Alco

LEADING RANGE OF CABLE GLANDS SOLUTIONS

to Australian & International Standards

Alco 68 SERIES

APPROVED TO 60079

Armoured, Unarmoured and Screened Cable Glands, Industrial Conduit and Accessories

Wattmaster
where quality counts

*HUW, HAW and HAW-B Glands tested and approved for hazardous, industrial mining and underground coal mining

ABOUT ALCO CABLE GLANDS

Alco was the first brand to provide a comprehensive range of Metal Cable Glands designed in Australia to meet Australian and International Standards. Alco premium quality cable glands are manufactured to comply with the requirements of the new AS/NZS 60079.2000 (equivalent to IEC 60079.1998) as applicable, which came into effect on 26/04/2000.
To maintain the high product integrity of the Alco glands, strict controls are exercised for the raw materials being used. These are specified below:

GLAND MATERIAL SPECIFICATIONS

The base material for all Alco metal glands is high quality nickel coated brass. All seals are of first grade material, machine moulded, with an operating temperature of +80°C or higher. Entry threads are METRIC. Alco's nickel plated finish maintains their lead in a quality finish, which has great resistance to corrosive atmospheres and abrasion.

ALCO PRODUCT DEVELOPMENT

With the ever changing requirements for gland performance, particularly in Hazardous Area applications, Alco continues to develop their glands to meet the stringent performance requirements of modern industry. Alco has completed a re-design of the range to meet the requirements of AS/NZS 60079 and 61241.1, and the new range has numerous benefits:

- All armoured cable glands come with a weatherproof seal rated to 300kPa (IP66/68-30m)
- The range of cables each gland will accept has increased. Alco achieves this by providing multiple seals. This greatly reduces the chances of cable size variations requiring a change of gland.
- All metal glands now come with a fibre washer and plated locknut in the one kit, avoiding the need to order and stock multiple items.
- Hazardous area glands now have the extended seals (20mm or longer) required for more effective gas sealing. The seals meet the requirements of the current Australian and International Standards.
- All ranges of metal glands have a reduced number of glands to cover the same range of cable sizes. This makes selection simpler and reduces inventory.
- Alco has added a new range to the metal gland offering. The 'EMC' range is for use with metal screened cables, and provides a low resistance contact between screen and earth. The glands are designed for use with taped or braided screened cables used in conjunction with Variable Speed Drives (VSD's).
- Installation - Glands must be installed in accordance with the requirements of the relevant Australian or international standard/s. In particular, glands in hazardous areas must be approved for the type of application.

CONTENTS

GLAND TYPES

The following types of glands are recognised throughout the world:

TYPE A1. For unarmoured cable with rubber or plastic outer sheath, where the function of the gland is to secure the outer sheath of the cable. Alco type UW and HUW Glands comply with this type.

TYPE A2. As type A1, but with watertight seal between outer sheath and gland. Alco type UW and HUW Glands comply with this type.

TYPE A3. As type A1 but with electrical bond for metallic inner sheath.

TYPE A4. As type A2 but with electrical bond for metallic inner sheath.

TYPE B. For armoured or wire-screened cable, where the function of the gland is to secure the armour wires or metallic braid and to provide electrical continuity between the armour and the threaded fixing component of the gland. Alco type AW and HAW Glands comply with this type.

TYPE C. For armoured or wire-screened cable and rubber or plastic outer sheath. As type B, but with watertight seal between outer sheath and gland. Alco types AW and HAW comply with this type.

TYPE D1. For armoured or wire-screened cable and rubber or plastic outer sheath. As type B, but with watertight seal between inner sheath and threaded fixing components. Alco type HAW complies with this type.

TYPE D2. As type D1, but with electrical bond for metallic inner sheath.

TYPE E1. For armoured or wire screened cable with rubber or plastic outer sheath. As type B, but with watertight seals between outer sheath and gland and between inner sheath and threaded fixing components. Alco type AW Gland complies, although this gland does not incorporate an inner seal - Alco utilise a patented 'O' Ring between the gland body and sleeve which proves a more positive moisture barrier than the inner seal method e.g. the 'O' Ring prevents moisture entering via the threaded section between the body and sleeve, ensuring moisture is kept out of the armour chamber as well as the equipment. Alco type HAW Gland complies with this type.

Pressurised enclosure - AS/NZS 60079.2
Intrinsic Safety Category ib - AS/NZS 60079.11
Intrinsic Safety Category ia - AS/NZS 60079.11
Increased Safety e - AS/NZS 60079.7
Flameproof enclosure d - AS/NZS 60079.1

	IP RATING IP RATED		CLASS OF HAZARD (Class I)				DUST Class II						Internat'l Gland
Gland type	Rating 66 & 68	Pressure 30m (depth)	METHANE I	HYDROGEN IIC	ETHYLENE IIB	PROPANE IIA	DIP A21	Ex d	Ex e	Ex ia	Ex ib	Exp	Type/s applicable
UW	yes	yes											A1, A2
HUW	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	A1, A2
EMC	yes	yes											
AW	yes	yes											B, C,
HAW	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	B, C, D1, E1**
HAW-B (BARRIER)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	B, C, **

Note: For intrinsic safety areas, glands must be coloured light blue.

HOW TO SELECT THE CORRECT GLAND

UNARMOURED CABLES

	Series	Page
General Purpose Weatherproof Gland IP66/68	UW	4
Hazardous Area Weatherproof Gland To AS/NZS 60079, AS/NZS 61241.1, IP66/68	HUW	6

1. Measure the outside diameter (OD) of the cable.
2. Select a cable gland having the measured cable OD falling between the 'OA' maximum of seal 'A' and the 'OA' minimum of seal 'B' or 'C', where applicable, shown under the cable details column on pages 4-6. Then select seal A, B or C as appropriate. e.g. For a 15mm OD cable you would select ALCUW25 with seal B or ALCHUW25 with seal B.

ARMOURED CABLES SWA

	Series	Page
SWA General Purpose Weatherproof Gland, IP66/68	AW	8
SWA Hazardous Area Weatherproof AS/NZS 60079, AS/NZS 61241.1, IP66/68	HAW	10
SWA Explosive Area Barrier AS/NZS 60079, AS/NZS 61241.1, IP66/68	HAW-B	12

1. Measure the outside diameter (OD) of the cable.
2. Measure the overbedding diameter of the cable (dia under armour).
3. Select a cable gland having the measured cable OD falling between the 'OA' minimum and the 'OA' maximum of seals 'A' and 'B' when included. Ensure the overbedding diameter is within the specified range shown under the cable details column on pages 8-10. e.g. For a OB dia of 31mm and an OD of 41mm you would select ALCAW40 or ALCHAW40B.
4. Ensure armour size lies within specified range.

T: 1300 300 747
F: 1300 300 074

UW

METAL CABLE GLANDS (IP66/68)

APPLICATIONS
Indoor or Outdoor use.

