ABOUT US

Connect with Braco.
Switch on progress.

Cable glands – a small part of the electrical system; but a single error and the entire electrical installation can fall apart, posing menacing risks to our lives. With electrical system, there's no room for negligence and thus, managing electrical installations to perfection is imperative to a safe set-up. We understand the fundamentals of electrical systems like no other. We are Braco India.

It was Shri Ramesh Sobhani's visionary leadership that led to the inception of Braco products in Indian electrical market in 1977. Since then, we are manufacturing high quality cable glands and serving the industry with the best we have.

In our endeavour to provide first rate cable glands, we cater to multiple clients today. But our very first patron – Elecon Engineering Company Limited – trusted us with the quality of cable glands and that's what boosted our confidence then. Today, we've grown to become a renowned name in the sphere of manufacturing and designing of the cable glands.

Designing of cable glands happens under management's supervision and are manufactured as per international standards. Our spectrum of cable glands are made in all sizes, specifications and designs such as Single Compression type, SIBG type, Double Compression type, Weather proof and Flame proof, Flange type, etc. We also delve into industry specific requirements, like we use brass for industrial use while we use aluminium and stainless-steel for under water cabling.

Every company has a way forward at some point. Ours came when the field of cable glands saw the grey market. Braco Electricals acquired the exports license under Braco brand and began its journey into expanding its portfolio by manufacturing terminals, connectors and other related accessories. After receiving a good response from the overseas market, we became the leading exporter of terminals and connectors across borders.

Presently, Braco's goodwill is associated with quality products that maximize efficiency and minimizes wastage.

The vision statement

Braco Electricals Private Ltd envisions to cruise swiftly to become one of the preferred partners to provide knowledge-based quality products through revolutionary thinking and rational approach so as to exceed customer expectations every time.

The mission path

Braco Electricals Private Ltd aims to achieve perfection each day by applying apt knowledge and delivering progressive results at right time.

Braco Electricals – An assurance of quality solutions

In any electrical system, quality of cable glands is vital. We understand that and manufacture high grade cable glands that meet our client's requirements. Before the final product is out in the market, our internal team carries out stringent quality inspections at various levels to maintain required quality standards.

We believe in providing superior products at economical prices and supreme service. Our motto is to not only manufacture good products, but also deliver them on time so that our clients are able to accomplish their projects on time.

Braco Electricals is a promise of good quality and superior service.

The pioneering foundation

Braco Electricals Private Ltd defines its pioneering headship in a manner such that it reflects the company's prospering image.

At Braco, pioneering translates into…

- **market leadership**
- **global recognition**
- **sustained growth**
- **content clientele**
- **motivated Bracoites**
- **leveraged knowledge**
- **wealth creation**

Today, we are at a position where we challenge turbulent times and strive to thrive in a business environment that keeps upgrading with technological advancements. At Braco, our able technocrats make sure to see that we march ahead with time and capitalize on opportunities that come our way.

At any point, Braco Electricals reserves right to alter or modify any product that's been featured in the catalogue.

Put our reliability to test.
Find output at its best.

Our products that are available in brass, aluminium and copper range, are applicable across different fields. Let's begin with a brief introduction of materials used in manufacturing our finest products.

Brass: It's an alloy that comprises 55% copper and 45% zinc, known for its exceptional cold forming property.

Aluminium: It's less in weight but high on durability. Holding good conductivity – around 60% that of copper. These qualities make it easier to work with aluminium.

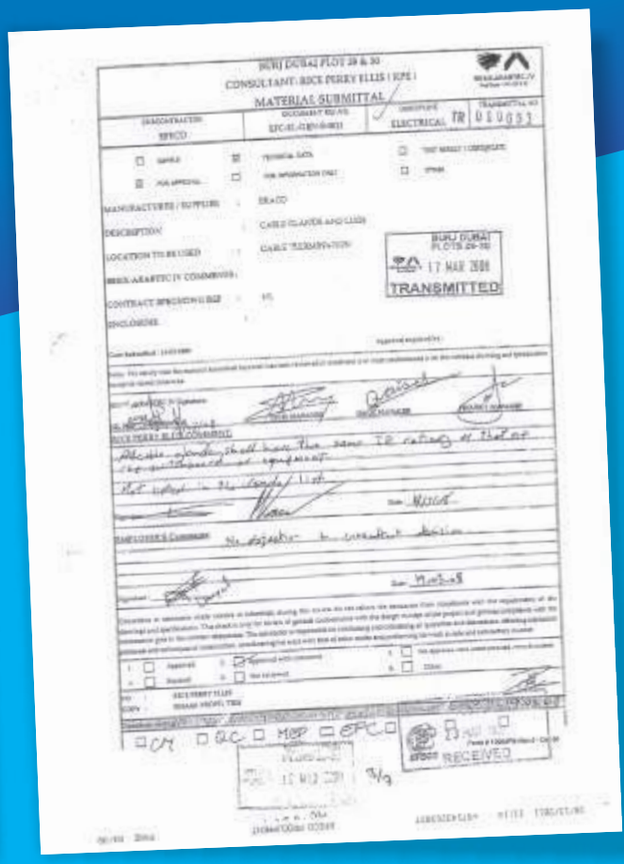
Copper: It is blessed to hold high conductivity and high corrosion resistance. Not just this, it also has good deformation properties and joining abilities.

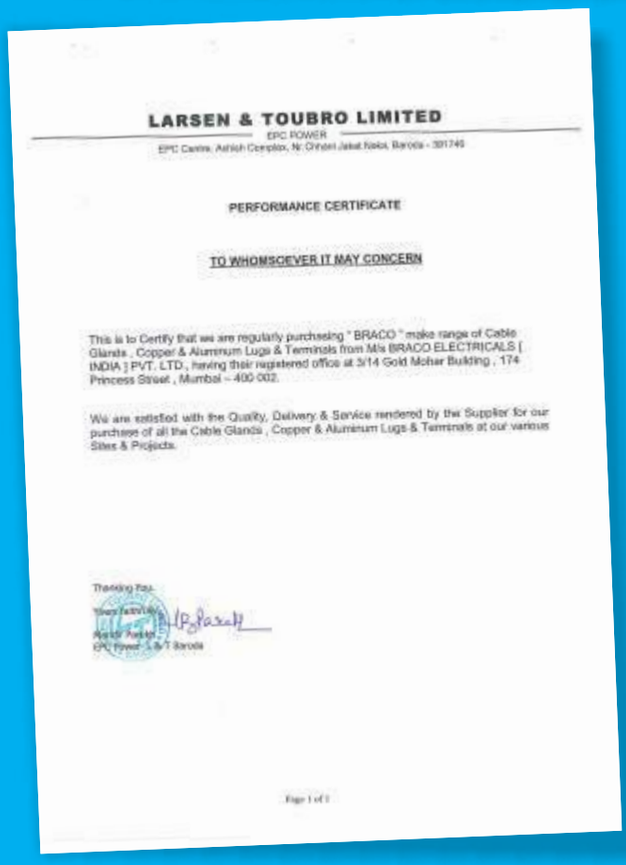
Braco products can be applied in…

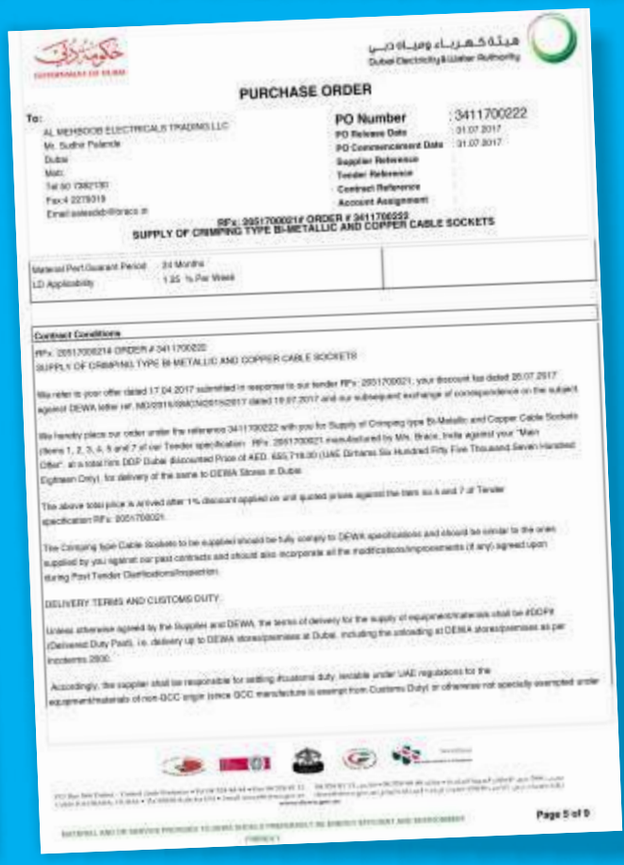
1. Control panels, switchgears, transformers and circuit breakers
2. Electricity power generation and distribution industries
3. Electronic industries
4. Railways
5. Steel and fertilizers industries
6. Cement and textile industries
7. Mining industries
8. Sugar industries
9. Defense industries
10. Shipping industries
11. Aeronautic industries
12. Satellite and communication industries
13. Automobile industries
14. Chemical projects
15. Domestics

Approvals


ARABIAN RANCHES - 2 DEVELOPMENT, LEA
COMMUNITY - 215 VILLAS
arabtec
RECEIVED


MATERIAL SUBMITTAL
TRANSMITTED
RECEIVED


LARSEN & TOUBRO LIMITED
EPC POWER
PERFORMANCE CERTIFICATE
TO WHOMSOEVER IT MAY CONCERN
This is to Certify that we are regularly purchasing " BRACO " make range of Cable Glands , Copper & Aluminum Lugs & Terminals from M/s BRACO ELECTRICALS [INDIA] PVT. LTD., having their registered office at 3/14 Gold Mohar Building , 174 Princess Street , Mumbai – 400 002.
We are satisfied with the Quality, Delivery & Service rendered by the Supplier for our purchase of all the Cable Glands , Copper & Aluminum Lugs & Terminals at our various Sites & Projects.
Thanking You,


PURCHASE ORDER
PO Number :3411700222
SUPPLY OF CRIMPING TYPE BI-METALLIC AND COPPER CABLE SOCKETS
Page 5 of 9

Certificates

Sohm Analytical Services (I) Pvt Ltd.

TEST CERTIFICATE

M/s Braco Electricals India Pvt. Ltd.
Braco House,Plot No.81,Chene Village,Thane Ghodbunder Road, Chene Bridge,Post Mira-Bhayander,Dist.Thane-401104
Ref. No.: 86/Sohm/02-16-17
Challan Dated: 20-03-2017
Description: Testing of Copper Tube Sample

Lab Ref. No.: 8561
Sample Received on: 23-03-2017
Test Completed on: 24-05-2017
Stamped By: -
Specification: IS 191 Gr Cu ETP

Size 44.5 x 45.5
Id -
Sample No 2

CHEMICAL ANALYSIS BY SPECTRO (OES) Test Method : BS EN 15079 :2025 Date of Performance : 24-05-2017

Elements	Result	Required Value Max.
%Copper	99.94	
%Silver	0.003	0.005
%Lead	0.0005	0.003
%Bismuth	0.003	99.90 Min
%Cu+Ag	99.943	

Remarks: THE ABOVE MATERIAL CONFORMS TO IS 191:2007 GRADE Cu-ETP WITH RESPECT TO ELEMENT ANALYSED

End of Report

FOR SOHM ANALYTICAL SERVICES (I) Pvt Ltd.

Authorised Signatory
OP Singh
HOD - CHEMICAL

Checked by

Page 1 of 1

Sohm Analytical Services (I) Pvt Ltd.

TEST CERTIFICATE

M/s Braco Electricals India Pvt. Ltd.
Braco House,Plot No.81,Chene Village,Thane Ghodbunder Road, Chene Bridge,Post Mira-Bhayander,Dist.Thane-401104
Ref. No.: 86/Sohm/02-16-17
Challan Dated: 20-03-2017
Description: Testing of Brass Sample

Lab Ref. No.: 8545
Sample Received on: 21-03-2017
Test Completed on: 23-03-2017
Stamped By: -
Specification: IS 12943 :1990

Size -
Id Random
Sample No 3

CHEMICAL ANALYSIS BY SPECTRO (OES) Test Method : BS EN 15079 :2015 Date of Performance : 23-03-2017

Elements	Result
%Copper	65.70
%Zinc	37.03

Remarks: ---

End of Report

FOR SOHM ANALYTICAL SERVICES (I) Pvt Ltd.

Authorised Signatory
OP Singh
HOD - CHEMICAL

Checked by

Page 1 of 1

Udyog Aadhaar

B

Udyog Aadhaar Memorandum

Sr.	Plot/Door/Block No.	Name of Premises/Building/Village	Road/Street/Lane	Area/Locality	City	Pin	State	District
1	PLOT NO.- 81 A ID	BRACO HOUSE	THANE - GHODBUNDER RD	CHENE VILLAGE, CHENE BRIDGE	MIRA ROAD EAST	401104	MAHARASHTRA	THANE

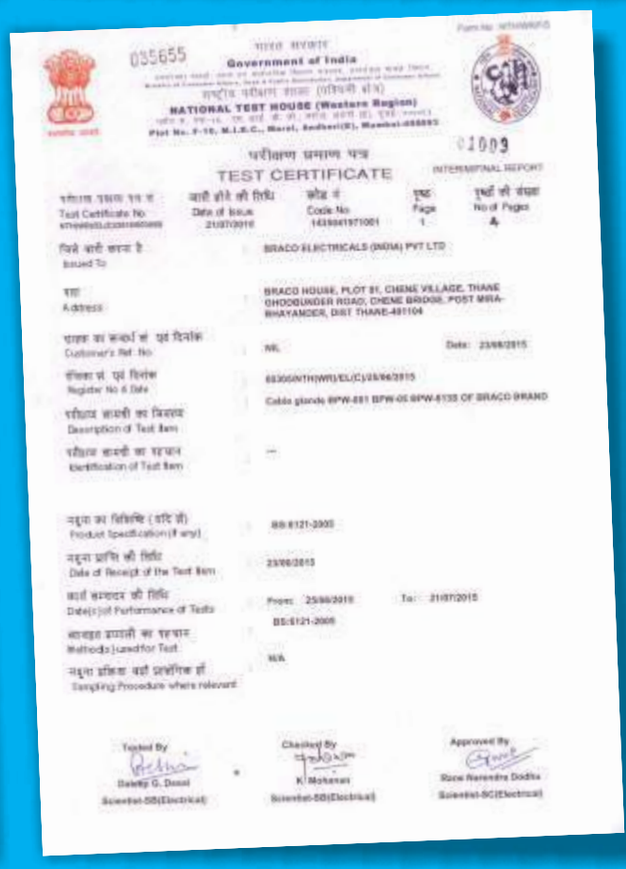
Official Address of Enterprise: 3/14, GOLD MOHAR BUILDING, 17th , PRINCESS STREET, ABOVE INDIAN ART STUDIO, ANANDA - 400002, MAHARASHTRA

State: MAHARASHTRA Pin: 400002
Mobile No: 9820261180 Email: ramesh@braco.in

Date of commencement: 19/10/2000
Previous Registration details if any: EM-2 : 27 - 021 - 10 - 00643 - PART II DATED 19 - 07 - 2010
Bank Details: IFS Code: UBIN0544434, Bank Account: 44430801260260
Major Activity: MANUFACTURING

SN	NIC 2 Digit	NIC 4 Digit	NIC 5 Digit Code	Activity Type
1	24 - Manufacture of basic metals	2420 - Manufacture of basic precious and other non-ferrous metals	24201 - Manufacture of Copper from ore, and other copper products and alloys	Manufacturing
2	24 - Manufacture of basic metals	2430 - Manufacture of basic precious and other non-ferrous metals	24302 - Manufacture of Aluminium from alumina and by softer methods and products of aluminium and alloys	Manufacturing
3	28 - Manufacture of fabricated metal products, except machinery and equipment	2893 - Manufacture of cutlery, hand tools and general hardware	28931 - Manufacture of hand tools such as chisels, screwdrivers, power tools,interchangeable tools, dies, punches, milling cutters etc.	Manufacturing
4	27 - Manufacture of electrical equipment	2710 - Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus	27104 - Manufacture of electricity distribution and control apparatus (electrical apparatus for switching or protecting electrical circuits (e.g. switches, fuses, voltage limiters, surge suppressors, surge-diverters, junction boxes) for a voltage exceeding 1000 volts; boards, panels, consoles, cabinets and other bases equipped with two or more of the above apparatus for electricity control or distribution of electricity including power meters of the above apparatus for electricity control or distribution of electricity including power meters(not to)	Manufacturing
5	27 - Manufacture of electrical equipment	2732 - Manufacture of wiring devices	27321 - Manufacture of switch, socket,box, lamp holders, type etc.	Manufacturing
6	27 - Manufacture of electrical equipment	2733 - Manufacture of wiring devices	27329 - Manufacture of other wiring devices and fittings n.e.c	Manufacturing
7	28 - Manufacture of machinery and equipment n.e.c.	2812 - Manufacture of fluid power equipment	28120 - Manufacture of fluid power equipment	Manufacturing

Persons employed: 50
Investment (Plant & Machinery / Equipment's): 2468(Rs. in Lakhs)
District Industry Centre: MUMBAI CITY



Government of India

NATIONAL TEST HOUSE (Western Region)
Plot No. F-10, M.I.D.C., Marol, Andheri(E), Mumbai-400093

035655

01009

परीक्षण प्रमाण पत्र
TEST CERTIFICATE
INTERIM/FINAL REPORT

परीक्षण प्रमाण पत्र सं. Test Certificate No.	जारी होने की तिथि Date of Issue	कोड सं. Code No.	पृष्ठ Page	पृष्ठों की संख्या No of Pages
	21/07/2015	1435941971001	1	4

जिसे जारी किया है
Issued To: BRACO ELECTRICALS (INDIA) PVT LTD

पता
Address: BRACO HOUSE, PLOT 81, CHENE VILLAGE, THANE GHODBUNDER ROAD, CHENE BRIDGE, POST MIRA-BHAYANDER, DIST THANE-401104

ग्राहक का संदर्भ एवं दिनांक
Customer's Ref. No: NIL Date: 23/06/2015

संविदा सं. एवं दिनांक
Register No & Date: 68306(NTH(WR)/EL/(C)/25/06/2015

परीक्षित वस्तु का विवरण
Description of Test Item: Cable glands BPW-001 BPW-05 BPW-6135 OF BRACO BRAND

परीक्षित वस्तु का पहचान
Identification of Test Item: ---

नमूना का विशिष्टि (यदि हो)
Product Specification(if any): BS:6121-2005

नमूना प्राप्ति की तिथि
Date of Receipt of the Test Item: 23/06/2015

कार्य सम्पादन की तिथि
Date(s)of Performance of Tests: From: 25/06/2015 To: 21/07/2015

व्यवहृत प्रयुक्ती का पहचान
Methods Used for Test: BS:6121-2005

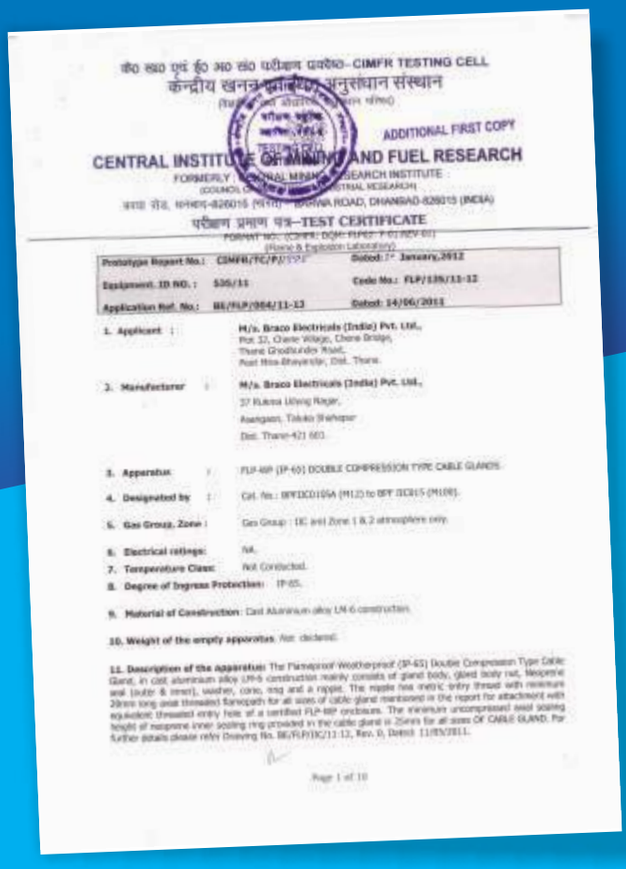
नमूना प्रक्रिया यदि प्रासंगिक हो
Sampling Procedure where relevant: N/A

Tested By
Dakshy G. Desai
Scientist-SB(Electrical)

Checked By
K. Mohanan
Scientist-SB(Electrical)

Approved By
Rave Narendra Dodke
Scientist-SC(Electrical)

Certificates



केंद्रीय खनन अनुसंधान संस्थान
CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH
ADDITIONAL FIRST COPY
परीक्षण प्रमाण पत्र–TEST CERTIFICATE

Prototype Report No.:	CIMFR/TC/P/	Dated: 1st January,2012
Equipment. ID NO. :	535/11	Code No.: FLP/135/11-12
Application Ref. No.:	BE/FLP/004/11-12	Dated: 14/06/2011

1. Applicant : M/s. Braco Electricals (India) Pvt. Ltd.,
Plot 32, Chene Village, Chene Bridge,
Thane Ghodbunder Road,
Post Mira-Bhayander, Dist. Thane.

2. Manufacturer : M/s. Braco Electricals (India) Pvt. Ltd.,
37 Rukma Udyog Nagar,
Asangaon, Taluka Shahapur
Dist. Thane-421 601.

3. Apparatus : FLP-WP (EP-65) DOUBLE COMPRESSION TYPE CABLE GLANDS

4. Designated by : Cat. No.: BWDCD105A (M12) to BFF DCD15 (M100).

5. Gas Group, Zone : Gas Group : IIC and Zone 1 & 2 atmosphere only.

6. Electrical ratings: NA.

7. Temperature Class: Not Conducted.

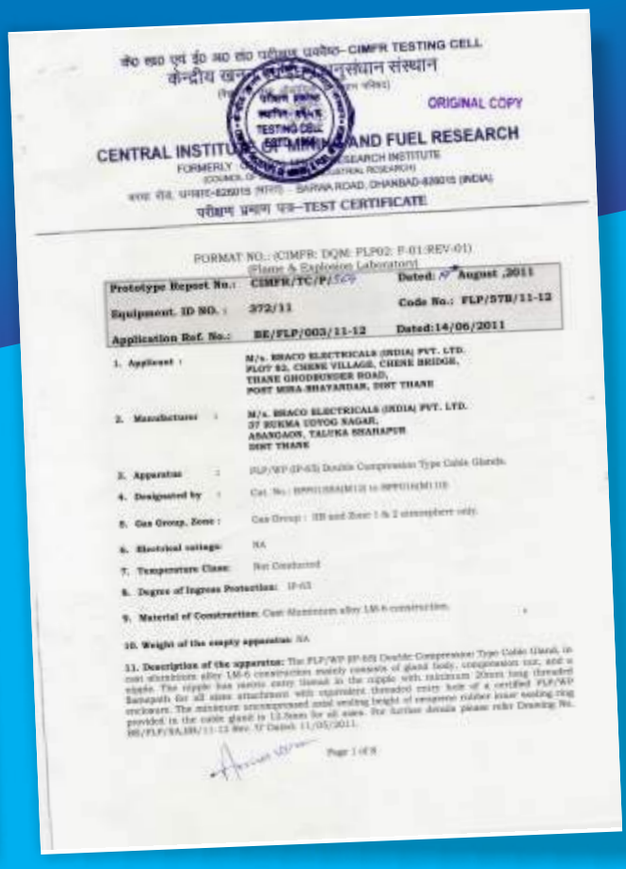
8. Degree of Ingress Protection: IP-65.

9. Material of Construction: Cast Aluminium alloy LM-6 construction.

10. Weight of the empty apparatus: Not declared.

11. Description of the apparatus: The Flameproof Weatherproof (IP-65) Double Compression Type Cable Gland, in cast aluminium alloy LM-6 construction mainly consists of gland body, gland body nut, Neoprene seal (outer & inner), washer, cone, ring and a nipple. The nipple has metric entry thread with minimum 20mm long axial threaded flamepath for all sizes of cable gland mentioned in the report for attachment with equivalent threaded entry hole of a certified FLP-WP enclosure. The minimum uncompressed axial sealing height of neoprene inner sealing ring provided in the cable gland is 2.5mm for all sizes OF CABLE GLAND. For further details please refer Drawing No. BE/FLP/DC/11-12, Rev. 0, Dated: 11/05/2011.

Page 1 of 10



केंद्रीय खनन अनुसंधान संस्थान
CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH
ORIGINAL COPY
परीक्षण प्रमाण पत्र–TEST CERTIFICATE

FORMAT NO.: (CIMFR/ DQM/ FLP/02/ F-01/REV-01)
(Flame & Explosion Laboratory)

Prototype Report No.:	CIMFR/TC/P/	Dated: 1st August ,2011
Equipment. ID NO. :	372/11	Code No.: FLP/57B/11-12
Application Ref. No.:	BE/FLP/003/11-12	Dated:14/06/2011

1. Applicant : M/s. BRACO ELECTRICALS (INDIA) PVT. LTD.
PLOT 82, CHENE VILLAGE, CHENE BRIDGE,
THANE GHODBUNDER ROAD,
POST MIRA BHAYANDAR, DIST THANE

2. Manufacturer : M/s. BRACO ELECTRICALS (INDIA) PVT. LTD.
37 RUKMA UDYOG NAGAR,
ASANGAON, TALUKA SHAHAPUR
DIST THANE

3. Apparatus : FLP/WP (EP-65) Double Compression Type Cable Glands.

4. Designated by : Cat. No.: BWDCD105A(M12) to BFF DCD15(M100).

5. Gas Group, Zone : Gas Group : IIB and Zone 1 & 2 atmosphere only.

6. Electrical ratings: NA

7. Temperature Class: Not Conducted

8. Degree of Ingress Protection: IP-65

9. Material of Construction: Cast Aluminium alloy LM-6 construction.

10. Weight of the empty apparatus: NA

11. Description of the apparatus: The FLP/WP (EP-65) Double Compression Type Cable Gland, in cast aluminium alloy LM-6 construction mainly consists of gland body, compression nut, and a nipple. The nipple has metric entry thread in the nipple with minimum 20mm long threaded flamepath for all sizes attachment with equivalent threaded entry hole of a certified FLP/WP enclosure. The minimum uncompressed axial sealing height of neoprene rubber inner sealing ring provided in the cable gland is 1.5mm for all sizes. For further details please refer Drawing No. BE/FLP/DA.135/11-12 Rev. '0' Dated: 11/05/2011.

Page 1 of 8

TÜV NORD

CERTIFICATE

Management system as per
ISO 9001 : 2015

In accordance with TÜV INDIA procedures, it is hereby certified that

BRACO ELECTRICALS (INDIA) PVT. LTD.
Plot No 82, Chene Village, Chene Bridge,
Thane Ghodbunder Road, Post Mira-Bhayander,
Dist-Thane – 401 105, Maharashtra,
India

applies a quality management system in line with the above standard for the following scope

Manufacture of Lugs, Terminals and Connectors of copper and Aluminium. Assembly of Cable Glands.

Certificate Registration No. QM 03 03275
Audit Report No. G 8542/2018

Valid until 07.09.2021
Initial Certification 12.07.2007

Certification Body
at TÜV INDIA PVT. LTD.

Issue 05.09.2018
Place : Mumbai

This certification was conducted in accordance with the TÜV INDIA auditing and certification procedures & shall be valid subject to Surveillance Audit 1 before 11.08.2019, Surveillance Audit 2 before 11.08.2020 and Re-Certification Audit before 11.08.2021.

TÜV India Pvt. Ltd., 801, Raheja Plaza – 1, L.B.S. Marg, Ghatkopar (W), Mumbai - 400 086, India

Sohm Analytical

Sohm Analytical Services (I) Pvt Ltd.

TEST CERTIFICATE

M/s Braco Electricals India Pvt. Ltd.
Braco House,Plot No.81,Chene Village,Thane Ghodbunder Road, Chene Bridge,Post Mira Bhayander,Dist Thane-401104

Lab Ref. No.: 8543
Sample Received on: 23-03-2017
Test Completed on: 23-03-2017

Ref. No.: BE/Sohm/03-16-17
Challan Dated: 28-03-2017
Description: Testing of Aluminium Tube Sample

Stamped By: -
Specification: IS 5082 ALLOY 19501

Size	15 x 2Sthr 120 Sq mm- ATAL-22 I
Id	-
Sample No	1

CHEMICAL ANALYSIS BY SPECTRO (OES) Test Method : ASTME E 1251:2011 Date of Performance : 23-03-2017

Elements	Result	Required Value Max.
%Iron	0.077	0.15
%Silicon	0.040	0.030
%Manganese	0.002	0.030
%Zinc	0.003	0.030
%Chromium	0.009	0.040
%Copper	0.006	99.50 Min.
%Aluminium	99.78	

Remarks: THE ABOVE MATERIAL CONFORMS TO IS 5082 ALLOY 19501 WITH RESPECT TO ELEMENT ANALYSED

End of Report

FOR SOHM ANALYTICAL SERVICES (I) Pvt Ltd.

Authorised Signatory
OP Singh
HOD - CHEMICAL

Checked by

Page 1 of 1

Index

Pg. No.	PRODUCT	SERIES	TITLE
1		R,RI,RD	Copper Crimping Ring Terminals (non-insulated and insulated)
5		RF,RFI,RFD	Copper Ring Tongue Fork Terminals
6		P,PI,PD	Copper Crimping Pin Terminals (non-insulated and insulated)
7		F,FI,FD	Copper Crimping Fork Terminals (non-insulated and insulated)
8		OC	Open Close Soldering Type Copper Ring Terminals
9		ES	Copper Crimping End Sealing Ferrules
10		ESI	Copper Crimping End Sealing Insulated Ferrules
11		ESIT	Copper Crimping End Sealing Insulated Ferrules (ForTwin Cable)
12		SNP	Snap On Terminals
16		CTS	Soldering Type Copper Terminals (Light Duty)
17		BSS	Soldering Type Copper Terminals (Heavy Duty)
18		WB	Soldering Typer Copper Weak Back Ferrules
19		CT	Copper Crimping Terminals For Aluminium Conductor (Light Duty)
20		CA	Copper Crimping Terminals With Inspection Hole (Light Duty)
22		CT	Copper Crimping Terminals With Inspection Hole For Copper Conductor (Heavy Duty)
25		CT	Extended Palm BlanksCopper Crimping Terminal Ends For Copper Conductors
26		CT	Copper Crimping Terminals For Copper Condutors (Long Barrel)
27		DIN	Copper Crimping Terminals As per Din Standards
28		ILC	Copper Tube In-Line Connectors
29		ILCI	Copper Tube In-Line Connectors (Insulated)
30		WPC	Copper Crimping Reducer Terminals For Aluminium Conductor
32		BMT	Bi-Metallic Terminals
33		BMR	Bimetallic Terminals - Copper Ring Type
35		AT	Aluminium Crimping Terminals
37		AT-XL	Aluminium Tube Terminals For AL-XLPE Conductors
38		ILA	Aluminium Crimping Connectors
39		WPA	Aluminium Crimping Reducer Terminals For Aluminium Conductor

Pg. No.	PRODUCT	SERIES	TITLE
41		AT	Long Barrel Aluminium Crimping Terminals For Aluminium Conductor
42		ATT	Double Hole Aluminium Crimping Terminals For Aluminium Conductors
43		ATB	Aluminium Alloy Tubular Bimetallic Terminals
44		BTZ	Corrosion Inhabiting Compound
48		GS	Gland Selection Chart
52		BC	Single Compression Glands (Commercial Series)
54		SIBG	Single Compression Glands (SIBG series)
55		BPW	Double Compression Brass Glands (Weather proof)
56		BPF	Double Compression Brass Glands (Flame Proof)
57		SSW	Double Compression Stainless Steel Glands (Weather proof)
58		SSF	Double Compression Stainless Steel Glands (Flame proof)
59		BPT	Braco Make Double Compression Glands (Weatherproof)
60		BCT	Braco Make Single Compression Glands (Weather proof)
61		PPG	Nylon PG type Glands
62		BPG	Brass PG type Glands
63		FL	Flange Type Cable Glands
64		BW	BW Type Glands
65		CW	CW Type Glands
66		A2	A2 Type Glands
67		E1W	E1W Type Glands
68		ET	Earth Tags
69		PVC	PVC Shrouds
70		KITS	Kits
71		BAD	Adaptor
76		BRD	Reducer
83		BSP	Stopper Plug
84		TM	Tailor Made
85			Technical data

While every effort has been taken to ensure that the information as contained & printed in this catalogue is correct,yet the company will not accept or cannot be held legally resposible for any claims what so ever for any inaccuracy,error or omission which might have crept in advertantly.

COPPER TERMINALS

Braco Ring Terminals are designed to offer maximum efficiency under heavy-duty applications. Therefore these terminals are ideal for use in applications which are subject to continuous mechanicals vibrations viz. engines, railways, moving components etc. The terminal barrel is brazed and soft annealed, which means that the terminal can be crimped in either direction.

All the terminals are tin plated to avoid oxidization and to achieve maximum corrosion protection. These terminals can be provided with PVC sleeves for protection against electrical shocks and can also be provided with metal reinforced sleeves to maintain a proper grip on conductor insulation.

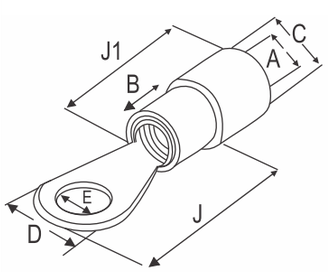
Colour Coding Insulated Terminals:

1.5 2.5 4.6

COPPER CRIMPING RING TERMINALS (NON-INSULATED AND INSULATED)

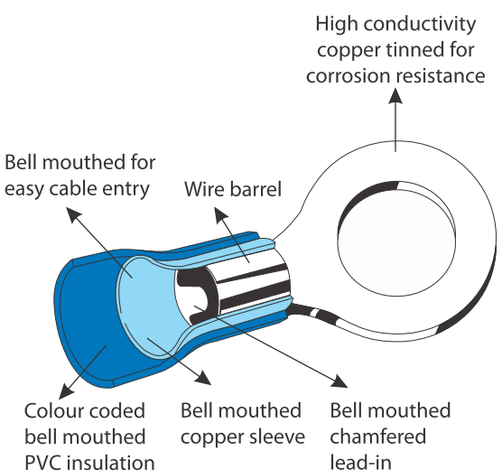
Material Copper BS: 1977
Finish: Electro Tinned

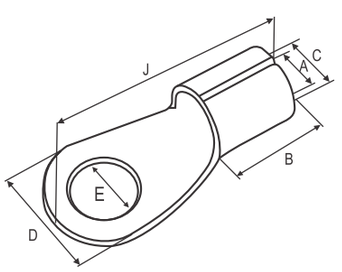
Size Sq. mm	Dimensions						Code No.	J-1	Code No.	A-1	J-1	Code No.
	E	A	C	D	B	J						
0.5-1	4.2	1.4	2.6	8.0	5	16..0	R - 0	8	RI - 0			
1.5	2.2	1.6	3.2	6.0	5	14.0	R - 103	10	RI - 052	3.6	10	RD - 435
	2.6	1.6	3.2	6.0	5	14.0	R - 000	10	RI - 053	3.6	10	RD - 436
	3.2	1.6	3.2	6.0	5	14.0	R - 001	10	RI - 054	3.6	10	RD - 437
	3.7	1.6	3.2	6.0	5	14.0	R - 002	10	RI - 055	3.6	10	RD - 438
	4.2	1.6	3.2	6.0	5	14.0	R - 003	10	RI - 056	3.6	10	RD - 439
	3.2	1.6	3.2	6.8	5	13.0	R - 153	10	RI - 057	3.6	10	RD - 440
	3.7	1.6	3.2	6.8	5	13.0	R - 048	10	RI - 058	3.6	10	RD - 441
	4.2	1.6	3.2	6.8	5	13.0	R - 049	10	RI - 059	3.6	10	RD - 442
	3.2	1.6	3.2	8.0	5	16.0	R - 104	10	RI - 060	3.6	10	RD - 443
	4.2	1.6	3.2	8.0	5	16.0	R - 004	10	RI - 061	3.6	10	RD - 444
	5.2	1.6	3.2	8.0	5	16.0	R - 005	10	RI - 062	3.6	10	RD - 445
	4.2	1.6	3.2	7.0	5	14.5	R - 154	10	RI - 063	3.6	10	RD - 446
	4.2	1.6	3.2	10.0	5	18.0	R - 105	10	RI - 064	3.6	10	RD - 447
	5.2	1.6	3.2	10.0	5	18.0	R - 006	10	RI - 065	3.6	10	RD - 448
	6.4	1.6	3.2	10.0	5	18.0	R - 007	10	RI - 066	3.6	10	RD - 449
	6.4	1.6	3.2	12.0	5	18.0	R - 106	10	RI - 067	3.6	10	RD - 450



COPPER CRIMPING RING TERMINALS (NON-INSULATED AND INSULATED)

Size Sq. mm	Dimensions						Code No.	J-1	Code No.	A-1	J-1	Code No.
	E	A	C	D	B	J						
2.5	3.2	2.3	3.9	6.5	5	12.7	R - 107	10	RI - 068	4.4	10	RD - 451
	3.7	2.3	3.9	6.5	5	12.7	R - 008	10	RI - 069	4.4	10	RD - 452
	3.7	2.3	3.9	8.0	5	16.0	R - 108	10	RI - 070	4.4	10	RD - 453
	4.2	2.3	3.9	8.0	5	16.0	R - 009	10	RI - 071	4.4	10	RD - 454
	5.2	2.3	3.9	8.0	5	16.0	R - 010	10	RI - 072	4.4	10	RD - 455
	5.2	2.3	3.9	10.0	5	18.0	R - 109	10	RI - 073	4.4	10	RD - 456
	6.4	2.3	3.9	10.0	5	18.0	R - 011	10	RI - 074	4.4	10	RD - 457
	5.2	2.3	3.9	12.0	5	22.0	R - 110	10	RI - 075	4.4	10	RD - 458
	6.4	2.3	3.9	12.0	5	22.0	R - 012	10	RI - 076	4.4	10	RD - 459
	8.2	2.3	3.9	12.0	5	22.0	R - 013	10	RI - 077	4.4	10	RD - 460
	6.4	2.3	3.9	16.0	5	25.0	R - 111	10	RI - 078	4.4	10	RD - 461
	8.2	2.3	3.9	16.0	5	25.0	R - 014	10	RI - 079	4.4	10	RD - 462
	10.2	2.3	3.9	16.0	5	25.0	R - 015	10	RI - 080	4.4	10	RD - 463
	10.2	2.3	3.9	18.0	5	29.0	R - 151	10	RI - 081	4.4	10	RD - 464
	12.7	2.3	3.9	18.0	5	29.0	R - 047	10	RI - 082	4.4	10	RD - 465
4-6	4.2	3.5	5.5	8.0	6	17.0	R - 155	14	RI - 083	6.4	15	RD - 466
	5.2	3.5	5.5	8.0	6	17.0	R - 050	14	RI - 084	6.4	15	RD - 467
	4.2	3.5	5.5	10.0	6	19.0	R - 112	14	RI - 085	6.4	15	RD - 468
	5.2	3.5	5.5	10.0	6	19.0	R - 016	14	RI - 086	6.4	15	RD - 469
	5.2	3.5	5.5	8.0	6	22.0	R - 157	14	RI - 087	6.4	15	RD - 470
	5.2	3.5	5.5	12.0	6	20.0	R - 113	14	RI - 088	6.4	15	RD - 471
	6.4	3.5	5.5	12.0	6	20.0	R - 017	14	RI - 089	6.4	15	RD - 472
	8.2	3.5	5.5	12.0	6	20.0	R - 018	14	RI - 090	6.4	15	RD - 473
	5.2	3.5	5.5	12.0	6	22.0	R - 114	14	RI - 091	6.4	15	RD - 474
	6.4	3.5	5.5	12.0	6	22.0	R - 019	14	RI - 092	6.4	15	RD - 475
	6.4	3.5	5.5	14.0	6	25.5	R - 115	14	RI - 093	6.4	15	RD - 476
	8.2	3.5	5.5	14.0	6	25.5	R - 020	14	RI - 094	6.4	15	RD - 477
	9.7	3.5	5.5	14.0	6	25.5	R - 021	14	RI - 095	6.4	15	RD - 478
	8.2	3.5	5.5	16.0	6	30.0	R - 116	14	RI - 096	6.4	15	RD - 479
	10.2	3.5	5.5	16.0	6	30.0	R - 022	14	RI - 097	6.4	15	RD - 480
	8.2	3.5	5.5	18.0	6	30.0	R - 117	14	RI - 098	6.4	15	RD - 481
	10.2	3.5	5.5	18.0	6	30.0	R - 023	14	RI - 099	6.4	15	RD - 482
	12.7	3.5	5.5	18.0	6	30.0	R - 024	14	RI - 100	6.4	15	RD - 483
10	4.2	4.3	6.3	10.0	8	22.0	R - 118	16	RI - 389	6.8	17	RD - 484
	8.2	4.3	6.3	18.0	8	22.0	R - 025	16	RI - 395	6.8	17	RD - 485



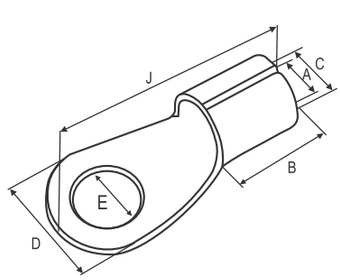


Braco Ring Terminals are designed to offer maximum efficiency under heavy-duty applications. Therefore these terminals are ideal for use in applications which are subject to continuous mechanicals vibrations viz. engines, railways, moving components etc. The terminal barrel is brazed and soft annealed, which means that the terminal can be crimped in either direction.