FUNCTION
Provides seal on Cable Sheath.
International type 'A1', 'A2'.
See page 2 for International Types.

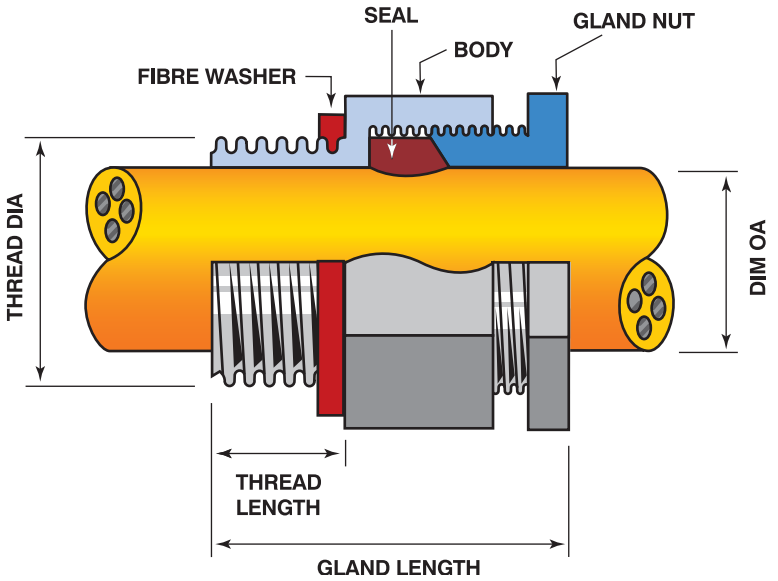
APPROVALS
Degree of protection against ingress of water IP66/68
UW12 - UW75 (30m)
UW105 - UW120B (10m)

Compliance with AS 1939-1990

MATERIAL
Brass, Nickel Plated

SEAL
TPE

GENERAL PURPOSE WEATHERPROOF GLAND - UNARMOURED CABLE



Item Number	Mounting thread diameter x length (mm)	Diameter across points (mm)	Diameter across flats (mm)	Gland length uncompressed (mm)	Gland length compressed (mm)	Cable details Seal B (thick) OA min	Seal B (thick) OA max	Seal A (thin) OA min	Seal A (thin) OA max	Rubber Shroud Orange*	Qty per Carton
ALCUW12	M12 x 10	18.9	17.5	32.0	25	1.5	3.5	3.5	6.0	ALCSG0S	30
ALCUW16S	M16 x 10	21.6	20.0	32.0	25	1.5	3.5	3.5	6.0	ALCSG0S	30
ALCUW16	M16 x 10	21.6	20.0	32.0	25	5.0	7.5	7.5	10.0	ALCSG0	30
ALCUW20A	M20 x 10	26.0	24.0	32.0	25	5.0	7.5	7.5	10.0	ALCSG1	20
ALCUW20	M20 x 10	27.1	25.0	32.0	25	10.0	11.0	11.0	15.0	ALCSG1	20
ALCUW25	M25 x12	35.2	32.5	37.5	29	14.5	17.0	17.0	20.0	ALCSG2L	15
ALCUW32	M32 x 12	40.6	37.5	39.5	30	20.0	23.0	23.0	26.5	ALCSG3S	10
ALCUW40	M40 x 15	51.4	47.5	44.5	35	26.0	30.0	30.0	33.5	ALCSG4S	8
ALCUW50	M50 x 15	62.2	57.5	49.5	35	33.0	36.0	36.0	42.0	ALCSG5S	5
ALCUW63	M63 x 19	75.8	70.0	56.5	45	41.5	46.0	46.0	52.0	ALCSG7	2
ALCUW75	M75 x 19	97.4	90.0	66.0	50	51.0	56.0	56.0	65.0	ALCSG7	2
ALCUW105	M105 x 30	129.0	120.0	148.0	110	75.0	80.0	82.0	89.0	ALCSG10S	1
ALCUW120A	M120 x 30	150.0	140.0	148.0	110	89.0	92.0	92.0	98.0	ALCSG11S	1
ALCUW120B	M120 x 30	150.0	140.0	148.0	110	-	-	96.0	105.0	ALCSG11S	1

* For Black Shroud add 'B' to part number: eg. ALCSG0SB
Note: To comply with IP66/68 approvals, the washer supplied must be installed on mounting thread.
Note: Mounting thread pitch is 1.5mm, unless otherwise specified.
Supplied complete with locknuts and sealing washers.

FITTING INSTRUCTIONS

1. UW glands come with 2 seals, A & B. The table of dimensions (left) gives the range of cable diameters to suit seals A & B. Select the required seal.

2. Slide the gland nut, then the selected seal over the cable.

3. Fit the gland body into the enclosure: either by screwing into tapped fitting or by inserting through a clearance hole and using an Alco locknut. Note: The fibre washer provided is required to maintain the IP 66/68 rating. Recommended torque settings (For gland body into enclosure) are provided with the gland instructions.

4. Slide the cable through the gland body until a tail of the required length protrudes through the gland.

5. Slide the seal into the gland body. Note: A small amount of rubber grease, petroleum jelly or cable pulling lube applied between the outer surface of the seal and the taper of the nut aids assembly.

6. Slide the gland nut into the gland and screw to tighten, forming a seal.

HUW

METAL CABLE GLANDS (IP66/68)

APPLICATIONS
Indoor or Outdoor use.

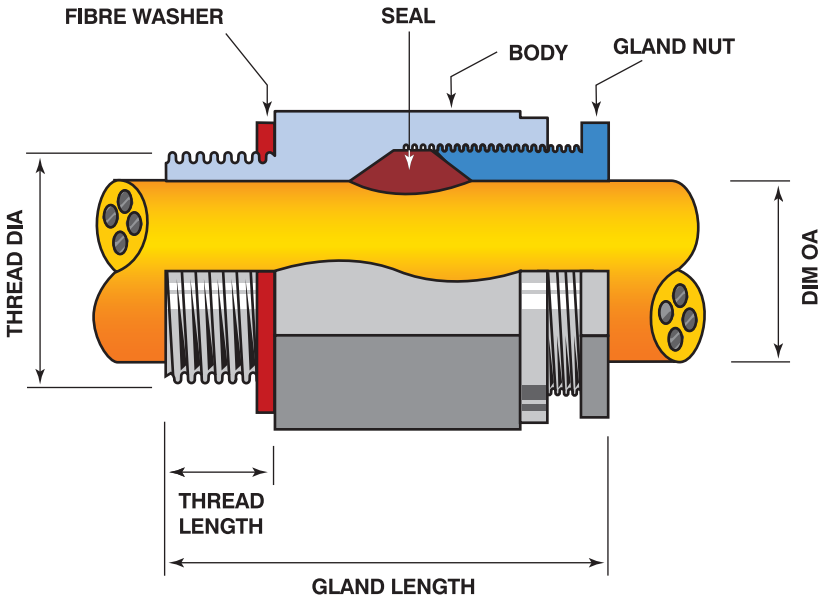
FUNCTION
Provides seal on Cable Sheath.
International type 'A1' & 'A2'.
See page 2 for International Types.

APPROVALS
CERTIFICATE No:
HUW20SB - HUW90
AUS Ex 03.3903
Ex d, I/IIC
Ex e, I/II
DIP A21
AS/NZS 60079, AS/NZS 61241.1
IP66/68 (30m) AS 1939-1990

MATERIAL
Brass, Nickel Plated

SEAL
TPE

HAZARDOUS AREA WEATHERPROOF GLAND - UNARMOURED CABLE



Item Number	Mounting thread diameter x length (mm)	Diameter across points (mm)	Diameter across flats (mm)	Gland length		Cable details						Rubber Shroud Orange*	Qty per Carton
				uncom-pressed (mm)	com-pressed (mm)	Seal C (thickest)		Seal B (thick)		Seal A (thin)			
						OA min	OA max	OA min	OA max	OA min	OA max		
ALCHUW20SB	M20x12	27.1	25.0	61	44	-	-	4.0	8.0	8.0	10.0	ALCSG1S	20
ALCHUW20A	M20x12	32.5	30.0	61	44	-	-	6.5	8.0	8.0	10.0	ALCSG2L	20
ALCHUW20B	M20x12	32.5	30.0	61	44	-	-	10.0	12.0	12.0	14.0	ALCSG2L	20
ALCHUW25	M25x12	37.9	35.0	63	46	-	-	14.0	16.0	16.0	19.0	ALCSG3	15
ALCHUW32	M32x15	43.3	40.0	76	56	-	-	19.0	22.0	22.0	25.0	ALCSG3S	10
ALCHUW40	M40x15	54.1	50.0	76	56	-	-	25.0	28.5	28.5	31.0	ALCSG4	8
ALCHUW50	M50x20	67.7	62.5	86	66	31.0	36.0	36.0	39.0	39.0	42.0	ALCSG6	2
ALCHUW63	M63x25	81.2	75.0	98	78	42.0	46.5	46.5	50.0	50.0	53.0	ALCSG6L	2
ALCHUW75	M75x25	97.4	90.0	108	83	53.0	57.0	57.0	61.0	61.0	64.0	ALCSG7	1
ALCHUW90	M90x30	119.0	110.0	138	105	-	-	64.0	70.0	70.0	75.0	ALCSG8S	1

* For black shroud add 'B' to part number: eg. ALCSG2LB.
Note: To comply with IP66/68 and Ex approvals, the washer supplied must be installed on mounting thread.
Note: Mounting thread pitch is 1.5mm, unless otherwise specified.

FITTING INSTRUCTIONS

1 HUW glands come in one, two or three seals, A, B and C (where applicable). The table of dimensions (left) gives the range of cable diameters to suit each seal. Select the required seal. These glands are not to be used where the temperature at the mounting point, or the branching point is outside the gland operating range of -20°C to +80°C or for cables for flexible applications.

2 Slide the gland nut, then the selected seal over the cable.

3 Screw the gland body into the enclosure, by screwing into tapped fitting. Recommended torque settings are provided with the gland instructions.

Note: 1. The fibre washer provided is required to maintain the IP66/68 & Ex d ratings.
2. For Ex d applications where minimum thread requirements apply, ensure the selected screwing method applies.

4 Slide the cable through the gland body until a tail of the required length protrudes through the gland.

5 Slide the seal into the gland body. Note: A small amount of rubber grease, petroleum jelly or cable pull lube applied between the outer surface of the seal and the taper of the gland nut aids assembly considerably.

6 Slide the gland nut onto the gland and screw to tighten.

AW

METAL CABLE GLANDS (IP66/68)

APPLICATIONS
Indoor or Outdoor use.

FUNCTION
Provides seal on Cable Sheath, Clamps SWA.
International type 'B', 'C', 'E1'.

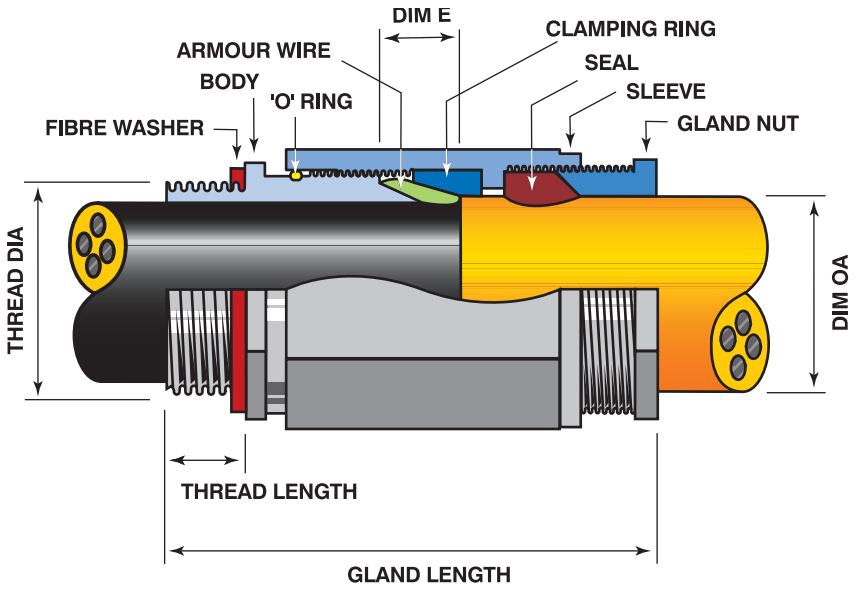
APPROVALS
Degree of protection against ingress of water IP66/68 (30m)