All the terminals are tin plated to avoid oxidization and to achieve maximum corrosion protection.

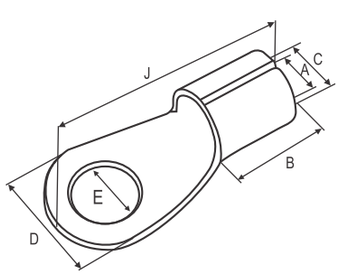
COPPER CRIMPING RING TERMINALS (NON-INSULATED)

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
10	5.2	4.3	6.3	10	8	20	R - 026
	6.4	4.3	6.3	12	8	23	R - 120
	8.2	4.3	6.3	16	8	27	R - 121
	8.2	4.3	6.3	18	8	30	R - 122
	10.2	4.3	6.3	18	8	30	R - 027
	10.2	4.3	6.3	22	8	34	R - 123
	12.7	4.3	6.3	22	8	34	R - 028
16	5.2	5.6	8.0	10	10	24	R - 124
	5.2	5.6	8.0	12	10	26	R - 125
	6.4	5.6	8.0	12	10	26	R - 029
	6.4	5.6	8.0	16	10	30	R - 126
	8.2	5.6	8.0	16	10	30	R - 030
	9.7	5.6	8.0	16	10	30	R - 031
	8.2	5.6	8.0	18	10	33	R - 127
	10.2	5.6	8.0	18	10	33	R - 032
	10.2	5.6	8.0	22	10	35	R - 128
	12.7	5.6	8.0	22	10	35	R - 033
25	6.4	7.5	11.1	12	11	31	R - 156
	8.2	7.5	11.1	12	11	31	R - 051
	6.4	7.5	11.1	16	11	30	R - 129
	8.2	7.5	11.1	16	11	30	R - 034
	10.2	7.5	11.1	16	11	30	R - 035
	6.4	7.5	11.1	16	11	33	R - 130
	8.2	7.5	11.1	16	11	33	R - 036
	10.2	7.5	11.1	18	11	34	R - 131
	10.2	7.5	11.1	22	11	42	R - 132
	12.7	7.5	11.1	22	11	42	R - 037



COPPER CRIMPING RING TERMINALS (NON-INSULATED)

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
35	6.4	9.0	12.6	16	12	31	R - 133
	8.2	9.0	12.6	16	12	31	R - 038
	8.2	9.0	12.6	18	12	36	R - 134
	10.2	9.0	12.6	18	12	36	R - 039
	10.2	9.0	12.6	22	12	42	R - 135
	12.7	9.0	12.6	22	12	42	R - 040
50	8.2	10.5	14.1	18	16	43	R - 136
	10.2	10.5	14.1	18	16	43	R - 041
	10.2	10.5	14.1	22	16	43	R - 137
	10.2	10.5	14.1	24	16	48	R - 138
	12.7	10.5	14.1	24	16	48	R - 042
	16.2	10.5	14.1	32	16	54	R - 139
70	10.2	12.0	16.0	22	18	47	R - 140
	12.7	12.0	16.0	22	18	47	R - 043
	12.7	12.0	16.0	24	18	48	R - 141
	16.2	12.0	16.0	24	20	54	R - 142
95	10.2	13.5	18.1	22	20	46	R - 143
	10.2	13.5	18.1	24	20	50	R - 144
	12.7	13.5	18.1	24	20	50	R - 044
	16.2	13.5	18.1	28	20	58	R - 145
120	12.7	15.0	20.2	26	22	52	R - 146
	16.2	15.0	20.2	32	22	64	R - 147
	20.3	15.0	20.2	40	22	72	R - 148
150	12.7	16.5	23.7	34	24	66	R - 149
	16.2	16.5	23.7	34	24	66	R - 045
	20.3	16.5	23.7	40	24	74	R - 046



Braco Ring Tongue Fork Terminals are designed to offer maximum efficiency under heavy-duty applications. Therefore these terminals are ideal for use in applications which are subject to continuous mechanical vibrations viz. engines, railways, moving components etc. The terminal barrel is brazed and soft annealed, which means that the terminal can be crimped in either direction.

All the terminals are tin plated to avoid oxidisation and to achieve maximum corrossion protection. These terminals can be provided with PVC sleeves for protection against electrical shocks and can also be provided with metal reinforced sleeves to maintain a proper grip on conductor insulation.

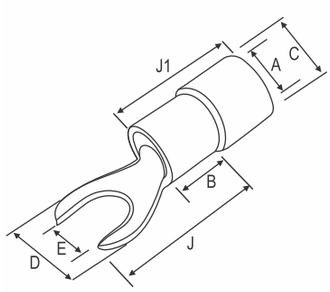
Colour Coding Insulated Terminals:

1.5 2.5 4.6

COPPER RING TONGUE FORK TERMINALS

Material Copper BS: 1977
Finish: Electro Tinned

Size Sq. mm	Dimensions						Code No.	Dim. J-1	Code No.	Dimensions		Code No.
	E	A	C	D	B	J				A-1	J-1	
1.5	3.1	1.6	3.2	6.0	5	14	RF - 235	10	RFI - 873	3.6	10	RFD - 899
	3.6	1.6	3.2	6.0	5	14	RF - 240	10	RFI - 874	3.6	10	RFD - 900
	3.1	1.6	3.2	6.8	5	13	RF - 241	10	RFI - 875	3.6	10	RFD - 901
	3.6	1.6	3.2	6.8	5	13	RF - 244	10	RFI - 876	3.6	10	RFD - 902
	4.1	1.6	3.2	7.0	5	14	RF - 237	10	RFI - 877	3.6	10	RFD - 903
	4.1	1.6	3.2	8.0	5	16	RF - 236	10	RFI - 878	3.6	10	RFD - 904
	5.1	1.6	3.2	10.0	5	18	RF - 238	10	RFI - 879	3.6	10	RFD - 905
	6.1	1.6	3.2	10.0	5	18	RF - 861	10	RFI - 880	3.6	10	RFD - 906
2.5	3.1	2.3	3.9	6.5	5	12.7	RF - 862	10	RFI - 881	4.4	10	RFD - 907
	3.6	2.3	3.9	6.5	5	12.7	RF - 863	10	RFI - 882	4.4	10	RFD - 908
	4.1	2.3	3.9	8.0	5	16	RF - 239	10	RFI - 883	4.4	10	RFD - 909
	5.1	2.3	3.9	10.0	5	18	RF - 242	10	RFI - 884	4.4	10	RFD - 910
	6.1	2.3	3.9	10.0	5	18	RF - 864	10	RFI - 885	4.4	10	RFD - 911
4-6	4.1	3.5	5.5	8.0	6	17	RF - 243	14	RFI - 886	6.4	15	RFD - 912
	4.1	3.5	5.5	10.0	6	19	RF - 245	14	RFI - 887	6.4	15	RFD - 913
	5.1	3.5	5.5	10.0	6	19	RF - 246	14	RFI - 888	6.4	15	RFD - 914
	5.1	3.5	5.5	12.0	6	22	RF - 247	14	RFI - 889	6.4	15	RFD - 915
	6.1	3.5	5.5	12.0	6	22	RF - 248	14	RFI - 890	6.4	15	RFD - 916
10	4.1	4.3	6.3	10.0	8	22	RF - 865	16	RFI - 891	6.8	17	RFD - 917
	5.1	4.3	6.3	10.0	8	22	RF - 866	16	RFI - 892	6.8	17	RFD - 918
	6.1	4.3	6.3	12.0	8	23	RF - 867	16	RFI - 893	6.8	17	RFD - 919
	8.1	4.3	6.3	16.0	8	27	RF - 868	16	RFI - 894	6.8	17	RFD - 920
16	5.1	5.6	8.0	10.0	10	24	RF - 869	--	-----	--	--	-----
	6.1	5.6	8.0	12.0	10	26	RF - 870	--	-----	--	--	-----
	8.1	5.6	8.0	16.0	10	30	RF - 871	--	-----	--	--	-----
	8.1	5.6	8.0	18.0	10	33	RF - 872	--	-----	--	--	-----



Braco Pin Terminals are designed to offer maximum efficiency under heavy-duty applications. Therefore these terminals are ideal for use in applications which are subject to continuous mechanical vibrations viz. engines, railways, moving components etc. The terminal barrel is brazed and soft annealed, which means that the terminal can be crimped in either direction.

All the terminals are tin plated to avoid oxidisation and to achieve maximum corrossion protection. These terminals can be provided with PVC sleeves for protection against electrical shocks and can also be provided with metal reinforced sleeves to maintain a proper grip on conductor insulation.

Colour Coding Insulated Terminals:

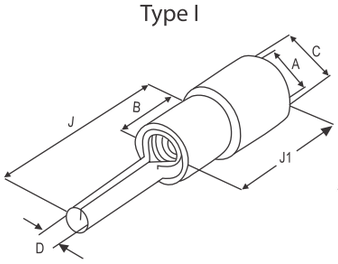
1.5 2.5 4.6

COPPER CRIMPING PIN TERMINALS (NON-INSULATED AND INSULATED)

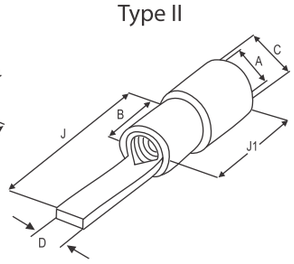
Material Copper BS: 1977
Finish: Electro Tinned

Size Sq. mm	Dimensions					TYPE	Code No.	J-1	Code No.	A-1	J-1	Code No.
	A	C	D	B	J							
0.5-1	1.4	2.6	1.6	5	17	I	P - 0	10	PI - 0	-	-	-
1.5	1.6	3.2	1.9	5	17	I	P - 9	10	PI - 17	3.6	10	PD - 26
	1.6	3.2	3.1	5	17	II	P - 35	10	PI - 40	3.6	10	PD - 42
2.5	2.3	3.9	1.9	5	17	I	P - 1	10	PI - 18	4.4	10	PD - 27
	2.3	3.9	3.1	5	17	II	P - 2	10	PI - 19	4.4	10	PD - 28
4	2.9	4.9	2.7	6	20	I	P - 3	14	PI - 20	6.4	15	PD - 29
	3.6	5.6	5.1	6	20	II	P - 4	14	PI - 21	6.4	15	PD - 30
6	3.6	5.6	2.7	6	20	I	P - 5	14	PI - 22	6.4	15	PD - 31
	4.0	6.0	2.7	6	20	II	P - 6	14	PI - 23	6.4	15	PD - 32
10	4.5	6.7	4.3	8	22	III	P - 7	16	PI - 24	-	-	-
16	5.8	8.2	5.5	10	26	III	P - 8	20	PI - 25	-	-	-
25	7.5	11.1	7.0	11	31	III	P - 86	-	-	-	-	-
35	9.0	12.6	8.0	12	37	III	P - 87	-	-	-	-	-
50	10.5	14.1	9.0	16	42	III	P - 88	-	-	-	-	-
70	12.0	16.0	10.0	18	45	III	P - 94	-	-	-	-	-
95	13.8	18.7	11.0	21	52	III	P - 95	-	-	-	-	-

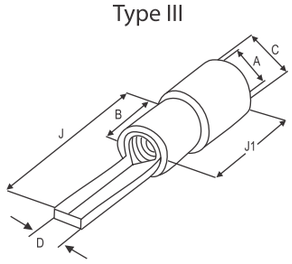
Type I



Type II



Type III



Braco Fork Terminals are designed to offer maximum efficiency under heavy-duty applications. Therefore these terminals are ideal for use in applications which are subject to continuous mechanical vibrations viz. engines, railways, moving components etc. The terminal barrel is brazed and soft annealed which means that the terminal can be crimped in either direction.

All the terminals are tin plated to avoid oxidisation and to achieve maximum corrossion protection. These terminals can be provided with PVC sleeves for protection against electrical shocks and can also be provided with metal reinforced sleeves to maintain a proper grip on conductor insulation.

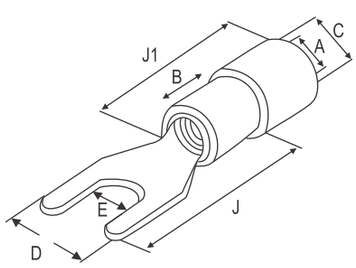
Colour Coding Insulated Terminals:

1.5 2.5 4.6

COPPER CRIMPING FORK TERMINALS (NON-INSULATED AND INSULATED)

Material Copper BS: 1977
Finish: Electro Tinned

Size Sq. mm	Dimensions						Code No.	J-1	Code No.	A-1	J-1	Code No.
	E	A	C	D	B	J						
0.5-1	3.5	1.4	2.6	6.6	5	14	F - 0	10	FI - 0			
1.5	5.1	1.6	3.2	8.0	5	21	F - 214	10	FI - 925	3.6	10	FD - 934
	3.5	1.6	3.2	6.8	4	13	F - 249	10	FI - 926	3.6	10	FD - 935
	3.0	2.0	2.8	6.2	5	13	F - 250	10	FI - 927	3.6	10	FD - 936
2.5	3.5	2.3	3.9	6.5	5	15	F - 251	10	FI - 928	4.4	10	FD - 937
	5.0	2.6	4.6	10.6	6.2	21	F - 280	10	FI - 929	5.1	10	FD - 938
4-6	3.1	3.5	5.5	6.0	6	15	F - 252	14	FI - 930	6.4	15	FD - 939
	3.5	3.5	5.5	6.0	6	15	F - 253	14	FI - 931	6.4	15	FD - 940
10	6.5	4.5	6.9	16.0	8	27	F - 254	16	FI - 932	7.4	17	FD - 941
	8.2	4.5	6.9	16.0	8	27	F - 255	16	FI - 933	7.4	17	FD - 942

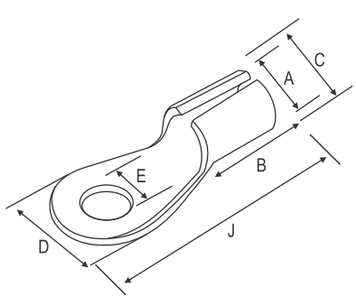


Braco open close terminals are made out of EC grade copper. These terminals ensure completeness and ease of conductor entry so that contact is reliable and have more tensile strength. The terminals are annealed to avoid cracking or breaks and are tin plated to avoid oxidization and to achieve maximum corrossion protection.

OPEN CLOSE SOLDERING TYPE COPPER RING TERMINALS

Material Copper BS: 1977
Finish: Electro Tinned

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
1.5	4.2	1.6	3.2	7	5	15	OC - 71
2.5	5.2	2.3	3.9	9	6	18	OC - 72
4	5.2	2.8	4.8	9	6	20	OC - 73
6	6.5	3.6	5.6	12	7	24	OC - 74
10	6.5	4.4	6.4	12	9	27	OC - 75
16	8.2	5.4	7.8	15	11	32	OC - 76
25	8.2	7.0	10.2	15	14	36	OC - 77
35	8.2	8.0	11.2	18	15	41	OC - 78
50	10.2	9.5	13.1	24	18	50	OC - 79
70	10.2	11.8	15.8	28	23	58	OC - 80
95	12.7	13.5	18.7	32	25	66	OC - 81
120	12.7	15.5	21.1	34	29	73	OC - 82
150	12.7	16.5	22.9	38	30	79	OC - 83
185	16.2	18.5	25.7	42	35	87	OC - 84
225	16.2	21.0	28.2	44	40	92	OC - 85
240	16.2	22.5	30.5	48	42	100	OC - 86
300	20.3	25.0	34.0	54	45	110	OC - 87
400	20.3	29.5	39.5	62	54	125	OC - 88
500	20.3	32.0	42.8	62	58	137	OC - 89
625	20.3	36.0	46.8	70	65	148	OC - 90

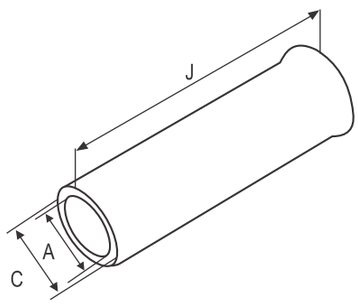


Braco End Sealing Ferrules are manufactured from electrolytic copper. These ferrules are used when a perfect connection is needed atthe end of a cable. Some cables, especially those with small diameters, may conduct badly in electrical connections without an End Sealing Ferrule. By using these ferrules strands deviation can be avoided and the risk of cable breakage can be reduced. Also these ferrules create a long lasting contact pressure and a large contact surface. Tinning is provided to give better finish, to avoid oxidisation and to achieve maximum corrosion protection.

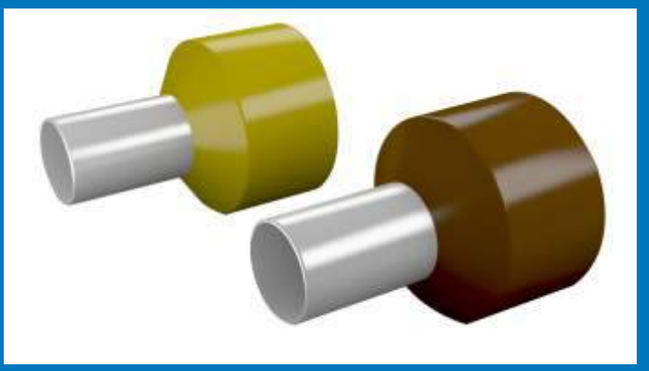
COPPER CRIMPING END SEALING FERRULES

Material Copper BS: 1977
Finish: Electro Tinned

Size Sq. mm	Dimensions			Code No.
	A	C	J	
0.5	1.0-1.1	1.4-1.5	6	ES - 08
0.75	1.4-1.5	1.8-1.9	6	ES - 09
1.0	1.6-1.7	2.0-2.1	6	ES - 10
	1.6-1.7	2.0-2.1	10	ES - 11
1.5	1.8-1.9	2.2-2.3	7	ES - 12
	1.8-1.9	2.2-2.3	10	ES - 13
2.5	2.3-2.4	2.7-2.8	7	ES - 14
	2.3-2.4	2.7-2.8	12	ES - 15
4.0	2.8-2.9	3.2-3.3	9	ES - 16
	2.8-2.9	3.2-3.3	12	ES - 17
6.0	3.7-3.8	4.1-4.2	10	ES - 18
	3.7-3.8	4.1-4.2	12	ES - 19
	3.7-3.8	4.1-4.2	15	ES - 20
10	4.6-4.7	5.0-5.1	12	ES - 21
	4.6-4.7	5.0-5.1	15	ES - 22
	4.6-4.7	5.0-5.1	18	ES - 23
16	5.9-6.0	6.3-6.4	12	ES - 24
	5.9-6.0	6.3-6.4	15	ES - 25
	5.9-6.0	6.3-6.4	18	ES - 26



Braco End Sealing Insulated Ferrules are manufactured from electrolytic copper. These ferrules have dimensions according to DIN 46228 and are used when a perfect connection is needed at the end of a cable. Some cables, especially those with small diameters, may conduct badly in electrical connections without an End Sealing Ferrule. By using these ferrules strands deviation can be avoided and the risk of cable breakage can be reduced. Also these ferrules create a long lasting contact pressure and a large contact surface. Tinning is provided to give better finish, to avoid oxidisation and to achieve maximum corrosion protection.

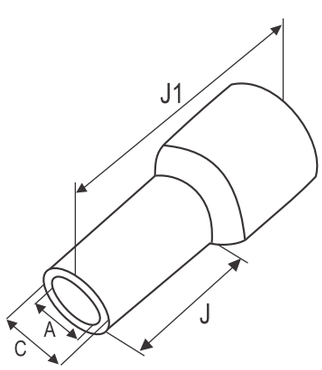


The Insulation Sleeve is manufactured from PP (Polypropylene). We also offer end terminals with insulation colours according to the most common colour system in the market.The colour of the insulation sleeves characterises the Cross section area of the conductor

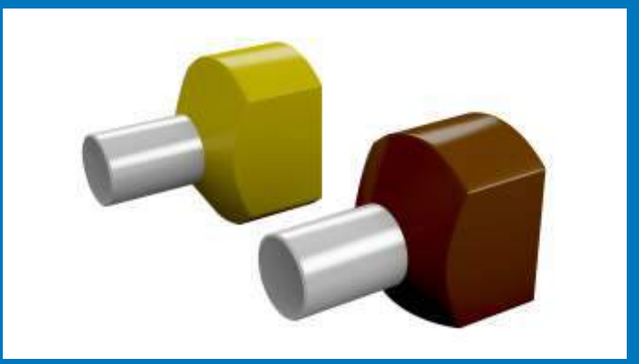
COPPER CRIMPING END SEALING INSULATED FERRULES

Material Copper BS: 1977
Finish: Electro Tinned

Size Sq. mm	Dimensions				Code No.
	A	C	J	J-1	
0.5	1	1.4	8	12	ESI-0.5-8
0.75	1.4	1.8	8	12	ESI-0.75-8
1	1.6	2	8	12	ESI-1-8
	1.6	2	10	16	ESI-1-10
1.5	1.8	2.2	8	14	ESI-1.5-8
	1.8	2.2	10	16	ESI-1.5-10
	1.8	2.2	12	18	ESI-1.5-12
2.5	2.3	2.7	8	14	ESI-2.5-8
	2.3	2.7	10	16	ESI-2.5-10
	2.3	2.7	12	18	ESI-2.5-12
4	2.8	3.2	8	16	ESI-4-8
	2.8	3.2	10	18	ESI-4-10
	2.8	3.2	12	20	ESI-4-12
6	3.7	4.1	10	18	ESI-6-10
	3.7	4.1	12	20	ESI-6-12
	3.7	4.1	16	24	ESI-6-16
10	4.6	5	12	22	ESI-10-12
	4.6	5	16	26	ESI-10-16
16	5.9	6.3	12	22	ESI-16-12
	5.9	6.3	16	26	ESI-16-16
25	7.5	7.9	16	29	ESI-25-16
35	8	8.7	16	29	ESI-35-16
50	9.7	10.3	20	36	ESI-50-20



Braco End Sealing Insulated Ferrules are manufactured from electrolytic copper. These ferrules have dimensions according to DIN 46228 and are used when a perfect connection is needed at the end of a cable. Some cables, especially those with small diameters, may conduct badly in electrical connections without an End Sealing Ferrule. By using these ferrules strands deviation can be avoided and the risk of cable breakage can be reduced. Also these ferrules create a long lasting contact pressure and a large contact surface. Tinning is provided to give better finish, to avoid oxidisation and to achieve maximum corrosion protection.

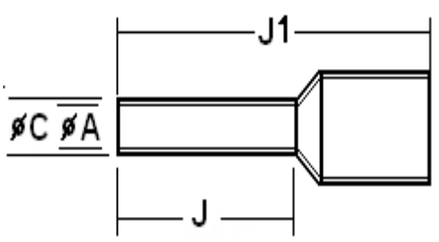


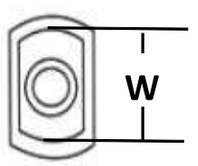
The Insulation Sleeve is manufactured from PP (Polypropylene). We also offer end terminals with insulation colours according to the most common colour system in the market. The colour of the insulation sleeves characterises the Cross section area of the conductor

COPPER CRIMPING END SEALING INSULATED FERRULES - FOR TWIN CABLE (Bootlace Ferrules-Twin Cable)

Material: Copper BS-1977
Finish : Electro Tinned

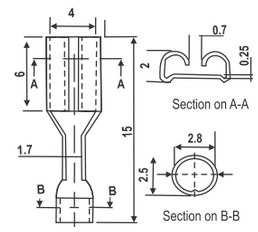
Size Sq. mm	Dimensions			J-1	W	Braco Cat. No.
	A	C	J			
0.5	1.5	1.8	8	15	4.7	ESIT-0.5-8
0.75	1.8	2.1	8	15	5	ESIT-0.75-8
1	2	2.3	8	15	5.4	ESIT-1-8
	2	2.3	10	17	5.4	ESIT-1-10
1.5	2.2	2.5	8	16	6.6	ESIT-1.5-8
	2.2	2.5	10	16	6.6	ESIT-1.5-10
	2.2	2.5	12	20	6.6	ESIT-1.5-12
2.5	2.8	3.2	10	18.5	7.8	ESIT-2.5-10
	2.8	3.2	12	21.5	7.8	ESIT-2.5-12
4	3.7	4.1	12	23	8.8	ESIT-4-12
6	4.8	5.2	12	26	10	ESIT-6-12
10	6.4	6.8	12	26	13	ESIT-10-12
16	8.3	8.9	12	30	18.4	ESIT-16-12





Braco snap on Terminals are made out of Phosporus bronze These are used in electrical and electronic installations like PCB mounted devices, electronic power relays etc.These can also be provided with insulation.

SNAP ON TERMINALS



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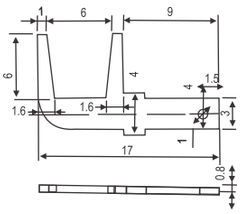
8368



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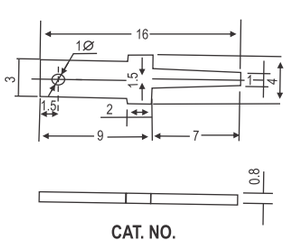

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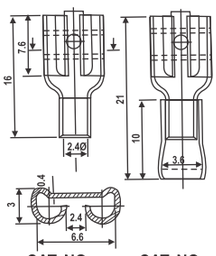

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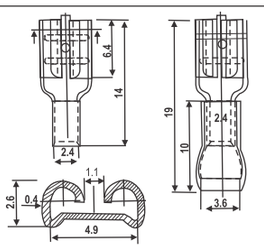

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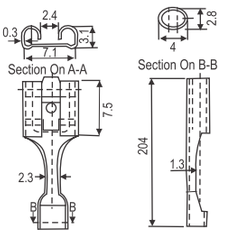

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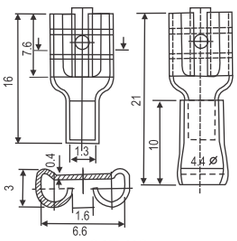

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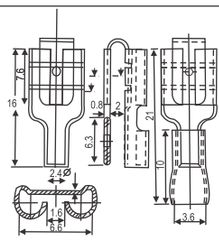

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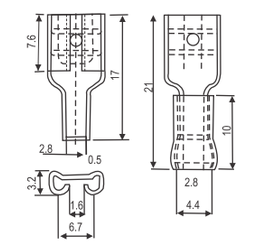

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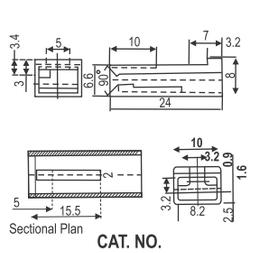

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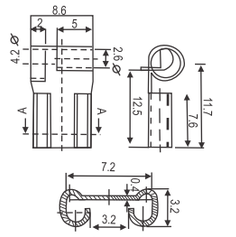

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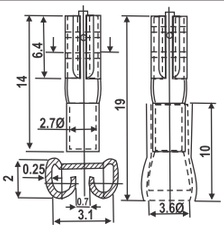

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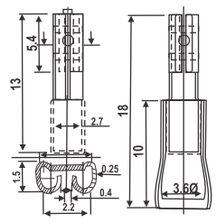

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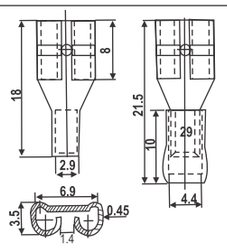

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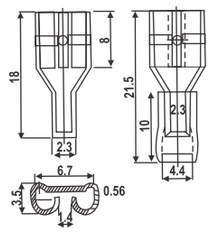

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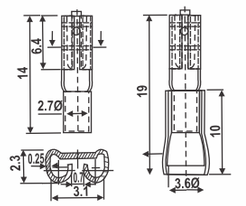

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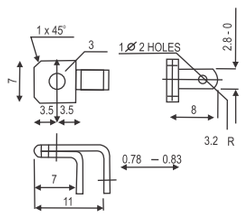

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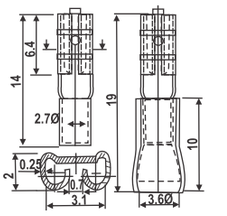

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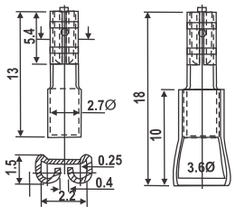

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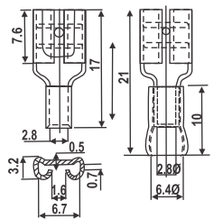

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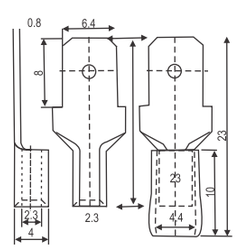

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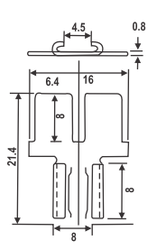

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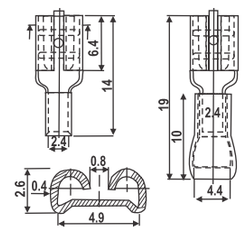

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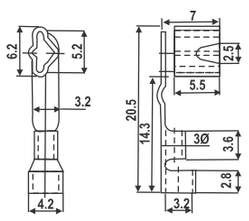

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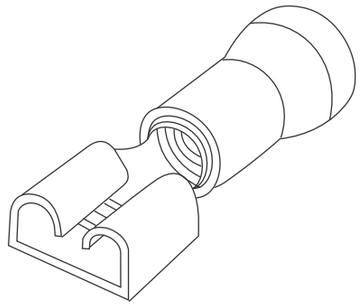


COPPER LUGS AND FERRULES

PROCESS OF MANUFACTURING CABLE LUGS

SCOPE OF LUGS: The Cable Lugs are used for termination of cables to the equipments and connectors are used to extend the cables. The cable sizes vary as per the electric current requirements. Generally cable sockets/terminals used shall be of E. C. Grade copper. The cable sockets shall be duly tin plated for outer finish and to withstand the corrosion while storage and use.

PROCESS

A) EXTRUSIONS: The cable Lugs & Connectors of various sizes are manufactured out of copper EC Grade wire bars. These wire bars are cut into 3 to 4 parts for melting. These are refined and are casted into round ingots as per required sizes. These ingots under go a process of cutting, which finally turns into the extrusion billets. These billets are drilled as per required I.D. of the internal diameter of tubes. These are further heated in gas fired furnaces to appropriate extrusion temperature. The heated billets are then extruded by hydropneumatic press into the mother tubes of required sizes. Three types of mother tubes are used for copper cable sockets.

I.D.	50	38	37.5
O.D.	64	50	40

B) TUBE DRAW: The copper mother tubes are finally made to required size of copper tubes which varies as per size of cable. The chart show the various sizes of copper tubes used. The dimension 'C' is 0. D. and 'A' is I. D. of Tube required for the particular cable terminals. The process is called tube drawing process. The mother tubes are drawn in draw bench with required T.C. dies of O.D, and plug for required I. D.

During the process the copper undergoes annealing process and each time the tube made to smaller size by swaging machine so that the pipe to be pulled at the beginning of pipe. This swaged pipes are pulled in draw bench every time it passes through small T.C. dies to reduce the diameters and every time these are annealed in heating furnace which gives burning and annealing loss.

C) CABLE LUGS MANUFACTURING: The drawn tubes are finally cut into the pieces in cutting machine to the required length of cable lugs and are chamfered. The cut tubes are finally annealed in annealing furnace and forged to make the plam of socket and in cutting process the front arc and hole is made. The lugs are then marked with required code number and size of cable. After this the lugs are ready for plating.

D) TINNING PROCESS: The cable lugs are finally acid tinned in plating plant. The tinning process is required for surface finish as well as to avoid corrosion whilst storage and use.

The cable sockets are finally checked and packed in boxes with sizes marked on the box. These boxes are finally packed in master carton for the final dispatch in export worthy packing.

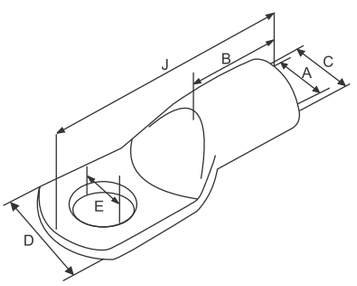
All the process checked at each stage as per the quality assurance plan.

Braco soldering type copper terminals are made out of EC grade copper and used where high value of current flow is desired and due to soldering loose terminations are avoided, thereby preventing heating at termination ends. Terminals are tin plated to avoid oxidization and to achieve maximum corrossion protection.

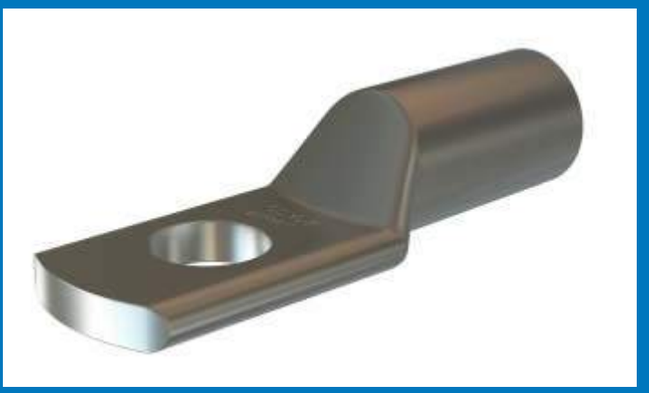
SOLDERING TYPE COPPER TERMINALS (LIGHT DUTY)

Material Copper BS :1977
Finish : Electro Tinned

AMPS	Dimensions						Code No.
	E	A	C	D	B	J	
15	3.2	3.9	4.8	7	7	19	CTS - 01
30	5.1	5.2	6.3	9	9	23	CTS - 02
60	6.4	8.1	9.5	14	14	36	CTS - 03
100	9.5	10.9	12.7	19	19	49	CTS - 04
150	9.5	13.9	15.9	24	23	57	CTS - 05
200	12.7	16.6	19.0	28	27	66	CTS - 06
300	12.7	19.0	22.2	33	28	80	CTS - 07
400	15.9	22.2	25.4	38	32	89	CTS - 08
500	19.0	25.4	28.6	43	38	105	CTS - 09
600	19.0	27.8	31.8	47	44	115	CTS - 10
800	23.8	31.7	38.1	56	47	121	CTS - 11
1000	23.8	38.1	44.5	66	56	152	CTS - 12
1000	-	50.0	57.3	85	62	164	CTS - 95



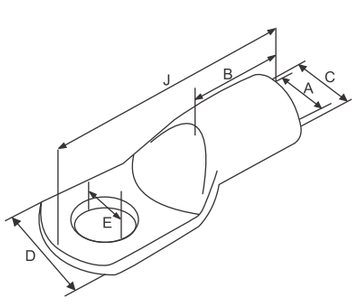
Braco soldering type copper terminals are made out of EC grade copper and used where high value of current flow is desired and due to soldering loose terminations are avoided, thereby preventing heating at termination ends. Terminals are tin plated to avoid oxidization and to achieve maximum corrossion protection.



SOLDERING TYPE COPPER TERMINALS (HEAVY DUTY)

Material Copper BS :1977
Finish : Electro Tinned

AMPS	Dimensions						Code No.
	E	A	C	D	B	J	
15	5.1	4.8	6.2	9	10	24	BSS - 6
30	7.1	6.4	8.0	12	13	33	BSS - 7
60	10.3	9.5	11.3	17	14	44	BSS - 8
100	11.9	11.9	13.9	21	19	55	BSS - 9
150	13.5	14.3	17.1	25	22	62	BSS - 10
200	13.5	16.7	19.9	29	29	78	BSS - 11
300	16.7	20.6	24.2	36	32	86	BSS - 12
400	16.7	23.8	27.8	41	38	100	BSS - 13
500	19.8	26.2	31.4	46	44	111	BSS - 14
300	18.0	26.2	34.2	49	44	111	BSS - 28
500	22.0	31.7	40.9	59	48	121	BSS - 29
630	26.0	36.5	46.1	67	56	139	BSS - 30

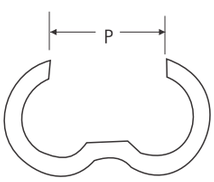


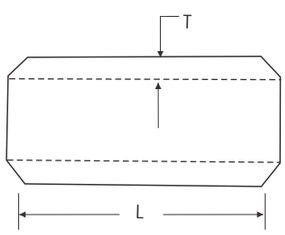
Braco Soldering Type Weak Back Ferrules are manufactured out of copper and are used to solder straight through joints. Tinning is provided to give better finish, to avoid oxidisation and to achieve maximum corrossion protection.

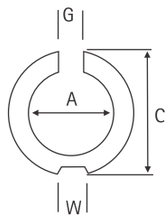
SOLDERING TYPE COPPER WEAK BACK FERRULES

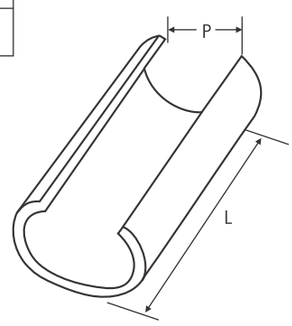
Material Copper BS :1997
Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	A	C	G	B	T	P	
6	3.9	5.5	2	20	0.8	3	WB-79
10	4.5	6.2	2	25	0.8	4	WB-80
16	5.5	7.1	2	25	1.0	5	WB-81
25	6.9	8.8	2	30	1	7	WB-82
35	8.3	10.6	2	35	1.2	8	WB-83
50	9.6	12.4	2	40	1.2	9	WB-84
70	11.3	14.7	3	45	1.4	12	WB-85
95	13.5	17.4	3	50	1.4	13	WB-86
120	15.1	19.4	4	55	1.6	15	WB-87
150	16.6	21.2	4	60	1.8	16	WB-88
185	18.5	23.5	4	65	2.2	18	WB-89
225	20.5	24.9	5	75	2.2	20	WB-90
240	21.1	26.5	5	80	2.2	21	WB-91
300	23.6	30	5	85	2.8	23	WB-92
400	26.8	34.8	7	95	3.1	27	WB-93
500	30.1	39	7	105	3.5	30	WB-94
625	35	45	8	115	4	33	WB-95









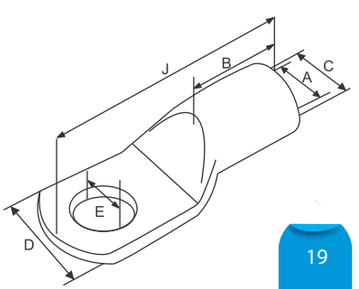
Braco Copper Tube Crimping Terminals are manufactured from electrolytic copper tube. The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out. These are used for terminating any size of cables to terminating electrical switching equipments, where vibration is critical.

Terminals are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation. In application subject to vibration, terminals still have to perform a reliable connection. Annealing plays a vital role in avoiding cracking or breaks between the barrel and palm. Tin plating on the terminals avoids oxidization and achieves maximum corrossion protection

COPPER CRIMPING TERMINALS FOR ALUMINIUM CONDUCTOR (LIGHT DUTY)

Material : Copper BS :1977 Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
2.5	5.2	2.4	4.0	9	7	20	CT - 05
4	6.2	3.1	4.8	11	7	22	CT - 06
6	6.2	3.8	5.5	11	9	24	CT - 07
10	6.2	4.4	6.2	11	9	24	CT - 08
16	6.2	5.3	7.1	11	12	30	CT - 09
25	6.2	7.0	9.0	13	12	37	CT - 10
35	6.2	8.0	10.0	15	12	37	CT - 11
	8.2	8.0	10.0	15	12	37	CT - 12
50	6.2	9.2	11.2	16	16	45	CT - 13
	8.2	9.2	11.2	16	16	45	CT - 14
	10.2	9.2	11.2	16	16	45	CT - 15
70	8.2	11.5	13.8	20	18	56	CT - 16
	10.2	11.5	13.8	20	18	56	CT - 17
	12.7	11.5	13.8	20	18	56	CT - 18
95	10.2	12.8	15.6	23	20	58	CT - 19
	12.7	12.8	15.6	23	20	58	CT - 20
120	10.2	14.8	17.8	26	22	62	CT - 21
	12.7	14.8	17.8	26	22	62	CT - 22
	16.2	14.8	17.8	26	22	62	CT - 23
150	10.2	16.0	19.6	28	26	70	CT - 24
	12.7	16.0	19.6	28	26	70	CT - 25
	16.2	16.0	19.6	28	26	70	CT - 26
185	12.7	18.0	22.0	32	30	83	CT - 27
	16.2	18.0	22.0	32	30	83	CT - 28
225	16.2	20.0	24.0	35	34	95	CT - 231
240	16.2	22.0	26.0	38	36	97	CT - 29
	20.3	22.0	26.0	38	36	97	CT - 30
300	16.2	24.0	28.7	42	39	103	CT - 31
	20.3	24.0	28.7	42	39	103	CT - 32
400	20.3	28.0	33.2	49	44	116	CT - 33
500	20.3	30.0	36.0	53	48	120	CT - 34
630	20.3	35.0	41.5	61	55	137	CT - 35
800	-	39.0	46.3	67	65	165	CT - 62
1000	-	43.0	53.8	76	90	210	CT - 76



Braco Copper tube crimping terminals are manufactured from electrolytic copper tube.The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out. These are used for terminating any size of cables to terminating electrical switching equipments ,where vibration is critical.

Terminals are annealed to guarantee optimum ductility which is an obsolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation . In application subject to vibration ,terminals still have to perform a reliable connection ,annealing plays a vital role in avoiding cracking or breaks between the barrel and the palm.

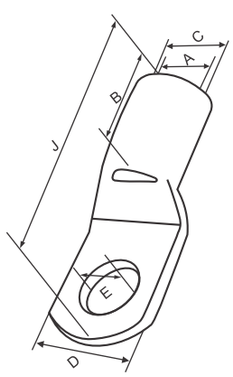
The presence of inspection hole facilitates full insertion of conductor while the barrel length has been designed to allow easy and accurate position dies during the crimping operation.

Tin plating on the terminals avoids oxidation and achieves maximum corrosion protection.

COPPER CRIMPING TERMINALS WITH INSPECTION HOLE (LIGHT DUTY)

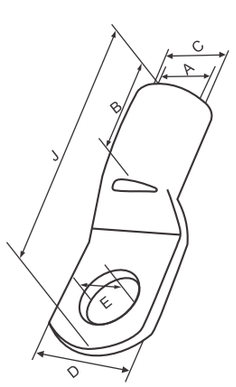
Material Copper BS :1977
Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
35	6.5	8.0	10.0	15.3	12	35	CA 35-6
	8.4	8.0	10.0	15.3	12	35	CA 35-8
	10.5	8.0	10.0	18	12	38	CA 35-10
	12.7	8.0	10.0	20	15	42	CA 35-12
50	6.5	9.2	11.2	16	16	43	CA 50-6
	8.4	9.2	11.2	16	16	43	CA 50-8
	10.5	9.2	11.2	16	16	43	CA 50-10
	12.7	9.2	11.2	17	16	43	CA 50-12
70	6.4	11.6	13.8	20	18	50	CA 70-6
	8.4	11.6	13.8	20	18	50	CA 70-8
	10.5	11.6	13.8	20	18	50	CA 70-10
	13	11.6	13.8	20	18	50	CA 70-12
95	8.4	12.8	15.6	23	20	55	CA 95-8
	10.5	12.8	15.6	23	20	55	CA 95-10
	13	12.8	15.6	23	20	55	CA 95-12
120	8.5	14.8	17.8	26	22	60	CA 120-8
	10.5	14.8	17.8	26	22	60	CA 120-10
	12.7	14.8	17.8	26	22	60	CA 120-12



COPPER CRIMPING TERMINALS WITH INSPECTION HOLE (LIGHT DUTY)

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
120	15	14.8	17.8	26	22	64	CA 120-14
	17	14.8	17.8	28	22	64	CA 120-16
	21	14.8	17.8	28	22	64	CA 120-20
150	8.4	16	19.6	28	26	69	CA 150-8
	10.5	16	19.6	28	26	69	CA 150-10
	12.7	16	19.6	28	26	69	CA 150-12
	17	16	19.6	28	26	69	CA 150-16
185	10.5	18	22	32	32	78	CA 185-10
	12.7	18	22	32	32	78	CA 185-12
	15	18	22	32	32	78	CA 185-14
	17	18	22	32	32	78	CA 185-16
	21	18	22	32	32	78	CA 185-20
240	10.5	22	26	38	38	92	CA 240-10
	12.7	22	26	38	38	92	CA 240-12
	17	22	26	38	38	92	CA 240-16
	21	22	26	38	38	92	CA 240-20
300	12.7	24	28.7	42	42	101	CA 300-12
	17	24	28.7	42	42	101	CA 300-16
	21	24	28.7	42	42	101	CA 300-20
400	17	28	33.2	49	44	114	CA 400-16
	21	28	33.2	49	44	114	CA 400-20
500	17	30	36	53	48	117	CA 500-16
	21	30	36	53	48	117	CA 500-20
	-	30	36	53	48	117	CA 500BL
630	13	35	41.5	61	69	145	CA 630-12
	17	35	41.5	61	69	145	CA 630-16
	21	35	41.5	61	69	145	CA 630-20
	-	35	41.5	61	69	145	CA 630BL
	8.5	35	41.5	61	69	145	CA 630-4X8
	10.5	35	41.5	61	69	145	CA 630-4X10
	13	35	41.5	61	69	145	CA 630-4X12
800	21	39	46.3	67	78	170	CA 800-20
	-	39	46.3	67	78	170	CA 800-BL
1000	-	43	53.8	76	90	200	CA-1000BL



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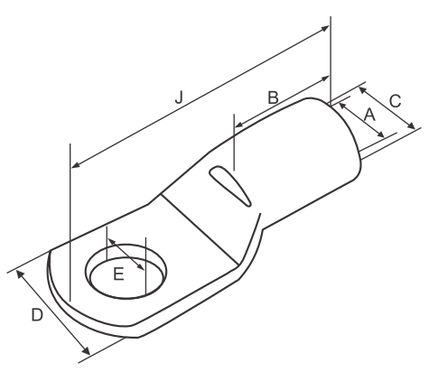
The presence of inspection hole facilitates full insertion of conductor while the barrel length has been designed to allow easy and accurate position dies during the crimping operation.

Tin plating on the terminals avoids oxidation and achieves maximum corrosion protection.

COPPER CRIMPING TERMINALS WITH INSPECTION HOLE FOR COPPER CONDUCTOR (HEAVY DUTY)

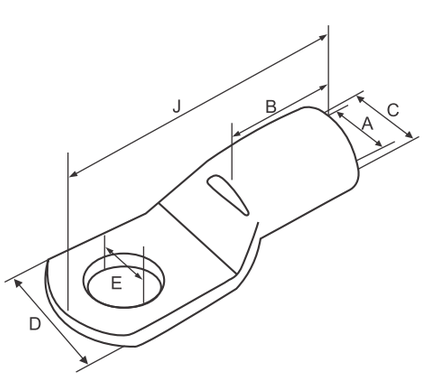
Material Copper BS :1977
Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
1.5	4.2	1.8	3.7	8	5	16	1.5-4 CT-711
	5.2	1.8	3.7	8	5	16	1.5-5 CT-538
	6.4	1.8	3.7	9	5	18	1.5-6 CT-539
	8.4	1.8	3.7	12	5	22	1.5-8
2.5	4.2	2.4	4	8	7	18	2.5-4 CT-388
	5.2	2.4	4	9	7	20	2.5-5 CT-540
	6.5	2.4	4	10	7	20	2.5-6 CT-541
	8.4	2.4	4	11.5	7	26	2.5-8 CT-762
4	4.2	3.1	4.8	8	7	20	4-4 CT-764
	5.2	3.1	4.8	9	7	20	4-5 CT-389
	6.5	3.1	4.8	10	7	20	4-6 CT-543
	8.4	3.1	4.8	11.5	7	25	4-8 CT-763
6	4.2	3.8	5.5	9	9	23	6-4
	5.2	3.8	5.5	10	9	23	6-5 CT-390
	6.5	3.8	5.5	12	9	26	6-6 CT-544
	8.4	3.8	5.5	12	9	26	6-8 CT-545
	10.5	3.8	5.5	15	9	32	6-10 CT-854
10	5.2	4.5	6.2	10	9	26	10-5 CT-822
	6.5	4.5	6.2	11	9	26	10-6 CT-353
	8.4	4.5	6.2	12	9	26	10-8 CT-547
	10.5	4.7	7.1	14	10	32	10-10 CT-855
	12.7	4.7	7.1	17	10	33	10-12 CT-856



COPPER CRIMPING TERMINALS WITH INSPECTION HOLE FOR COPPER CONDUCTOR (HEAVY DUTY)

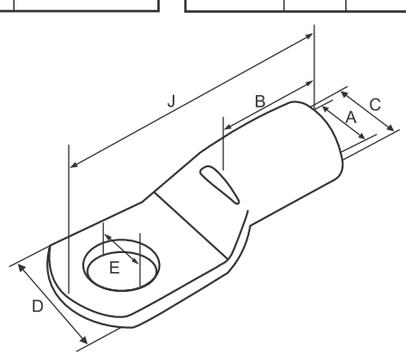
Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
16	5.2	5.4	7.1	10	12	30	16-5 CT-696
	6.4	5.4	7.1	11	12	30	16-6 CT-354
	8.4	5.4	7.1	12	12	31	16-8 CT-549
	10.5	5.5	7.9	14.5	13	35	16-10 CT-657
	12.7	5.5	7.9	17	13	40	16-12 CT-858
	16.5	5.5	7.9	22	13	40	16-16
25	6.4	6.8	8.8	13	12	32	25-6 CT-355
	8.4	6.8	8.8	13	12	32	25-8 CT-551
	10.5	6.8	8.8	16	12	38	25-10 CT-552
	12.7	6.8	8.8	16.5	12	40	25-12 CT-765
	16.5	6.8	8.8	24	13	45	25-16
35	6.5	8.2	10.6	15.3	12	35	35-6 CT-542
	8.4	8.2	10.6	15.3	12	35	35-8 CT-356
	10.5	8.2	10.6	16	12	38	35-10 CT-554
	12.7	8.2	10.6	17	15	42	35-12 CT-853
	16.5	8.2	10.6	24	14	50	35-16
50	6.5	9.5	12.4	18	16	43	50-6 CT-746
	8.4	9.5	12.4	18	16	43	50-8 CT-357
	10.5	9.5	12.4	18	16	43	50-10 CT-556
	12.7	9.5	12.4	18	16	43	50-12 CT-698
	15	9.5	12.4	20	17	49	50-14
	17	9.5	12.4	24	18	54	50-16 CT-699
	21	9.5	12.4	30	18	54	50-20
70	6.4	11.2	14.7	21	18	50	70-6 CT-748
	8.4	11.2	14.7	21	18	50	70-8 CT-557
	10.5	11.2	14.7	21	18	50	70-10 CT-358
	13	11.2	14.7	21	18	50	70-12 CT-559
	15	11.2	14.7	25	20	55	70-14 CT-795
	17	11.2	14.7	25	20	55	70-16 CT-780
	21	11.2	14.7	26	20	55	70-20 CT-781



COPPER CRIMPING TERMINALS WITH INSPECTION HOLE FOR COPPER CONDUCTOR (HEAVY DUTY)

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
95	6.4	13.5	17.4	25	20	55	95-6
	8.4	13.5	17.4	25	20	55	95-8 CT-752
	10.5	13.5	17.4	25	20	55	95-10 CT-359
	13	13.5	17.4	25	20	55	95-12 CT-561
	15	13.5	17.4	26	20	55	95-14 CT-796
	17	13.5	17.4	26	22	60	95-16 CT-672
	21	13.5	17.4	28	22	64	95-20 CT-673
120	6.4	15	19.4	28	22	64	120-6
	8.5	15	19.4	28	22	64	120-8 CT-782
	10.5	15	19.4	28	22	64	120-10 CT-700
	12.7	15	19.4	28	22	64	120-12 CT-241
	15	15	19.4	28	22	64	120-14 CT-797
	17	15	19.4	28	22	64	120-16 CT-546
	21	15	19.4	28	22	64	120-20 CT-798
150	8.4	16.5	21.2	30	26	69	150-8 CT-783
	10.5	16.5	21.2	30	26	69	150-10 CT-676
	12.7	16.5	21.2	30	26	69	150-12 CT-242
	15	16.5	21.2	30	26	69	150-14 CT-799
	17	16.5	21.2	30	26	69	150-16 CT-564
	21	16.5	21.2	30	26	69	150-20 CT-565
185	8.5	18.5	23.5	34	32	78	185-8
	10.5	18.5	23.5	34	32	78	185-10 CT-652
	12.7	18.5	23.5	34	32	78	185-12 CT-639
	15	18.5	23.5	34	32	78	185-14 CT-800
	17	18.5	23.5	34	32	78	185-16 CT-243
	21	18.5	23.5	34	32	78	185-20 CT-704

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
240	8.5	21	26.5	38	38	92	240-8
	10.5	21	26.5	38	38	92	240-10 CT-787
	12.7	21	26.5	38	38	92	240-12 CT-705
	15	21	26.5	38	38	92	240-14 CT-801
	17	21	26.5	38	38	92	240-16 CT-244
	21	21	26.5	38	38	92	240-20 CT-567
300	10.5	23.5	30	43	42	101	300-10 CT-568
	12.7	23.5	30	43	42	101	300-12 CT-597
	15	23.5	30	43	42	101	300-14 CT-802
	17	23.5	30	43	42	101	300-16 CT-245
	21	23.5	30	43	42	101	300-20 CT-569
400	10.5	26.8	34.8	50	44	114	400-10
	13	26.8	34.8	50	44	114	400-12
	15	26.8	34.8	50	44	114	400-14
	17	26.8	34.8	50	44	114	400-16 CT-246
	21	26.8	34.8	50	44	114	400-20 CT-571
500	13	30	39	56	48	124	500-12
	17	30	39	56	48	124	500-16 CT-596
	21	30	39	56	48	124	500-20 CT-247
630	-	35	45	65	56	144	630BL CT-761
	17	35	45	65	56	144	630-16 CT-807
	21	35	45	65	56	144	630-20 CT-248
800	-	39	50.6	73	78	170	800BL CT-599
	21	39	50.6	73	78	170	800-20 CT-808
1000	-	43	53.7	81	90	200	1000BL CT-590
	21	43	53.7	81	90	200	1000-20 CT-809

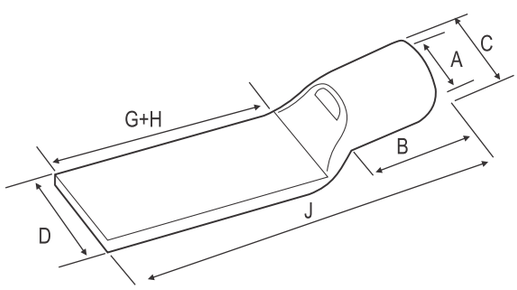


Braco copper long palm terminals are manufactured from electrolytic copper tube. These are used where more secured termination is required as it can easily accommodate two bolts to reduce drift. All terminals are standard with blank palm and stud holes can be punched to order.These terminals are normally used in vibrating applications. The presence of inspection hole facilitates full insertion of conductor. The terminals are tin plated to avoid oxidation and to achieve maximum corrosion protection.

EXTENDED PALM BLANKS COPPER CRIMPING TERMINAL ENDS FOR COPPER CONDUCTORS

Material Copper BS :1977
Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	A	C	D	B	G+H	J	
50	9.5	12.4	18	16	42	64	CT - 466
70	11.2	14.7	21	18	50	75	CT - 467
95	13.5	17.4	25	20	52	81	CT - 468
120	15.0	19.4	28	22	56	88	CT - 469
150	16.5	21.2	30	26	64	101	CT - 470
185	18.5	23.5	34	32	68	112	CT - 471
240	21.0	26.5	38	38	80	132	CT - 472
300	23.5	30.0	43	42	88	145	CT - 473
400	28.5	36.5	53	44	104	166	CT - 474
500	30.0	39.0	56	48	112	180	CT - 475
625	35.0	45.0	65	56	132	210	CT - 476



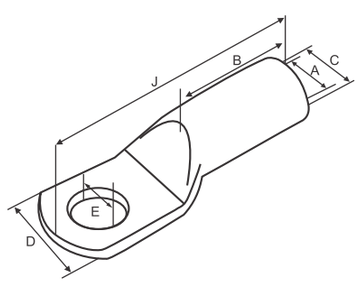
Braco Copper Long Barrel Tube Terminals are made from high purity copper tube and are annealed to avoid cracking or breaks. The increased barrel length ensures enhanced electrical and mechanical performance in heavy duty application. The absence of an inspection hole prevents the entry of water or moisture into crimped joints making them suitable for outdoor applications. The terminals are tin plated to avoid oxidization and to achieve maximum corrossion protection.

The increased barrel length ensures enhanced electrical and mechanical performance in heavy duty application. The absence of an inspection hole prevents the entry of water or moisture into crimped joints making them suitable for outdoor applications. The terminals are tin plated to avoid oxidization and to achieve maximum corrossion protection.

COPPER CRIMPING TERMINALS FOR COPPER CONDUCTORS (LONG BARREL)

Material Copper BS :1977
Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
25	8.2	6.8	8.8	13	16	41	CT-82
35	8.2	8.2	10.6	15	20	48	CT-83
50	8.2	9.5	12.4	17	26	59	CT-84
70	10.5	11.2	14.7	20	28	66	CT-85
95	12.7	13.5	17.4	24	32	74	CT-86
120	12.7	15	19.4	28	35	82	CT-87
150	12.7	16.5	21.2	30	38	86	CT-88
185	12.7	18.5	23.5	34	43	95	CT-89
240	16.2	21	26.5	38	50	112	CT-90
300	16.2	23.5	30	43	55	120	CT-91
400	20.3	26.8	34.8	50	58	135	CT-92
500	21	30	39	56	70	150	CT-93
630	21	35	45	65	76	165	CT-94
800		39	50.5	73	105	200	CT-95
1000		43	53.7	81	130	240	CT-96



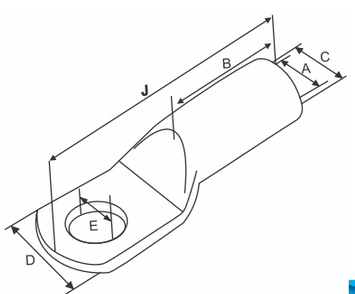
Braco copper tube terminals are manufactured from Electrolytic Copper Tube. The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out. These are used for terminating any size of cable, electrical switching equipments, where vibration is critical.

Terminals are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation. In application subject to vibration terminals still have to perform a reliable connection, annealing plays a vital role in avoiding crackings or breaks between the barrel and palm.

The terminals are designed as per DIN standard 46235. The plating on the terminals avoids oxidization and achieves maximum corrosion protection.

COPPER CRIMPING TERMINALS AS PER DIN STANDARDS

Cable mm2	Stud Hole E	Dimensions (mm2) A	C	B	D	G	H	J	Cat No.
6	5.3	3.8	5.5	10	8.5	6.5	7.5	31	6-5 DIN
	6.5	3.8	5.5	10	8.5	7.5	8.0	32	6-6 DIN
10	6.5	4.5	6.0	10	8.5	7.5	8.0	35	10-6 DIN
	8.5	4.5	6.0	10	8.5	10.0	10.0	37	10-8 DIN
16	6.5	5.5	8.5	20	12	7.5	8.0	43	16-6 DIN
	8.4	5.5	8.5	20	12	10.0	10.0	45	16-8 DIN
	10.5	5.5	8.5	20	17	12.0	12.0	49	16-10 DIN
	13.0	5.5	8.5	20	19	13.0	13.0	50	16-12 DIN
25	6.5	7.0	10.0	20	15	7.5	8.0	47	25-6 DIN
	8.4	7.0	10.0	20	15	10.0	10.0	49	25-8 DIN
	10.5	7.0	10.0	20	17	12.0	12.0	51	25-10 DIN
	13.0	7.0	10.0	20	19	13.0	13.0	52	25-13 DIN
35	8.4	8.2	12.5	20	17	7.5	8.0	50	35-8 DIN
	10.5	8.2	12.5	20	19	10.0	10.0	52	35-10 DIN
	13.0	8.2	12.5	20	21	12.0	12.0	54	35-12 DIN
50	8.4	10.0	14.5	28	22	10.0	10.0	61	50-8 DIN
	10.5	10.0	14.5	28	22	12.0	12.0	63	50-10 DIN
	13.0	10.0	14.5	28	23	13.0	13.0	64	50-12 DIN
	17.0	10.0	14.5	28	28	14.5	14.5	66	50-16 DIN
70	10.5	11.5	16.5	28	24	10.0	10.0	64	70-10 DIN
	13.0	11.5	16.5	28	24	12.0	12.0	66	70-12 DIN
	17.0	11.5	16.5	28	32	13.0	13.0	67	70-16 DIN
	21.0	11.5	16.5	28	32	14.5	14.5	69	70-20 DIN
95	10.5	13.5	19.0	35	28	12.0	12.0	76	95-10 DIN
	13.0	13.5	19.0	35	28	12.0	12.0	76	95-12 DIN
	17.0	13.5	19.0	35	32	13.0	13.0	80	95-16 DIN
	21.0	13.5	19.0	35	34	14.5	14.5	82	95-20 DIN
120	10.5	15.5	21.0	35	32	18.0	16.0	83	120-10 DIN
	13.0	15.5	21.0	35	32	19.0	17.0	84	120-12 DIN
	17.0	15.5	21.0	35	32	15.0	19.0	87	120-16 DIN
	21.0	15.5	21.0	35	32	16.0	20.0	88	120-20 DIN
150	10.5	17.0	23.5	35	34	15.0	16.0	92	150-10 DIN
	13.0	17.0	23.5	35	34	16.0	17.0	93	150-12 DIN
	17.0	17.0	23.5	35	34	19.0	20.0	96	150-16 DIN
	21.0	17.0	23.5	35	40	16.0	20.0	96	150-20 DIN
185	10.5	19.0	25.5	40	37	15.0	16.0	96	185-10 DIN
	13.0	19.0	25.5	40	37	16.0	17.0	97	185-12 DIN
	17.0	19.0	25.5	40	37	19.0	20.0	100	185-16 DIN
	21.0	19.0	25.5	40	40	19.0	20.0	100	185-20 DIN
240	10.5	21.5	29.0	40	42	15.0	16.0	106	240-10 DIN
	13.0	21.5	29.0	40	42	16.0	17.0	107	240-12 DIN
	17.0	21.5	29.0	40	42	19.0	20.0	110	240-16 DIN
	21.0	21.5	29.0	40	46	21.0	20.0	112	240-20 DIN
300	13.0	24.0	32.0	50	48	19.0	22.0	119	300-12 DIN
	17.0	24.0	32.0	50	48	19.0	22.0	119	300-16 DIN
	21.0	24.0	32.0	50	48	21.0	22.0	121	300-20 DIN
400	17.0	27.5	38.5	70	55	25.0	25.0	140	400-16 DIN
	21.0	27.5	38.5	70	55	25.0	25.0	140	400-20 DIN
500	21.0	31.0	42.0	70	60	25.0	25.0	152	500-20 DIN
625	21.0	34.5	44.0	80	60	25.0	25.0	160	652-20 DIN



Braco connectors are designed for jointing low voltage conductors. Made of electrolytic copper tube having the same dimension as CT series lugs, Braco connectors are annealed and Electro tin plated. They feature an internal taper at both ends to ease the introduction of conductor and a dimple (if required) to ensure correct positioning. These connectors can also be provided with insulation. Tinning on connectors provides better finish, avoids oxidisation and achieves maximum corrossion protection

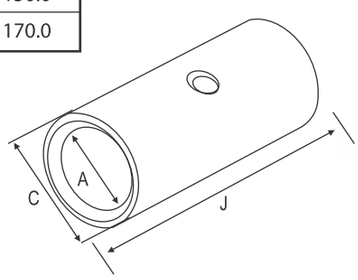
COPPER TUBE IN-LINE CONNECTORS

(Short Barrel)

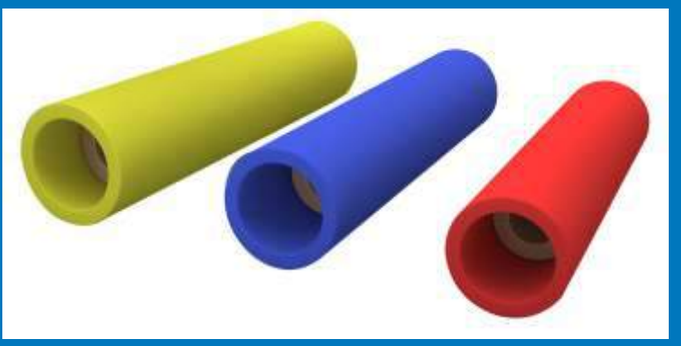
Braco Cat. No.	Size Sq. mm.	Dimensions		
		d1	d3	J
ILC-453	1.5	1.6	3.2	15.0
ILC-454	2.5	2.4	4.0	15.0
ILC-3	4	3.1	4.8	15.0
ILC-4	6	3.8	5.5	15.0
ILC-460	10	4.5	6.2	20.0
ILC-6	16	5.4	7.1	20.0
ILC-24	25	6.8	8.8	32.0
ILC-25	35	8.2	10.6	36.0
ILC-26	50	9.5	12.4	40.0
ILC-51	70	11.2	14.7	40.0
ILC-52	95	13.5	17.4	45.0
ILC-53	120	15.0	19.4	45.0
ILC-54	150	16.5	21.2	55.0
ILC-55	185	18.5	23.5	65.0
ILC-56	240	21.0	26.8	80.0
ILC-57	300	23.5	30.0	85.0
ILC-58	400	26.8	34.8	90.0
ILC-59	500	30.0	39.0	100.0
ILC-61	630	35.0	45.0	110.0
ILC-62	800	39.0	50.6	150.0
ILC-63	1000	43.0	56.2	170.0

(Long Barrel)

Braco Cat. No.	Size Sq. mm.	Dimensions		
		d1	d3	J
ILC-41	1.5	1.6	3.2	22.0
ILC-42	2.5	2.4	4.0	22.0
ILC-43	4	3.1	4.8	22.0
ILC-44	6	3.8	5.5	22.0
ILC-45	10	4.5	6.2	22.0
ILC-46	16	5.4	7.1	35.0
ILC-47	25	6.8	8.8	47.0
ILC-48	35	8.2	10.6	45.0
ILC-49	50	9.5	12.4	50.0
ILC-27	70	11.2	14.7	50.0
ILC-28	95	13.5	17.4	60.0
ILC-29	120	15.0	19.4	65.0
ILC-30	150	16.5	21.2	70.0
ILC-31	185	18.5	23.5	75.0
ILC-32	240	21.0	26.8	89.0
ILC-33	300	23.5	30.0	95.0
ILC-34	400	26.8	34.8	110.0
ILC-35	500	30.0	39.0	117.0
ILC-36	630	35.0	45.0	120.0



Braco connectors are designed for jointing low voltage conductors. Made of electrolytic copper tube having the same dimension as CT series lugs, Braco connectors are annealed and electrolytic ally tin plated. They feature an internal taper at both ends to ease the introduction of conductor and a dimple (if required) to ensure correct positioning. These connectors can also be provided with insulation. Tinning on connectors provides better finish, avoids oxidisation and achieves maximum corrossion protection

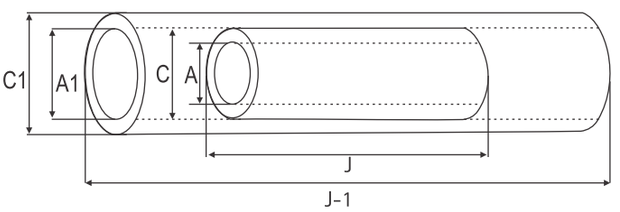


Colour Coding Insulated Terminals:

1.5 2.5 4.6

COPPER TUBE IN-LINE CONNECTORS (INSULATED)

Size Sq. mm	Dimensions						Code No.
	A	C	J	A1	C1	J1	
1.5	1.6	3.2	15	3.3	4.9	25	ILCI - 63
2.5	2.4	4.0	15	4.1	5.5	25	ILCI - 64
4.5	3.5	5.5	15	5.6	7.2	27	ILCI - 65

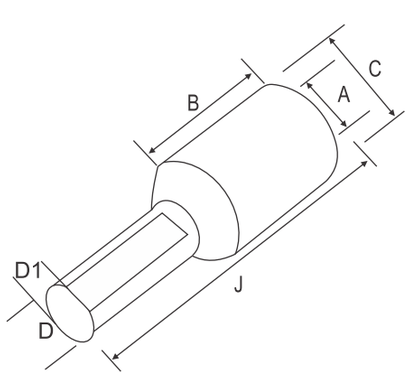


Braco Copper Crimping Reducer Terminals are used to terminate one or more Aluminium conductors to a smaller termination area. These type of terminals are applicable in tunnel type terminal blocks viz. fuse gears, cut-outs, meters etc. Braco is able to produce any Copper Reducing Link that you may require. The presence of copper at termination end ensures high current carrying capacity at smaller surface area. Tinning avoids oxidisation and provides maximum corrosion protection.

COPPER CRIMPING REDUCER TERMINALS FOR ALUMINIUM CONDUCTOR

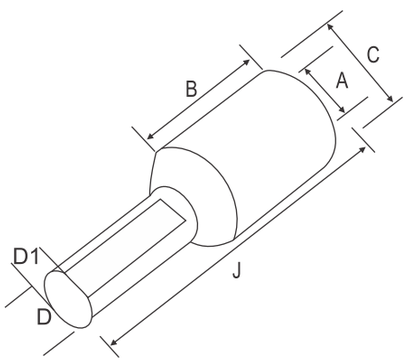
Material : Copper BS 1977
Finish : Electro Tinned

Size Sq. mm	Dimensions						Code No.
	A	C	D	D-1	B	J	
2.5	2.5	4.7	4.5	4.0	6	20	WPC - 1
	2.5	4.7	3.8	3.3	6	20	WPC - 7
4	2.8	4.7	4.5	4.0	6	20	WPC - 15
	2.8	4.7	3.8	3.3	6	20	WPC - 16
6	3.1	4.7	4.5	4.0	6	20	WPC - 17
	3.1	4.7	3.8	3.3	6	20	WPC - 18
10	3.8	5.5	4.5	4.0	9	23	WPC - 19
	3.8	5.5	3.8	3.3	9	23	WPC - 20
	4.4	6.2	4.5	4.0	9	23	WPC - 21
	4.4	6.2	3.8	3.3	9	23	WPC - 22
16	5.3	7.1	6.0	5.5	12	32	WPC - 23
	5.3	7.1	6.0	5.5	12	37	WPC - 24
	5.3	7.1	3.8	3.3	12	30	WPC - 2
25	7.0	9.0	6.0	5.5	12	32	WPC - 25
	7.0	9.0	7.5	6.5	12	37	WPC - 3
35	8.0	10.0	7.5	6.5	12	37	WPC - 4
50	9.2	11.2	7.5	6.5	16	41	WPC - 26
	10.4	14.0	14.0	13.0	18	49	WPC - 5



COPPER CRIMPING REDUCER TERMINALS FOR ALUMINIUM CONDUCTOR

Size Sq. mm	Dimensions						Code No.
	A	C	D	D-1	B	J	
70	11.5	13.8	7.5	6.5	18	43	WPC - 27
	11.5	13.8	11.5	10.5	18	48	WPC - 6
	11.5	13.8	11.5	10.5	18	55	WPC - 28
95	12.8	15.6	11.5	10.5	20	51	WPC - 29
	12.8	15.6	7.5	6.5	20	48	WPC - 31
	12.8	15.6	12.8	11.8	20	58	WPC - 32
120	14.8	17.8	7.5	6.5	22	50	WPC - 34
	14.8	17.8	11.5	10.5	22	60	WPC - 35
150	16.0	19.6	15.6	14.0	26	64	WPC - 10
	16.0	19.6	11.5	10.5	26	64	WPC - 37
185	18.0	22.0	15.6	14.0	32	70	WPC - 30
	18.0	22.0	11.5	10.5	32	70	WPC - 38
225	20.0	26.0	15.6	14.0	38	78	WPC - 39
240	22.0	26.0	16.0	15.0	38	88	WPC - 44
	22.0	26.0	16.0	14.0	38	78	WPC - 43
300	24.0	28.7	16.0	15.0	42	92	WPC - 45
	24.0	28.7	16.0	14.0	42	82	WPC - 47
400	27.0	33.2	16.0	14.0	46	90	WPC - 101

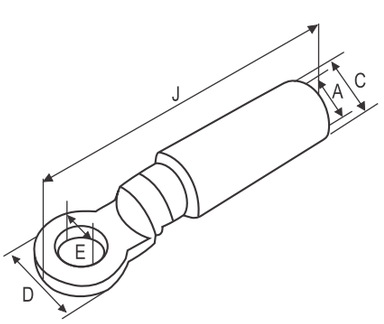


Braco Bi-metallic terminals for aluminium conductor are manufactured from solid materials by friction welding. This method means that aluminium and Copper join through the heat, which develops when aluminium rotates against copper under pressure. This is a superior method to give a complete connection between Aluminium and Copper. Barrels are caped and filled with grease so as to avoid oxidisation of the aluminium.

BI-METALLIC TERMINALS

Material : Aluminium 99.5, E Copper
Surface : Bright

SIZE Sq.mm.	Dimension						CAT NO.
	E	A	C	D	B	J	
16	10.5	5.5	16	24	42	90	BMT-16-10
	13	5.5	16	24	42	90	BMT-16-12
25	10.5	6.5	16	24	42	90	BMT-25-10
	13	6.5	16	24	42	90	BMT-25-12
35	10.5	8	16	24	42	90	BMT-35-10
	13	8	16	24	42	90	BMT-35-12
50	10.5	9.5	20	24	43	92	BMT-50-10
	13	9.5	20	24	43	92	BMT-50-12
70	10.5	11.5	20	24	43	92	BMT-70-10
	13	11.5	20	24	43	92	BMT-70-12
95	13	13.5	20	24	43	92	BMT-95-12
120	13	15	25	30	60	117	BMT-120-12
150	13	16.5	25	30	60	117	BMT-150-12
	17	16.5	25	30	60	117	BMT-150-16
185	13	18.5	32	35	60	124	BMT-185-12
	17	18.5	32	35	60	124	BMT-185-16
240	13	21	32	35	60	124	BMT-240-12
	17	21	32	35	60	124	BMT-240-16
300	13	22.5	34	36	62	130	BMT-300-12
	17	22.5	34	36	62	130	BMT-300-16
400	13	27	40	36	80	152	BMT-400-12
	17	27	40	36	80	152	BMT-400-16
500	13	30	40	36	80	152	BMT-500-12
630	13	34	46	36	70	146	BMT-630-12
	21	34	46	36	70	146	BMT-630-20
800	13	39	54	50	115	230	BMT-800-12
1000	13	43	58	50	115	230	BMT-1000-12

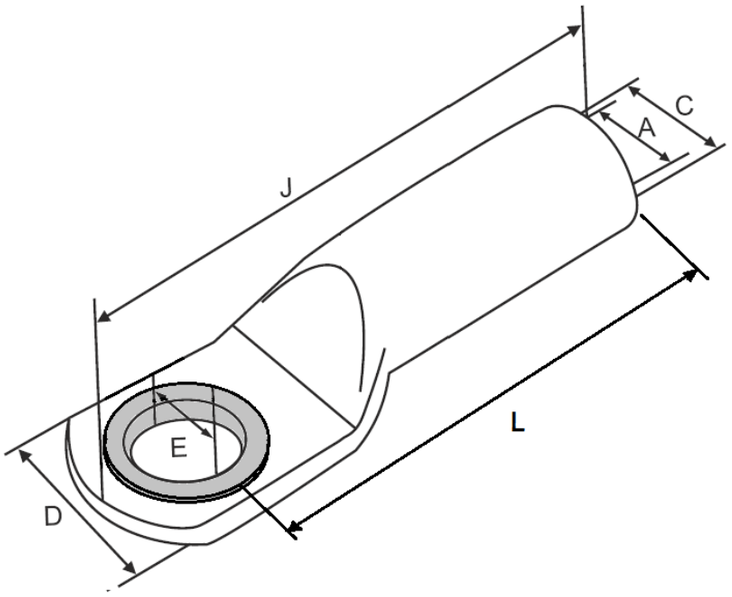


These Bimetallic cable Lugs are manufatured out of Aluminium Tubes of E.C . Grade having conductivity of 60% I.A.C.S. as per IS 5082. These Aluminum Lugs are Fused with E.C. Grade Copper Bushes by fusion process. The bimetallic Surface is sealed with special Green colour anti-galvanic compound for preventing bimetallic galvanic electro corrosion. The barrel of the lug is filled with corrosion inhibiting compound and are supplied with PVC cap.

Bimetallic Terminals - Copper Ring Type

Material : Aluminium 99.5, E Copper
Surface : Bright

"Size Sq.mm."	E	A	C	D	G	H	L	J	Cat No.
150	13	16.5	26	35	18.5	21.5	103	121	BMR-150-12
185	13	18.5	28	40	22	22.5	106	128	BMR-185-12
	17	18.5	28	40	22	22.5	106	128	BMR-185-16
300	13	23.5	33	51	24.5	24.5	124	148	BMR-300-12
	17	23.5	33	51	24.5	24.5	124	148	BMR-300-16
	21	23.5	33	51	24.5	24.5	124	148	BMR-300-20



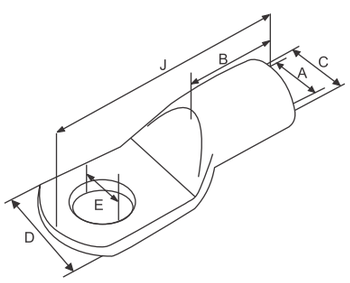
ALUMINIUM LUGS AND FERRULES

Braco Aluminium Crimping Terminals are manufactured out of tubes of purity equal to or greater than 99.5%, having maximum conductivity not less than 60% IACS and are designed as per IS 8309 1993 These are used for terminating all sizes of cables to terminate electrical switching equipments. The absence of an inspection hole prevents the entry of water or moisture into crimped joints making them suitable for outdoor applications.