Compliance with AS 1939-1990

MATERIAL
Brass, Nickel Plated

SEAL
TPE

GENERAL PURPOSE WEATHERPROOF GLAND - ARMOURED CABLE



Item Number	Mounting thread diameter x length (mm)	Diameter across points (mm)	Diameter across flats (mm)	Gland length uncompressed (mm)	Gland length compressed (mm)	Cable details Seal B (thick) OA min	Seal B (thick) OA max	Seal A (thin) OA min	Seal A (thin) OA max	Seal A (thin) OB max	Exposed length SWA 'E'	SWA diameter (mm)	Rubber Shroud Orange*	Qty per Carton
ALCAW16	M16x12	29.6	27.5	65	53	10.5	13.0	13.0	15.5	*10.0*	11.5	0.8 -1.25	ALCSG2	20
ALCAW20SB	M20x12	26.0	24.0	65	53	10.5	13.0	13.0	15.5	*10.0*	11.5	0.8 -1.25	ALCSG1	14
ALCAW20MR	M20x12	26.9	25.0	65	53	-	-	14.5	17.5	*11.5*	11.5	0.8 -1.25	ALCSG1	20
ALCAW20	M20x12	35.0	32.5	65	53	14.5	17.0	17.0	20.0	*14.0*	11.5	0.8 -1.25	ALCSG2L	20
ALCAW20UR	M20x12	35.0	32.5	65	53	-	-	19.5	22.5	*16.0*	11.5	0.8 -1.25	ALCSG2L	20
ALCAW25	M25x14	40.3	37.5	77	63	20.0	23.0	23.0	26.0	*19.0*	14.0	1.25-1.60	ALCSG3	15
ALCAW32	M32x14	51.0	47.5	88	72	26.0	30.0	30.0	33.5	*26.0*	17.0	1.25-1.60	ALCSG4S	5
ALCAW40	M40x15	61.9	57.5	95	78	33.0	36.0	36.0	42.0	*33.0*	17.0	1.60-2.0	ALCSG5S	5
ALCAW50	M50x15	75.3	70.0	105	85	41.5	46.0	46.0	51.0	*42.0*	20.0	2.0-2.50	ALCSG7	2
ALCAW50L	M50x15	75.3	70.0	100	81	-	-	49.0	56.0	*44.5*	18.0	2.50	ALCSG7	2
ALCAW63	M63x19	91.0	85.0	125	100	51.0	56.0	56.0	64.0	*55.0*	20.0	2.50-3.15	ALCSG7S	1
ALCAW63L	M63x19	91.0	85.0	120	95	-	-	62.0	69.0	*56.5*	19.0	2.50-3.15	ALCSG7S	1
ALCAW75	M75x19	108.0	100.0	135	108	63.0	71.0	71.0	75.0	*63.0*	26.0	2.50-3.15	ALCSG8S	1
ALCAW90	M90x19	119.0	110.0	156	122	75.0	82.0	82.0	90.0	*75.0*	31.0	2.50-3.15	ALCSG9	1
ALCAW90B	M90x19	129.0	120.0	170	138	-	-	88.0	98.0	*83.0*	30.0	3.15	-	1

* For Black Shroud add 'B' to part number: eg. ALCSG1B

Note: To comply with IP66/68 approval, the washer supplied must be installed on mounting thread.

Note: Mounting thread pitch is 1.5mm, unless otherwise specified.

FITTING INSTRUCTIONS

1. AW glands come with 2 seals, seals A & B. The table of dimensions (left) gives the range of cable diameters to suit seals A & B. Select the required seal.

2. Determine the required length of tail. Remove the outer sheath from the cable for the required tail length plus the compressed gland length.

3. Remove SWA leaving for an exposed length equal to the Dimension 'E' specified (left).

4. Slide the gland nut and the selected seal over the cable, then the sleeve and clamping ring over the armour.

5. Secure the gland body into the enclosure: either by screwing into tapped fitting or by using an Alco locknut.
   Note: The fibre washer provided is required to maintain the IP66/68 rating. Recommended torque settings are provided with the gland instructions.

6. Slide the cable through the gland body, spreading the armour wires over the taper of the body. Make sure that the armour butts up against the body face. On smaller cables it is advisable to pre-bend the wires to the larger diameter cone.

7. Tighten the sleeve while ensuring that the armour is not allowed to slip back from the body face.

8. Slide the seal into the gland body.
   Note: A small amount of rubber grease, petroleum jelly or cable pulling lube applied between the outer surface of the seal and the taper of the nut aids assembly.

9. Slide the gland nut onto the gland and screw to tighten.

HAW

METAL CABLE GLANDS (IP66/68)

APPLICATIONS
Indoor or Outdoor use.

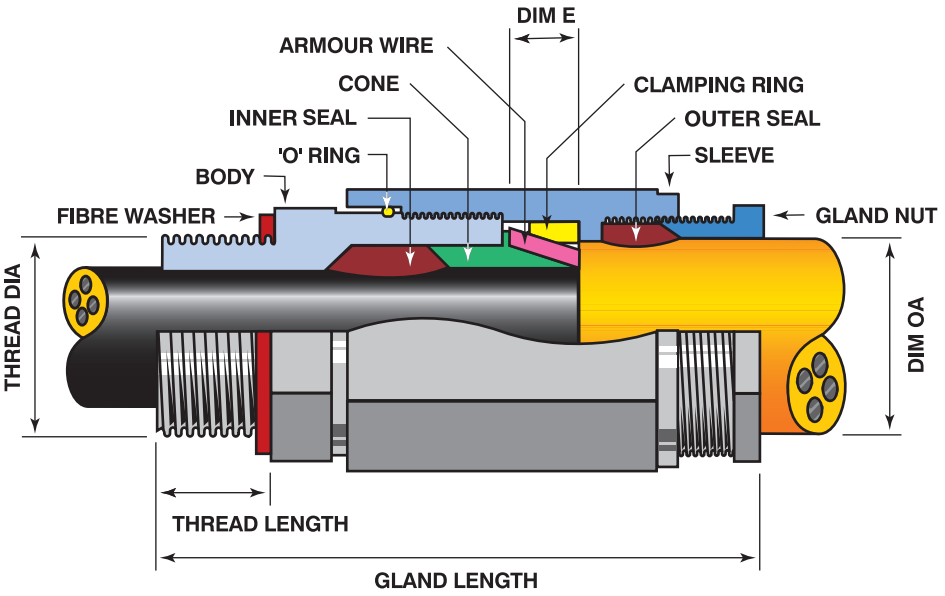
FUNCTION
Provides seal on Cable Sheath,
Clamps SWA.
International type 'B', 'C', 'D1', 'E1'.
See page 2 for International types.

APPROVALS
CERTIFICATE No:
HAW20LR - HAW90B
AUS Ex 03.3904
Ex d, I/IIC
Ex e, I/II
DIP A21
AS/NZS 60079, AS/NZS 61241.1
IP66/68 (30m) AS 1939-1990