ALUMINIUM CRIMPING TERMINALS

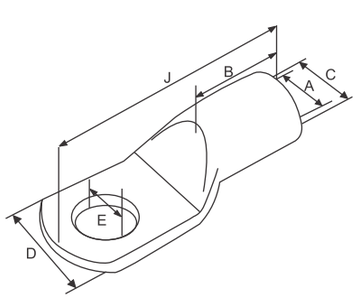
Material : Aluminium IS: 5082 :1981

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
2.5	3.2	2.0	5.5	7	7	18	AT-151
	3.7	2.6	5.5	7	7	18	AT-309
4	4.2	2.9	5.5	7	7	18	AT-155
	5.2	2.9	5.5	9	7	24	AT-317
6	5.2	3.5	5.5	8	7	24	AT-158
	6.4	3.5	5.5	11	7	24	AT-313
10	6.4	4.4	7.4	11	9	30	AT-214
	8.2	4.4	7.4	13	9	30	AT-215
16	6.4	5.4	8.3	11	13	37	AT-252
	8.2	5.4	8.3	12	13	37	AT-216
	10.2	5.4	8.3	15	13	37	AT-217
25	6.4	7.0	9.7	14	16	44	AT-253
	8.2	7.0	9.7	14	16	44	AT-218
	10.2	7.0	9.7	17	16	44	AT-219
	12.7	7.0	9.7	18	16	44	AT-220
35	6.4	8.0	10.8	15	18	47	AT-254
	8.2	8.0	10.8	15	18	47	AT-221
	10.2	8.0	10.8	17	18	47	AT-222
50	8.2	9.3	13	18	22	54	AT-255
	10.2	9.3	13	18	22	54	AT-312
	12.7	9.3	13	18	22	54	AT-224
70	8.2	11.1	15.4	22	26	60	AT-256
	10.2	11.1	15.4	22	26	60	AT-225
	12.7	11.1	15.4	22	26	60	AT-226



ALUMINIUM CRIMPING TERMINALS

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
95	10.2	13.5	17.3	25	28	64	AT-227
	12.7	13.5	17.3	25	28	64	AT-228
	16.2	13.5	17.3	25	28	64	AT-229
120	10.2	14.8	19.6	28	32	73	AT-257
	12.7	14.8	19.6	28	32	73	AT-230
	16.2	14.8	19.6	28	32	73	AT-231
150	10.2	16.6	21.4	31	34	79	AT-258
	12.7	16.6	21.4	31	34	79	AT-232
	16.2	16.6	21.4	31	34	79	AT-233
185	10.2	18.5	24	34	36	84	AT-311
	12.7	18.5	24	34	36	84	AT-234
	16.2	18.5	24	34	36	84	AT-235
225	12.7	20.6	27	39	40	94	AT-320
240	12.7	22	28	40	44	102	AT-236
	16.2	22	28	40	44	102	AT-237
	20.3	22	28	40	44	102	AT-238
300	16.2	24	31	44.7	47	115	AT-300
	20.3	24	31	44.7	47	115	AT-259
400	20.3	26.8	35.5	51	56	130	AT-260
500	20.3	30.2	41	58	60	140	AT-296
630	20.3	35	46	66	69	154	AT-261
800	-	39	51	73	77	180	AT-318
1000	-	43.5	57	81	100	220	AT-319

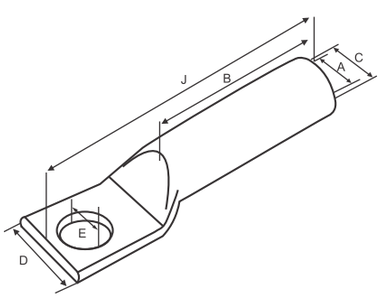


Braco AT - XL type of terminals are manufactured out of tubes of purity equal to or greater than 99.5% having maximum conductivity not less than 60% IACS and are suitable for high voltage application where termination of XLPE cable is required.

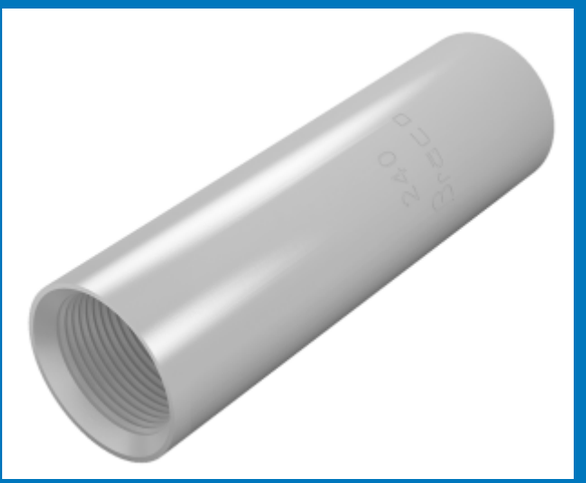
ALUMINIUM TUBE TERMINALS FOR AL-XLPE CONDUCTORS

Material : Aluminium IS :5082 :1981

Size Sq. mm	Dimensions							Code No.
	E	A	C	D	B	G+H	J	
25	8.2	7.2	9.6	14	41	21	69	AT - XL 17
35	8.2	8.3	11.1	16	50	22	79	AT - XL 18
50	10.2	9.3	13.5	19.5	49	24	81	AT - XL 19
70	10.2	10.2	14.5	20.5	62	26	96	AT - XL 20
95	12.7	12.0	16.6	23.5	73	28	109	AT - XL 21
120	12.7	13.7	19.0	26.5	73	30	114	AT - XL 22
150	12.7	15.1	21.1	29.5	83	34	128	AT - XL 23
185	12.7	16.6	23.9	33.0	83	36	131	AT - XL 24
225	12.7	18.6	26.1	36.0	86	40	140	AT - XL 25
240	12.7	19.3	27.2	37.5	86	44	144	AT - XL 26
300	20.3	21.8	30.2	42.0	89	54	157	AT - XL 27
400	20.3	25.0	34.8	48.0	113	60	187	AT - XL 28
500	20.3	28.2	39.1	54.0	125	64	205	AT - XL 29
630	20.3	31.7	44.4	61.0	140	68	225	AT - XL 30
800	20.3	35.7	49.5	68.0	147	78	250	AT - XL 31
1000	20.3	41.0	56.0	77.5	160	90	280	AT - XL 32



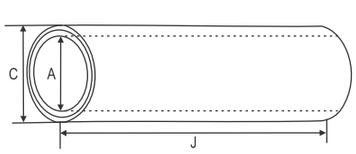
Braco Aluminium Crimping In-Line Connectors are made out of tubes of purity equal to or greater than 99.5% having maximum conductivity not less than 60% IACS and the designed as per IS 8309 1993.These connectors facilitate joining two identical size Aluminium conductors.



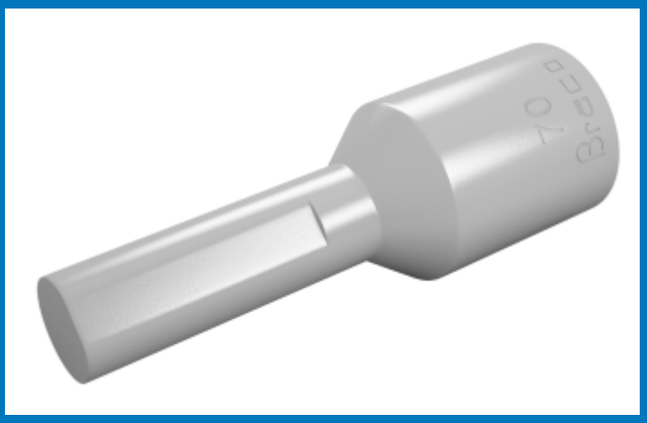
ALUMINIUM CRIMPING CONNECTOR

Material : Aluminium IS :5082 :1981

Size Sq. mm	Dimensions			Code No.
	A	C	J	
2.5	2.0	5.5	16	ILA-145
	2.6	5.5	16	ILA-6
4	2.9	5.5	16	ILA-5
6	3.5	5.5	16	ILA-13
10	4.4	7.4	20	ILA-14
	3.8	6.2	20	ILA-146
16	5.4	8.3	26	ILA-4
25	7.0	9.7	35	ILA-3
35	8.0	10.8	40	ILA-2
50	9.3	13	45	ILA-12
70	11.1	15.4	55	ILA-1
95	13.5	17.3	60	ILA-15
120	14.8	19.6	65	ILA-9
150	16.6	21.4	70	ILA-10
185	18.5	24	75	ILA-11
225	20.6	27	85	ILA-147
240	22.0	28	90	ILA-16
300	24.0	31	100	ILA-17
400	26.8	35.5	115	ILA-18
500	30.2	41	125	ILA-19
630	35.0	46	140	ILA-20
800	39.0	51	160	ILA-148
1000	43.5	57	210	ILA-149



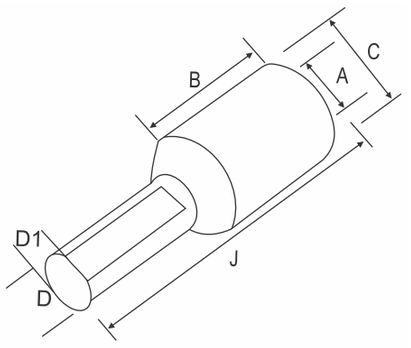
Braco Aluminium Reducer Terminals are manufactured out of aluminium of purity equal to or greater than 99.5 % having maximum coductivity not less than 60% IACS. These are used to terminate one or more Aluminium conductors to a smaller termination area. Braco is able to produce any Aluminium Reducing Link that you may require.



ALUMINIUM CRIMPING REDUCER TERMINALS FOR ALUMINIUM CONDUCTOR

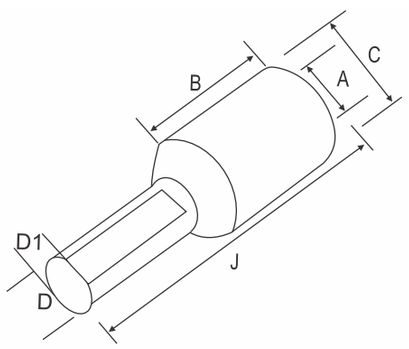
Material : Aluminium IS :5082 :1981

Size Sq. mm	Dimensions						Code No.
	A	C	D	D-1	B	J	
2.5	2.6	5.5	4.5	4.0	7	21	WPA - 1
	2.6	5.5	3.5	3.3	7	21	WPA - 7
4	2.9	5.5	4.5	4.0	7	21	WPA - 15
	2.9	5.5	3.8	3.3	7	21	WPA - 16
6	3.5	5.5	4.5	4.0	7	21	WPA - 17
	3.5	5.5	3.8	3.3	7	21	WPA - 18
10	3.8	7.4	4.5	4.0	9	23	WPA - 19
	3.8	7.4	3.8	3.3	9	23	WPA - 20
	4.4	7.4	4.5	4.0	9	23	WPA - 21
	4.4	7.4	3.8	3.3	9	23	WPA - 22
16	5.4	8.3	6.0	5.5	13	33	WPA - 23
	5.4	8.3	6.0	5.5	13	38	WPA - 24
	5.4	8.3	3.8	3.3	13	31	WPA - 2
25	7.0	10.0	6.0	5.5	16	36	WPA - 25
	7.0	10.0	7.5	6.5	16	41	WPA - 3
35	8.0	10.8	7.5	6.5	18	43	WPA - 4
50	9.3	13.0	7.5	6.5	22	47	WPA - 26
	10.4	14.0	14.0	13.0	22	53	WPA - 5
70	11.6	16.0	7.5	6.5	26	51	WPA - 27
	11.6	16.0	11.5	10.5	26	56	WPA - 6
	11.6	16.0	11.5	10.5	26	63	WPA - 28



ALUMINIUM CRIMPING REDUCER TERMINALS FOR ALUMINIUM CONDUCTOR

Size Sq. mm	Dimensions						Code No.
	A	C	D	D-1	B	J	
95	12.9	17.1	11.5	10.5	28	59	WPA - 29
	12.9	17.1	15.6	14.0	28	61	WPA - 8
	12.9	17.1	7.5	6.5	28	56	WPA - 31
	12.9	17.1	12.8	11.8	28	66	WPA - 32
120	14.8	19.6	11.5	10.5	32	63	WPA - 33
	14.8	19.6	7.5	6.5	32	60	WPA - 34
	14.8	19.6	11.5	10.5	32	70	WPA - 35
	14.8	19.6	15.6	14.0	32	70	WPA - 36
150	16.1	21.2	15.6	14.0	34	72	WPA - 10
	16.1	21.2	11.5	10.5	34	72	WPA - 37
185	18.0	23.7	15.6	14.0	36	74	WPA - 30
	18.0	23.7	11.5	10.5	36	74	WPA - 38
	20.6	27.0	15.6	14.0	40	80	WPA - 39
	20.6	27.0	21.0	18.0	40	90	WPA - 46
	20.6	27.0	16.0	15.0	40	90	WPA - 42
240	22.0	28.0	16.0	15.0	44	94	WPA - 44
	22.0	28.0	15.6	14.0	44	84	WPA - 43
300	24.0	31.0	16.0	15.0	47	94	WPA - 45
	24.0	31.0	15.6	14.0	47	84	WPA - 47



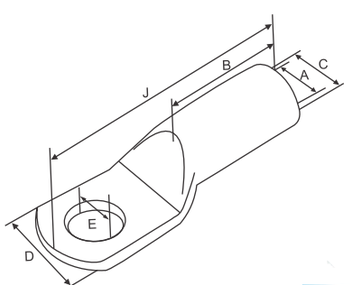
Braco long barrel aluminium crimping terminals are manufactured out tubes drawn to the required sizes having minimum conductivity not less than 60% IACS and as per IS 158309 1993

These are used for terminating all sizes of cables to terminate electrical switching equipments. The increased barrel length ensures enhanced electrical and mechanical performance due to more number of crimps. The absence of inspection hole prevents the entry of water or moisture into crimped joints making them suitable for outdoor applications.

LONG BARREL ALUMINIUM CRIMPING TERMINALS FOR ALUMINIUM CONDUCTOR

Material : Aluminium IS :5082 :1981

CABLE SIZE MM2	Dimensions						CAT NO
	E	A	C	D	B	J	
2.5	3.2	2.0	5.5	7	10	21	AT-551
	3.7	2.6	5.5	7	10	21	AT-509
4	4.2	2.9	5.5	7	10	21	AT-555
	5.2	2.9	5.5	9	10	27	AT-617
6	5.2	3.5	5.5	8	10	27	AT-558
	6.4	3.5	5.5	11	10	27	AT-513
10	6.4	4.4	7.4	11	13	34	AT-514
	8.2	4.4	7.4	13	13	34	AT-515
16	6.4	5.4	8.3	11	20	44	AT-552
	8.2	5.4	8.3	12	20	44	AT-516
	10.2	5.4	8.3	15	20	44	AT-517
25	8.2	7.0	9.7	14	24	52	AT-518
	10.2	7.0	9.7	17	24	52	AT-519
	12.7	7.0	9.7	18	24	52	AT-520
35	8.2	8.0	10.8	15	27	56	AT-521
	10.2	8.0	10.8	17	27	56	AT-522
50	8.2	9.3	13	18	33	65	AT-655
	10.2	9.3	13	18	33	65	AT-512
	12.7	9.3	13	18	33	65	AT-524
70	8.2	11.1	15.4	22	39	73	AT-556
	10.2	11.1	15.4	22	39	73	AT-525
	12.7	11.1	15.4	22	39	73	AT-526
95	10.2	13.5	17.3	25	42	78	AT-527
	12.7	13.5	17.3	25	42	78	AT-528
	16.2	13.5	17.3	25	42	78	AT-529
120	10.2	14.8	19.6	28	48	89	AT-557
	12.7	14.8	19.6	28	48	89	AT-530
	16.2	14.8	19.6	28	48	89	AT-531
150	10.2	16.6	21.4	31	51	96	AT-658
	12.7	16.6	21.4	31	51	96	AT-532
	16.2	16.6	21.4	31	51	96	AT-533
185	10.2	18.5	24	34	54	102	AT-511
	12.7	18.5	24	34	54	102	AT-534
	16.2	18.5	24	34	54	102	AT-535
225	12.7	20.6	27	39	60	114	AT-620
240	12.7	22	28	40	66	124	AT-536
	16.2	22	28	40	66	124	AT-537
300	16.2	24	31	44.7	70	138	AT-500
	20.3	24	31	44.7	70	138	AT-559
400	20.3	26.8	35.5	51	84	158	AT-560
500	20.3	30.2	41	58	90	170	AT-596
630	20.3	35	46	66	104	188	AT-561
800	-	39	51	73	115	218	AT-618
1000	-	43.5	57	81	150	270	AT-619

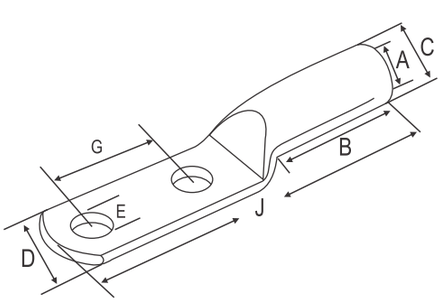


Braco double hole Aluminium crimping terminals which are also known as "Non Rotating Terminals" are manufactured out of the tubes drawn to the required sizes having minimum conductivity not less than 60% IACS. The increased barrel length ensures enhanced electrical and mechanical performance due to more number of crimps.Two holes ensures non rotation in the equipments such as transformers, moving equipments where vibration is critical.The holes can be punched as per requirement.

DOUBLE HOLE ALUMINIUM CRIMPING TERMINALS FOR ALUMINIUM CONDUCTORS

Material : Aluminium IS :5082 :1981

CABLE SIZE MM2	Dimensions							CAT NO
	E	A	C	D	G	B	J	
25	8.2	7.0	9.7	14	45	16	88	ATT-25
35	8.2	8.0	10.8	15	45	18	90	ATT-35
50	10.2	9.3	13	18	45	22	100	ATT-50
70	10.2	11.1	15.4	22	45	26	103	ATT-70
95	12.7	13.5	17.3	25	45	28	111	ATT-95
120	12.7	14.8	19.6	28	45	32	118	ATT-120
150	12.7	16.6	21.4	31	45	34	120	ATT-150
185	12.7	18.5	24	34	45	36	123	ATT-185
240	12.7	22	28	40	45	44	137	ATT-240
300	16.2	24	31	45	45	47	147	ATT-300
400	20.3	26.8	35.5	51	45	56	157	ATT-400
500	20.3	30.2	41	58	45	60	167	ATT-500
630	20.3	35	46	66	45	69	178	ATT-630



Braco Aluminium alloy tubular bi-metallic terminals are manufactured out of aluminium of purity equal to or greater than 99.5 % having maximum coductivity not less than 60% IACS. These are anti-corrosive and used for highly corrosive environment. The barrels are kept filled with grease so as to avoid oxidization of the Aluminium. These are designed to accept a variety of conductor forms especially low stranded compacted conductors.

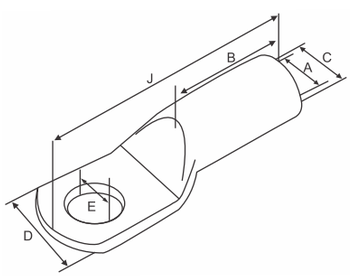
These terminals are mainly used to terminate on copper bus bars. Whenever aluminium links terminated on to copper or copper based alloy terminals without suitable plating, results in the corrossion of the joint over a period leading to higher joint resistance.

Bi-metallic terminals are found most reliable and suitable for such connections.

ALUMINIUM ALLOY TUBULAR BIMETALLIC TERMINALS

Material : Aluminium IS :5082 :1981

Size Sq. mm	Dimensions						Code No.
	E	A	C	D	B	J	
10	6.4	4.4	7.4	11	9	30	ATB-1
	8.2	4.4	7.4	13	9	30	ATB-2
16	6.4	5.4	8.3	11	13	37	ATB-3
	8.2	5.4	8.3	12	13	37	ATB-4
25	8.2	7	9.7	14	16	44	ATB-5
	10.2	7	9.7	17	16	44	ATB-6
35	8.2	8	10.8	15	18	47	ATB-7
	10.2	8	10.8	17	18	47	ATB-8
50	8.2	9.3	13	18	22	54	ATB-9
	10.2	9.3	13	18	22	54	ATB-10
70	10.2	11.1	15.4	22	26	60	ATB-11
	12.7	11.1	15.4	22	26	60	ATB-12
95	10.2	13.5	17.3	25	28	64	ATB-13
	12.7	13.5	17.3	25	28	64	ATB-14
120	10.2	14.8	19.6	28	32	73	ATB-15
	12.7	14.8	19.6	28	32	73	ATB-16
150	12.7	16.6	21.4	31	34	79	ATB-17
	16.2	16.6	21.4	31	34	79	ATB-18
185	12.7	18.5	24	34	36	84	ATB-19
	16.2	18.5	24	34	36	84	ATB-20
225	12.7	20.6	27	39	40	94	ATB-21
240	12.7	22	28	40	44	102	ATB-22
	16.2	22	28	40	44	102	ATB-23
300	16.2	24	31	45.7	47	115	ATB-24
	20.3	24	31	45.7	47	115	ATB-25
400	20.3	26.8	35.5	51	56	130	ATB-26
500	20.3	30.2	41	58	60	140	ATB-27
630	20.3	35	46	66	69	154	ATB-28
800	-	39	51	73	77	180	ATB-29
1000	-	43.5	57	81	100	220	ATB-30



Braco Corrosion Inhabiting Compound is recommended for crimping connections. It is suggested where conditions are particularly aggressive such as chemical or salt-laden atmospheres or where inspection and cleaning are not regular.

Braco Corrosion Inhabiting Compound is mixture of Grey Lithium based grease with abrasive particles and suspended Zinc particles, which assist in jointing because as metal flows under pressure the abrasive particles cause small area of cold welding :

- Corrosion Inhibitor does not affect the electrical properties of the compression joint.
- It is non-corrosive to aluminium, copper, steel, tin, zinc and combination of these metals.
- It does not deteriorate on exposure to atmosphere at conductor operating temperature.
- It has good sealing properties against moisture and contaminating substances in the atmosphere It has high temperature drop point.

The mixture contains :

1. Grey Lithium based grease 85%
2. Zinc Chromate 5%
3. Titanium Dioxide 10%

CORROSION INHABITING COMPOUND

Test Report

The test carried out on 200 mm conductor joined with Aluminium lugs 95 Sq. mm. The test results found in terms of mV drop compared to joint with nonuse of compound, joint with Braco Compound and joint with imported compound

Specification	Joint without Compound	Joint with Braco Compound	Joint with Imported Compound
At 700 Amp at Ambient Temp.	4.42 mV	2.65 mV	3.85 mV
After 10 days 6.16mV 3.1mV 5.35mV at 90°c	5.70 mV	2.97 mV	4.75 mV
After 1/2 hour ageing at 200°C after 2nd test	7.06 mV	3.55 mV	5.56 mV

BRASS GLANDS

INTRODUCTION OF BRACO CABLE GLANDS

Braco Cable Glands are mechanical cable entry devices, which are constructed from metallic materials and are used throughout all industries in conjunction with cable and wiring used in the electrical control panels, instrumentation and automation systems.

Cable Glands may be used on all types of electrical power, control, instrumentation, data and telecommunications cables. They are used as a sealing and terminating device to ensure that the characteristics of the enclosure which the cable enters can be maintained adequately.

FUNCTIONS OF CABLE GLANDS

- Cable Glands may provide environmental protection by sealing on the outer cable sheath, excluding dust and moisture from the electrical or instrument enclosure.
- Cable Glands may facilitate earth continuity in the case of armoured cable when the cable gland has a metallic construction.
- Cable Glands may provide a holding force on the cable to ensure adequate levels of cable pull out resistance.
- Cable Glands may provide additional sealing on the part of the cable entering the enclosure, when a high degree of ingress protection is required.
- Cable Glands may provide additional environmental sealing at the cable entry point, maintaining the ingress protection rating of the enclosure with the selection of applicable accessories dedicated to performing this function.
- When used in hazardous areas they are required to maintain the level of protection of the equipment to which they are attached.

SELECTION GUIDELINES

There are many factors to consider when selecting cable glands for industrial installations. Neglecting to pay due attention to some of these factors may cause unnecessary anxiety at a future point in time when the equipment and cables have been delivered on site, but for example the cable glands have either been forgotten to be ordered or it is discovered that they are the incorrect type or size at the very point when they are needed the most. Good advice would be to allocated some value added planning and preparation time to the subject of cable gland selection so as to avoid the great inconvenience which is likely to occur at a critical point in time. In the event that a user or contractor is in possession of a cable schedule that requires a cable gland selection and sizing process to be carried out Braco products would be blissful to assist in carrying out this process.

While selecting cable glands the following aspects shall be carefully considered:

- Identify the type of cable to be used.
- Check the construction, size and material properties of the cable.

If the cable is armoured, verify the following:

- Check the type and material of the cable armour.
- Check the short circuit fault current rating of the cable armour.
- Check the actual diameter of the inner bedding.
- Check the actual diameter of the lead covering.
- Check the actual size of the overall cable diameter.
- Check the size and type of armour or braid.
- Check any special environmental requirements in relation to corrosion protection.
- Check whether any protective plating is required to be applied on the cable gland.
- Check the type and size of the cable entry hole in the matching electrical equipment.
- Check whether an entry thread seal is required.
- Check whether fixing accessories such as locknuts and serrated washers are required.
- Check whether earth tags are required.
- Check whether shrouds tags are required.

Though the information presented in Gland Selection Chart is intended to assist users to ensure that the correct cable gland is selected. It is the responsibility of the user to ensure that the cable gland selected is of the correct size and type to suit the type of cable being terminated.

While terminating cables and wires during the process of installation of electrical equipment this should be done by qualified and competent personnel in line with good engineering practice, observing safe electrical practices. It is also important that the correct cable entry device or cable gland is also important that the correct cable entry device or cable glands is selected to suit the cable being used. For instances using normal unarmoured cables, the cable would usually be fed through a cable entry device that has a sealing ring activated onto the cable outer sheath. The choice of cable glands to suit this unarmoured cable may need to take into account any vulnerability of the cable, may need to take into account any vulnerability of the cable, which may be especially critical if the cable is an instrument cable. Two factors which could affect the long term cable performance are the type and design of the cable gland sealing function, and the possibility of this being inadvertently or otherwise over tightened onto the cable sheath.

SELECTION OF BRACO GLANDS BASED ON POLYCAB CABLES 1100 VOLTS L.T.

Cable Construction Details			Single Comp.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG	
Size Sq.mm	Overall Dia / mm	U/Armour Dia/mm	Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
1 CORE POWER CABLES							
4.0	11.0	6	3/8"	5	001S	1216	R1210
6.0	12.0	7	3/8"	5	001S	1216	R1211
10	13.0	8	1/2"	5	01S	1616	R1611
16	14.0	9	1/2"	5	01S	1616	R1613
25	15.0	10	1/2"	5	01S	1616	R1613
35	16.0	11	5/8"	5	01S	1616, 1619	R1615
50	18.0	13	3/4"	4	01	2119, 2125	R2116
70	20.0	14.5	1"	3	02	2125	R2120
95	21.0	16	1"	2	03	2125	R2120
120	22.0	17	1"	2	03	2125	R2120
150	24.0	19	1-1/8"	2	04	2925, 2932	R2925
185	26.0	21	1-1/4"	1	04	2932	R2925
240	29.0	24	1-1/4"	1	05	2932, 2938	R2927
300	32.0	27	1-3/8"	11	06	3638	R3631
400	36.0	31	1-1/2"	00	07	3638	R3635
500	40.0	34	1-3/4"	38	08	4251	R4238
630	44.0	28.5	1-3/4"	001	09	4251	R4242
800	48.0	42	2"	002	010	5451	R5446
1000	53.0	46	2-1/4"	003	011	5463	R5450
2 CORE POWER CABLES							
1.5	12.5	7.5	3/8"	5	001S	1216	R1211
2.5	13.5	8.5	1/2"	5	01S	1616	R1613
4.0	15.0	9.5	1/2"	5	01S	1616	R1613
6.0	16.0	10.5	5/8"	5	01S	1616, 1619	R1615
10	18.0	12.5	3/4"	4	01	2119, 2125	R2116
16	18.0	13	3/4"	4	01	2119, 2125	R2116
25	20.0	15	1"	3	02	2125	R2120
35	21.5	16.5	1"	2	03	2125	R2120

Cable Construction Details			Single Comp.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG	
Size Sq.mm	Overall Dia / mm	U/Armour Dia/mm	Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
2 CORE POWER CABLES							
50	24.5	19.5	1-1/8"	2	04	2925, 2932	R2925
70	28.0	23	1-1/4"	1	05	2932, 2938	R2927
95	31.0	24	1-3/8"	11	06	2932	R2929
120	33.0	28	1-3/8"	0	06	3638	R3633
150	37.0	31	1-1/2"	00	07	3638	R3637
185	40.5	34.5	1-3/4"	38	08	4251	R4238
240	45.0	38	2"	002	09	4251	R4242
300	50.0	43	2-1/4"	002	010	5451	R5448
400	56.0	49	2-1/2"	003	011	6063	R6055
500	62.5	55	2-3/4"	0033	012	6063	R6060
3 CORE POWER CABLES							
1.5	12.5	7.5	3/8"	5	001S	1216	R1211
2.5	14.0	9	1/2"	5	01S	1616	R1613
4.0	15.5	10.5	5/8"	5	01S	1616, 1619	R1615
6.0	17.0	12	3/4"	4	01	1616, 1619	R1615
10	19.0	14	7/8"	4	02	2119, 2125	R2118
16	20.0	15	1"	3	02	2125	R2120
25	22.0	17	1"	2	03	2125	R2120
35	25.0	20	1-1/4"	1	04	2932, 2938	R2925
50	27.0	22	1-1/4"	1	05	2932, 2938	R2925
70	31.0	26	1-3/8"	11	06	2932	R2929
95	34.0	29	1-1/2"	0	07	3638	R3633
120	38.0	32.5	1-1/2"	00	08	3638	R3637
150	42.0	36	1-3/4"	38	09	4251	R4240
185	46.0	40	2"	002	09	4251	R4244
240	52.0	45.5	2-1/4"	003	010	5463	R5450
300	56.5	50	2-1/2"	003	011	6063	R6055
400	64.0	57	2-3/4"	0033	012	6675	R6662
500	72.0	64	3"	004	013	7882	R7870

SELECTION OF BRACO GLANDS BASED ON POLYCAB CABLES 1100 VOLTS L.T.

Cable Construction Details			Single Comp.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG	
Size Sq.mm	Overall Dia / mm	U/Armour Dia/mm	Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
3.5 CORE POWER CABLES							
25	23.5	18.5	1-1/8"	2	04	2925, 2932	R2923
35	26.0	21	1-1/4"	1	04	2932	R2925
50	30.0	25	1-1/4"	1	05	2932, 2938	R2929
70	32.5	27.5	1-3/8"	11	06	3638	R3631
95	36.5	31	1-1/2"	00	07	3638	R3635
120	40.5	35	1-3/4"	38	08	4251	R4238
150	44.0	38	1-3/4"	001	09	4251	R4242
185	50.0	43	2-1/4"	002	010	5451	R5448
240	55.0	48	2-1/4"	003	011	6063	R6053
300	61.0	54	2-3/4"	0033	012	6063	R6060
400	68.0	60	3"	004	013S	7882	R7868
500	75.0	67	3-1/4"	004	013	7882	R7870
4 CORE POWER CABLES							
1.5	15.0	10	1/2"	5	01S	1616	R1613
2.5	16.5	11.5	3/4"	5	01	1616, 1619	R1615
4.0	18.0	13	3/4"	4	01	2119, 2125	R2116
6.0	19.5	14.5	7/8"	3	02	2119, 2125	R2118
10	20.0	15	1"	3	02	2125	R2120
16	23.0	18	1-1/8"	2	04	2925, 2932	R2923
25	24.0	19	1-1/8"	2	04	2925, 2932	R2925
35	27.0	22	1-1/4"	1	05	2932, 2938	R2925
50	31.0	25	1-3/8"	11	06	2932	R2929
70	35.0	29	1-1/2"	0	07	3638	R3635
95	38.0	32	1-1/2"	00	08	3638	R3637
120	42.0	36	1-3/4"	38	09	4251	R4240
150	46.0	40	2"	002	09	4251	R4244
185	51.0	44	2-1/4"	002	010	5451	R5448
240	58.0	51	2-1/2"	003	011	6063	R6058
300	66.0	59	2-3/4"	0033	012	6675	R6664
400	72.0	64	3"	004	013	7882	R7870
500	80.0	72	3-1/2"	005	014	8490	R8480

Cable Construction Details			Single Comp.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG	
Size Sq.mm	Overall Dia / mm	U/Armour Dia/mm	Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
1.1 KV 1.5 SQ. MM (CONTROL CABLES)							
2	13.50	8.00	1/2"	5	01S	1616	R1613
3	14.00	8.50	1/2"	5	01S	1616	R1613
4	15.00	9.50	1/2"	5	01S	1616	R1613
5	15.50	10.00	5/8"	5	01S	1616, 1619	R1615
6	16.00	10.50	5/8"	5	01S	1616, 1619	R1615
7	16.50	11.00	3/4"	5	01	1616, 1619	R1615
10	19.00	13.00	7/8"	4	02	2119, 2125	R2118
12	19.50	15.00	7/8"	3	02	2119, 2125	R2118
14	20.00	15.00	1"	3	02	2125	R2120
16	21.00	16.00	1"	2	03	2125	R2120
19	22.00	17.00	1"	2	03	2125	R2120
24	25.00	20.00	1-1/4"	1	04	2932, 2938	R2925
30	26.50	21.50	1-1/4"	1	05	2932, 2938	R2925
37	28.00	23.00	1-1/4"	1	05	2932, 2938	R2927
61	35.00	29.50	1-1/2"	0	07	3638	R3635
1.1 KV 2.5 SQ. MM (CONTROL CABLES)							
2	14.50	9.00	1/2"	5	01S	1616	R1613
3	15.50	10.00	5/8"	5	01S	1616, 1619	R1615
4	16.50	11.00	3/4"	5	01	1616, 1619	R1615
5	17.50	12.00	3/4"	4	01	1616, 1619	R1615
6	18.50	13.00	7/8"	4	01	2119, 2125	R2118
7	18.50	13.00	7/8"	4	01	2119, 2125	R2118
10	21.00	16.00	1"	2	03	2125	R2120
12	22.00	17.00	1"	2	03	2125	R2120
14	23.00	18.00	1-1/8"	2	04	2925, 2932	R2923
16	24.00	19.00	1-1/8"	2	04	2925, 2932	R2925
19	25.00	20.00	1-1/4"	1	04	2932, 2938	R2925
24	29.00	24.00	1-1/4"	1	05	2932, 2938	R2927
30	30.50	25.00	1-3/8"	11	06	2932	R2929
37	33.00	27.50	1-3/8"	0	06	3638	R3633
61	41.00	35.50	1-3/4"	38	08	4251	R4238

SELECTION OF BRACO GLANDS BASED ON POLYCAB CABLES XLPE H.T.