MATERIAL
Brass, Nickel Plated

SEAL
TPE

HAZARDOUS AREA WEATHERPROOF GLAND - ARMOURED CABLE



Item Number	Mounting thread dia x length (mm)	Diameter across points (mm)	Diameter across flats (mm)	Gland length uncompressed (mm)	Gland length compressed (mm)	Cable details: Over bedding diam, Inner Seal B min	Over bedding diam, Inner Seal B max	Over bedding diam, Inner Seal A min	Over bedding diam, Inner Seal A max	Over cable diam, Seal A (outer) min	Over cable diam, Seal A (outer) max	Exposed length SWA 'E'	SWA diameter (mm)	Rubber Shroud Orange*	Qty per Carton
ALCHAW20LR	M20x15	27.1	25.0	64	53	-	-	5.2	8.0	7.8	12.7	7.0	0.7 -0.9	ALCSG1S	20
ALCHAW20	M20x20	29.8	27.5	89	71	6.5	8.0	8.0	10.0	11.5	16.0	10.5	0.8 -1.25	ALCSG2	20
ALCHAW20SB	M20x16	29.8	27.5	89	71	-	-	9.1	12.3	14.0	18.0	10.5	0.8 -1.25	ALCSG2	20
ALCHAW25A	M25x20	32.5	30.0	89	71	10.0	12.0	12.0	14.0	16.0	20.0	10.5	0.8 -1.25	ALCSG2L	12
ALCHAW25B	M25x20	40.6	37.5	100	78	14.0	16.0	16.0	18.0	20.0	24.0	13.0	1.25-1.60	ALCSG3S	10
ALCHAW32A	M32x20	46.0	42.5	107	86	18.0	19.5	19.5	21.5	24.0	28.0	16.0	1.25-1.60	ALCSG3L	6
ALCHAW32B	M32x20	51.4	47.5	107	86	21.5	23.0	23.0	25.0	28.0	32.0	16.0	1.60-2.00	ALCSG4S	6
ALCHAW40A	M40x20	54.1	50.0	114	90	25.0	27.0	27.0	29.0	32.0	37.0	16.0	1.60-2.00	ALCSG5	4
ALCHAW40B	M40x20	62.6	57.5	114	90	28.5	31.0	31.0	33.5	37.0	42.0	16.0	1.60-2.00	ALCSG5S	4
ALCHAW50A	M50x20	67.6	62.5	119	96	33.0	35.0	35.0	37.5	41.0	46.0	19.0	2.00-2.50	ALCSG6	2
ALCHAW50B	M50x20	75.8	70.0	119	96	36.5	39.0	39.0	42.0	45.0	51.0	19.0	2.00-2.50	ALCSG6L	2
ALCHAW63A	M63x25	81.2	75.0	146	115	42.0	44.5	44.5	47.0	51.0	57.0	19.0	2.50-3.15	ALCSG6S	1
ALCHAW63B	M63x25	92.0	85.0	146	115	47.0	50.0	50.0	53.0	57.0	63.0	19.0	2.50-3.15	ALCSG7S	1
ALCHAW75A	M75x25	108.2	100.0	154	123	52.5	55.5	55.5	58.5	62.0	69.0	24.0	2.50-3.15	ALCSG8S	1
ALCHAW75B	M75x25	108.2	100.0	154	123	58.0	61.0	61.0	64.0	66.0	75.0	24.0	2.50-3.15	ALCSG8S	1
ALCHAW90A	M90x25	119.0	110.0	168	132	63.0	66.0	66.0	69.0	73.0	82.0	29.0	2.50-3.15	ALCSG9S	1
ALCHAW90B	M90x25	119.0	110.0	168	132	68.0	71.5	71.5	75.0	81.0	90.0	29.0	2.50-3.15	ALCSG9S	1

* For Black Shroud add 'B' to part number: eg. ALCSG2B
Note: To comply with IP66/68 Ex approvals, the washer supplied must be installed on mounting thread.
Note: Mounting thread pitch is 1.5mm, unless otherwise specified.
Supplied complete with locknuts and sealing washers.

FITTING INSTRUCTIONS

The table of dimensions gives the range of inner sheath diameters to suit inner seals A and B and the cable diameters to suit outer seal A. Select the appropriate glands and seals. These glands are not to be used where the temperature at the mounting point, or the branching point is outside the gland operating range of -20°C to +80°C or for cable for flexible applications.

NON-BARRIER GLANDS

1 Inner seals A and B are provided. Referring to the table (left), select the appropriate inner seal and discard the other.

2 Determine the required length of tail. Remove the sheath from the cable for the required tail length plus the compressed gland length.

3 Remove the SWA leaving an exposed length equal to the Dimension 'E' specified (left).

4 Slide the gland nut and the outer seal over the cable, then the sleeve and clamping ring over the armour and the cone over the bedding and under the armour. On smaller cables it is advisable to pre-bend the wires to the larger diameter cone.

5 Screw the gland body into the enclosure by screwing into tapped fitting. Note: The fibre washer provided is required to maintain the IP66/68 & Ex d rating. Recommended torque settings are provided with the gland instructions.

6 Slide the selected inner seal over the cable and butt against the cone.

7 Slide the cable through the gland body, ensuring that the armour butts up against the cone face.

8 Maintaining pressure, so that the inner seal, cone and armour remain in place, slide the ring and sleeve against the body and tighten.

9 Slide the seal into the gland body. Note: A small amount of rubber grease, petroleum jelly or cable pulling lube applied between the outer surface of the seal and the taper of the gland nut aids assembly.

10 Slide the gland nut onto the gland and screw to tighten.

HAW-B

BARRIER CABLE GLANDS (IP66/68)

APPLICATIONS
Indoor or Outdoor use.

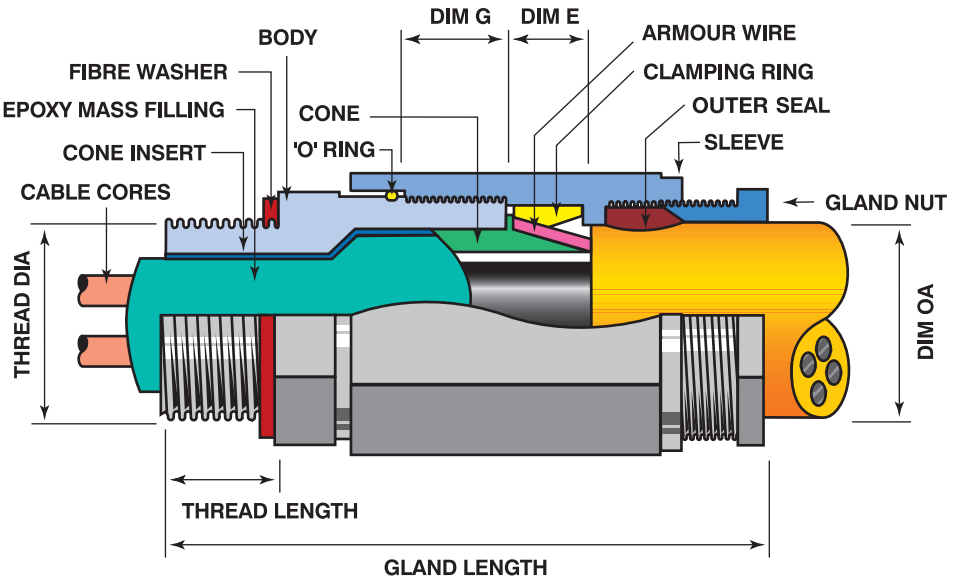
FUNCTION
Provides seal on Cable Sheath, Clamps SWA.
International type 'B', 'C', 'D1', 'E1'.
See page 2 for International types.

APPROVALS
CERTIFICATE No:
HAW20LRB - HAW90B-B
AUS Ex 03.3904
Ex d, I/IIC
Ex e, I/II
DIP A21
AS/NZS 60079, AS/NZS 61241.1
IP66/68 (30m) AS 1939-1990

MATERIAL
Brass, Nickel Plated Brass

SEAL
TPR, Epoxy Resin

HAZARDOUS AREA WEATHERPROOF GLAND - FOR PVC/SWA/PVC CABLE



Item Number	Mounting thread dia x length (mm)	Diameter across points (mm)	Diameter across flats (mm)	Gland length uncompressed (mm)	Gland length compressed (mm)	Cable details Max dia Under bedding Multi core	Cable details Seal A (outer) Over cable diam min	Cable details Seal A (outer) Over cable diam max	Exposed length SWA 'E'	Exposed length bedding 'G'	SWA diameter (mm)	Rubber Shroud Orange*	Qty per Carton	Suitable Resin Pack
ALCHAW20LRB	M20x15	27.1	25.0	64	53	-	7.8	12.7	7.0	8.0	0.7-0.9	ALCSG1S	20	ALCIP38 x 1
ALCHAW20-B	M20x20	29.8	27.5	89	71	8.0	11.5	16.0	10.5	11.0	0.8 -1.25	ALCSG2	20	ALCIP38 x 1
ALCHAW20SB-B	M20x16	29.8	27.5	89	71	10.1	14.0	18.0	10.5	11.0	0.8 -1.25	ALCSG2	20	ALCIP38 x 1
ALCHAW25A-B	M25x20	32.5	30.0	89	71	12.0	16.0	20.0	10.5	11.0	0.8 -1.25	ALCSG2L	12	ALCIP38 x 1
ALCHAW25B-B	M25x20	40.6	37.5	89	71	16.0	20.0	24.0	10.5	14.0	1.25-1.60	ALCSG3S	10	ALCIP38 x 1
ALCHAW32A-B	M32x20	46.0	42.5	107	86	19.5	24.0	28.0	16.0	16.0	1.25-1.60	ALCSG3L	6	ALCIP38 x 1
ALCHAW32B-B	M32x20	51.4	47.5	107	86	23.0	28.0	32.0	16.0	16.0	1.60-2.00	ALCSG4S	6	ALCIP38 x 1
ALCHAW40A-B	M40x20	54.1	50.0	114	90	27.0	32.0	37.0	16.0	16.0	1.60-2.00	ALCSG5	4	ALCIP125 x 1
ALCHAW40B-B	M40x20	62.6	57.5	114	90	31.0	37.0	42.0	16.0	16.0	1.60-2.00	ALCSG5S	4	ALCIP125 x 1
ALCHAW50A-B	M50x20	67.6	62.5	119	96	35.0	41.0	46.0	19.0	16.0	2.00-2.50	ALCSG6L	2	ALCIP125 x 1
ALCHAW50B-B	M50x20	75.8	70.0	119	96	39.0	45.0	51.0	19.0	16.0	2.00-2.50	ALCSG6L	2	ALCIP125 x 1
ALCHAW63A-B	M63x25	81.2	75.0	146	115	44.5	51.0	57.0	19.0	20.0	2.50-3.15	ALCSG6S	1	ALCIP180 x 1
ALCHAW63B-B	M63x25	92.0	85.0	146	115	50.0	57.0	63.0	19.0	20.0	2.50-3.15	ALCSG7S	1	ALCIP180 x 1
ALCHAW75A-B	M75x25	108.2	100.0	154	123	55.5	62.0	69.0	24.0	20.0	2.50-3.15	ALCSG8S	1	ALCIP125 x 2
ALCHAW75B-B	M75x25	108.2	100.0	154	123	61.0	66.0	75.0	24.0	20.0	2.50-3.15	ALCSG8S	1	ALCIP125 x 2
ALCHAW90A-B	M90x25	119.0	110.0	168	132	66.0	73.0	82.0	29.0	20.0	2.50-3.15	ALCSG9S	1	ALCIP180 x 2
ALCHAW90B-B	M90x25	119.0	110.0	168	132	71.5	81.0	90.0	29.0	20.0	2.50-3.15	ALCSG9S	1	ALCIP180 x 2

* For Black Shroud add 'B' to part number: eg. ALCSG2B
Note: To comply with IP66/68 Ex approvals, the washer supplied must be installed on mounting thread.
Note: Mounting thread pitch is 1.5mm, unless otherwise specified.
Supplied complete with locknuts and sealing washers.

FITTING INSTRUCTIONS

HAW Barrier Glands come with an outer seal and an insert (discard the inner seals). The table of dimensions gives the maximum laid up core diameter range to suit outer seal A. Select the appropriate gland. These glands are not to be used where the temperature at the mounting point or the branching off is outside the gland operating temperature of -20°C to +100°C, or for cable for flexible applications.

BARRIER GLANDS

1 Determine the required length of tail. Remove the sheath from the cable for the required tail length plus the compressed gland length.
2 Remove the SWA leaving an exposed length equal to the Dimension 'E' specified (left).
3 Trim the bedding so the exposed length beyond the armour equals Dimension 'G' (left).
4 Spread the cores and remove any fillers and tapes, without damaging the insulation.
5 Slide the gland nut and the outer seal over the cable, then the sleeve and clamping ring over the armour and the cone over the bedding and under the armour.
6 Screw the gland body into the enclosure: either by screwing into tapped fitting or by using an Alco locknut. Note: The fibre washer provided is required to maintain the IP66/68 and Ex d rating. Recommended torque settings are provided with the gland instructions.
7 The epoxy filling compound is a two part (two colour) product that must be thoroughly mixed (until consistent in colour). The mixed compound will remain pliable for 40 minutes (less in high temperatures). Mix the compound. On larger glands where multiple packs of compound are required the packs are easier mixed separately, but the complete gland must be filled while all the epoxy resin remains pliable. (The use of gloves when handling the resin is not necessary but recommended for those with sensitive skin or for prolonged exposure).
8 Fill the spaces between the cores, starting at the centre of the cable and working outwards, for a length equal to the length of the insert. As you work outwards make sure that the cores are closed back to the original position so that the whole assembly is covered with epoxy. Ensure there is sufficient epoxy to fill the wide section of the insert that goes over the bedding.
9 Slide the insert over the epoxy filled cable, removing excess epoxy, until the insert and cone are mated.
10 Slide the cable through the gland body, ensuring that the insert stays mated to the cone and that the armour butts up against the cone face.
11 Slide the ring and sleeve onto cone and body. Tighten the sleeve while ensuring that the armour is not allowed to slip back from the body face, or the cone separate from the insert during the tightening process.
12 Slide the outer seal into the gland body. Note: A small amount of rubber grease, petroleum jelly or cable pulling lube applied between the outer surface of the seal and the taper of the gland nut aids assembly considerably.
13 Slide the gland nut onto the gland and screw to tighten.
14 Leave for three hours for the resin to cure. The gland may be disassembled after the curing period for inspection or maintenance.

EMC PREMIUM METAL CABLE GLANDS (IP66/68)

APPLICATIONS
Indoor or Outdoor use.