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
1.9 / 3.3 KV (E) & 3.3 /3.3 KV (UE) HT XLPE THREE CORE							
35	F 37.0	32	1-1/2"	00	07	3638	R3637
	R 40.5	32.5	1-3/4"	38	08 R2	4251	R4238
50	F 39.5	34	1-3/4"	38	08	4251	R4238
	R 42.5	34.5	1-3/4"	38	09 R2	4251	R4240
70	F 44.0	38.5	1-3/4"	001	09	4251	R4242
	R 47.0	38.5	2"	002	010 R2	5451	R5444
95	F 47.5	42	2"	002	010	5451	R5446
	R 51.5	42	2-1/4"	002	010 R2.5	5451	R5448
120	F 51.5	45.5	2-1/4"	002	010	5451	R5448
	R 55.5	46	2-1/2"	003	011 R2.5	6063	R6055
150	F 54.5	48.5	2-1/4"	003	011	6063	R6053
	R 58.5	48.5	2-1/2"	003	012 R2.5	6063	R6055
185	F 59.0	52.5	2-1/2"	003	012	6063	R6055
	R 63.0	52	2-3/4"	0033	012 R2.5	6675	R6662
240	F 64.5	58.5	2-3/4"	0033	012	6675	R6662
	R 68.0	57	3"	004	013S R2.5	7882	R7868
300	F 70.0	63	3"	004	013S	7882	R7868
	R 75.0	63	3-1/4"	004	013 R3.2	7882	R7870
400	F 76.5	69	3-1/4"	005	014	7882	R7874
	R 82.0	69	3-1/2"	005	014 R3.2	8940	R8480
3.8 / 6.6 KV (E) HT XLPE SINGLE CORE							
35	F 21.0	16	1"	2	03	2125	R2120
	R 22.5	16.5	1"	2	03	2125	R2120
50	F 22.0	17	1"	2	03	2125	R2120
	R 23.5	17.5	1-1/8"	2	04	2925, 2932	R2923
70	F 24.0	19	1-1/8"	2	04	2925, 2932	R2925
	R 25.5	19.5	1-1/4"	1	04	2932, 2938	R2925
95	F 25.5	20.5	1-1/4"	1	04	2932, 2938	R2925
	R 27.0	21	1-1/4"	1	05	2932, 2938	R2925
120	F 27.0	22	1-1/4"	1	05	2932, 2938	R2925
	R 29.0	23	1-1/4"	1	05	2932, 2938	R2927
150	F 28.5	23.5	1-1/4"	1	05	2932, 2938	R2927
	R 30.5	24	1-3/8"	11	06	2932	R2929
185	F 31.0	25.5	1-3/8"	11	06	2932	R2929
	R 32.5	26	1-3/8"	11	06	3638	R3631
240	F 33.0	27.5	1-3/8"	0	06	3638	R3633
	R 35.5	28	s	0	07 R2	3638	R3635
300	F 36.0	30.5	1-1/2"	00	07	3638	R3635
	R 38.0	30.5	1-1/2"	00	08 R2	3638	R3637
400	F 40.0	34.5	1-3/4"	38	08	4251	R4238
	R 42.5	36.5	1-3/4"	38	09 R2	4251	R4240

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
3.8 / 6.6 KV (E) HT XLPE SINGLE CORE							
500	F 43.5	37.5	1-3/4"	38	09	4251	R4242
	R 46.5	38.5	2"	002	010 R2	5451	R5444
630	F 47.5	41.5	2"	002	010	5451	R5446
	R 50.0	42	2-1/4"	002	010 R2	5451	R5448
800	F 51.0	45	2-1/4"	002	010	5451	R5448
	R 55.0	45.5	2-1/4"	003	011 R2.5	6063	R6053
1000	F 56.5	50	2-1/2"	003	011	6063	R6055
	R 60.5	50.5	2-3/4"	0033	012 R2.5	6063	R6058
3.8 / 6.6 KV (E) HT XLPE THREE CORE							
35	F 40.0	34.5	1-3/4"	38	08	4251	R4238
	R 43.0	35	1-3/4"	38	09 R2	4251	R4240
50	F 42.5	37	1-3/4"	38	09	4251	R4240
	R 45.5	37	2"	002	09 R2	4251	R4242
70	F 47.0	41.5	2"	002	010	5451	R5444
	R 49.5	41	2-1/4"	002	010 R2	5451	R5446
95	F 50.5	45	2-1/4"	002	010	5451	R5448
	R 54.0	44.5	2-1/4"	003	011 R2.5	6063	R6053
120	F 55.0	49	2-1/4"	003	011	6063	R6053
	R 58.5	48.5	2-1/2"	003	012 R2.5	6063	R6055
150	F 58.0	51.5	2-1/2"	003	011	6063	R6055
	R 61.0	51	2-3/4"	0033	012 R2.5	6063	R6060
185	F 62.0	55.5	2-3/4"	0033	012	6063	R6060
	R 66.0	55	2-3/4"	0033	012 R2.5	6675	R6664
240	F 67.5	61	2-3/4"	004	013S	7882	R7866
	R 73.0	61	3"	004	013 R3.2	7882	R7870
300	F 73.5	66.5	3"	004	013	7882	R7870
	R 78.5	66.5	3-1/4"	005	014 R3.2	7882	R7874
400	F 82.0	74	3-1/2"	005	014	8940	R8480
	R 89.0	74	4"	006	015 R4	8940	R8484
6.35 / 11 KV (UE) HT XLPE SINGLE CORE							
35	F 23.0	18	1-1/8"	2	04	2925, 2932	R2923
	R 24.5	18.5	1-1/8"	2	04	2925, 2932	R2925
50	F 24.0	19	1-1/8"	2	04	2925, 2932	R2925
	R 25.5	19.5	1-1/4"	1	04	2932, 2938	R2925
70	F 25.5	20.5	1-1/4"	1	04	2932, 2938	R2925
	R 27.5	21.5	1-1/4"	1	05	2932, 2938	R2925
95	F 27.5	22.5	1-1/4"	1	05	2932, 2938	R2925
	R 29.0	23	1-1/4"	1	05	2932, 2938	R2927
120	F 29.0	24	1-1/4"	1	05	2932, 2938	R2927
	R 31.0	24.5	1-3/8"	11	06	2932	R2929

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
6.35 / 11 KV (UE) HT XLPE SINGLE CORE							
150	F 30.5	25	1-3/8"	11	06	2932	R2929
	R 32.5	26	1-3/8"	11	06	3638	R3631
185	F 33.0	27.5	1-3/8"	0	06	3638	R3633
	R 35.5	28	1-1/2"	0	07 R2	3638	R3635
240	F 35.0	29.5	1-1/2"	0	07	3638	R3635
	R 38.0	30.5	1-1/2"	00	08 R2	3638	R3637
300	F 37.0	31.5	1-1/2"	00	07	3638	R3637
	R 40.0	32.5	1-3/4"	38	08 R2	4251	R4238
400	F 40.5	34.5	1-3/4"	38	08	4251	R4238
	R 43.5	35.5	1-3/4"	38	09 R2	4251	R4242
500	F 44.0	38	1-3/4"	001	09	4251	R4242
	R 46.5	38.5	2"	002	010 R2	5451	R5444
630	F 47.5	41.5	2"	002	010	5451	R5446
	R 50.0	42	2-1/4"	002	010 R2	5451	R5448
800	F 51.5	45.5	2-1/4"	002	010	5451	R5448
	R 55.0	45.5	2-1/4"	003	011 R2.5	6063	R6053
1000	F 56.5	50	2-1/2"	003	011	6063	R6055
	R 60.5	50.5	2-3/4"	0033	012 R2.5	6063	R6058
3.8 / 6.6 KV (E) HT XLPE SINGLE CORE							
35	F 21.0	16	1"	2	03	2125	R2120
	R 22.5	16.5	1"	2	03	2125	R2120
50	F 22.0	17	1"	2	03	2125	R2120
	R 23.5	17.5	1-1/8"	2	04	2925, 2932	R2923
70	F 24.0	19	1-1/8"	2	04	2925, 2932	R2925
	R 25.5	19.5	1-1/4"	1	04	2932, 2938	R2925
95	F 25.5	20.5	1-1/4"	1	04	2932, 2938	R2925
	R 27.0	21	1-1/4"	1	05	2932, 2938	R2925
120	F 27.0	22	1-1/4"	1	05	2932, 2938	R2925
	R 29.0	23	1-1/4"	1	05	2932, 2938	R2927
150	F 28.5	23.5	1-1/4"	1	05	2932, 2938	R2927
	R 30.5	24	1-3/8"	11	06	2932	R2929
185	F 31.0	25.5	1-3/8"	11	06	2932	R2929
	R 32.5	26	1-3/8"	11	06	3638	R3631
240	F 33.0	27.5	1-3/8"	0	06	3638	R3633
	R 35.5	28	s	0	07 R2	3638	R3635
300	F 36.0	30.5	1-1/2"	00	07	3638	R3635
	R 38.0	30.5	1-1/2"	00	08 R2	3638	R3637
400	F 40.0	34.5	1-3/4"	38	08	4251	R4238
	R 42.5	36.5	1-3/4"	38	09 R2	4251	R4240
6.35 / 11 KV (E) HT XLPE THREE CORE							
35	F 42.5	37	1-3/4"	38	09	4251	R4240
	R 45.5	37	2"	002	09 R2	4251	R4242

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
6.35 / 11 KV (E) HT XLPE THREE CORE							
50	F 46.0	40.5	2"	002	09	4251	R4244
	R 49.5	40	2-1/4"	002	010 R2.5	5451	R5446
70	F 49.0	43.5	2-1/4"	002	010	5451	R5446
	R 52.5	43	2-1/4"	003	010 R2.5	5463	R5450
95	F 53.0	47	2-1/4"	003	011	5463	R5450
	R 56.5	46.5	2-1/2"	003	011 R2.5	6063	R6055
120	F 56.0	49.5	2-1/2"	003	011	6063	R6055
	R 59.5	49.5	2-1/2"	003	012 R2.5	6063	R6055
150	F 59.0	52.5	2-1/2"	003	012	6063	R6055
	R 63.0	52	2-3/4"	0033	012 R2.5	6675	R6662
185	F 63.0	56.5	2-3/4"	0033	012	6675	R6662
	R 68.0	56	3"	004	013S R3.2	7882	R7868
240	F 68.0	61	3"	004	013S	7882	R7868
	R 73.0	61	3"	004	013 R3.2	7882	R7870
300	F 73.0	65.5	3"	004	013	7882	R7870
	R 78.0	65	3-1/4"	005	014 R3.2	7882	R7874
400	F 80.0	72	3-1/2"	005	014	8490	R8476
	R 86.5	71.5	4"	006	015 R4	8940	R8480
11 - 11 / 11 KV (UE) HT XLPE SINGLE CORE							
70	F 30.0	24.5	1-1/4"	1	05	2932, 2938	R2929
	R 31.5	25	1-3/8"	11	06	2932	R2929
95	F 32.0	26.5	1-3/8"	11	06	3638	R3631
	R 34.0	26.5	1-1/2"	0	07 R2	3638	R3633
120	F 33.5	28	1-3/8"	0	06	3638	R3633
	R 36.0	28.5	1-1/2"	00	07 R2	3638	R3635
150	F 35.0	29.5	1-1/2"	0	07	3638	R3635
	R 37.0	29.5	1-1/2"	00	07 R2	3638	R3637
185	F 37.0	31.5	1-1/2"	00	07	3638	R3637
	R 39.0	31.5	1-3/4"	38	08 R2	4251	R4238
240	F 39.0	33.5	1-3/4"	38	08	4251	R4238
	R 42.0	34	1-3/4"	38	09 R2	4251	R4240
300	F 41.5	35.5	1-3/4"	38	09	4251	R4238
	R 44.0	36	1-3/4"	001	09 R2	4251	R4242
400	F 45.0	39	2"	002	09	4251	R4242
	R 47.5	39	2"	002	010 R2	5451	R5446
500	F 48.0	42	2"	002	010	5451	R5446
	R 52.0	42.5	2-1/4"	003	010 R2.5	5463	R5450
630	F 51.5	44.5	2-1/4"	002	010	5451	R5448
	R 55.0	45.5	2-1/4"	003	011 R2.5	6063	R6053
800	F 56.0	49.5	2-1/2"	003	011	6063	R6055
	R 60.0	50	2-3/4"	0033	012 R2.5	6063	R6058
1000	F 61.0	54.5	2-3/4"	0033	012	6063	R6060
	R 65.0	54	2-3/4"	0033	012 R2.5	6675	R6662

SELECTION OF BRACO GLANDS BASED ON POLYCAB CABLES XLPE H.T.

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
11 - 11 / 11 KV (UE) HT XLPE THREE CORE							
70	F 58.0	51.5	2-1/2"	003	011	6063	R6055
	R 61.5	50.5	2-3/4"	0033	012 R2.5	6063	R6060
95	F 62.0	55.5	2-3/4"	0033	012	6063	R6060
	R 66.5	54.5	2-3/4"	0033	013S R3.2	7882	R7866
120	F 65.0	58.5	2-3/4"	0033	012	6675	R6662
	R 70.0	58	3"	004	013S R3.2	7882	R7868
150	F 68.5	61.5	3"	004	013S	7882	R7868
	R 73.0	61	3"	004	013 R3.2	7882	R7870
185	F 71.5	64	3"	004	013	7882	R7870
	R 77.0	64	3-1/4"	005	014 R3.2	7882	R7874
240	F 77.0	69	3-1/4"	005	014	7882	R7874
	R 82.0	67	3-1/2"	005	014 R3.2	8940	R8480
300	F 81.5	73	3-1/2"	005	014	8940	R8480
	R 88.0	73	4"	006	015 R4	8940	R8484
400	F 88.0	79	4"	006	015	8940	R8484
	R 94.5	79	4"	006	016 R4	9210	R9292
12.7 / 22 KV (E) HT XLPE SINGLE CORE							
95	F 33.0	28	1-3/8"	0	06	3638	R3633
	R 36.0	28.5	1-1/2"	00	07 R2	3638	R3635
120	F 35.0	30	1-1/2"	0	07	3638	R3635
	R 37.5	30	1-1/2"	00	08 R2	3638	R3637
150	F 36.0	31	1-1/2"	00	07	3638	R3635
	R 39.0	31.5	1-3/4"	38	08 R2	4251	R4238
185	F 38.0	33	1-1/2"	00	08	3638	R3637
	R 41.0	33	1-3/4"	38	08 R2	4251	R4238
240	F 40.5	35.5	1-3/4"	38	08	4251	R4238
	R 43.0	35	1-3/4"	38	09 R2	4251	R4240
300	F 43.0	37.5	1-3/4"	38	09	4251	R4240
	R 45.0	37	2"	002	09 R2	4251	R4242
400	F 47.0	41.5	2"	002	010	5451	R5444
	R 49.0	40.5	2-1/4"	002	010 R2	5451	R5446
500	F 50.0	44.5	2-1/4"	002	010	5451	R5448
	R 53.5	44	2-1/4"	003	011 R2.5	5463	R5450
630	F 54.0	48	2-1/4"	003	011	6063	R6053
	R 57.0	47.5	2-1/2"	003	011 R2.5	6063	R6055
800	F 58.0	52	2-1/2"	003	011	6063	R6055
	R 61.0	51	2-3/4"	0033	012 R2.5	6063	R6060
1000	F 62.5	56	2-3/4"	0033	012	6063	R6060
	R 66.0	55	2-3/4"	0033	012 R2.5	6675	R6664

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
12.7 / 22 KV (E) HT XLPE THREE CORE							
95	F 64.0	57.5	2-3/4"	0033	012	6675	R6662
	R 69.0	57	3"	004	013S R3.2	7882	R7868
120	F 67.5	60.5	2-3/4"	004	013S	7882	R7866
	R 72.0	60	3"	004	013 R3.2	7882	R7870
150	F 70.5	63	3"	004	013S	7882	R7868
	R 75.5	63.5	3-1/4"	005	013 R3.2	7882	R7874
185	F 74.0	66.5	3"	004	013	7882	R7870
	R 79.0	66	3-1/4"	005	014 R3.2	7882	R7874
240	F 79.0	71	3-1/4"	005	014	7882	R7874
	R 85.5	70.5	3-1/2"	006	015 R4	8940	R8480
300	F 83.5	75	3-1/2"	006	015	8940	R8480
	R 90.0	75	4"	006	015 R4	9210	R9288
400	F 90.5	82	4"	006	015	9210	R9288
	R 96.5	81.5	4"	006	016 R4	9210	R9292
19 / 33 KV (E) HT XLPE SINGLE CORE							
95	F 39.0	34	1-3/4"	38	08	4251	R4238
	R 41.5	33.5	1-3/4"	38	09 R2	4251	R4238
120	F 41.0	35.5	1-3/4"	38	08	4251	R4238
	R 43.0	35	1-3/4"	38	09 R2	4251	R4240
150	F 42.0	36.5	1-3/4"	38	09	4251	R4240
	R 44.5	36.5	2"	002	09 R2	4251	R4242
185	F 44.5	39	2"	002	09	4251	R4242
	R 47.0	38.5	2"	002	010 R2	5451	R5444
240	F 47.0	41.5	2"	002	010	5451	R5444
	R 49.5	41	2-1/4"	002	010 R2	5451	R5446
300	F 49.0	43.5	2-1/4"	002	010	5451	R5446
	R 52.0	42.5	2-1/4"	003	010 R2	5463	R5450
400	F 52.5	46	2-1/4"	003	010	5463	R5450
	R 55.0	45.5	2-1/4"	003	011 R2	6063	R6053
500	F 56.0	49.5	2-1/2"	003	011	6063	R6055
	R 60.0	50	2-3/4"	0033	012 R2.5	6063	R6058
630	F 60.0	53.5	2-3/4"	0033	012	6063	R6058
	R 63.0	52	2-3/4"	0033	012 R2.5	6675	R6662
800	F 64.0	57.5	2-3/4"	0033	012	6675	R6662
	R 67.0	56	2-3/4"	0033	013S R2.5	7882	R7866
1000	F 69.0	62.5	3"	004	013S	7882	R7868
	R 72.5	60.5	3"	004	013 R2.5	7882	R7870

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
19 / 33 KV (E) HT XLPE THREE CORE							
95	F 77.0	69	3-1/4"	005	014	7882	R7874
	R 82.0	69	3-1/2"	005	014 R3.2	8940	R8480
120	F 80.5	72.5	3-1/2"	005	014	8940	R8480
	R 86.5	71.5	4"	006	015 R4	8940	R8480
150	F 83.5	75	3-1/2"	006	015	8940	R8480
	R 90.0	75	4"	006	015 R4	9210	R9288
185	F 87.0	78.5	4"	006	015	8940	R8480
	R 93.0	78	4"	006	016 R4	9210	R9288
240	F 91.5	83	4"	006	015	9210	R9288
	R 98.0	83	4"	006	016 R4	1011	R1094
300	F 96.0	87.5	4"	006	016	9210	R9292
	R 102.0	87	4-1/2"	007	017 R4	1011	R1094
400	F 102.5	94	4-1/2"	007	017	1011	R1094
	R 109.0	94	5"	008	017 R4	1525	R1502
33 / 33 KV (E) HT XLPE SINGLE CORE							
120	F 43.0	37.5	1-3/4"	38	09	4251	R4240
	R 45.5	37.5	2"	002	09 R2	4251	R4242
150	F 44.5	39	2"	002	09	4251	R4242
	R 47.5	39	2"	002	010 R2	5451	R5446
185	F 46.5	41	2"	002	010	5451	R5444
	R 49.5	41	2-1/4"	002	010 R2	5451	R5446
240	F 49.5	44	2-1/4"	002	010	5451	R5446
	R 53.0	43.5	2-1/4"	003	011 R2.5	5463	R5450
300	F 51.5	46	2-1/4"	002	010	5451	R5448
	R 55.0	45.5	2-1/4"	003	011 R2.5	6063	R6053
400	F 55.0	49	2-1/4"	003	011	6063	R6053
	R 58.5	48.5	2-1/2"	003	012 R2.5	6063	R6055
500	F 58.0	52	2-1/2"	003	011	6063	R6055
	R 62.0	52	2-3/4"	0033	012 R2.5	6063	R6060
630	F 61.5	55	2-3/4"	0033	012	6063	R6060
	R 65.5	54.5	2-3/4"	0033	012 R2.5	6675	R6662
800	F 66.0	59.5	2-3/4"	0033	012	6675	R6664
	R 71.0	59	3"	004	013S R3.2	7882	R7868
1000	F 71.0	64	3"	004	013S	7882	R7868
	R 76.0	64	3-1/4"	005	013 R3.2	7882	R7874

Nominal Size Of Conductor	O.D. Flat / Round Armour	U/Armoured	Single Comp. H.D.	Flange Type	Double Comp. / Flameproof	Single Comp. SIBG Type	
			Braco Ref.	Braco Ref.	Braco Ref.	SIBG Ref.	Rubber Ref.
33 / 33 KV (E) HT XLPE THREE CORE							
120	F 83.5	75	3-1/2"	006	015	8940	R8480
	R 90.0	75	4"	006	015 R4	9210	R9288
150	F 86.5	78	4"	006	015	8940	R8480
	R 93.0	78	4"	006	016 R4	9210	R9288
185	F 89.5	81	4"	006	015	8940	R8484
	R 96.0	81	4"	006	016 R4	9210	R9292
240	F 94.5	86	4"	006	016	9210	R9292
	R 101.0	86	4-1/2"	007	016 R4	1011	R1094
300	F 98.5	90	4-1/2"	007	016	1011	R1094
	R 105.0	90	4-1/2"	007	017 R4	1525	R1500
400	F 105.0	96	4-1/2"	007	017	1525	R1500
	R 112.0	97	5"	008	017 R4	1525	R1506

NOTE

1. The Selection above is for reference purpose only, the same is based on Polycab make latest ISI Cables.

2. For the perfect size selection please check the actual construction details of Cable i.e. Overall Diameter, Under Armour Diameter & Type of Armour Flat or Round & Its dimension.

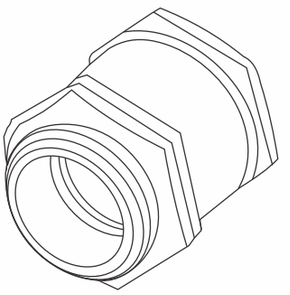
3. Select the material of glands other then brass for Atmosphere Protection & Type ingress protection required.

Braco single compression Brass Cable Glands are suitable for armoured /unarmoured cables. These are manufactured out of brass castings and are machined accurately to the required sizes. These glands are nickel plated to avoid corrosion while storage and use.

Each gland comprises of Brass Body with nipple thread as per I.S. 12943:1990 Compression nut , Check nut, Rubber Ring and three metal washers .The detail parts are shown in the functional drawing.

These glands are weather proof and water tight and have provision for earthing the armoured cables. These glands are available in various different sizes and are suitable for all cables upto 1000 sq .mm. and control cables upto 61 cores .The entry thread on gland body is normally threaded according to IS 1653(Steel conduits for electric wiring). However if any special kind of thread required, the same can be supplied. The glands can be supplied with special plating such as cadmium, tin or passivated.

SINGLE COMPRESSION GLANDS



Characteristics

- Washers of soft metal will be provided for firm gripping of armour
- Earth tag will be provided if required at extra cost
- PVC protective shrouds can be supplied at extra cost.
- Washers between rubber ring are supplied for uniform radial gripping.

Selection

- O. D of cable should be less than D-3
- Diameter of cable underneath the overall sheating for unarmoured cable and underneath the armouring for armoured cables is not more than D-34.
- Selection of rubber ring is made such that the dia over armouring for armoured cables and dia underneath the overall sheathing for unarmoured cable is less than rubber I.D. A-1.

Parts

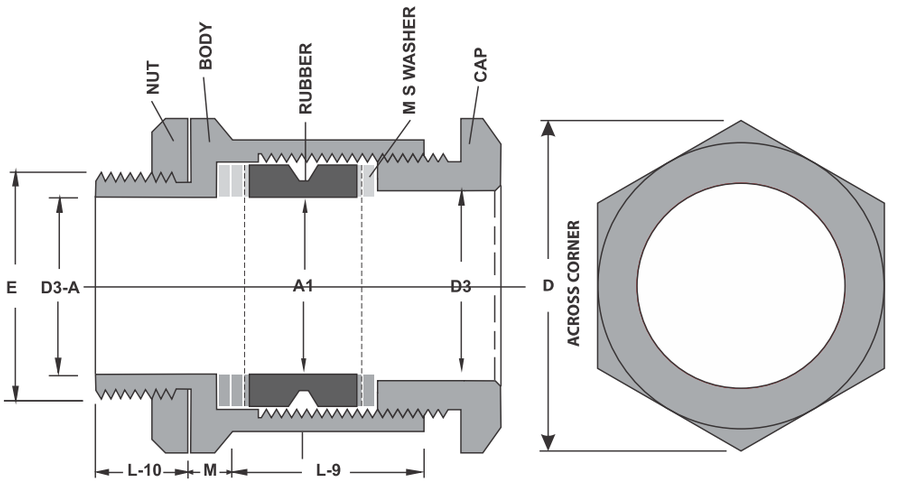
1. Compression Nut
2. Gland Body
3. Three Metal Washers
4. Rubber Ring
5. Check Nut

Material

Brass / SS-304/316

Finish

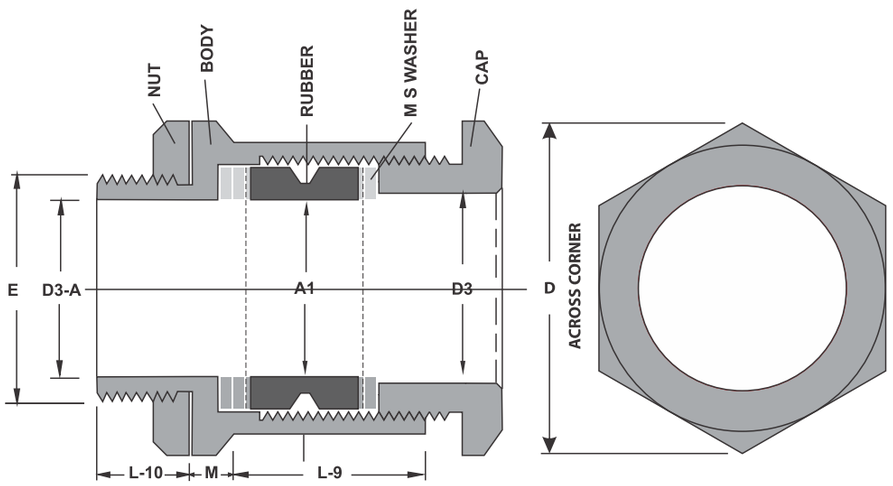
Nickle Plated



SINGLE COMPRESSION GLANDS

Glands Ref.	NIP. OD	CAP. BORING	NIP. ID	A.CROSS.	BODY HIGHT	NIP. HIGHT	B. NUT	RUB. ID	Cable diameter (mm)	
	E	D-3	D-3 A	D	L-9	L-10	M	A-1	above	upto
BC-3/8"	1/2"	14.00	12.00	20.00	10.50	6.00	2.00	8.00	9	13.5
BC-1/2"L	5/8"	15.00	13.00	23.00	12.50	6.50	2.00	12.00	10	14.5
BC-1/2"H	5/8"	15.00	13.00	23.50	14.00	7.50	3.00	12.00	10	14.5
BC-5/8"L	3/4"	15.00	15.00	23.00	14.00	7.00	2.00	12.00	10	14.5
BC-5/8"H	3/4"	15.00	15.00	23.50	15.00	8.00	3.00	12.00	10	14.5
BC-3/4"L	3/4"	17.50	15.00	26.00	15.50	8.00	2.50	14.00	14	17
BC-3/4"H	3/4"	17.50	15.00	27.50	16.50	9.00	3.00	14.00	14	17
BC-7/8"L	3/4"	20.00	15.00	29.00	16.00	8.00	2.50	16.00	17	19.5
BC-7/8"H	3/4"	20.00	15.00	29.50	17.00	9.00	3.00	16.00	17	19.5
BC-1"L	1"	23.50	21.50	32.50	17.50	8.00	3.00	20.00	19.5	23
BC-1"H	1"	23.50	21.00	34.50	19.00	10.00	3.50	20.00	19.5	23
BC-1"S	3/4"	23.50	15.00	32.50	17.50	8.00	3.00	18.00	19.5	23
BC-1-1/8"	1-1/8"	28.00	25.00	39.00	21.00	10.50	4.00	25.00	23	27
BC-1-1/4"	1-1/4"	31.50	27.00	42.50	21.00	10.50	4.00	27.00	27	30
BC-1-3/8"	1-3/8"	35.50	31.00	47.50	22.00	10.50	4.50	31.00	30	34
BC-1-1/2"	1-1/2"	39.00	34.00	52.00	22.00	10.50	4.50	33.00	34	38
BC-1-3/4"	1-3/4"	45.00	40.00	59.00	23.00	11.50	4.50	39.00	38	44
BC-2"	2"	51.50	45.00	68.00	23.00	11.50	4.50	44.00	44	50
BC-2-1/4"	2-1/4"	58.00	52.00	75.00	23.50	11.50	5.00	52.00	50	56.5
BC-2-1/2"	2-1/2"	62.50	58.00	80.00	25.00	13.00	5.50	58.00	56.5	61
BC-2-3/4"	2-3/4"	70.00	65.50	90.00	28.00	13.50	5.50	65.00	61	68
BC-3"	3"	76.00	69.50	100.00	28.00	13.50	5.50	70.00	68	74
BC-3-1/4"	3-1/4"	82.00	75.00	115.00	29.00	15.00	5.50	75.00	74	80
BC-3-1/2"	3-1/2"	88.00	82.00	117.00	29.00	15.00	6.00	80.00	80	86
BC-4"	4"	100.00	92.50	127.00	36.00	20.00	6.00	86.00	86	98
BC-4-1/2"	4-1/2"	108.00	102.00	145.00	38.00	23.00	7.00	90.00	98	105

Note : These Glands can also be supplied in SS-304/316 if required. Cat no will be SSBC for SS Glands.



Pass the compression nut (Pt.1), Washer No.1 (Pt.3) in succession order over the cable before commencing to strip the cable.

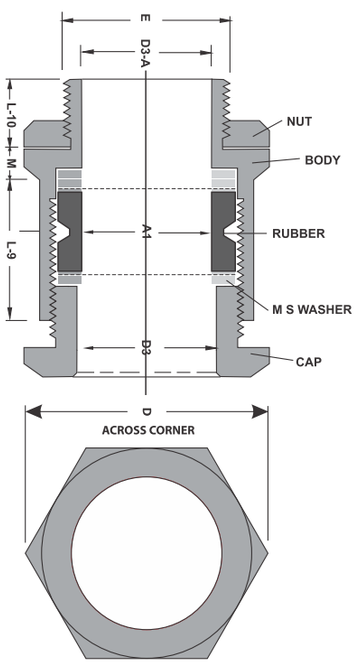
Remove the outer sheath to the desired length depending on the length of leads required .Pass the rubber ring(Pt.4) over the armouring upto the outer sheath .

Pass the 2nd washer (Pt. 5) over the armouring and splay out the armour wire one by one and then cut the armour wires according to the sizes of washer Pass the third washer (Pt .6). File the sharp edges of armour wires and bend them so that the armour wires are now secure between the two washers.

Push the assembly through gland body (Pt.2) and tighten the compression nut. While doing so the rubber ring will expand in radial direction and will grip the cable. This will also ensure dust proof entry of the cable

INSTALLATION INSTRUCTIONS:

GLAND REF.	E	D-3	D-3A	D	L-9	L-10	M	RUBBER REF.	A-1	B-1	C-1
SIBG-1216	12	16	12	25.5	15	9	3	R1212	12	18	8
SIBG-1616	16	19	12	29.5	15	9.5	3.5	R1611	11	20.5	9
SIBG-1619	19	19	15	29.5	15	9.5	3.5	R1613	13	20.5	9
								R1615	15	20.5	9
SIBG-2119	19	24	15	36.5	18	9.5	3.5	R2116	16	26	11
SIBG-2125	25.4	24	21	36.5	18	9.5	3.5	R2118	18	26	11
								R2120	20	26	11
SIBG-2925	25.4	33	21	47	21	10	4	R2921	21	35	12
SIBG-2932	32	33	27	47	21	10	4	R2923	23	35	12
SIBG-2938	38	33	32	47	21	10	4	R2925	25	35	12
								R2927	27	35	12
								R2929	29	35	12
SIBG-3632	32	41	26	59	22.5	11	4.5	R3631	31	45	14
SIBG-3638	38	41	32	59	22.5	11	4.5	R3633	33	45	14
								R3635	35	45	14
								R3637	37	45	14
SIBG-4238	38	47	32	71	26	12	5.5	R4236	36	52	17
SIBG-4251	51	47	44.5	71	26	12	5.5	R4238	38	52	17
								R4240	40	52	17
								R4242	42	52	17
SIBG-5451	51	56	44.5	80	27	12	6	R5444	44	59	18
SIBG-5463	63.5	56	55	80	27	12	6	R5446	46	59	18
								R5448	48	59	18
								R5450	50	59	18
SIBG-6063	63.5	64	55	92	31	12	6.5	R6053	53	68	18
								R6055	55	68	18
								R6058	58	68	18
								R6060	60	68	18
SIBG-6675	76	68	66	100	33	13	7	R6662	62	72	18
								R6664	64	72	18
								R6668	68	72	18
SIBG-7882	83	82	72	116	33	14	8	R7870	70	88	20
								R7874	74	88	20
								R7877	77	88	20
SIBG-8490	90	91	81	124	30	19	8	R8484	84	97	20
SIBG-9210	100	98	91	135	32	20	8	R9292	92	105	20
SIBG-1011	110	107	100	146	32	25	9	R1100	100	114	20
SIBG-1525	125	118	113	164	32	25	10	R1115	115	127	20



Braco Double Compression Glands are manufactured out of brass rods/castings and are machined accurately to the required sizes. These are nickel plated to avoid corrosion whilst storage and use.

These glands have two moisture proof seals and may be used under most climatic conditions. These are weather proof and water proof and when protected by a PVC shroud, these can be used under most corrosive conditions. The armour cone and ring gives excellent mechanical and electrical connections.

These Glands are certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Weather proof conditions. These Glands are rated with IP protection upto IP-65 Levels.

These glands are as per BS 6121:Part 1:2005 and have parts: Brass body, Armour clamp and Ring, Gland Barrel sealing nut, two seals, , check nut and flat washer between the gland barrel and check nut is provided to prevent the drag on outer seal.

These glands are available in various different sizes and are suitable for all cables up to 1000sq. mm and control cables up to 61 cores. Threads can be ET / mm /NPT as per requirement. However if any special kind of gland or thread is required, the same can be supplied on request.

The gland can also be supplied with any other special plating such as cadmium, tin or pasivated. Also the glands can be supplied made out of aluminum, mild steel or stainless steel

DOUBLE COMPRESSION BRASS GLANDS (Weather proof)

BRACO CAT. No.	B	A	A/F E	A/C E1	Nipple thread Inch			D	Acceptable cable OD (mm)	
					ET	MM	NPT		Above	Upto
BPW-3/8'	13	11	21	24	5/8"	M16	1/2" NPT	12	8	12
BPW-1/2"	15	11	21	24	5/8"	M16	1/2" NPT	12	8	13
BPW-001S	14	13	21	24	3/4"	M20	1/2" NPT	12	8	13
BPW-5/8"	17	14	23	26	3/4"	M20	1/2" NPT	15	11	15
BPW-001	17	14	24	27.5	3/4"	M20	1/2" NPT	15	12.5	16.5
BPW-01S	17.5	15	25	29	3/4"	M20	1/2" NPT	15	12.5	16.5
BPW-01	20	14	27	31	3/4"	M20	1/2" NPT	15	15	18
BPW-01L	20	15	27	31	1"	M25	3/4" NPT	15	15	18
BPW-02	20.5	18	30.5	35.5	1"	M25	3/4" NPT	15	18	20
BPW-02S	20.5	14	30.5	35.5	3/4"	M20	1/2" NPT	15	18	20
BPW-03	23	18	30.5	35.5	1"	M25	3/4" NPT	15	20	23
BPW-1"	23	20	30.5	35.5	1"	M25	3/4" NPT	15	20	23
BPW-04	28	20	37	43	1"	M25	3/4" NPT	15	23	26
BPW-04L	28	24	37	43	1-1/4"	M32	1" NPT	15	23	26
BPW-05	31	25	41	47	1-1/4"	M32	1" NPT	15	26	30
BPW-05L	31	26	41	47	1-1/2"	M40	1-1/4" NPT	15	26	30
BPW-06	34	31	47	54.5	1-1/2"	M40	1-1/4" NPT	15	30	33
BPW-06S	34	24	47	54.5	1-1/4"	M32	1" NPT	15	30	33
BPW-07	39	33	51	59	1-1/2"	M40	1-1/4" NPT	15	33	37
BPW-08	43	38	54	62	2"	M50	1-1/2" NPT	15	37	41
BPW-09	47	40	56	65	2"	M50	1-1/2" NPT	15	41	46
BPW-010	53	44	66	76.5	2"	M50	1-1/2" NPT	20	46	52
BPW-010L	53	50	66	76.5	2-1/2"	M63	2" NPT	20	46	52
BPW-011	61	56	80	92	2-1/2"	M63	2" NPT	20	52	60
BPW-012	68	64	84	97	3"	M75	2-1/2" NPT	20	60	66
BPW-013S	73	67	90	104	3"	M75	2-1/2" NPT	20	66	72
BPW-013	79	75	98	113	3-1/4"	M82	3" NPT	20	72	78
BPW-014	85	78	103	119	3-1/2"	M90	3" NPT	20	78	83
BPW-015	98	91	112	129	4"	M100	3-1/2" NPT	24	83	93
BPW-016	106	104	125	144	4-1/2"	M115	4" NPT	25	93	104

Characteristics:

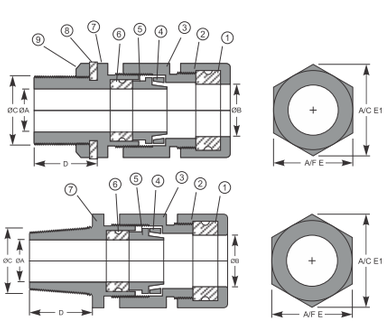
- Clamping cone will be provided with knurling for firm gripping of the armour.
- Earthing tag will be provided if required at extra cost.
- PVC protective shroud can be supplied at extra cost.
- Washers between seals are supplied for uniform radial gripping of PCP seals.

Installation Instructions:

Remove the outer sheath to the desired length depending on the length of the leads required, and splay out the armour wire one by one and then cut the same according to the size of armour clamping cone. File the sharp edges of the armour wire and fit the gland as per assembly shown sectionally.

Parts

1. Outer Seal
2. Sealing Nut
3. Gland Body
4. Clamping Ring
5. Armour Clamp
6. Inner Seal
7. Gland Nipple
8. Flat Washer
9. Check Nut



Braco Double Compression Glands are manufactured out of brass rods/castings and are machined accurately to the required sizes. These are nickel plated to avoid corrosion whilst storage and use.

These glands have two moisture proof seals and may be used under most climatic conditions. These are weather proof and water proof and when protected by a PVC shroud, these can be used under most corrosive conditions. The armour cone and ring gives excellent mechanical and electrical connections.

These Glands are certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Flame proof and weather proof conditions. These Glands are rated with IP protection upto IP-68 Levels.

These glands are as per BS 6121:Part 1:2005 and have parts: Brass body, Armour clamp and Ring, Gland Barrel sealing nut, two seals, check nut , check nut and flat washer between the gland barrel and check nut is provided to prevent the drag on outer seal.

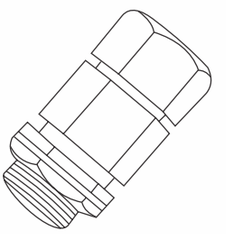
These glands are available in various different sizes and are suitable for all cables up to 1000sq. mm and control cables up to 61 cores. Threads can be ET / mm /NPT as per requirement. However if any special kind of gland or thread is required, the same can be supplied on request.

The gland can also be supplied with any other special plating such as cadmium, tin or pasivated. Also the glands can be supplied made out of aluminum, mild steel or stainless steel. Can be supplied in IIA/ IIB/ IIC

DOUBLE COMPRESSION BRASS GLANDS (Flame Proof)

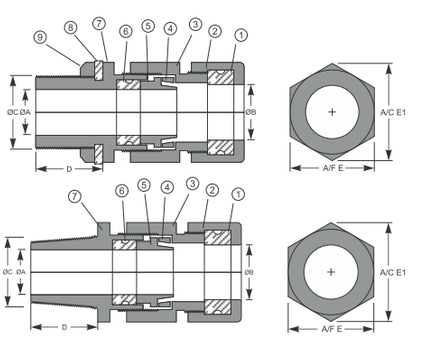
Certified by : Central Institute of Mining & Fuel Research

BRACO CAT. No.	B	A	A/F E	A/C E1	Nipple thread Inch C			D	Acceptable cable OD (mm)	
					ET	MM	NPT		Above	Upto
BPF-3/8'	13	11	21	24	5/8"	M16	1/2" NPT	25	8	12
BPF-1/2"	15	11	21	24	5/8"	M16	1/2" NPT	25	8	13
BPF-001S	14	13	21	24	3/4"	M20	1/2" NPT	25	8	13
BPF-5/8"	17	14	23	26	3/4"	M20	1/2" NPT	25	11	15
BPF-001	17	14	24	27.5	3/4"	M20	1/2" NPT	25	12.5	16.5
BPF-01S	17.5	15	25	29	3/4"	M20	1/2" NPT	25	12.5	16.5
BPF-01	20	14	27	31	3/4"	M20	1/2" NPT	25	15	18
BPF-01L	20	15	27	31	1"	M25	3/4" NPT	25	15	18
BPF-02	20.5	18	30.5	35.5	1"	M25	3/4" NPT	25	18	20
BPF-02S	20.5	14	30.5	35.5	3/4"	M20	1/2" NPT	25	18	20
BPF-03	23	18	30.5	35.5	1"	M25	3/4" NPT	25	20	23
BPF-1"	23	20	30.5	35.5	1"	M25	3/4" NPT	25	20	23
BPF-04	28	20	37	43	1"	M25	3/4" NPT	25	23	26
BPF-04L	28	24	37	43	1-1/4"	M32	1" NPT	25	23	26
BPF-05	31	25	41	47	1-1/4"	M32	1" NPT	25	26	30
BPF-05L	31	26	41	47	1-1/2"	M40	1-1/4" NPT	25	26	30
BPF-06	34	31	47	54.5	1-1/2"	M40	1-1/4" NPT	25	30	33
BPF-06S	34	24	47	54.5	1-1/4"	M32	1" NPT	25	30	33
BPF-07	39	33	51	59	1-1/2"	M40	1-1/4" NPT	25	33	37
BPF-08	43	38	54	62	2"	M50	1-1/2" NPT	25	37	41
BPF-09	47	40	56	65	2"	M50	1-1/2" NPT	25	41	46
BPF-010	53	44	66	76.5	2"	M50	1-1/2" NPT	25	46	52
BPF-010L	53	50	66	76.5	2-1/2"	M63	2" NPT	25	46	52
BPF-011	61	56	80	92	2-1/2"	M63	2" NPT	25	52	60
BPF-012	68	64	84	97	3"	M75	2-1/2" NPT	25	60	66
BPF-013S	73	67	90	104	3"	M75	2-1/2" NPT	25	66	72
BPF-013	79	75	98	113	3-1/4"	M82	3" NPT	25	72	78
BPF-014	85	78	103	119	3-1/2"	M90	3" NPT	25	78	83
BPF-015	98	91	112	129	4"	M100	3-1/2" NPT	25	83	93
BPF-016	106	104	125	144	4-1/2"	M115	4" NPT	25	93	104



Parts

1. Outer Seal
2. Sealing Nut
3. Gland Body
4. Clamping Ring
5. Armour Clamp
6. Inner Seal
7. Gland Nipple
8. Flat Washer
9. Check Nut



Braco Double Compression Glands are manufactured out of Stainless Steel of Grade SS 304 / 316 and are machined accurately to the required sizes.

These glands have two moisture proof seals and may be used under most climatic conditions. These are weather proof and water proof and when protected by a PVC shroud, these can be used under most corrosive conditions. The armour cone and ring gives excellent mechanical and electrical connections.

These Glands are certified by Central Institute of Mining and Fuel Research, Dhanbad for use in weather proof conditions. These Glands are rated with IP protection upto IP-65 Levels.

These glands are as per BS 6121:Part 1:2005 and have parts: SS body, Armour clamp and Ring, Gland Barrel sealing nut, two seals, check nut and flat washer between the gland barrel and check nut is provided to prevent the drag on outer seal.

These glands are available in various different sizes and are suitable for all cables up to 1000sq. mm and control cables up to 61 cores. Threads can be ET / mm /NPT as per requirement. However if any special kind of gland or thread is required, the same can be supplied on request.

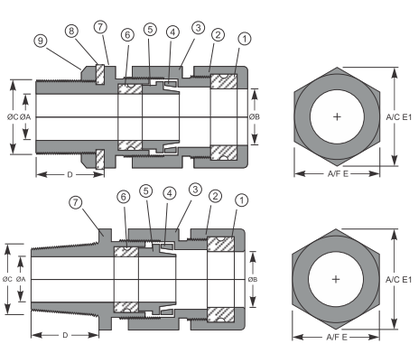
DOUBLE COMPRESSION STAINLESS STEEL GLANDS

Weather proof

Material :SS-304 / SS-316

BRACO CAT. No.	B	A	A/F E	A/C E1	Nipple thread Inch			D	Acceptable cable OD (mm)	
					ET	MM	NPT		Above	Upto
SSW 3/8'	13	11	22	25	5/8"	M16	1/2" NPT	12	8	12
SSW 1/2"	14	11	22	25	5/8"	M16	1/2" NPT	12	8	13
SSW-001S	14	13	22	25	3/4"	M20	1/2" NPT	15	8	14
SSW-5/8"	17	14	23	26	3/4"	M20	1/2" NPT	15	11	15
SSW-001	17	14	24	27.5	3/4"	M20	1/2" NPT	15	12.5	16.5
SSW-01S	17.5	15	24	27.5	3/4"	M20	1/2" NPT	15	12.5	16.5
SSW 01	18.5	15	27	30	3/4"	M20	1/2" NPT	15	15	18
SSW 01L	18.5	15	27	30	1"	M25	3/4" NPT	15	15	18
SSW 02	20.5	16	30	35	1"	M25	3/4" NPT	15	18	20
SSW 02S	20.5	14	30	35	3/4"	M20	1/2" NPT	15	18	20
SSW 03	23	18	30	35	1"	M25	3/4" NPT	15	20	23
SSW 04	27	20	35	41	1"	M25	3/4" NPT	15	23	26
SSW 04L	27	24	35	41	1-1/4"	M32	1" NPT	15	23	26
SSW 05	31	24	40	46	1-1/4"	M32	1" NPT	15	26	30
SSW 05L	31	26	40	46	1-1/2"	M40	1-1/4" NPT	15	26	30
SSW 06	34	31	47	53	1-1/2"	M40	1-1/4" NPT	15	30	33
SSW 06S	34	24	47	53	1-1/4"	M32	1" NPT	15	30	33
SSW 07	38	32	52	58	1-1/2"	M40	1-1/4" NPT	15	33	37
SSW 08	42	38	56	64	2"	M50	1-1/2" NPT	15	37	41
SSW 09	47	39	59	67	2"	M50	1-1/2" NPT	15	41	46
SSW 010	53	44	67.5	77	2"	M50	1-1/2" NPT	20	46	52
SSW-010L	53	50	67.5	77	2-1/2"	M63	2" NPT	20	46	52
SSW 011	61	56	80	92	2-1/2"	M63	2" NPT	20	52	60
SSW 012	68	64	85	98	3"	M75	2-1/2" NPT	20	60	66
SSW 013S	73	64	99	113	3"	M75	2-1/2" NPT	20	66	72
SSW 013	79	74	99	113	3-1/4"	M82	3" NPT	20	72	78
SSW 014	84	78	105	118	3-1/2"	M90	3" NPT	20	78	83
SSW 015	95	88	115	129	4"	M100	3-1/2" NPT	20	83	93
SSW 016	106	100	125	140	4-1/2"	M115	4" NPT	20	93	104

Description	Material
1. Outer Seal	Nitrile Rubber
2. Sealing Nut	SS-304/316
3. Gland Body	SS-304/316
4. Clamping Ring	SS-304/316
5. Armour Clamp	SS-304/316
6. Inner Seal	Nitrile Rubber
7. Gland Nipple	SS-304/316
8. Flat Washer	Nitrile Rubber
9. Check Nut	SS-304/316



Braco Double Compression Glands are manufactured out of Stainless Steel of Grade SS 304 / 316 and are machined accurately to the required sizes.

These glands have two moisture proof seals and may be used under most climatic conditions. These are weather proof and water proof and when protected by a PVC shroud, these can be used under most corrosive conditions. The armour cone and ring gives excellent mechanical and electrical connections.

These Glands are certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Flame proof and weather proof conditions. These Glands are rated with IP protection upto IP-68 Levels.

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These glands are available in various different sizes and are suitable for all cables up to 1000sq. mm and control cables up to 61 cores. Threads can be ET / mm /NPT as per requirement. However if any special kind of gland or thread is required, the same can be supplied on request. Can be supplied in IIA/ IIB/ IIC

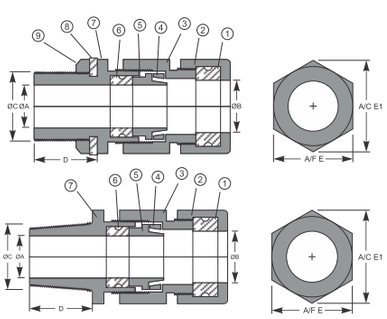
DOUBLE COMPRESSION STAINLESS STEEL GLANDS

Flame proof

Material :SS-304 / SS-316

BRACO CAT. No.	B	A	A/F E	A/C E1	Nipple thread Inch			D	Cable OD (mm)	
					ET	MM	NPT		Above	Upto
SSF 3/8'	13	11	22	25	5/8"	M16	1/2" NPT	25	8	12
SSF 1/2"	14	11	22	25	5/8"	M16	1/2" NPT	25	8	13
SSF-001S	14	13	22	25	3/4"	M20	1/2" NPT	25	8	14
SSF-5/8"	17	14	23	26	3/4"	M20	1/2" NPT	25	11	15
SSF-001	17	14	24	27.5	3/4"	M20	1/2" NPT	25	12.5	16.5
SSF-01S	17.5	15	24	27.5	3/4"	M20	1/2" NPT	25	12.5	16.5
SSF 01	18.5	15	27	30	3/4"	M20	1/2" NPT	25	15	18
SSF 01L	18.5	15	27	30	1"	M25	3/4" NPT	25	15	18
SSF 02	20.5	16	30	35	1"	M25	3/4" NPT	25	18	20
SSF 02S	20.5	14	30	35	3/4"	M20	1/2" NPT	25	18	20
SSF 03	23	18	30	35	1"	M25	3/4" NPT	25	20	23
SSF 04	27	20	35	41	1"	M25	3/4" NPT	25	23	26
SSF 04L	27	24	35	41	1-1/4"	M32	1" NPT	25	23	26
SSF 05	31	24	40	46	1-1/4"	M32	1" NPT	25	26	30
SSF 05L	31	26	40	46	1-1/2"	M40	1-1/4" NPT	25	26	30
SSF 06	34	31	47	53	1-1/2"	M40	1-1/4" NPT	25	30	33
SSF 06S	34	24	47	53	1-1/4"	M32	1" NPT	25	30	33
SSF 07	38	32	52	58	1-1/2"	M40	1-1/4" NPT	25	33	37
SSF 08	42	38	56	64	2"	M50	1-1/2" NPT	25	37	41
SSF 09	47	39	59	67	2"	M50	1-1/2" NPT	25	41	46
SSF 010	53	44	67.5	77	2"	M50	1-1/2" NPT	25	46	52
SSF-010L	53	50	67.5	77	2-1/2"	M63	2" NPT	25	46	52
SSF 011	61	56	80	92	2-1/2"	M63	2" NPT	25	52	60
SSF 012	68	64	85	98	3"	M75	2-1/2" NPT	25	60	66
SSF 013S	73	64	99	113	3"	M75	2-1/2" NPT	25	66	72
SSF 013	79	74	99	113	3-1/4"	M82	3" NPT	25	72	78
SSF 014	84	78	105	118	3-1/2"	M90	3" NPT	25	78	83
SSF 015	95	88	115	129	4"	M100	3-1/2" NPT	25	83	93
SSF 016	106	100	125	140	4-1/2"	M115	4" NPT	25	93	104

Description	Material
1. Outer Seal	Nitrile Rubber
2. Sealing Nut	SS-304/316
3. Gland Body	SS-304/316
4. Clamping Ring	SS-304/316
5. Armour Clamp	SS-304/316
6. Inner Seal	Nitrile Rubber
7. Gland Nipple	SS-304/316
8. Flat Washer	Nitrile Rubber
9. Check Nut	SS-304/316



Braco Double compression Through Glands are specially designed for unarmored/Flexible cables as per BS 6121 Part 1: 2005. These Glands are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

These Glands have two Rubber seals to ensure proper grip on Cable Outer Sheath. Brass Glands are nickel plated to avoid corrosion whilst storage and use. SS and Aluminium Glands are treated with ultrasonic bath.

These Glands are suitable for use under most climatic conditions and are certified by Central Institute of Mining and Fuel Research, Dhanbad for use in weather proof conditions. These Glands are rated with IP protection upto IP-65 Levels.

These glands are available in different sizes, suitable for all types of unarmored/ flexible cables upto 1000 sq.mm

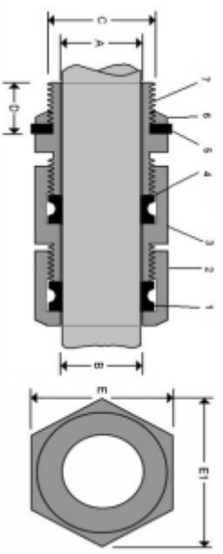
Suffix – BPT = for Brass Glands, SSWT = for SS Glands and ALT = for Aluminium Glands

Threads can be ET / mm / NPT as per requirement

Braco Make Double Compression Glands (Weather proof)

Through Type for Unarmoured Cables.

Sr. No.	Braco Cat. No.	B	A	A/F E	A/C E1	Nipple thread C	D	Above	Upto
1	BPT-001SS	11	11	22	25	3/4"	12	5	10
2	BPT-001S	14	14	22	25	3/4"	12	10	13.5
3	BPT-001	15	15	24	27.5	3/4"	12	11	14.5
4	BPT-01 L	20	19	28	31	1"	15	14	18
5	BPT-02	20.5	20.5	30	35	1"	15	18	20
6	BPT-03 SP	23	23	32	36.5	28mm	15	20	23
7	BPT-04L	28	27	37	43	1-1/4"	15	23	26
8	BPT-05 L	31	31	41	47	1-1/2"	20	26	30
9	BPT-06 SP	35	34	47	54	40mm	20	30	33
10	BPT-07 SP	39	37	52	59	42mm	20	33	36
11	BPT-08	43	43	55	63	2"	20	36	41
12	BPT-09	47	45	57	66	2"	20	41	44
13	BPT-010L	54	54	67	77	2-1/2"	20	44	52
14	BPT-011S	56	56	70	81	2-1/2"	20	52	55
15	BPT-011L	61	60	80	92	70mm	20	55	60
16	BPT-012	68	67	84	97	3"	20	60	66
17	BPT-013SL	73	72	90	103	3-1/4"	20	66	72
18	BPT-013	79	78	99	113	3-1/2"	20	72	78
19	BPT-014	85	84	105	118	3-3/4"	20	78	83
20	BPT-015	95	94	113	128	4"	20	83	93
21	BPT-016	106	105	125	140	4-1/2"	20	93	104



Description	Material
1. outer seal	Nitrile Rubber (R1)
2. Sealing Nut	Brass
3. Gland Body	Brass
4. Inner Seal	Nitrile Rubber (R2)
5. Flat washer	Nitrile Rubber
6. Check Nut	Brass
7. Gland barrel	Brass

Note:

1. Material : Brass as per IS-12943:1990 OR Aluminium HE-30 Grade OR SS-304/316
2. Gland Entry Thread : BSC & MM as specified (BSP or Npt also in special case)
3. Nickle plated with plating thickness min 10 microns as per IS 12943:1990 (only in case of Brass)
4. IP protection - IP-65

Braco Single compression Through Glands are specially designed for unarmored/Flexible cables as per BS 6121 Part 1: 2005. These Glands are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

These Glands have One Rubber seal to ensure proper grip on Cable Outer Sheath. Brass Glands are nickel plated to avoid corrosion whilst storage and use. SS and Aluminium Glands are treated with ultrasonic bath.

These Glands are suitable for use under most climatic conditions and are certified by Central Institute of Mining and Fuel Research, Dhanbad for use in weather proof conditions. These Glands are rated with IP protection upto IP-65 Levels.

These glands are available in different sizes, suitable for all types of unarmored/ flexible cables upto 1000 sq.mm

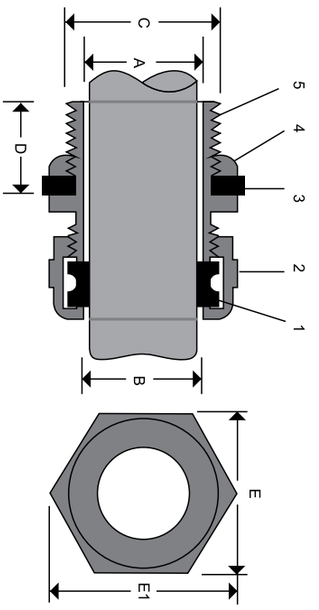
Suffix – BCT = for Brass Glands, SCT = for SS Glands and ALCT = for Aluminium Glands

Threads can be ET / mm / NPT as per requirement

Braco Make Single Compression Glands (Weather proof)

Through Type for Unarmoured Cables.

Sr. No.	Braco Cat. No.	B	A	A/F E	A/C E1	Nipple thread C	D	Above	Upto
1	BCT-001SS	11	14	22	25	3/4"	12	5	10
2	BCT-001S	14	14	22	25	3/4"	12	10	13.5
3	BCT-001	15	15	24	27.5	3/4"	12	11	14.5
4	BCT-01 L	20	19	28	31	1"	15	14	18
5	BCT-02	20.5	20.5	30	35	1"	15	18	20
6	BCT-03 SP	23	23	32	36.5	28mm	15	20	23
7	BCT-04L	28	27	37	43	1-1/4"	15	23	26
8	BCT-05 L	31	31	41	47	1-1/2"	20	26	30
9	BCT-06 SP	35	34	47	54	40mm	20	30	33
10	BCT-07 SP	39	37	52	59	42mm	20	33	36
11	BCT-08	43	43	55	63	2"	20	36	41
12	BCT-09	47	45	57	66	2"	20	41	44
13	BCT-010L	54	54	67	77	2-1/2"	20	44	52
14	BCT-011S	56	56	70	81	2-1/2"	20	52	55
15	BCT-011L	61	60	80	92	70mm	20	55	60
16	BCT-012	68	67	84	97	3"	20	60	66
17	BCT-013SL	73	72	90	103	3-1/4"	20	66	72
18	BCT-013	79	78	99	113	3-1/2"	20	72	78
19	BCT-014	85	84	105	118	3-3/4"	20	78	83
20	BCT-015	95	94	113	128	4"	20	83	93
21	BCT-016	106	105	125	140	4-1/2"	20	93	104



Description	Material
1. outer seal	Nitrile Rubber (R1)
2. Sealing Nut	Brass
3. Flat washer	Nitrile Rubber
4. Check Nut	Brass
5. Gland barrel	Brass

Note:

1. Material : Brass as per IS-12943:1990 OR Aluminium HE-30 Grade OR SS-304/316
2. Gland Entry Thread : BSC & MM as specified (BSP or Npt also in special case)
3. Nickle plated with plating thickness min 10 microns as per IS 12943:1990 (only in case of Brass)
4. IP protection - IP-65

Braco Nylon PG type Glands are suitable for unarmoured, plastic or rubber sheathed cables. These glands are made from UL approved Nylon PA-66 grade.

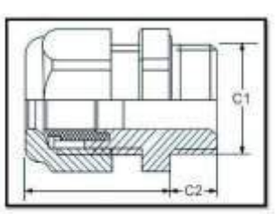
These Glands provide IP protection upto IP-68 levels. The Claws and seals of excellent design, sealing nut have a click sound and reopen can hold cable firmly and have a wider cable Range. Resistant to salt water, Weak acid, Alcohol, Oil, Grease and Common Solvency.

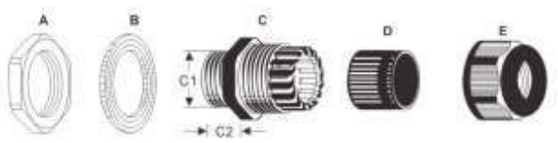
Nylon Cable Glands PG Type (PG & Metric Threads)

Gland Size	Cable OD Range	Thread OD C 1	Thread Length C2	Hex Dimension
PPG-7	3-6.5	12.5	8	16
PPG-7 S	2-5	12.5	8	16
PPG-9	4-8	15.2	8	19
PPG-9 S	2-6	15.2	8	19
PPG-11	5-10	18.6	8	22
PPG-11 S	3-7	18.6	8	22
PPG-13.5	6-12	20.4	10	24
PPG-13.5 S	5-9	20.4	10	24
PPG-16	10-14	22.5	10	27
PPG-16 S	7-12	22.5	10	27
PPG-19	12-16	24	10	27
PPG-19 S	10-13	24	10	27
PPG- 21	13-18	28.3	10	33
PPG- 21 S	9-16	28.3	10	33
PPG- 25	16-21	30	11	35
PPG- 25 S	13-18	30	11	35
PPG- 29	18-25	37	12	42
PPG- 29 S	13-20	37	12	42
PPG- 36	22-32	47	14	52
PPG- 36 S	20-26	47	14	52
PPG- 42	32-38	54	14	60
PPG- 42 S	25-31	54	14	60
PPG-48	37-44	59.3	15	64
PPG-48 S	29-35	59.3	15	64
PPG- 63	42-50	71	28	77
PPG- 63 S	32-40	71	28	77

Gland Size	Cable OD Range	Thread OD C 1	Thread Length C2	Hex Dimension
PPGM-12 x 1.5	3-6.5	M12	8	16
PPGM-12 x 1.5 S	2-5	M12	8	16
PPGM-16 x 1.5	4-8	M16	8	19
PPGM-16 x 1.5 S	2-6	M16	8	19
PPGM-18 x 1.5	5-10	M18	8	22
PPGM-18 x 1.5 S	3-7	M18	8	22
PPGM-20 x 1.5	6-12	M20	10	24
PPGM-20 x 1.5 S	5-9	M20	10	24
PPGM-22 x 1.5	10-14	M22	10	27
PPGM-22 x 1.5 S	7-12	M22	10	27
PPGM-24 x 1.5	12-16	M24	10	27
PPGM-24 x 1.5 S	10-13	M24	10	27
PPGM-25 x 1.5	13-18	M25	10	33
PPGM-25 x 1.5 S	9-16	M25	10	33
PPGM-27 x 1.5	13-18	M27	10	33
PPGM-27 x 1.5 S	9-16	M27	10	33
PPGM-30 x 1.5	16-21	M30	11	35
PPGM-30 x 1.5 S	13-18	M30	11	35
PPGM-32 x 1.5	16-21	M32	11	35
PPGM-32 x 1.5 S	13-18	M32	11	35
PPGM-36 x 1.5	18-25	M36	12	42
PPGM-36 x 1.5 S	13-20	M36	12	42
PPGM-40 x 1.5	22-32	M40	14	52
PPGM-40 x 1.5 S	20-26	M40	14	52
PPGM-50 x 1.5	32-38	M50	14	60
PPGM-50 x 1.5 S	25-31	M50	14	60
PPGM-63 x 1.5	37-44	M63	15	64
PPGM-63 x 1.5 S	29-35	M63	15	64

PPG : PG Thread Glands. Suffix 'S' is for smaller dia Rubber.
PPGM : Metric Thread Glands. Suffix 'S' is for smaller dia Rubber.





Braco Brass PG type Glands are suitable for unarmoured, plastic or rubber sheathed cables. These glands are made from Brass with Nickel Plated.

These Glands provide IP protection upto IP-68 levels. Polyamide Claws with EPDM Rubber can hold cable firmly and have a wider cable Range. Resistant to salt water, Weak acid, Alcohol, Oil, Grease and Common Solvency.

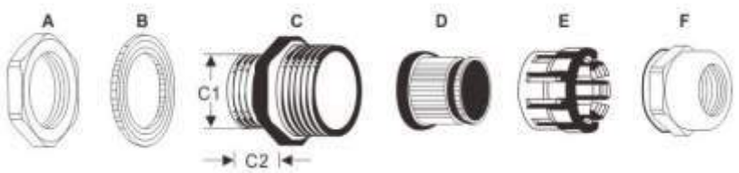
Brass Cable Glands PG Type - (PG & Metric Thread)

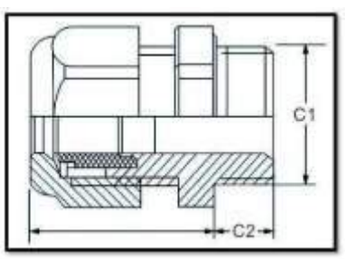
Gland Size	Cable OD Range	Thread OD C1	Thread Length C2		Hex Dimension
			Short	Long	
BPG- 7	3-6.5	12.5	6	10	14
BPG- 7 S	2-5	12.5	6	10	14
BPG-9	4-8	15.2	7	10	17
BPG-9 S	2-6	15.2	7	10	17
BPG-11	5-10	18.6	7	10	20
BPG-11 S	3-7	18.6	7	10	20
BPG-13.5	6-12	20.4	7.5	10	22
BPG-13.5 S	5-9	20.4	7.5	10	22
BPG-16	10-14	22.5	7.5	10	24
BPG-16 S	7-12	22.5	7.5	10	24
BPG-19	11-15	24	8	12	26
BPG-19 S	10-13	24	8	12	26
BPG- 21	13-18	28.3	8	12	30
BPG- 21 S	9-16	28.3	8	12	30
BPG-25	16-20	30	9	12	33
BPG-25 S	13-18	30	9	12	33
BPG-29	18-25	37	9	12	40
BPG-29 S	13-20	37	9	12	40
BPG-36	22-32	47	9	15	50
BPG-36 S	20-26	47	9	15	50
BPG-42	32-38	54	10	15	57
BPG-42 S	25-31	54	10	15	57
BPG-48	37-44	59.3	11	15	64
BPG-48 S	29-35	59.3	11	15	64
BPG-63	42-52	72	15	20	80
BPG-63 S	32-40	72	15	20	80

Gland Size	Cable OD Range	Thread OD C1	Thread Length C2		Hex Dimension
			Short	Long	
BPGM-12 x 1.5	3-6.5	M-12	6	10	14
BPGM-16 x 1.5	4-8	M-16	7	10	17
BPGM-18 x 1.5	5-10	M-18	7	10	20
BPGM-20 x 1.5	6-12	M-20	7.5	10	22
BPGM-22 x 1.5	10-14	M-22	7.5	10	24
BPGM-24 x 1.5	11-15	M-24	8	12	26
BPGM-25 x 1.5	12-16	M-25	8	12	27
BPGM-25 x 1.5	13-18	M-25	8	12	30
BPGM-27 x 1.5(2)	13-18	M-27	8	12	30
BPGM-30 x 1.5(2)	15-20	M-30	9	12	33
BPGM-32 x 1.5(2)	16-21	M-32	9	12	35
BPGM-40 x 1.5(2)	22-32	M-40	9	15	45
BPGM-50 x 1.5(2)	32-38	M-50	10	15	57
BPGM-63 x 1.5(2)	37-44	M-63	11	15	68
BPGM-70 x 1.5(2)	42-52	M-70	15	20	80
BPGM-72 x 1.5(2)	42-52	M-70	15	20	80
BPGM-75 x 1.5(2)	42-52	M-75	15	20	80
BPGM-80 x 1.5(2)	55-62	M-80	15	20	87
BPGM-88 x 1.5(2)	65-70	M-88	15	20	95
BPGM-100 x 1.5(2)	78-84	M-100	15	20	110

BPGM: Metric Thread PG Glands. Suffix 'L' is for Long Nipple

BPG : PG Thread Glands. Suffix 'S' is for smaller dia Rubber,
Suffix 'L' is for Long Nipple,Suffix 'SL' is for small rubber is for long Nipple.





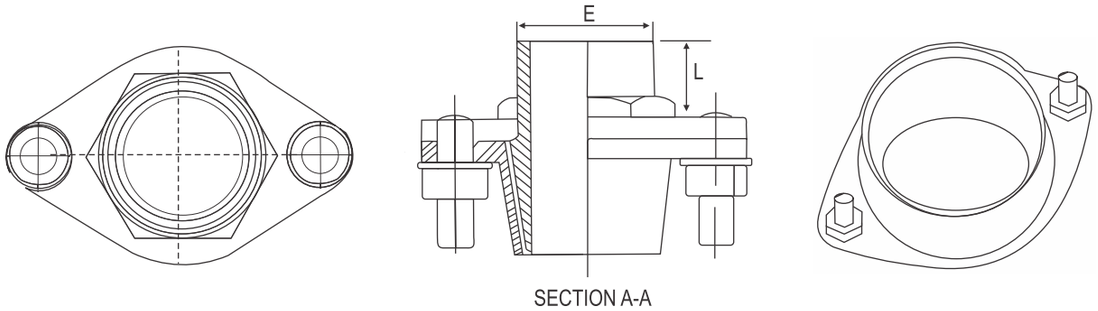
Braco Flange Type Cable Glands are made out of brass castings and are machined accurately to the required sizes. These glands are suitable for armoured calbes and are called mechanical glands hence suitable for outdoor application.

The gland comprises of brass body (flange type oval shape) and plate clamped with galavanised mild steel studs and nuts for clamping the armour. Tapered cone and nut are provided for termination of cable.

The cone and body taper is designed for giving a firm grip to the armour of the cable.

FLANGE TYPE CABLE GLANDS

Code No	E(mm)	Max Dia Of Cable	Under Armour Dia	L	Acceptance Dia	
					Min	Max
FL 5	15.0	16.5	10.0	13.0	12.0	16.5
FL 4	19.0	19.0	13.5	13.0	15.0	19.0
FL 3	19.5	20.5	13.0	13.0	18.5	20.5
FL 2	25.0	24.5	19.0	16.5	20.5	24.5
FL 1	31.0	30.0	25.5	15.5	24.0	30.0
FL 11	31.0	34.0	28.0	15.0	29.5	34.0
FL 0	37.5	35.0	29.5	21.0	32.5	35.0
FL 00	37.5	38.0	29.5	20.0	34.5	38.0
FL 38	42.0	42.0	34.5	21.5	37.0	42.0
FL 001	49.0	44.0	41.0	20.5	40.5	44.0
FL 002	53.5	52.0	46.0	21.5	43.5	52.0
FL 003	60.0	58.0	52.0	23.0	51.0	58.0
FL 0033	65.0	67.0	56.0	25.5	56.5	67.0
FL 004	75.0	76.0	65.2	22.5	66.0	76.0
FL 005	99.0	83.0	88.0	22.5	75.0	83.0

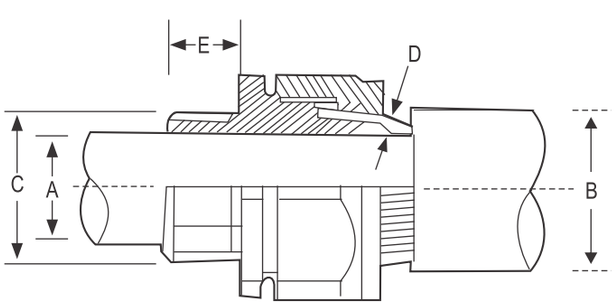


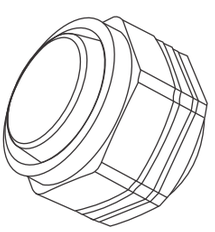
SECTION A-A

Braco BW Brass cable glands are as per BS 6121 Part 1:1989 and suitable for single wire armoured plastic or rubber sheathed cables. These glands provide mechanical cable retention, and electrical continuity via armour wire termination. The use of these glands is recommended in dry, indoor situations. Shrouds may be used for ingress protection.

BW Type Cable Glands

GLAND SIZE	ENTRY THREAD		CABLE ACCEPTANCE DETAIL			ACROSS FLAT	ACROSS CORNER
	DIA. C	LENGTH MINIMUM E	DIA MAX. A	DIA MAX. B	ARMOUR DIAMETER D		
20 S	20	9	11.60	16.00	0.9/1.25	21.50	24.50
20 L	20	9	14.00	20.00	0.9/1.25	24.20	27.30
25 S	25	9	19.00	24.00	1.25/1.60	30.00	33.60
25 L	25	10	20.00	27.00	1.25/1.60	30.00	34.40
32 S	32	10	24.00	30.50	1.60/2.00	36.50	40.00
32 L	32	10	26.20	33.00	1.60/2.00	36.50	42.30
40 S	40	11	30.00	37.00	1.60/2.00	44.50	50.00
40 L	40	11	32.50	41.00	1.60/2.00	46.50	52.00
50 S	50	13	40.00	47.50	2.00/2.50	55.00	62.00
50 L	50	13	44.00	52.60	2.00/2.50	59.00	66.00
63 S	63	14	51.00	60.00	2.50	69.00	76.00
63 L	63	14	55.00	66.00	2.50	73.00	82.00
75 S	75	15	62.00	72.00	2.50	83.00	94.00
75 L	75	15	67.00	78.00	2.50	86.30	98.00
90 S	90	20	74.00	84.00	2.50/3.15	94.00	104.00
90 L	90	20	79.00	90.00	2.50/3.15	105.00	118.00

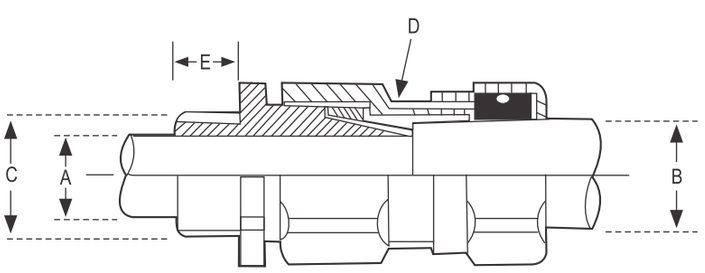


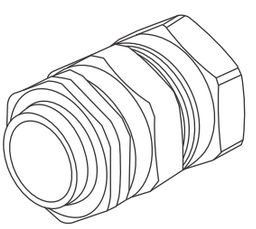


Braco CW Brass cable glands are as per BS 6121 Part 1 :1989 and suitable for single wire armoured plastic or rubber sheathed cables. The outer seal grips sheath. These glands provide mechanical cable retention, and electrical continuity via armour wire termination. The use of these glands is recommended in indoor as well as outdoor application because of suitability in most climatic conditions weather proof and water proof.

CW Type Cable Glands

GLAND SIZE	ENTRY THREAD		CABLE ACCEPTANCE DETAIL			ACROSS FLAT	ACROSS CORNER
	DIA. C	LENGTH MINIMUM E	DIA MAX. A	DIA MAX. B	ARMOUR DIAMETER D		
20 S	20	10	11.60	16.00	0.9/1.25	22.00	25.00
20 L	20	10	14.00	20.00	0.9/1.25	25.40	28.50
25 S	25	10	19.00	24.00	1.25/1.60	30.00	33.60
25 L	25	10	20.00	27.00	1.25/1.60	33.00	37.00
32 S	32	10	24.00	30.50	1.60/2.00	38.00	43.00
32 L	32	10	26.20	33.00	1.60/2.00	40.00	45.00
40 S	40	11	30.00	37.00	1.60/2.00	44.50	50.00
40 L	40	11	32.50	41.00	1.60/2.00	46.50	52.00
50 S	50	13	40.00	47.50	2.00/2.50	55.00	62.00
50 L	50	13	44.00	52.60	2.00/2.50	59.00	66.00
63 S	63	14	51.00	60.00	2.50	69.00	76.00
63 L	63	14	55.00	66.00	2.50	73.00	82.00
75 S	75	15	62.00	72.00	2.50	83.00	94.00
75 L	75	15	67.00	78.00	2.50	87.60	99.00
90S	90	20	74.00	84.00	2.50/3.15	94.00	104.00
90 L	90	20	79.00	90.00	2.50/3.15	105.00	118.00

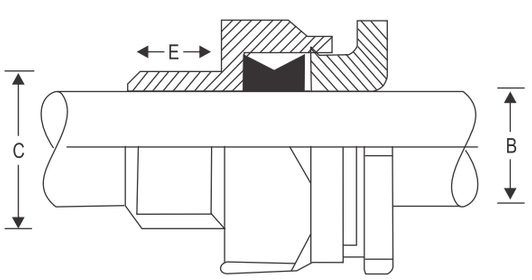


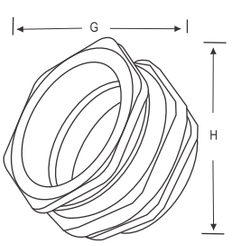


Braco A2 type brass cable glands are as per BS 6121 Part 1:1989 and suitable for unarmoured, plastic or rubber sheathed cables. These glands provide outer seal joint and are suitable for indoor as well as outdoor applications.

A2 Type Glands

GLAND SIZE	ENTRY THREAD				
	DIA. C	LENGTH MINIMUM E	DIA MAX. B	ACROSS FLAT	ACROSS CORNER
16L	16	12	3.50 - 9.00	21.00	24.00
20S	20	12	8.00 - 11.70	22.00	25.00
20L	20	12	11.00 - 14.00	24.00	26.60
25S	25	15	12.00 - 17.00	27.00	30.50
25L	25	15	13.00 - 20.70	30.00	33.30
32S	32	15	16.50 - 23.00	37.00	41.00
32L	32	15	19.00 - 26.30	41.00	45.50
40S	40	20	23.00 - 29.00	45.00	50.00
40L	40	20	25.00 - 33.00	46.00	51.00
50S	50	20	31.50 - 38.20	58.00	64.00
50L	50	20	36.50 - 44.00	62.00	69.00
63S	63	20	42.50 - 50.00	69.00	76.00
63L	63	20	48.00 - 56.00	73.00	81.00
75S	75	20	54.50 - 62.00	82.00	91.00
75L	75	20	60.50 - 68.00	88.00	97.00
90L	90	20	66.00 - 77.00	103.00	114.00

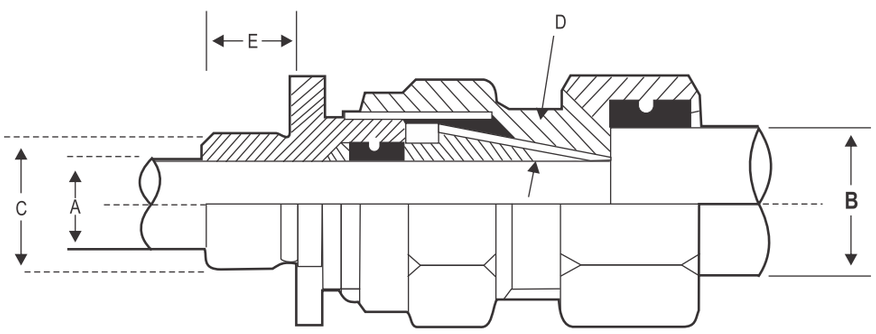




Braco E1W type brass glands are as per BS 612 part I:1989 suitable for indoor as well as outdoor applications. These glands are suitable for all types of SWA cable, providing environmental seal on both the cable inner and electrical continuity via armour wire termination.

BRACO E1W TYPE GLANDS

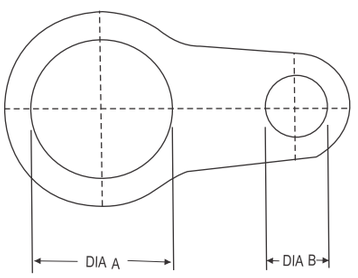
GLAND SIZE	ENTRY THREAD		CABLE ACCEPTANCE DETAIL			ACROSS FLAT	ACROSS CORNER
	DIA. C	LENGTH MINIMUM E	DIA MAX. A	DIA MAX. B	ARMOUR DIAMETER D		
20 S	20	10	8.00 - 11.80	12.90 - 17.20	0.90/1.25	24.00	27.00
20 L	20	10	11.00 - 14.00	15.50 - 20.80	0.90/1.25	27.70	31.00
25 S	25	10	12.00 - 17.00	17.50 - 24.00	1.25/1.60	31.50	35.00
25 L	25	10	13.00 - 20.30	24.00 - 27.20	1.25/1.60	35.00	39.00
32 S	32	10	17.00 - 24.00	25.00 - 31.00	1.60/2.00	43.00	47.50
32 L	32	10	19.00- 26.20	26.70 - 34.00	1.60/2.00	43.00	47.50
40 S	40	15	23.00 - 30.00	31.00 - 38.50	1.60/2.00	51.50	57.00
40 L	40	15	25.00 - 32.20	33.00 - 40.50	1.60/2.00	51.50	57.00
50 S	50	15	31.50 - 38.20	39.40 - 46.80	2.00/2.50	58.50	65.00
50 L	50	15	36.50 - 44.00	45.70 - 53.20	2.00/2.50	66.00	73.00
63 S	63	15	42.50 - 50.00	52.10 - 59.00	2.50	72.00	80.00
63 L	63	15	49.10 - 56.00	58.40 - 66.00	2.50	80.00	89.00
75 S	75	17	54.50 - 62.00	64.80 - 72.00	2.50	86.50	97.00
75 L	75	17	60.50 - 68.00	71.10 - 78.00	2.50	94.00	105.00
90 L	90	20	66.00 - 79.00	77.00 - 90.00	2.50/3.15	106.00	118.00

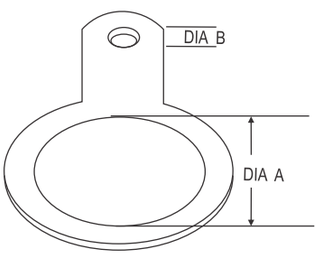


Braco earth tags are made out of brass sheets and punched to the required sizes and are suitable for all sizes of cable glands. Electrical continuity is normally achieved via the screwed entry into metal boxes. For clearance Hole entry situations it is essential to obtain direct metal-to-metal contact between the gland, earth tag and the enclosure. These are used to ensure earth continuity between the gland and the equipment.

Earth Tags

Cat No.	Dia A (mm)	Dia B (bolt Hole)	Thickness (mm)	Short Circuit Rating KA
ET -20	20.3	6.7	1.5	4.4
ET -25	25.8	6.7	1.5	4.0
ET -32	32.4	12.4	1.5	6.2
ET -40	40.4	13.2	1.5	9.8
ET -50	51.2	13.2	1.5	11.4
ET -63	63.9	13.2	1.5	12.0
ET -75	76.6	13.2	1.5	14.3





Braco black Polyvinyl chloride PVC shrouds are used for fitting over cable glands where additional protection against generous weather conditions and corrosion is required. They provide an effective seal onto both gland and cable oversheath as well as fast and simple installation. PVC shrouds also enhance the IP rating of a termination.

These shrouds are use to minimize the risk of dirt or foreign substances gathering on the cable gland body and or point of cable to gland interface.

PVC SHROUDS

Braco gland kits contain all that is necessary for terminating a cable Gland(s), Earth tag(s), locknut(s) and shroud(s). Since the kits are ready to use hence are convenient and help to keep all parts for each termination together. The kits are easier to stock than loose pieces.