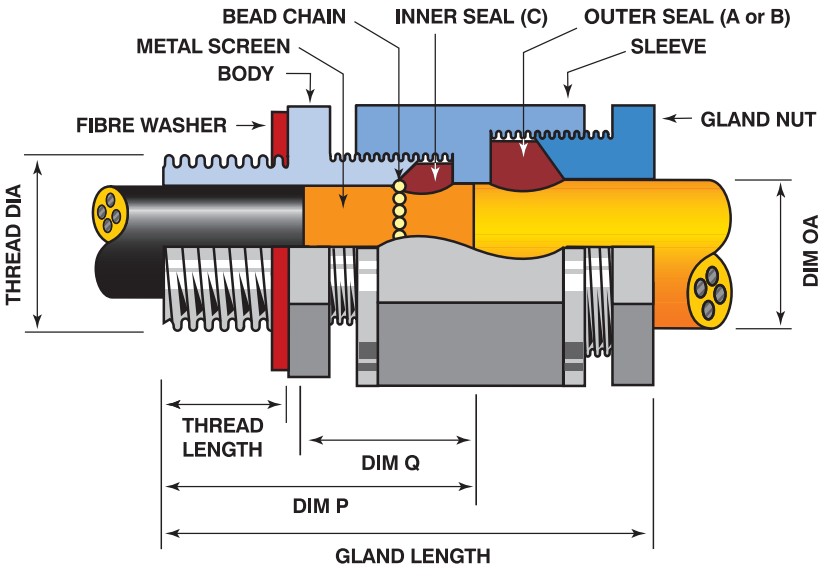
FUNCTION
Provides seal on Cable Sheath, provides contact between screen & earth (body).
See page 2 for International types.

APPROVALS
Degree of protection against ingress of water IP66/68 (30m)
Compliance with AS 1939-1990

MATERIAL
Nickel Plated Brass

SEAL
TPR

WEATHERPROOF GLAND - SCREENED VARIABLE SPEED DRIVE (VSD) CABLE



Item Number	Mounting thread dia x length (mm)	Diameter across points (mm)	Diameter across flats (mm)	Gland length uncompressed (mm)	Gland length compressed (mm)	Dim 'P' (mm)	Dim 'Q' (mm)	Cable details: Seal B (thick) OA min	Seal B (thick) OA max	Seal A (thin) OA min	Seal A (thin) OA max	Overscreen OS min	Overscreen OS max	Rubber Shroud Orange*	Qty per Carton
ALCEMC12	M12 x 12	18.9	17.5	55	40	35	12	5.8	7.5	7.5	10.0	4.0	7.5	ALCSG0S	20
ALCEMC16	M16 x 12	29.8	27.5	58	43	40	14	-	-	8.2	13.0	6.5	10.5	ALCSG2	20
ALCEMC20	M20 x 12	35.2	32.5	58	43	40	14	-	-	13.0	17.0	10.0	14.0	ALCSG2L	20
ALCEMC25	M25 x 12	40.6	37.5	61	45	40	14	-	-	17.5	22.0	14.0	18.0	ALCSG3	15
ALCEMC32	M32 x 12	40.6	37.5	62	46	40	14	-	-	22.0	26.0	18.0	22.5	ALGSG3	5
ALCEMC40	M40 x 15	51.4	47.5	72	54	49	16	26.0	30.0	30.0	33.5	22.5	30.0	ALCSG4S	5
ALCEMC50	M50 x 15	62.6	57.5	80	60	55	20	33.0	36.0	36.0	42.0	30.0	37.0	ALCSG5S	3
ALCEMC63	M63 x 19	75.8	70.0	96	75	69	26	41.0	46.0	46.0	50.0	38.0	46.0	ALGSG7	2
ALCEMC75A	M75 x 19	92.0	85.0	105	80	69	26	-	-	48.0	56.0	45.0	52.0	ALGSG7S	1
ALCEMC75B	M75 x 19	92.0	85.0	111	83	75	29	-	-	56.0	64.0	53.0	60.0	ALGSG7S	1
ALCEMC75C	M75 x 19	92.0	85.0	113	85	75	29	-	-	62.0	69.0	58.0	65.0	ALGSG7S	1

* For Black Shroud add 'B' to part number: eg. ALCSG2B

Note: To comply with IP66/68 approval, the washer supplied must be installed on mounting thread.

Note: Mounting thread pitch is 1.5mm, unless otherwise specified.

Supplied complete with locknuts and sealing washers.

FITTING INSTRUCTIONS

1. EMC Premium glands come with 1 or 2 seals, A & B. The table of dimensions (left) gives the range of cable diameters to suit outer seals A & B, select the appropriate seal where applicable.

2. Determine the required length of tail. Remove the outer sheath from the cable for the required tail length plus the Dimension 'P' specified (left).

3. Remove the screen leaving an exposed length equal to the Dimension 'Q' specified (left).

4. Slide the gland nut and the outer seal (A or B) over the cable, then the sleeve and inner seal (Seal C) over the screen.

5. Take the bead chain provided and wrap this around the exposed screen of the cable to determine the correct length required. Cut the chain to length, making sure that the joiner is on the required length. The bead chain should fit snugly around the cable screen. The assembled chain length can then either be slid along the tail onto the screen or joined in place.

6. Screw the gland body into the enclosure: either by screwing into tapped fitting or by using an Alco locknut.
   Note: The fibre washer provided is required to maintain the IP66/68 rating. Recommended torque settings are provided with the gland instructions.

7. Slide the cable through the gland body until the taper of the gland body, bead chain, inner seal and sleeve are in contact (the end of the cable sheath should be either butting against the internal flange of the sleeve or in the section of the inner flange).

8. Tighten the sleeve while ensuring that the cable is not allowed to slip back from the internal flange of the sleeve.

9. Slide the seal into the gland body. Note: A small amount of rubber grease or petroleum jelly applied between the outer surface of the seal and the taper of the nut aids assembly.

10. Slide the gland nut onto the gland and screw to tighten.

ELMAKO EMC

BRASS CABLE GLANDS (IP68)

APPLICATIONS
Indoor or Outdoor use

FUNCTION
Provides water tight seal on Cable Sheath and secures and connects outer braid.

APPROVALS
IP68

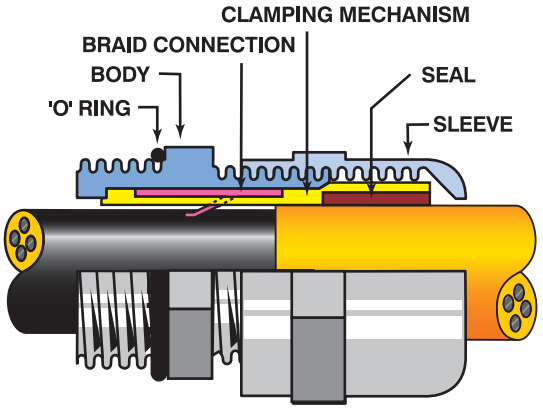
MATERIAL
Body & Cap: Nickel Plated Brass.