Kits

Braco Adaptors are used along with Glands for Extended or reduced entry holes in an apparatus. These are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

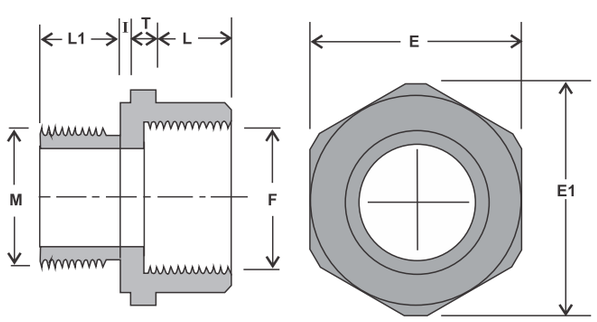
Brass Adaptors are nickel plated to avoid corrosion whilst storage and use. These are supplied with "O" Rings for IP protection. These Adaptors are Certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Weather proof as well as Flame proof conditions

Adaptors are available with Different thread combination such as ET to ET, ET to MM, ET to NPT, MM to ET, MM to MM, MM to NPT, NPT to ET, NPT to MM and NPT to NPT

Suffix – BAD = for Brass Adaptors, SAD = for SS Adaptors and ALAD = for Aluminium Adaptors

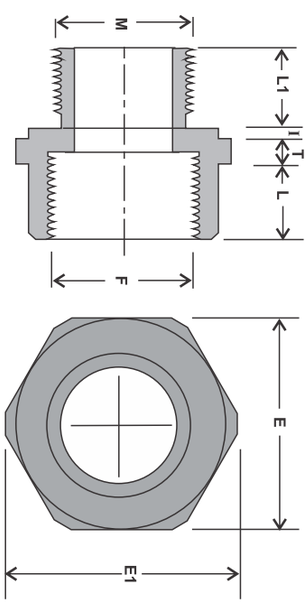
ADAPTOR

SIZE (M X F)	M	F	L1	T	L	E	E1
BAD 5/8 " ET X 3/4" ET	5/8"ET	3/4"ET	12	3	12	22	25.5
BAD 5/8" ET X 1" ET	5/8"ET	1"ET	12	3	12	28	32.5
BAD 5/8" ET X 1-1/4" ET	5/8"ET	1-1/4"ET	12	4	12	35	40.5
BAD 3/4" ET X 1" ET	3/4"ET	1"ET	12	3	12	28	32.5
BAD 3/4" ET X 1-1/4" ET	3/4"ET	1-1/4"ET	12	4	12	35	40.5
BAD 3/4" ET X 1-1/2" ET	3/4"ET	1-1/2"ET	12	4	12	42	48
BAD 1" ET X 1-1/2"ET	1"ET	1-1/2"ET	12	4	12	42	48
BAD 1"ET X 1-1/4" ET	1"ET	1-1/4"ET	12	4	12	35	40.5
BAD 1"ET X 2" ET	1"ET	2"ET	12	4	15	55	64
BAD 1-1/4"ET X 1-1/2"ET	1-1/4"ET	1-1/2"ET	12	4	12	42	48
BAD 1-1/4"ET X 2" ET	1-1/4"ET	2"ET	12	4	15	55	64
BAD 1-1/4"ET X 2-1/2" ET	1-1/4"ET	2-1/2"ET	12	5	15	68	79
BAD 1-1/2"ET X 2"ET	1-1/2"ET	2"ET	12	4	15	55	64
BAD 1-1/2"ET X 2-1/2"ET	1-1/2"ET	2-1/2"ET	12	5	15	68	79
BAD 1-1/2"ET X 3" ET	1-1/2"ET	3"ET	12	5	15	81	94
BAD 2" ET X 2-1/2" ET	2"ET	2-1/2"ET	15	5	15	68	79
BAD 2" ET X 3" ET	2"ET	3"ET	15	5	15	81	94
BAD 2" ET X 3-1/2" ET	2"ET	3-1/2"ET	15	6	15	95	110
BAD 2-1/2"ET X 3" ET	2-1/2"ET	3"ET	15	5	15	81	94
BAD 2-1/2"ET X 3-1/2"ET	2-1/2"ET	3-1/2"ET	15	6	15	95	110
BAD 3" ET X 3-1/2"ET	3"ET	3-1/2"ET	15	6	15	95	110
BAD 5/8 " ET X M20	5/8"ET	M20	12	3	12	23.5	27.5



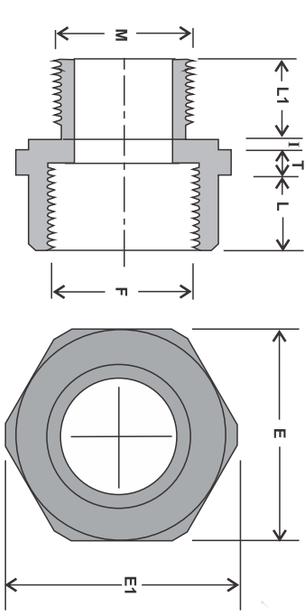
ADAPTOR

SIZE (M X F)	M	F	L1	T	L	E	E1
BAD 5/8" ET X M25	5/8"ET	M25	12	3	12	28.5	33
BAD 5/8" ET X M32	5/8"ET	M32	12	4	12	35.5	41
BAD 3/4" ET X M25	3/4"ET	M25	12	3	12	28.5	33
BAD 3/4" ET X M32	3/4"ET	M32	12	4	12	35.5	41
BAD 3/4" ET X M40	3/4"ET	M40	12	4	12	43.5	50.5
BAD 1" ET X M32	1"ET	M32	12	4	12	35.5	41
BAD 1"ET X M40	1"ET	M40	12	4	12	43.5	50.5
BAD 1"ET X M50	1"ET	M50	12	4	15	54.5	63
BAD 1-1/4"ET X M40	1-1/4"ET	M40	12	4	12	43.5	50.5
BAD 1-1/4"ET X M50	1-1/4"ET	M50	12	4	15	54.5	63
BAD 1-1/4"ET X M63	1-1/4"ET	M63	12	5	15	67.5	78.5
BAD 1-1/2"ET X M50	1-1/2"ET	M50	12	4	15	54.5	63
BAD 1-1/2"ET X M63	1-1/2"ET	M63	12	5	15	67.5	78.5
BAD 1-1/2"ET X M75	1-1/2"ET	M75	12	5	15	79.5	92
BAD 2" ET X M63	2"ET	M63	15	5	15	67.5	78.5
BAD 2" ET X M75	2"ET	M75	15	5	15	79.5	92
BAD 2" ET X M90	2"ET	M90	15	6	15	94.5	110
BAD 2-1/2"ET X M75	2-1/2"ET	M75	15	5	15	79.5	92
BAD 2-1/2"ET X M90	2-1/2"ET	M90	15	6	15	94.5	110
BAD 3" ET X M90	3"ET	M90	15	6	15	94.5	110
BAD M16 X 3/4" ET	M16	3/4"ET	12	3	12	22	25.5
BAD M16 X 1" ET	M16	1"ET	12	3	12	28	32.5
BAD M16 X 1-1/4" ET	M16	1-1/4"ET	12	4	12	35	40.5
BAD M20 X 1" ET	M20	1"ET	12	3	12	28	32.5
BAD M20 X 1-1/4" ET	M20	1-1/4"ET	12	4	12	35	40.5
BAD M20 X 1-1/2" ET	M20	1-1/2"ET	12	4	12	42	48
BAD M25 X 1-1/2"ET	M25	1-1/2"ET	12	4	12	42	48
BAD M25 X 1-1/4" ET	M25	1-1/4"ET	12	4	12	35	40.5
BAD M25 X 2" ET	M25	2"ET	12	4	15	55	64
BAD M32 X 1-1/2"ET	M32	1-1/2"ET	12	4	12	42	48
BAD M32 X 2" ET	M32	2"ET	12	4	15	55	64
BAD M32 X 2-1/2" ET	M32	2-1/2"ET	12	4	15	68	79
BAD M40 X 2"ET	M40	2"ET	12	4	15	55	64
BAD M40 X 2-1/2"ET	M40	2-1/2"ET	12	4	15	68	79
BAD M40 X 3" ET	M40	3"ET	12	5	15	81	94
BAD M50 X 2-1/2" ET	M50	2-1/2"ET	15	4	15	68	79
BAD M50 X 3" ET	M50	3"ET	15	5	15	81	94
BAD M50 X 3-1/2" ET	M50	3-1/2"ET	15	6	15	95	110
BAD M63 X 3" ET	M63	3"ET	15	5	15	81	94
BAD M63 X 3-1/2"ET	M63	3-1/2"ET	15	6	15	95	110
BAD M75 X 3-1/2"ET	M75	3-1/2"ET	15	6	15	95	110
BAD M16 X M20	M16	M20	12	3	12	23.5	27.5
BAD M16 X M25	M16	M25	12	3	12	28.5	33
BAD M16 X M32	M16	M32	12	4	12	35.5	41
BAD M20 X M25	M20	M25	12	3	12	28.5	33
BAD M20 X M32	M20	M32	12	4	12	35.5	41
BAD M20 X M40	M20	M40	12	4	12	43.5	50.5
BAD M25 X M32	M25	M32	12	4	12	35.5	41
BAD M25 X M40	M25	M40	12	4	12	43.5	50.5
BAD M25 X M50	M25	M50	12	4	15	54.5	63
BAD M32 X M40	M32	M40	12	4	12	43.5	50.5
BAD M32 X M50	M32	M50	12	4	15	54.5	63
BAD M32 X M63	M32	M63	12	4	15	67.5	78.5
BAD M40 X M50	M40	M50	12	4	15	54.5	63
BAD M40 X M63	M40	M63	12	4	15	67.5	78.5



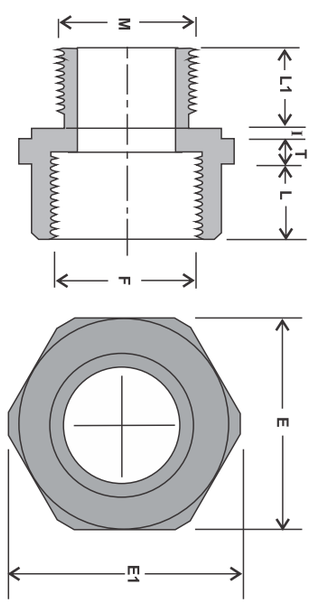
ADAPTOR

SIZE (M X F)	M	F	L1	T	L	E	E1
BAD M40 X M75	M40	M75	12	5	15	79.5	92
BAD M50 X M63	M50	M63	15	4	15	67.5	78.5
BAD M50 X M75	M50	M75	15	5	15	79.5	92
BAD M50 X M90	M50	M90	15	6	15	94.5	110
BAD M63 X M75	M63	M75	15	5	15	79.5	92
BAD M63 X M90	M63	M90	15	6	15	94.5	110
BAD M75 X M90	M75	M90	15	6	15	94.5	110
BAD 5/8 " ET X 1/2" NPT	5/8"ET	1/2"NPT	12	3	12	22	25.5
BAD 5/8" ET X 3/4" NPT	5/8"ET	3/4"NPT	12	3	12	28	32.5
BAD 5/8" ET X 1" NPT	5/8"ET	1"NPT	12	4	14	35	40.5
BAD 3/4"ET X 1/2" NPT	3/4"ET	1/2"NPT	12	3	12	22	25.5
BAD 3/4" ET X 3/4" NPT	3/4"ET	3/4"NPT	12	3	12	28	32.5
BAD 3/4" ET X 1" NPT	3/4"ET	1"NPT	12	4	14	35	40.5
BAD 3/4" ET X 1-1/4" NPT	3/4"ET	1-1/4"NPT	12	4	15	42	48
BAD 1" ET X 3/4" NPT	1"ET	3/4"NPT	12	3	12	28	32.5
BAD 1" ET X 1" NPT	1"ET	1"NPT	12	4	14	35	40.5
BAD 1"ET X 1-1/4" NPT	1"ET	1-1/4"NPT	12	4	15	42	48
BAD 1"ET X 1-1/2" ET	1"ET	1-1/2"ET	12	4	12	42	48
BAD 1-1/4" ET X 1" NPT	1-1/4"ET	1"NPT	12	4	14	35	40.5
BAD 1-1/4"ET X 1-1/4" NPT	1-1/4"ET	1-1/4"NPT	12	4	15	42	48
BAD 1-1/4"ET X 1-1/2"NPT	1-1/4"ET	1-1/2"NPT	12	4	15	55	64
BAD 1-1/4"ET X 2" NPT	1-1/4"ET	2"NPT	12	5	16	68	79
BAD 1-1/2"ET X 1-1/4"NPT	1-1/2"ET	1-1/4"NPT	12	4	15	42	48
BAD 1-1/2"ET X 1-1/2"NPT	1-1/2"ET	1-1/2"NPT	12	4	15	55	64
BAD 1-1/2"ET X 2" NPT	1-1/2"ET	2"NPT	12	5	16	68	79
BAD 1-1/2"ET X 2-1/2" NPT	1-1/2"ET	2-1/2"NPT	12	5	22	81	94
BAD 2" ET X 1-1/2" NPT	2"ET	1-1/2"NPT	15	4	15	55	64
BAD 2" ET X 2" NPT	2"ET	2"NPT	15	5	16	68	79
BAD 2"ET X 2-1/2" NPT	2"ET	2-1/2"NPT	15	5	22	81	94
BAD 2"ET X 3" NPT	2"ET	3"NPT	15	6	22	95	110
BAD 2-1/2"ET X 2" NPT	2-1/2"ET	2"NPT	15	5	16	68	79
BAD 2-1/2"ET X 2-1/2" NPT	2-1/2"ET	2-1/2"NPT	15	5	22	81	94
BAD 2-1/2"ET X 3" NPT	2-1/2"ET	3"NPT	15	6	22	95	110
BAD 3" ET X 2-1/2"NPT	3"ET	2-1/2"NPT	15	5	22	81	94
BAD 3" ET X 3" NPT	3"ET	3"NPT	15	6	22	95	110
BAD M16 X 1/2" NPT	M16	1/2"NPT	12	3	12	22	25.5
BAD M16 X 3/4" NPT	M16	3/4"NPT	12	3	12	28	32.5
BAD M16 X 1" NPT	M16	1"NPT	12	4	14	35	40.5
BAD M20 X 1/2" NPT	M20	1/2"NPT	12	3	12	22	25.5
BAD M20 X 3/4" NPT	M20	3/4"NPT	12	3	12	28	32.5
BAD M20 X 1" NPT	M20	1"NPT	12	4	14	35	40.5
BAD M20 X 1-1/4" NPT	M20	1-1/4"NPT	12	4	15	42	48
BAD M25 X 3/4" NPT	M25	3/4"NPT	12	3	12	28	32.5
BAD M25 X 1" NPT	M25	1"NPT	12	4	14	35	40.5
BAD M25 X 1-1/4" NPT	M25	1-1/4"NPT	12	4	15	42	48
BAD M25 X 1-1/2" ET	M25	1-1/2"ET	12	4	12	42	48
BAD M32 X 1" NPT	M32	1"NPT	12	4	14	35	40.5
BAD M32 X 1-1/4" NPT	M32	1-1/4"NPT	12	4	15	42	48
BAD M32 X 1-1/2"NPT	M32	1-1/2"NPT	12	4	15	55	64
BAD M32 X 2" NPT	M32	2"NPT	12	5	16	68	79
BAD M40 X 1-1/4"NPT	M40	1-1/4"NPT	12	4	15	42	48
BAD M40 X 1-1/2"NPT	M40	1-1/2"NPT	12	4	15	55	64
BAD M40 X 2" NPT	M40	2"NPT	12	5	16	68	79



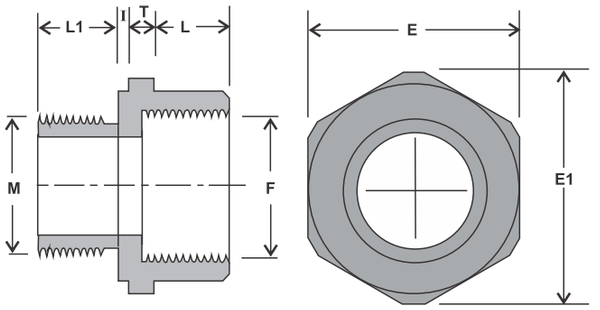
ADAPTOR

SIZE (M X F)	M	F	L1	T	L	E	E1
BAD M40 X 2" NPT	M40	2"NPT	12	5	16	68	79
BAD M40 X 2-1/2" NPT	M40	2-1/2"NPT	12	5	22	81	94
BAD M50 X 1-1/2" NPT	M50	1-1/2"NPT	15	4	15	55	64
BAD M50 X 2" NPT	M50	2"NPT	15	5	16	68	79
BAD M50 X 2-1/2" NPT	M50	2-1/2"NPT	15	5	22	81	94
BAD M50 X 3" NPT	M50	3"NPT	15	6	22	95	110
BAD M63 X 2" NPT	M63	2"NPT	15	5	16	68	79
BAD M63 X 2-1/2" NPT	M63	2-1/2"NPT	15	5	22	81	94
BAD M63 X 3" NPT	M63	3"NPT	15	6	22	95	110
BAD M75X 2-1/2"NPT	M75	2-1/2"NPT	15	5	22	81	94
BAD M75 X 3" NPT	M75	3"NPT	15	6	22	95	110
BAD 1/2" NPT X 3/4" ET	1/2"NPT	3/4"ET	12	3	12	22	25.5
BAD 1/2" NPT X 1" ET	1/2"NPT	1"ET	12	4	12	28	32.5
BAD 1/2" NPT X 1-1/4" ET	1/2"NPT	1-1/4"ET	12	4	12	35	40.5
BAD 1/2" NPT X 1-1/2" ET	1/2"NPT	1-1/2"ET	12	4	12	42	48
BAD 3/4" NPT X 1" ET	3/4"NPT	1"ET	12	4	12	28	32.5
BAD 3/4" NPT X 1-1/4" ET	3/4"NPT	1-1/4"ET	12	4	12	35	40.5
BAD 3/4" NPT X 1-1/2" ET	3/4"NPT	1-1/2"ET	12	4	12	42	48
BAD 3/4" NPT X 2" ET	3/4"NPT	2"ET	12	5	15	55	64
BAD 1" NPT X 1-1/2" ET	1"NPT	1-1/2"ET	14	4	12	42	48
BAD 1" NPT X 2" ET	1"NPT	2"ET	14	5	15	55	64
BAD 1" NPT X 2-1/2" ET	1"NPT	2-1/2"ET	14	5	15	68	79
BAD 1-1/4" NPT X 2" ET	1-1/4"NPT	2"ET	15	5	15	55	64
BAD 1-1/4" NPT X 2-1/2" ET	1-1/4"NPT	2-1/2"ET	15	5	15	68	79
BAD 1-1/4" NPT X 3" ET	1-1/4"NPT	3"ET	15	6	15	81	94
BAD 1-1/2" NPT X 2" ET	1-1/2"NPT	2"ET	15	6	15	55	64
BAD 1-1/2" NPT X 2-1/2" ET	1-1/2"NPT	2-1/2"ET	15	5	15	68	79
BAD 1-1/2" NPT X 3" ET	1-1/2"NPT	3"ET	15	6	15	81	94
BAD 1-1/2" NPT X 3-1/2" ET	1-1/2"NPT	3-1/2"ET	15	6	15	95	110
BAD 2 " NPT X 2-1/2" ET	2"NPT	2-1/2"ET	16	6	15	68	79
BAD 2" NPT X 3" ET	2"NPT	3"ET	16	6	15	81	94
BAD 2" NPT X 3-1/2" ET	2"NPT	3-1/2"ET	16	6	15	95	110
BAD 2-1/2" NPT X 3 " ET	2-1/2"NPT	3"ET	22	6	15	81	94
BAD 2-1/2" NPT X 3-1/2" ET	2-1/2"NPT	3-1/2"ET	22	6	15	95	110
BAD 1/2" NPT X M20	1/2"NPT	M20	12	3	12	23.5	27.5
BAD 1/2" NPT X M25	1/2"NPT	M25	12	3	12	28.5	33
BAD 1/2" NPT X M32	1/2"NPT	M32	12	4	12	35.5	41
BAD 1/2" NPT X M40	1/2"NPT	M40	12	4	12	43.5	50.5
BAD 3/4" NPT X M25	3/4"NPT	M25	12	3	12	28.5	33
BAD 3/4" NPT X M32	3/4"NPT	M32	12	4	12	35.5	41
BAD 3/4" NPT X M40	3/4"NPT	M40	12	4	12	43.5	50.5
BAD 3/4" NPT X M50	3/4"NPT	M50	12	4	15	54.5	63
BAD 1" NPT X M40	1"NPT	M40	14	4	12	43.5	50.5
BAD 1" NPT X M50	1"NPT	M50	14	4	15	54.5	63
BAD 1" NPT X M63	1"NPT	M63	14	5	15	67.5	78.5
BAD 1-1/4" NPT X M50	1-1/4"NPT	M50	15	4	15	54.5	63
BAD 1-1/4" NPT X M63	1-1/4"NPT	M63	15	5	15	67.5	78.5
BAD 1-1/4" NPT X M75	1-1/4"NPT	M75	15	5	15	79.5	92
BAD 1-1/2" NPT X M50	1-1/2"NPT	M50	15	5	15	54.5	63
BAD 1-1/2" NPT X M63	1-1/2"NPT	M63	15	5	15	67.5	78.5
BAD 1-1/2" NPT X M75	1-1/2"NPT	M75	15	5	15	79.5	92
BAD 1-1/2" NPT X M90	1-1/2"NPT	M90	15	6	15	94.5	110
BAD 2" NPT X M63	2"NPT	M63	16	5	15	67.5	78.5
BAD 2" NPT X M75	2"NPT	M75	16	5	15	79.5	92
BAD 2" NPT X M90	2"NPT	M90	16	6	15	94.5	110



ADAPTOR

SIZE (M X F)	M	F	L1	T	L	E	E1
BAD 2-1/2" NPT X M75	2-1/2"NPT	M75	22	6	15	79.5	92
BAD 2-1/2" NPT X M90	2-1/2"NPT	M90	22	6	15	94.5	110
BAD 1/2" NPT X 3/4" NPT	1/2"NPT	3/4"NPT	12	3	12	28	32.5
BAD 1/2" NPT X 1" NPT	1/2"NPT	1"NPT	12	4	14	35	40.5
BAD 1/2" NPT X 1-1/4" NPT	1/2"NPT	1-1/4"NPT	12	4	15	42	48
BAD 3/4" NPT X 1" NPT	3/4"NPT	1"NPT	12	4	14	35	40.5
BAD 3/4" NPT X 1-1/4" NPT	3/4"NPT	1-1/4"NPT	12	4	15	42	48
BAD 3/4" NPT X 1-1/2" NPT	3/4"NPT	1-1/2"NPT	12	4	15	55	64
BAD 1" NPT X 1-1/4" NPT	1"NPT	1-1/4"NPT	14	4	15	42	48
BAD 1" NPT X 1-1/2" NPT	1"NPT	1-1/2"NPT	14	4	15	55	64
BAD 1" NPT X 2" NPT	1"NPT	2"NPT	14	5	16	68	79
BAD 1-1/4" NPT X 1-1/2" NPT	1-1/4"NPT	1-1/2"NPT	15	4	15	55	64
BAD 1-1/4" NPT X 2" NPT	1-1/4"NPT	2"NPT	15	5	16	68	79
BAD 1-1/4" NPT X 2-1/2" NPT	1-1/4"NPT	2-1/2"NPT	15	5	22	81	94
BAD 1-1/2" NPT X 2" NPT	1-1/2"NPT	2"NPT	15	5	16	68	79
BAD 1-1/2" NPT X 2-1/2" NPT	1-1/2"NPT	2-1/2"NPT	15	5	22	81	94
BAD 1-1/2" NPT X 3" NPT	1-1/2"NPT	3"NPT	15	6	22	95	110
BAD 2" NPT X 2-1/2" NPT	2"NPT	2-1/2"NPT	16	5	22	81	94
BAD 2" NPT X 3" NPT	2"NPT	3"NPT	16	6	22	95	110



Braco Reducers are used along with Glands for Extended or reduced entry holes in an apparatus. These are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

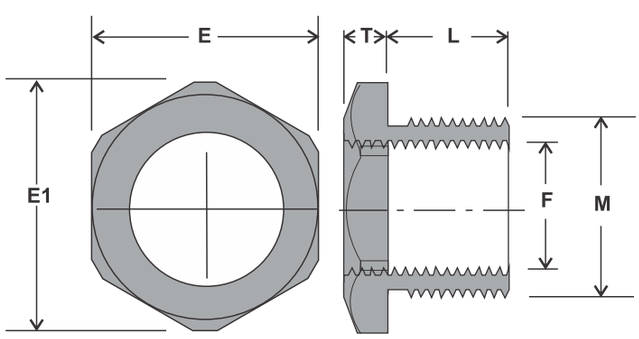
Brass Reducers are nickel plated to avoid corrosion whilst storage and use. These are supplied with "O" Rings for IP protection. These Reducers are Certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Weather proof as well as Flame proof conditions

Reducers are available with Different thread combination such as ET to ET, ET to MM, ET to NPT, MM to ET, MM to MM, MM to NPT, NPT to ET, NPT to MM and NPT to NPT

Suffix – BRD = for Brass Reducers, SRD = for SS Reducers and ALRD = for Aluminium Reducers

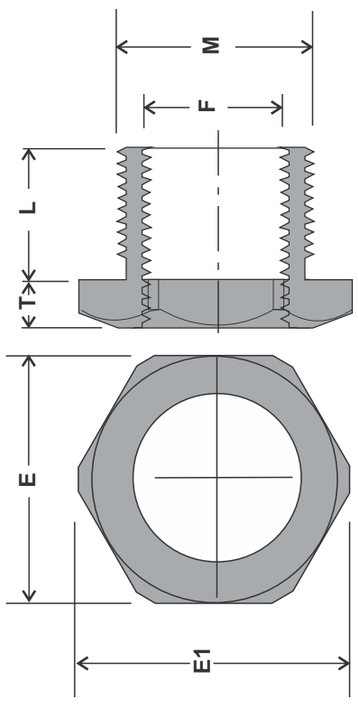
REDUCER

SIZE (M X F)	M	F	E1	E	T	L
BRD 3/4"ET X 5/8"ET	3/4"ET	5/8"ET	25.5	22	3	12
BRD 1" ET X 5/8" ET	1"ET	5/8"ET	32.5	28	3	12
BRD 1" ET X 3/4" ET	1"ET	3/4"ET	32.5	28	3	12
BRD 1-1/4" ET X 5/8" ET	1-1/4"ET	5/8"ET	40.5	35	4	12
BRD 1-1/4" ET X 3/4" ET	1-1/4"ET	3/4"ET	40.5	35	4	12
BRD 1-1/4" ET X 1" ET	1-1/4"ET	1"ET	40.5	35	4	12
BRD 1-1/2"ET X 3/4"ET	1-1/2"ET	3/4"ET	48	42	4	12
BRD 1-1/2"ET X 1"ET	1-1/2"ET	1"ET	48	42	4	12
BRD 1-1/2" ET X 1-1/4"ET	1-1/2"ET	1-1/4"ET	48	42	4	12
BRD 2" ET X 1" ET	2"ET	1"ET	64	55	4	15
BRD 2" ET X 1-1/4" ET	2"ET	1-1/4"ET	64	55	4	15
BRD 2"ET X 1-1/2" ET	2"ET	1-1/2"ET	64	55	4	15
BRD 2-1/2" ET X 1-1/4" ET	2-1/2"ET	1-1/4"ET	79	68	5	15
BRD 2-1/2" ET X 1-1/2" ET	2-1/2"ET	1-1/2"ET	79	68	5	15
BRD 2-1/2" ET X 2" ET	2-1/2"ET	2"ET	79	68	5	15
BRD 3" ET X 1-1/2" ET	3"ET	1-1/2"ET	94	81	5	15
BRD 3" ET X 2" ET	3"ET	2"ET	94	81	5	15
BRD 3" ET X 2-1/2" ET	3"ET	2-1/2"ET	94	81	5	15
BRD 3-1/2"ET x 2" ET	3-1/2"ET	2"ET	110	95	6	15
BRD 3-1/2"ET X 2-1/2"ET	3-1/2"ET	2-1/2"ET	110	95	6	15
BRD 3-1/2"ET X 3" ET	3-1/2"ET	3"ET	110	95	6	15
BRD 3/4"ET X M16	3/4"ET	M16	25.5	22	3	12
BRD 1" ET X M16	1"ET	M16	32.5	28	3	12



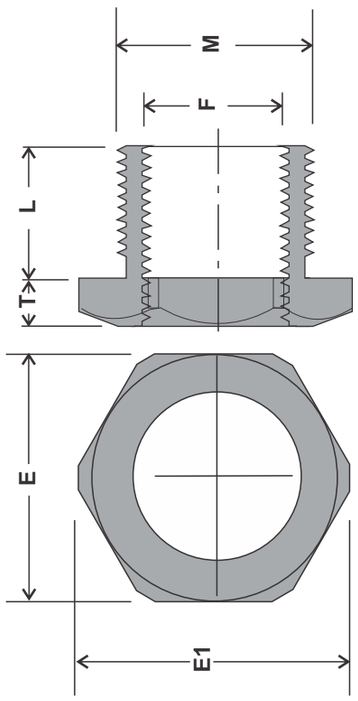
REDUCER

SIZE (M X F)	M	F	E1	E	T	L
BRD 1" ET X M20	1"ET	M20	32.5	28	3	12
BRD 1-1/4" ET X M16	1-1/4"ET	M16	40.5	35	4	12
BRD 1-1/4" ET X M20	1-1/4"ET	M20	40.5	35	4	12
BRD 1-1/4" ET X M25	1-1/4"ET	M25	40.5	35	4	12
BRD 1-1/2"ET X M20	1-1/2"ET	M20	48	42	4	12
BRD 1-1/2"ET X M25	1-1/2"ET	M25	48	42	4	12
BRD 1-1/2" ET X M32	1-1/2"ET	M32	48	42	4	12
BRD 2" ET X M25	2"ET	M25	64	55	4	15
BRD 2" ET X M32	2"ET	M32	64	55	4	15
BRD 2"ET X M40	2"ET	M40	64	55	4	15
BRD 2-1/2" ET X M32	2-1/2"ET	M32	79	68	5	15
BRD 2-1/2" ET X M40	2-1/2"ET	M40	79	68	5	15
BRD 2-1/2" ET X M50	2-1/2"ET	M50	79	68	5	15
BRD 3" ET X M40	3"ET	M40	94	81	5	15
BRD 3" ET X M50	3"ET	M50	94	81	5	15
BRD 3" ET X M63	3"ET	M63	94	81	5	15
BRD 3-1/2"ET X M50	3-1/2"ET	M50	110	95	6	15
BRD 3-1/2"ET X M63	3-1/2"ET	M63	110	95	6	15
BRD 3-1/2"ET X M75	3-1/2"ET	M75	110	95	6	15
BRD M20 X 5/8"ET	M20	5/8"ET	27.5	23.5	3	12
BRD M25 X 5/8" ET	M25	5/8"ET	33	28.5	3	12
BRD M25 X 3/4" ET	M25	3/4"ET	33	28.5	3	12
BRD M32 X 5/8" ET	M32	5/8"ET	41	35.5	4	12
BRD M32 X 3/4" ET	M32	3/4"ET	41	35.5	4	12
BRD M32 X 1" ET	M32	1"ET	41	35.5	4	12
BRD M40 X 3/4"ET	M40	3/4"ET	50.5	43.5	4	12
BRD M40 X 1"ET	M40	1"ET	50.5	43.5	4	12
BRD M40 X 1-1/4"ET	M40	1-1/4"ET	50.5	43.5	4	12
BRD M50 X 1" ET	M50	1"ET	63	54.5	4	15
BRD M50 X 1-1/4" ET	M50	1-1/4"ET	63	54.5	4	15
BRD M50 X 1-1/2" ET	M50	1-1/2"ET	63	54.5	4	15
BRD M63 X 1-1/4" ET	M63	1-1/4"ET	78.5	67.5	5	15
BRD M63 X 1-1/2" ET	M63	1-1/2"ET	78.5	67.5	5	15
BRD M63 X 2" ET	M63	2"ET	78.5	67.5	5	15
BRD M75 X 1-1/2" ET	M75	1-1/2"ET	92	79.5	5	15
BRD M75 X 2" ET	M75	2"ET	92	79.5	5	15
BRD M75 X 2-1/2" ET	M75	2-1/2"ET	92	79.5	5	15
BRD M90X 2" ET	M90	2"ET	110	94.5	6	15
BRD M90 X 2-1/2"ET	M90	2-1/2"ET	110	94.5	6	15
BRD M90 X 3" ET	M90	3"ET	110	94.5	6	15
BRD M20 X M16	M20	M16	27.5	23.5	3	12
BRD M25 X M16	M25	M16	33	28.5	3	12
BRD M25 X M20	M25	M20	33	28.5	3	12
BRD M32 X M16	M32	M16	41	35.5	4	12
BRD M32 X M20	M32	M20	41	35.5	4	12
BRD M32 X M25	M32	M25	41	35.5	4	12
BRD M40 X M20	M40	M20	50.5	43.5	4	12
BRD M40 X M25	M40	M25	50.5	43.5	4	12
BRD M40 X M32	M40	M32	50.5	43.5	4	12
BRD M50 X M25	M50	M25	63	54.5	4	15
BRD M50 X M32	M50	M32	63	54.5	4	15
BRD M50 X M40	M50	M40	63	54.5	4	15
BRD M63 X M32	M63	M32	78.5	67.5	5	15



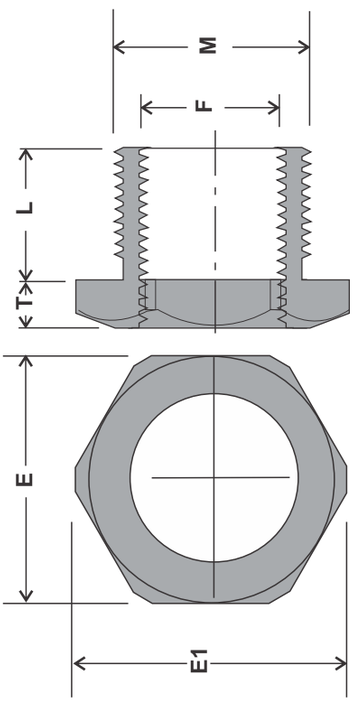
REDUCER

SIZE (M X F)	M	F	E1	E	T	L
BRD M63 X M40	M63	M40	78.5	67.5	5	15
BRD M63 X M50	M63	M50	78.5	67.5	5	15
BRD M75 X M40	M75	M40	92	79.5	5	15
BRD M75 X M50	M75	M50	92	79.5	5	15
BRD M75 X M63	M75	M63	92	79.5	5	15
BRD M90X M50	M90	M50	110	94.5	6	15
BRD M90 X M63	M90	M63	110	94.5	6	15
BRD M90 X M75	M90	M75	110	94.5	6	15
BRD 1" ET X 1/2" NPT	1"ET	1/2"NPT	32.5	28	3	12
BRD 1-1/4" ET X 1/2" NPT	1-1/4"ET	1/2"NPT	40.5	35	4	12
BRD 1-1/4" ET X 3/4" NPT	1-1/4"ET	3/4"NPT	40.5	35	4	12
BRD 1-1/2"ET X 1/2" NPT	1-1/2"ET	1/2"NPT	48	42	4	12
BRD 1-1/2"ET X 3/4" NPT	1-1/2"ET	3/4"NPT	48	42	4	12
BRD 1-1/2" ET X 1" NPT	1-1/2"ET	1"NPT	48	42	4	12
BRD 2" ET X 1/2" NPT	2"ET	1/2"NPT	64	55	4	15
BRD 2" ET X 3/4" NPT	2"ET	3/4"NPT	64	55	4	15
BRD 2"ET X 1" NPT	2"ET	1"NPT	64	55	4	15
BRD 2" ET X 1-1/4" NPT	2"ET	1-1/4"NPT	64	55	4	15
BRD 2-1/2" ET X 3/4" NPT	2-1/2"ET	3/4"NPT	79	68	5	15
BRD 2-1/2" ET X 1" NPT	2-1/2"ET	1"NPT	79	68	5	15
BRD 2-1/2" ET X 1-1/4" NPT	2-1/2"ET	1-1/4"NPT	79	68	5	15
BRD 2-1/2"ET X 1-1/2" NPT	2-1/2"ET	1-1/2"NPT	79	68	5	15
BRD 3" ET X 1" NPT	3"ET	1"NPT	94	81	5	15
BRD 3" ET X 1-1/4" NPT	3"ET	1-1/4"NPT	94	81	5	15
BRD 3" ET X 1-1/2" NPT	3"ET	1-1/2"NPT	94	81	5	15
BRD 3" ET X 2"NPT	3"ET	2"NPT	94	81	5	15
BRD 3-1/2"ET X 1-1/4" NPT	3-1/2"ET	1-1/4"NPT	110	95	6	15
BRD 3-1/2"ET X 1-1/2" NPT	3-1/2"ET	1-1/2"NPT	110	95	6	15
BRD 3-1/2"ET X 2" NPT	3-1/2"ET	2"NPT	110	95	6	15
BRD 3-1/2"ET X 2-1/2" NPT	3-1/2"ET	2-1/2"NPT	110	95	6	15
BRD M25 X 1/2" NPT	M25	1/2"NPT	33	28.5	3	12
BRD M32 X 1/2" NPT	M32	1/2"NPT	41	35.5	4	12
BRD M32 X 3/4" NPT	M32	3/4"NPT	41	35.5	4	12
BRD M40 X 1/2" NPT	M40	1/2"NPT	50.5	43.5	4	12
BRD M40 X 3/4" NPT	M40	3/4"NPT	50.5	43.5	4	12
BRD M40 X 1" NPT	M40	1"NPT	50.5	43.5	4	12
BRD M50 X 1/2" NPT	M50	1/2"NPT	63	54.5	4	15
BRD M50 X 3/4" NPT	M50	3/4"NPT	63	54.5	4	15
BRD M50 X 1" NPT	M50	1"NPT	63	54.5	4	15
BRD M50 X 1-1/4" NPT	M50	1-1/4"NPT	63	54.5	4	15
BRD M63 X 3/4" NPT	M63	3/4"NPT	78.5	67.5	5	15
BRD M63 X 1" NPT	M63	1"NPT	78.5	67.5	5	15
BRD M63 X 1-1/4" NPT	M63	1-1/4"NPT	78.5	67.5	5	15
BRD M63 X 1-1/2" NPT	M63	1-1/2"NPT	78.5	67.5	5	15
BRD M75 X 1" NPT	M75	1"NPT	92	79.5	5	15
BRD M75 X 1-1/4" NPT	M75	1-1/4"NPT	92	79.5	5	15
BRD M75 X 1-1/2" NPT	M75	1-1/2"NPT	92	79.5	5	15
BRD M75 X 2"NPT	M75	2"NPT	92	79.5	5	15
BRD M90 X 1-1/4" NPT	M90	1-1/4"NPT	110	94.5	6	15
BRD M90 X 1-1/2" NPT	M90	1-1/2"NPT	110	94.5	6	15
BRD M90 X 2" NPT	M90	2"NPT	110	94.5	6	15
BRD M90 X 2-1/2" NPT	M90	2-1/2"NPT	110	94.5	6	15
BRD 1/2" NPT X 5/8" ET	1/2"NPT	5/8"ET	25.5	22	3	12
BRD 3/4" NPT X 5/8 " ET	3/4"NPT	5/8"ET	32.5	28	3	12
BRD 3/4" NPT X 3/4 " ET	3/4"NPT	3/4"ET	32.5	28	3	12



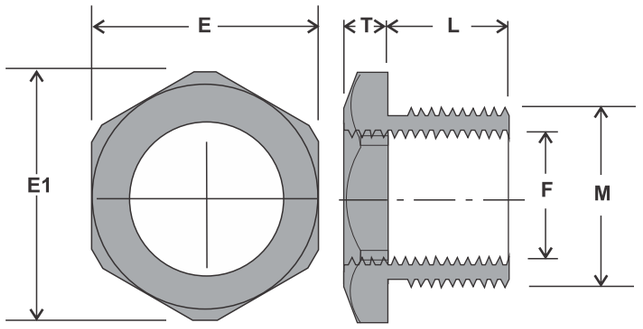
REDUCER

SIZE (M X F)	M	F	E1	E	T	L
BRD 1" NPT X 5/8" ET	1"NPT	5/8"ET	40.5	35	4	14
BRD 1" NPT X 3/4" ET	1"NPT	3/4"ET	40.5	35	4	14
BRD 1" NPT X 1" ET	1"NPT	1"ET	40.5	35	4	14
BRD 1" NPT X 1-1/4" ET	1"NPT	1-1/4"ET	40.5	35	4	14
BRD 1-1/4" NPT X 5/8" ET	1-1/4"NPT	5/8"ET	48	42	4	15
BRD 1-1/4" NPT X 3/4" ET	1-1/4"NPT	3/4"ET	48	42	4	15
BRD 1-1/4" NPT X 1" ET	1-1/4"NPT	1"ET	48	42	4	15
BRD 1-1/4" NPT X 1-1/4" ET	1-1/4"NPT	1-1/4"ET	48	42	4	15
BRD 1-1/4" NPT X 1-1/2" ET	1-1/4"NPT	1-1/2"ET	48	42	4	15
BRD 1-1/2" NPT X 5/8" ET	1-1/2"NPT	5/8"ET	64	55	4	15
BRD 1-1/2" NPT X 3/4" ET	1-1/2"NPT	3/4"ET	64	55	4	15
BRD 1-1/2" NPT X 1" ET	1-1/2"NPT	1"ET	64	55	4	15
BRD 1-1/2" NPT X 1-1/4" ET	1-1/2"NPT	1-1/4"ET	64	55	4	15
BRD 1-1/2" NPT X 1-1/2" ET	1-1/2"NPT	1-1/2"ET	64	55	4	15
BRD 2" NPT X 1" ET	2"NPT	1"ET	79	68	5	16
BRD 2" NPT X 1-1/4" ET	2"NPT	1-1/4"ET	79	68	5	16
BRD 2" NPT X 1-1/2" ET	2"NPT	1-1/2"ET	79	68	5	16
BRD 2" NPT X 2" ET	2"NPT	2"ET	79	68	5	16
BRD 2-1/2" NPT X 1-1/2" ET	2-1/2"NPT	1-1/2"ET	94	81	5	22
BRD 2-1/2" NPT X 2" ET	2-1/2"NPT	2"ET	94	81	5	22
BRD 2-1/2" NPT X 2-1/2" ET	2-1/2"NPT	2-1/2"ET	94	81	5	22
BRD 3" NPT X 2" ET	3"NPT	2"ET	110	95	6	22
BRD 3" NPT X 2-1/2" ET	3"NPT	2-1/2"ET	110	95	6	22
BRD 3" NPT X 3" ET	3"NPT	3"ET	110	95	6	22
BRD 3" NPT X 3-1/2" ET	3"NPT	3-1/2"ET	110	95	6	22
BRD 1/2" NPT X M16	1/2"NPT	M16	25.5	22	3	12
BRD 3/4" NPT X M16	3/4"NPT	M16	32.5	28	3	12
BRD 3/4" NPT X M20	3/4"NPT	M20	32.5	28	3	12
BRD 1" NPT X M16	1"NPT	M16	40.5	35	4	14
BRD 1" NPT X M20	1"NPT	M20	40.5	35	4	14
BRD 1" NPT X M25	1"NPT	M25	40.5	35	4	14
BRD 1" NPT X M32	1"NPT	M32	40.5	35	4	14
BRD 1-1/4" NPT X M16	1-1/4"NPT	M16	48	42	4	15
BRD 1-1/4" NPT X M20	1-1/4"NPT	M20	48	42	4	15
BRD 1-1/4" NPT X M25	1-1/4"NPT	M25	48	42	4	15
BRD 1-1/4" NPT X M32	1-1/4"NPT	M32	48	42	4	15
BRD 1-1/4" NPT X M40	1-1/4"NPT	M40	48	42	4	15
BRD 1-1/2" NPT X M16	1-1/2"NPT	M16	64	55	4	15
BRD 1-1/2" NPT X M20	1-1/2"NPT	M20	64	55	4	15
BRD 1-1/2" NPT X M25	1-1/2"NPT	M25	64	55	4	15
BRD 1-1/2" NPT X M32	1-1/2"NPT	M32	64	55	4	15
BRD 1-1/2" NPT X M40	1-1/2"NPT	M40	64	55	4	15
BRD 2" NPT X M25	2"NPT	M25	79	68	5	16
BRD 2" NPT X M32	2"NPT	M32	79	68	5	16
BRD 2" NPT X M40	2"NPT	M40	79	68	5	16
BRD 2" NPT X M50	2"NPT	M50	79	68	5	16
BRD 2-1/2" NPT X M40	2-1/2"NPT	M40	94	81	5	22
BRD 2-1/2" NPT X M50	2-1/2"NPT	M50	94	81	5	22
BRD 2-1/2" NPT X M63	2-1/2"NPT	M63	94	81	5	22
BRD 3" NPT X M50	3"NPT	M50	110	95	6	22
BRD 3" NPT X M63	3"NPT	M63	110	95	6	22
BRD 3" NPT X M75	3"NPT	M75	110	95	6	22
BRD 3/4" NPT X 1/2" NPT	3/4"NPT	1/2"NPT	32.5	28	3	12



REDUCER

SIZE (M X F)	M	F	E1	E	T	L
BRD 1" NPT X 1/2" NPT	1"NPT	1/2"NPT	40.5	35	4	14
BRD 1" NPT X 3/4" NPT	1"NPT	3/4"NPT	40.5	35	4	14
BRD 1-1/4" NPT X 1/2" NPT	1-1/4"NPT	1/2"NPT	48	42	4	15
BRD 1-1/4" NPT X 3/4" NPT	1-1/4"NPT	3/4"NPT	48	42	4	15
BRD 1-1/4" NPT X 1" NPT	1-1/4"NPT	1"NPT	48	42	4	15
BRD 1-1/2" NPT X 1/2" NPT	1-1/2"NPT	1/2"NPT	64	55	4	15
BRD 1-1/2" NPT X 3/4" NPT	1-1/2"NPT	3/4"NPT	64	55	4	15
BRD 1-1/2" NPT X 1" NPT	1-1/2"NPT	1"NPT	64	55	4	15
BRD 1-1/2" NPT X 1-1/4" NPT	1-1/2"NPT	1-1/4"NPT	64	55	4	15
BRD 2" NPT X 3/4" NPT	2"NPT	3/4"NPT	79	68	5	16
BRD 2" NPT X 1" NPT	2"NPT	1"NPT	79	68	5	16
BRD 2" NPT X 1-1/4" NPT	2"NPT	1-1/4"NPT	79	68	5	16
BRD 2" NPT X 1-1/2" NPT	2"NPT	1-1/2"NPT	79	68	5	16
BRD 2-1/2" NPT X 1" NPT	2-1/2"NPT	1"NPT	94	81	5	22
BRD 2-1/2" NPT X 1-1/4" NPT	2-1/2"NPT	1-1/4"NPT	94	81	5	22
BRD 2-1/2" NPT X 1-1/2" NPT	2-1/2"NPT	1-1/2"NPT	94	81	5	22
BRD 2-1/2" NPT X 2" NPT	2-1/2"NPT	2"NPT	94	81	5	22
BRD 3" NPT X 1-1/4" NPT	3"NPT	1-1/4"NPT	110	95	6	22
BRD 3" NPT X 1-1/2" NPT	3"NPT	1-1/2"NPT	110	95	6	22
BRD 3" NPT X 2" NPT	3"NPT	2"NPT	110	95	6	22
BRD 3" NPT X 2-1/2" NPT	3"NPT	2-1/2"NPT	110	95	6	22



Braco Reducers are used along with Glands for Extended or reduced entry holes in an apparatus. These are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

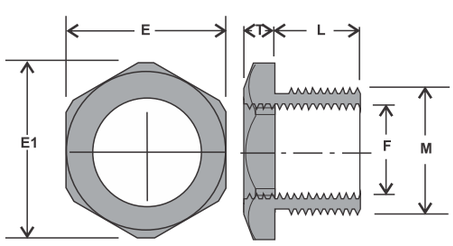
Brass Reducers are nickel plated to avoid corrosion whilst storage and use. These are supplied with "O" Rings for IP protection. These Adaptors and Reducers are Certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Weather proof as well as Flame proof conditions

Reducers are available with Different thread combination such as ET to ET, ET to MM, ET to NPT, MM to ET, MM to MM, MM to NPT, NPT to ET, NPT to MM and NPT to NPT

Suffix – BRD = for Brass Reducers, SRD = for SS Reducers and ALRD = for Aluminium Reducers

REDUCER

MALE \ FEMALE	5/8" ET (M16)	3/4" ET (M20)	1" ET (M25)	1-1/4" ET (M32)	1-1/4" ET (M32)	2" ET (M50)	2-1/2" ET (M63)	3" ET (M75)	3-1/2" ET (M90)
5/8" ET (M16)		A	A	A					
3/4" ET (M20)	R		A	A	A				
1" ET (M25)	R	R		A	A	A			
1-1/4" ET (M32)	R	R	R		A	A	A		
1-1/2" ET (M40)		R	R	R		A	A	A	
2" ET (M50)			R	R	R		A	A	A
2-1/2" ET (M63)				R	R	R		A	A
3" ET (M75)					R	R	R		A
3-1/2" ET (M90)						R	R	R	
1/2" NPT	R	A	A	A	A				
3/4" NPT	R	R	A	A	A	A			
1" NPT	R	R	R	R	A	A	A		
1-1/4" NPT	R	R	R	R	R	A	A	A	
1-1/2" NPT	R	R	R	R	R	A	A	A	A
2" NPT			R	R	R	R	A	A	A
2-1/2" NPT					R	R	R	A	A
3" NPT						R	R	R	A



Braco Adaptors are used along with Glands for Extended or reduced entry holes in an apparatus. These are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

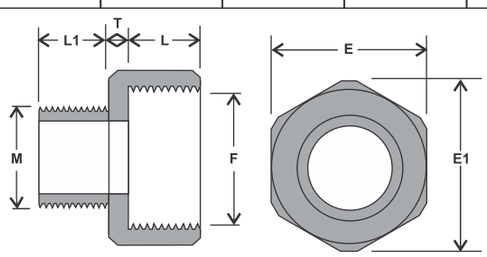
Brass Adaptor are nickel plated to avoid corrosion whilst storage and use. These are supplied with "O" Rings for IP protection. These Adaptors and Reducers are Certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Weather proof as well as Flame proof conditions

Adaptors are available with Different thread combination such as ET to ET, ET to MM, ET to NPT, MM to ET, MM to MM, MM to NPT, NPT to ET, NPT to MM and NPT to NPT

Suffix – BAD = for Brass Adaptors, SAD = for SS Adaptors and ALAD = for Aluminium Adaptors

ADAPTOR

MALE \ FEMALE	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT	2-1/2" NPT	3" NPT
5/8" ET (M16)	A	A	A					
3/4" ET (M20)	A	A	A	A				
1" ET (M25)	R	A		A	A			
1-1/4" ET (M32)	R	R	R	A	A	A		
1-1/2" ET (M40)	R	R	R	A	A	A	A	
2" ET (M50)	R	R	R	R		A	A	A
2-1/2" ET (M63)		R		R	R	A	A	A
3" ET (M75)				R	R	R	A	A
3-1/2" ET (M90)				R	R	R	R	A
1/2" NPT		A	A	A				
3/4" NPT	R		A	A	A			
1" NPT	R	R	R	A	A	A		
1-1/4" NPT	R	R	R		A	A	A	
1-1/2" NPT	R	R	R	R	R	A	A	A
2" NPT		R	R	R	R		A	A
2-1/2" NPT				R	R	R		A
3" NPT				R	R	R	R	

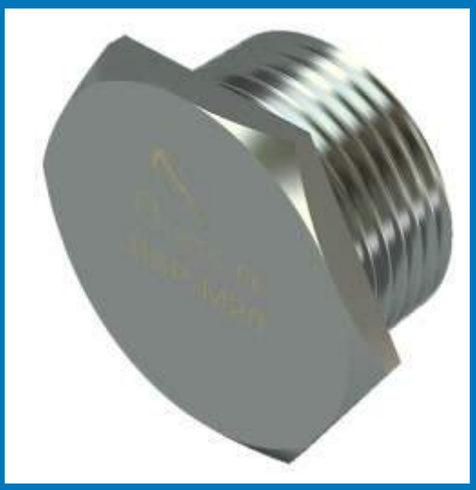


Braco Stopping Plugs are used to close unused entry holes in an apparatus. These Plugs are mainly manufactured out of brass but can be supplied in SS-304/316 and Aluminium also.

Brass Plugs are nickel plated to avoid corrosion whilst storage and use. These are supplied with "O" Rings for IP protection. These Plugs are Certified by Central Institute of Mining and Fuel Research, Dhanbad for use in Weather proof as well as Flame proof conditions

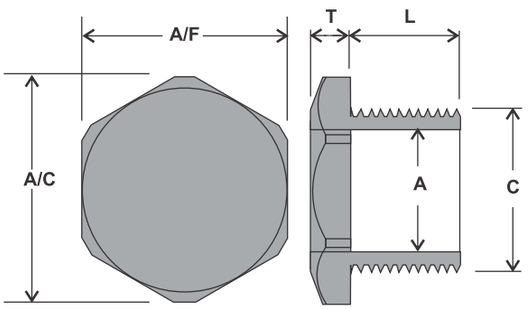
Suffix – BSP = for Brass Plugs, SSP = for SS Plugs and ALSP = for Aluminium Plugs

Threads can be ET / mm / NPT as per requirement



STOPPER PLUG

SIZE	A/C	A/F	T	L	C	A
ET THREAD						
BSP 3/4"ET	26	22	3	10	3/4"ET	15.5
BSP 1" ET	32	28	3	10	1"ET	21
BSP 1-1/4" ET	42	36	4	10	1-1/4"ET	27.8
BSP 1-1/2"ET	49	42	4	10	1-1/2"ET	33.5
BSP 2" ET	63	54	4	12	2"ET	45
BSP 2-1/4" ET	71	61	4	12	2-1/4"ET	52
BSP 2-1/2" ET	79	68	5	12	2-1/2"ET	57.5
BSP 2-3/4" ET	87	75	5	12	2-3/4"ET	64
BSP 3" ET	93	80	5	12	3"ET	69
BSP 3-1/4" ET	101	87	6	12	3-1/4"ET	76
BSP 3-1/2"ET	109	94	6	12	3-1/2"ET	82
M THREAD						
BSP M20	28	24	3	10	M20	16.5
BSP M25	34	29	3	10	M25	21
BSP M32	42	36	4	10	M32	28
BSP M40	51	44	4	10	M40	35.5
BSP M50	63	54	4	12	M50	45
BSP M63	79	68	5	12	M63	57.5
BSP M75	93	80	5	12	M75	69
BSP M90	110	95	6	12	M90	83
NPT THREAD						
BSP 1/2" NPT	28	24	3	12	1/2"NPT	16.3
BSP 3/4" NPT	34	30	3	12	3/4"NPT	21.6
BSP 1" NPT	42	36	4	14	1"NPT	28.1
BSP 1-1/4" NPT	52	45	4	15	1-1/4"NPT	35.9
BSP 1-1/2" NPT	59	51	4	15	1-1/2"NPT	41.9
BSP 2" NPT	73	63	5	16	2"NPT	53
BSP 2-1/2" NPT	87	75	5	22	2-1/2"NPT	65
BSP 3" NPT	105	91	6	22	3"NPT	80.9



TAILOR MADE

Ingress Protection

In the IEC (International Electrotechnical Commission) 60529 Standards document, it specifies an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e., tools, dust, fingers) and moisture. This classification system utilizes the letters "IP" ("Ingress Protection") followed by two digits. (An "X" is used for one of the digits if there is only one class of protection; i.e., IP X4 which addresses moisture resistance only.)

1. Degrees of Protection - First Digit

The first digit of the IP code indicates the degree that persons are protected against contact with moving parts (other than smooth rotating shafts, etc.) and the degree that equipment is protected against solid foreign bodies intruding into an enclosure.

0 No special protection
1 Protection from a large part of the body such as a hand (but no protection from deliberate access); from solid objects greater than 50mm in diameter
2 Protection against fingers or other objects not greater than 80mm in length and 12mm in diameter
3 Protection from entry by tools, wires, etc., with a diameter or thickness greater than 2.5mm
4 Protection from entry by solid objects with a diameter or thickness greater than 1.0mm
5 Protection from the amount of dust that would interfere with the operation of the equipment
6 Dust-tight

2. Degrees of Protection - Second Digit

Second digit indicates the degree of protection of the equipment inside the enclosure against the harmful entry of various forms of moisture (e.g. dripping, spraying, submersion, etc.).

0 No special protection
1 Protection from dripping water
2 Protection from vertically dripping water
3 Protection from sprayed water
4 Protection from splashed water
5 Protected against low-pressure jets from all directions - limited ingress permitted
6 Protected against direct sprays from all directions - limited ingress permitted
7 Protection against effects of immersion from 15cm to 1m
8 Protection against complete, continuous submersion in water from 15 meters or 50 feet

IP Code Symbols

The chart below illustrates the use of special symbols in the IP classification system. In the "1st digit" columns, note the grid-like symbols next to numbers 5 and 6. In the "2nd digit" columns numbers 3-8 are symbolized by teardrop shaped symbols, sometimes enclosed in a box or a triangle, sometimes unenclosed (7-8).

Example : IP 68 = IP letter code
1st digit = 6. Dust-tight
2nd digit = 8. Protection against complete, continuous submersion in water from 15 meters or 50 feet

Technical Data

Aluminium Stranded Wire Dia with Equivalent solid cross section			
Nominal / Area mm^2	Cable size	Dia. of Cond.	Solid Cross Sec. Dia.
4	1/2.24	2.24	2.24
	7/.85	2.55	2.24
4.5	1/2.36	2.36	2.36
	7/.92	2.76	2.36
6	1/2.8	2.8	2.8
	7/1.06	3.18	2.8
6.75	1/2.9	2.9	2.9
	7/1.12	3.36	2.9
10	1/3.55	3.55	3.55
	7/1.35	4.08	3.6
16	1/4.5	4.5	4.5
	7/1.7	5.1	4.5
25	3/3	6.46	5.2
	7/2.24	6.72	5.8
	19/1.32	6.6	5.8
	3/3.5	7.2	5.8
35	3/3.66	7.9	6.5
	7/2.5	7.5	6.5
	19/1.5	7.5	6.5
	7/2.8	8.4	7.4
50	7/3	9	8
	19/1.8	9	8
	7/3.1	9.3	8
70	7/3.4	10.2	9
	7/3.65	10.98	9.7
	7/3.78	11.34	10
	19/2.24	11.2	9.6
95	7/4.17	12.51	11
	7/4.39	13.17	11.5
	19/2.5	12.5	10.9
	37/1.8	12.6	10.9
120	37/2.06	14.42	12.4
150	19/3	15	13
	37/2.24	15.68	13.5
185	37/2.5	17.5	15.3
240	37/3	21	17.5
	61/2.24	20.16	17.5
300	61/2.5	22.5	19.5
400	61/3	27	22.5
	91/2.36	26	22.5
500	91/2.65	29.15	25.2
625	91/3	33	28.2
800	91/2.35	36.9	31.9
1000	91/3.75	41.5	35.5

Solid and Stranded Conductors Annealed Copper					
Nominal Area		Stranding and Wire Diameter		Appx. overall (Eqvt.) Dia.	
$Inch^2$	mm^2	Inch	mm	Inch	mm
0.001	-	1/.036	1/.914	0.036	0.91
0.0015	-	1/.044	1/1.12	0.044	1.12
-	1.0	1/.04409	1/1.12	0.044	1.12
0.002	-	3/.029	3/.737	0.062	1.59
-	1.5	1/.0551	1/1.40	0.055	1.40
0.003	-	3/.036	3/.914	0.078	1.97
0.003	-	1/.064	1/1.63	0.064	1.63
-	2.5	1/.0709	1/1.80	0.071	1.80
-	2.5	3/.0417	3/1.06	0.090	2.28
0.0045	-	7/.029	7/.737	0.087	2.21
-	4.0	7/.0335	7/.850	0.100	2.55
-	4.0	1/.0882	1/2.24	0.088	2.24
0.007	-	7/.036	7/.914	0.108	2.74
-	6.0	7/.0417	7/1.06	0.125	3.18
-	6.0	1/.1102	1/2.80	0.110	2.80
0.01	-	7/.044	7/1.12	0.132	3.35
0.0145	-	7/.052	7/1.32	0.156	3.96
-	10	7/.0551	7/1.40	0.165	4.20
0.0225	-	7/.064	7/1.63	0.192	4.88
-	16	7/.0669	7/1.70	0.200	5.10
0.03	-	19/.044	19/.1.12	0.220	5.59
0.04	-	19/.052	19/1.32	0.260	6.60
-	25	7/.0882	7/2.24	0.265	6.72
-	35	7/.0984	7/2.50	0.295	7.50
0.06	-	19/.064	19/1.63	0.320	8.13
-	50	19/.0709	19/1.80	0.354	9.00
0.075	-	19/.072	19/1.83	0.360	9.14
0.1	-	19/.083	19/2.11	0.415	10.5
-	70	19/.0882	19/2.24	0.441	11.2
0.12	-	37/.064	37/1.63	0.448	11.4
-	95	19/.0984	19/2.50	0.492	12.5
0.15	-	37/.072	37/1.83	0.504	12.8
-	120	37/.0811	37/2.06	0.568	14.42
0.20	-	37/.083	37/2.11	0.581	14.8
-	150	37/.0882	37/2.24	0.617	15.68
0.25	-	37/.093	37/2.36	0.651	16.5
-	185	37/.0984	37/2.50	0.689	17.5
0.3	-	37/.103	37/2.62	0.721	18.3
-	240	61/.0882	61/2.24	0.794	20.15
0.4	-	61/.093	61/2.36	0.837	21.3
-	300	61/.0984	61/2.50	0.886	22.5
0.5	-	61/.103	61/2.62	0.927	23.5
0.6	-	91/.093	91/2.36	1.023	26.0
-	400	61/.1181	61/3.00	1.063	27.0
0.75	-	91/.103	91/2.62	1.133	28.8
0.85	-	127/.093	127/2.36	1.209	30.7
1.0	-	127/.103	127/2.62	1.339	34.0

Technical Data

Copper Cable Stranded and Multistrand Wire with Equivalent solid section Diameter & Bare Conductor Diameter				
Nominal Area In^2	Nominal Area mm^2	Cable size In^2	Diam' of Cond' mm	Solid Cross Sect. Dia. mm.
0.0025	1.5	40/.0076	1.6	1.3
0.003	2	27/.0118	1.8	1.5
0.004	2.5	70/.0076	2.3	1.7
0.0045	3	45/.0118	2.6	1.9
0.015	10	144/.0118	4.2	3.6
0.023	15	91/.018	5.1	4.54
0.039	25	127/.020	6.5	5.7
0.065	42	248/.018	8.5	7.4
0.100	70	416/.018	12.5	9.2
0.150	100	610/.018	15.3	11.3
0.175	112	550/.020	15.6	12.0
0.185	120	427/.0236	16.5	12.4
0.200	133	810/.018	16.2	13.0
		650/.020	16.2	13.0
0.230	150	525/.0236	18.5	13.8
0.288	185	665/.0236	20.3	15.4
0.350	225	760/.0236	21.8	16.5
0.420	270	1325/.020	22.5	18.5
0.620	400	1925/.026	29.5	22.4

Conversion table for the most important foreign wire gauges to metric units			
No. and Dia. of strands NBS	Nominal $Inch^2$	Area mm^2	Cond' Dia' mm
14/.0076"	0.0006	0.39	0.9
23/.0076"	0.001	0.65	1.2
40/.0076"	0.0017	1.10	1.5
70/.0076"	0.003	1.94	2
110/.0076"	0.0048	3.10	2.3
162/.0076"	0.007	4.52	3.1

MCM	Area mm^2	Cond' Dia' mm
250	127	14.6
300	152	16.0
350	177	17.3
400	203	18.5
450	228	19.6
500	253	20.7
550	279	21.7
600	304	22.7
650	329	23.6
700	355	24.5
750	380	25.4
800	405	26.2
850	431	27.0
900	456	27.8
1000	507	29.3

*Applies only to Multistrand Conductors ACC, to ASTM Stranding Class A, Multistrand construction specified in VDE 0250 table

1 MCM - 1000 CM
1 Cm - 1 CIRCULAR MIL = 0.000507 mm^2
1 CIRCULAR NIL = AREA OF A CIRCLE
1 MIL IN DIA'

Technical Data

Conversion table for the most important foreign wire gauges to metric units					
AWG (B7S)	SWG	NBS Inches	Nominal Inch^2	Area mm^2	Cond. Dia. mm
28	-	-	-	0.08	0.3
-	29	-	-	0.09	0.4
27	-	-	-	0.10	0.4
-	28	-	-	0.11	0.4
26	-	-	-	0.13	0.4
-	27	-	-	0.14	0.4
25	-	-	-	0.16	0.5
-	26	-	-	0.16	0.5
-	25	-	-	0.20	0.5
24	-	-	-	0.20	0.5
-	24	-	-	0.25	0.6
23	-	-	-	0.26	0.6
-	23	-	-	0.29	0.6
22	-	-	-	0.33	0.6
-	22	-	-	0.40	0.7
21	-	-	-	0.41	0.7
20	-	-	-	0.52	0.8
-	21	-	-	0.52	0.8
-	-	1/.036″	0.001	0.65	0.9
-	-	3/.029″	0.001	0.65	1.1
19	-	-	-	0.65	0.9
-	20	-	-	0.66	0.9
-	19	-	-	0.81	1.0
18	-	-	-	0.82	1.0
-	-	1/.044″	0.0015	0.97	1.1
17	-	-	-	1.04	1.2
-	18	-	-	1.17	1.2
-	-	3/.029″	0.002	1.29	1.6
16	-	-	-	1.31	1.3
-	17	-	-	1.59	1.4
15	-	-	-	1.65	1.5
-	-	1/.064″	0.003	1.94	1.4
-	-	3/.036″	0.003	1.94	2.0
-	16	-	-	2.08	1.6
14	-	-	-	2.08	1.6
13-	-	-	-	2.62	1.8
-	15	-	-	2.63	1.8
-	-	7/.029″	0.0045	2.90	2.2
-	14	-	-	3.24	2.0
12	-	-	-	3.31	2.1
11	-	-	-	4.17	2.3
-	13	-	-	4.29	2.3
-	-	7/.36″	0.007	4.52	2.7
10	-	-	-	5.26	2.6
-	12	-	-	5.48	2.6
-	-	7/.044″	0.01	6.45	3.4
9	-	-	-	6.63	2.9
-	11	-	-	6.82	2.9

Conversion table for the most important foreign wire gauges to metric units					
AWG (B7S)	SWG	NBS Inches	Nominal Inch^2	Area mm^2	Cond. Dia. mm
-	10	-	-	8.30	3.3
8	-	-	-	8.37	3.3
-	-	7/.052″	0.00145	9.35	4.0
-	9	-	-	10.51	3.7
7	-	-	-	10.55	3.7
-	8	-	-	12.97	4.1
6	-	-	-	13.30	4.1
-	-	7/.064″	0.0225	14.52	4.9
-	7	-	-	15.70	4.5
5	-	-	-	16.77	4.6
-	6	-	-	18.68	4.9
-	-	19/.044″	0.03	19.35	5.6
4	-	-	-	21.15	5.2
-	5	-	-	22.77	5.4
-	-	19/.052″	0.04	25.81	6.6
3	-	-	-	26.67	5.8
-	4	-	-	27.27	5.9
-	3	-	-	32.18	6.4
2	-	-	-	33.63	6.5
-	2	-	-	38.60	7.0
-	-	19/.064″	0.06	38.71	8.1
1	-	-	-	42.41	7.4
-	1	-	-	45.60	7.6
-	1/0	-	-	53.19	8.2
1/0	-	-	-	53.48	8.3
-	2/0	-	-	61.36	8.8
-	-	19/.083″	0.1	64.52	10.5
2/0	-	-	-	67.43	9.3
-	3/0	-	-	70.12	9.5
-	4/0	-	-	81.07	10.2
3/0	-	-	-	85.3	10.4
-	5/0	-	-	94.56	11.0
4/0	-	-	-	107.2	11.7
-	6/0	-	-	109.1	11.8
-	7/0	-	-	126.7	12.7
-	-	37/.072″	0.15	96.77	12.8
-	-	37/.083″	0.2	129.03	14.8
-	-	37/.103″	0.3	193.55	18.3
-	-	61/.093″	0.4	258.06	21.3
-	-	61/.103″	0.5	322.58	23.6
-	-	91/.103″	0.75	483.87	28.8
-	-	127/.103″	1.0	645.16	34.0

Technical Data

Copper Stranded Multistrand Wire sizes in mm with Equivalent solid cross sectionDiameter & Bare Conductor Diameter			
Nominal Area mm^2	Cable size mm	Dia. of Cond.	Solid Cross Sec. Dia.
1.5	1/1.38	1.38	1.38
	7/.52	1.6	1.38
	21/.3	1.7	1.38
	30/.25	1.6	1.38
	189/.1	1.9	1.38
2.5	1/1.78	1.78	1.78
	7/.67	2.0	1.8
	35/.3	2.2	1.8
	50/.25	2.1	1.8
	315/.1	2.2	1.8
4	1/2.26	2.26	2.26
	19/.52	2.6	2.26
	56/.3	2.8	2.26
	511/.1	3	2.26
6	1/2.76	2.76	2.76
	7/1.05	3.2	2.8
	19/.64	3.2	2.8
	85/.3	3.5	2.8
	756/.1	3.7	2.8
10	1/3.55	3.55	3.6
	7/1.35	4.1	3.6
	19/.8	4.3	3.6
	49/.51	4.6	3.6
	80/.4	5.0	3.6
	1197/.1	4.5	3.6
15	91/.457	5.1	4.4
16	1/4.52	4.52	4.5
	7/1.7	5.1	4.5
	37/.75	5.3	4.5
	49/.65	5.4	4.5
	127/.4	6	4.5
	2058/.1	6.8	4.5
25	7/2.13	6.4	5.7
	37/.9	6.8	5.7
	84/.62	7.7	5.7
	200/.4	7.5	5.7
	796/.2	7.6	5.7
	3185/.1	8.3	5.7
35	19/1.53	7.6	6.7
	37/1.1	8.3	6.7
	133/.56	8.7	6.7
	285/.4	8.7	6.7
	1115/.2	9	6.7
	4459/.1	10.2	6.7
42	248/.457	8.5	7.4

Copper Stranded Multistrand Wire sizes in mm with Equivalent solid cross sectionDiameter & Bare Conductor Diameter			
Nominal Area mm^2	Cable size mm	Dia. of Cond.	Solid Cross Sec. Dia.
50	19/1.83	9.2	8
	61/1	9.7	8
	133/.69	10.4	8
	400/.4	11	8
	1591/.2	10.9	8
64.5	416/.457	12.5	8
70	19/2.24	11.2	9.2
	61/1.2	11.6	9.5
	189/.69	12.7	9.5
	560/.4	12.8	9.5
95	19/2.52	12.6	11
	61/1.4	13.5	11
	259/.69	14.5	11
	485/.5	14.9	11
	1936/.25	14.9	11
100	610/.457	15.3	11.3
112	550/.5	15.6	12
120	37/2.03	14.2	12.4
	61/1.6	15.5	12.4
	336/.67	16.4	12.4
	614/.5	16	12.4
	2445/.25	16.4	12.4
133	810/.457	16.2	13
	659/.5	16.2	13
150	37/2.26	15.8	13.8
	392/.69	18	13.8
	765/.5	19.2	13.8
185	37/2.62	18.4	15.4
240	61/2.36	21.3	17.5
270	1325/.5	22.5	18.5
300	61/2.5	22.5	20
	790/.69	25	20
	1530/.5	27	20
400	1925/.5	29.5	22.4

Technical Data

Equivalents of an inch		
Fraction	Decimal	Millimeters
1/64	0.015	0.4
1/32	0.031	0.8
3/64	0.046	1.2
1/16	0.062	1.6
5/64	0.078	2.0
3/32	0.093	2.4
7/64	0.109	2.8
1/8	0.125	3.2
9/64	0.140	3.6
5/32	0.156	4.0
11/64	0.171	4.4
3/16	0.187	4.8
13/64	0.203	5.2
7/32	0.218	5.6
15/64	0.234	6.0
1/4	0.250	6.3
17/64	0.265	6.7
9/32	0.281	7.1
19/64	0.296	7.5
5/16	0.312	7.9
21/64	0.328	8.3
11/32	0.343	8.7
23/64	0.359	9.1
3/8	0.375	9.5
25/64	0.390	9.9
13/32	0.406	10.3
27/64	0.421	10.7
7/16	0.437	11.1
29/64	0.453	11.5
15/32	0.468	11.9
31/64	0.484	12.3
1/2	0.500	12.7
33/64	0.515	13.1
17/32	0.531	13.5
35/64	0.546	13.9
9/16	0.562	14.3
37/64	0.578	14.7
19/32	0.593	15.1
39/64	0.609	15.5

Equivalents of an inch		
MCM	Area mm^2	Cond. Dia. mm
5/8	0.625	15.9
41/64	0.640	16.3
21/32	0.656	16.7
43/64	0.671	17.1
11/16	0.687	17.5
45/64	0.703	17.9
23/32	0.718	18.3
47/64	0.734	18.6
3/4	0.750	19.0
49/64	0.765	19.4
25/32	0.781	19.8
51/64	0.796	20.2
13/16	0.812	20.6
53/64	0.828	21.0
27/32	0.843	21.4
55/64	0.859	21.8
7/8	0.875	22.2
57/64	0.890	22.6
29/32	0.906	23.0
59/64	0.921	23.4
15/16	0.937	23.8
61/64	0.953	24.2
31/32	0.968	24.6
63/64	0.984	25.0
1	1.000	25.4

PRODUCT SPECIFICATION & QUALITY CONTROL CHART FOR CABLE TERMINAL ENDS

A) RAW MATERIALS

MTL/ FORM	PARAMETERS CHECKED	TYPE/METHOD & INSTRUMENTS OF INSPECTION	ACCEPTANCE	STANDARD VALUES
I Copper	Chemical composition	Testing done at renowned lab Supplier test Certificate	BS 1877 IS 191 (Part-V)	-
(a) Tubes	Diameters	Verniers/Go & No Go Gauges	BS 1877	-
	Surface roughness	Visual	-	-
	Ovality	Visual/Vernier	-	-
	Hardness	Hardness testing M/C	DO	65 RF (60 HV)
	Conductivity	Conductivity Meter	DO	99.25% I. A. C. S.
	Resistivity	Resistivity Meter	DO	0.0172 ohm mm^2/m at 20 degree C
	Flattening	Press	IS 5071 ORBS 1977	Should not crack When Flattened
(b) Strip	Dimensions	Verniers/mm	IS 1897	
	Surface Roughness	Visual	-	-
	Bend test	'V Block/Vice	IS 3260-1965	Should not crack when bent
	Hardness	Hardness testing Machine	DO	65RF (60 Hv)
	Conductivity	Conductivity Meter	DO	99.25% I. A. C. S.
	Resistivity	Resistivity Meter	IS 3635 1960	0.0172 ohm mm^2/m at 20 degrees C
(c) Rods	Diameters	Verniers / mm	IS 613-1984	-
	Surface Roughness Hardness	Visual	-	-
	Conductivity	Hardness testing Machine		60RF(65HV)
	Resistivity	Conductivity Meter		99.25% I. A. C. S.
	Hardness	Resistivity Meter		0.0172 ohm mm^2/m at at 20 degrees C
	Conductivity			
	Resistivity			
II Aluminium	Chemical Composition	Testing done at Renowned Lab/ Test Certificate	IS 5082-1982	
(a) Tubes	Diameter	Verniers/Go & NoGo Gauges	IS 5082	-
	Surface Roughness	Visual	-	-
	Ovality	Visual	-	-
	Hardness	Hardness tester	DO	30 BHN max.
	Conductivity	Conductivity Meter	DO	60% I. A. C. S.
	Resistivity	Resistivity Meter	DO	2.87 micro ohm cm at 20 degree C
	Flattening	Press		Should not crack when Flattened**

MTL / FORM	PARAMETERS CHECKED	TYPE/METHOD & INSTRUMENTS OF INSPECTION	ACCEPTANCE	STANDARD VALUES
III PVC sleeves	Diameter	Verniers/Go & NoGo (gauges)	IS 1951-1961	-
	Surface roughness	Visual	-	-
	Ovality	Vernier / Visual	IS 1951-1961	-
	Colour	Visual	-	0.75 Red, 1.5 Red, 2.5 Blue, 4.6 Yellow 10.16 Blue
	Hardness	Pliers	IS 1951-1961	Should not crack
	Flattening	Pliers	DO	when Flattened
IV Phosphorous Bronze Sheet	Surface Roughness	Visual		
	Hardness	Hardness testing M/C	IS 7814-1975	150 HV min
	Bend test	'V' Block/Vice	IS 3260-1965	Should not crack when bent

RAW MATERIAL SPECIFICATION

COPPER

RAW MATERIAL GRADE :
Electrolytic Copper Grade as per BS 1977/IS 191

CONDUCTIVITY : 99.25% IACS

CHEMICAL COMPOSITION :

Copper + Silver	- 99.9%
Bismuth max	- 0.001%
Lead max	- 0.005%
Impurities	- 0.003%

RESISTIVITY :
0.017% ohm mm^2/m at 20° C

PHYSICAL PROPERTIES :
1. Tensile Strength
   (Above 0.5 mm thick) : 205 MPa Min

2. Hardness : 60 Hv (RF) Min.

ALUMINIUM

RAW MATERIAL GRADE :
Electrolytic as per IS 5082

CONDUCTIVITY : 60% IACS

CHEMICAL COMPOSITION :

Aluminium	- 99.5%
Copper max	- 0.04%
Silicon	- 0.15%
Iron max	- 0.35%
Titanium	- 0.02%
Magnesium	
Zirconium	- 0.02% each

TENSILE STRENGTH : 60 MPa Min

RESISTIVITY : 2.87 Micro Ohm. cm

B) PROCESS INSPECTION

SR NO	PRODUCT / PROCESS	PARAMETERS CHECKED	TYPE/METHOD & INSTRUMENTS OF INSPECTION	ACCEPTANCE SPECIFICATION	STANDARD VALUES
I	Copper & Aluminium Tubular Terminal End				
(a)		Length	Verniers	As per drawing	Design dimension
(b)	Cutting	Palm Width	Vernier	-	DO
(c)	Punching	Stud Hole	Vernier/Go & NoGo Gauges	-	DO
(d)	Holing	Stamp marking	Visual	-	DO
(e)	Stamping		Visual	-	DO
(f)	Serrations	Bell Mouth on Barrel	Visual	-	DO
	Champhering				
II		Length	Vernier	-	DO
	Ferrules and	Diameter			
	in-line	Serrations	Vernier/Go & NoGo Gauges	-	DO
	Connectors		Visual	-	DO
III					
	Ring Tongue & Pin Type, Fork Type, Snap On Type Terminal				
(a)	Cutting	Blank piece	Visual/Vernier		DO
(b)	Holing / Stamping	Stud Hole / Stamp marking	Visual/Vernier Go & NoGo Gauges	As per drawing	Design dimension
(c)	'0' Bending	Barrel Dia	Vernier/Go & NoGo Gauges	-	DO
(d)	Champhering / Serrations	Bell Mouth on barrel	Visual	-	DO
(e)	Soldering	Solder finish	Visual	-	DO
IV	Reducers or Wire Pin Terminals				
(a)	Cutting	Length	Vernier	-	DO
(b)	Turning	Diameter	Vernier	-	DO
(c)	Drilling	Inner-Dia	Vernier	-	DO
(d)	Champhering	Bell Mouth on Barrel	Visual	-	DO

C) FINISHED GOODS

SR NO	PRODUCT	PARAMETERS CHECKED	TYPE/METHOD & INSTRUMENTS OF INSPECTION	ACCEPTANCE SPECIFICATION	STANDARD VALUES
I	Copper and Aluminium Tubular Terminal Ends	Dimensions a) Diameter of Barrel b) Stud hole c) Palm width d) Barrel length Conductivity Tinning thickness (cu) Pull test Millivolt drop	Tol: + 5% NoGo Gauges DO DO DO Conductivity Meter Tin coating thickness measurement M/C Tensile Testing M/C Voltage drop meter	IS 8309 DO DO DO DO DO DO DO	- - - - 99.25%I.A.S.(Cu) 60% I. A. C. S. (Al) 5M to 1 0M (Cu) 40N/MM2 Depends upon size of cable/lugs and nature of crimping
II	Inline Connector (Copper and Aluminium)	Dimension a) Diameter Aluminium) b) Length Conductivity Tinning thickness (Cu) Pull test Millivolt drop	Tol:$^{+}$ 5% Vernier/Go & NoGo Gauge Vernier Conductivity Meter Tinning thickness measurement M/C Tensile Testing M/C Voltage Drop Meter	IS 8308 DO DO IS 8337-1976 -	- 99.25% (Cu) 60% (AL) *5Mto10M(Cu) 40N/MM^2 Depends on size of Cable/Lugs
III	Copper Pin Type Ring Tongue, Fork Type, Terminal End and Snap Type Terminal	Dimension (a) Barrel Diameter (b) Stud hole (c) Palm width/diameter (d) Barrel length Conductivity Tinning thickness) Pull test Millivolt drop	Tol:$^{+}$ 5% Vernier/Go & NoGo Gauges DO DO DO Conductivity Meter Tin coating thickness measurement M/C Tensile Testing M/C Voltage drop meter	- - - - - - IS 8337-1976 -	- - - - 99.25% I. A. C.S. *5M to10M(Cu) 40 N/mm^2 | Depends upon size of cable/lugs and nature of crimping
IV	Reducers or Wire Pin Terminal	Dimension Hardness Tinning Thickness	Vernier Hardness testing M/C Tinning Thickness Measurement M/C	- IS 613	- 65 RF (60 HV) 5M to 10M