CLAMPING RING
Clamping: Polyamide 6
Sealing: Neoprene

O RING
NBR

TEMPERATURE RANGE
-40°C to +100°C

FOR BRAIDED EMC SHIELDED CABLES



Item Number	Mounting Thread Dia	Min Shielded Dia	ODM Cable Range (mm)		Diameter Across Flats (mm)	Rubber Shroud Orange*	Qty per Carton
			Min	Max			
EMC12	12mm	2.5mm	3.0	6.5	14	ALCSG0	10
EMC16	16mm	3.0mm	4.0	8.0	18	ALCSG0S	5
EMC20	20mm	5.0mm	6.0	12.0	22	ALCSG1	5
EMC25	25mm	8.0mm	10.0	14.0	27	ALCSG2	5
EMC32	32mm	11.0mm	13.0	18.0	34	ALCSG2L	1
EMC40	40mm	16.0mm	18.0	25.0	43	ALCSG3L	1
EMC50	50mm	19.0mm	22.0	32.0	55	ALCSG5	1
EMC63	63mm	30.0mm	34.0	44.0	68	ALCSG7	1

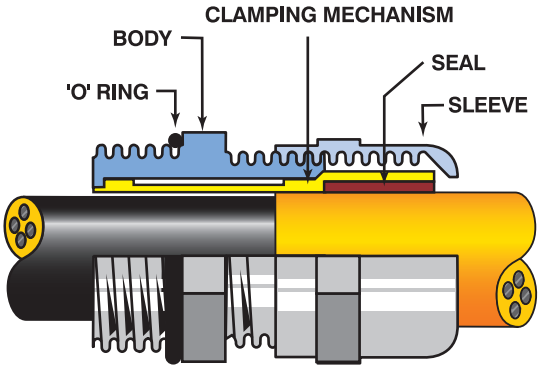
* For Black Shroud add 'B' to part number: eg. ALCSG2B

Note: Mounting thread pitch is 1.5mm, unless otherwise specified.
Supplied complete with lock nut.
Available in stainless steel on request.

FITTING INSTRUCTIONS
Installation is extremely easy, simply insert cable through the assembled gland and tighten gland nut until cable is secured.

BRASS CABLE GLANDS (IP68)

SHUTTER TYPE FOR UNARMOURED CABLE



Item Number	Mounting Thread Dia	Min Shielded Dia	ODM Cable Range (mm)		Diameter Across Flats (mm)	Rubber Shroud Orange*	Qty per Carton
			Min	Max			
ALCBRGM12	12mm	2.5mm	3.0	6.5	14	ALCSG0	15
ALCBRGM16	16mm	3.0mm	4.0	8.0	17	ALCSG0S	15
ALCBRGM20	20mm	5.0mm	6.0	12.0	22	ALCSG1	10
ALCBRGM25	25mm	8.0mm	10.0	14.0	24	ALCSG2	10
ALCBRGM32	32mm	11.0mm	13.0	18.0	30	ALCSG3	5
ALCBRGM40	40mm	16.0mm	18.0	25.0	40	ALCSG4	4
ALCBRGM50	50mm	19.0mm	22.0	32.0	50	ALCSG5	2
ALCBRGM63	63mm	30.0mm	34.0	44.0	64	ALCSG7	1

* For Black Shroud add 'B' to part number: eg. ALCSG2B

Note: Mounting thread pitch is 1.5mm, unless otherwise specified.
Supplied complete with lock nut.

FITTING INSTRUCTIONS

Installation is extremely easy, simply insert cable through the assembled gland and tighten gland nut until cable is secured.

APPLICATIONS

Indoor or Outdoor use

FUNCTION

Provides water tight seal on Cable Sheath and provides strain relief.

APPROVALS

IP68

MATERIAL

Body & Cap: Nickel Plated Brass.

CLAMPING RING

Clamping: Polyamide 6
Sealing: Neoprene

O RING

NBR

TEMPERATURE RANGE

-40°C to +100°C

T: 1300 300 747
F: 1300 300 074

SHUTTER

STAINLESS STEEL CABLE GLANDS (IP68)

APPLICATIONS
Indoor or Outdoor use

Provides water tight seal on Cable Sheath and provides strain relief.

APPROVALS
IP68

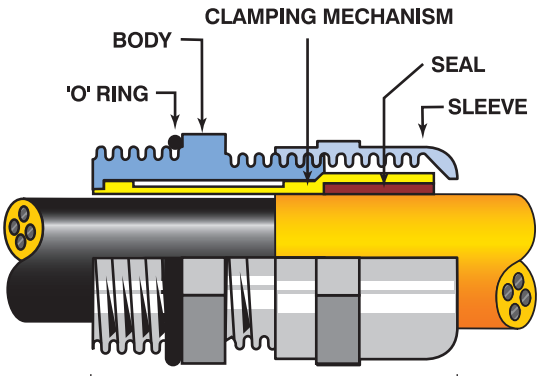
MATERIAL
Body & Cap: Stainless Steel.

CLAMPING RING
Clamping: Polyamide 6
Sealing: Neoprene

O RING
NBR

TEMPERATURE RANGE
-40°C to +100°C

SHUTTER TYPE FOR UNARMOURED CABLE



Item Number	Mounting Thread Dia	Min Shielded Dia	ODM Cable Range (mm)		Diameter Across Flats (mm)	Rubber Shroud Orange*	Qty per Carton
			Min	Max			
ALCBRGM16-SS	16mm	3.0mm	4.0	8.0	18	ALCSG0S	15
ALCBRGM20-SS	20mm	5.0mm	6.0	12.0	22	ALCSG1	10
ALCBRGM25-SS	25mm	8.0mm	10.0	14.0	27	ALCSG2	10
ALCBRGM32-SS	32mm	11.0mm	13.0	18.0	34	ALCSG3	5
ALCBRGM40-SS	40mm	16.0mm	18.0	25.0	43	ALCSG4	4
ALCBRGM50-SS	50mm	19.0mm	22.0	32.0	55	ALCSG5	2
ALCBRGM63-SS	63mm	30.0mm	34.0	44.0	68	ALCSG7	1

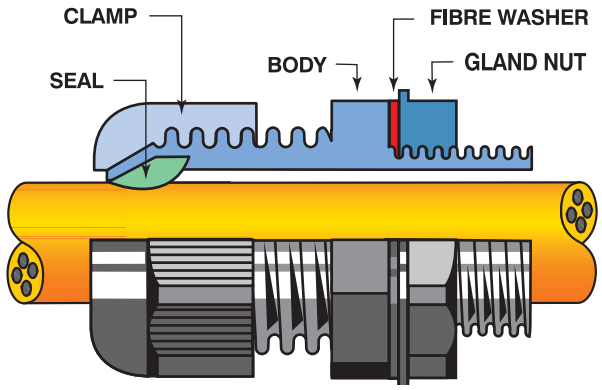
* For Black Shroud add 'B' to part number: eg. ALCSG2B

Note: Mounting thread pitch is 1.5mm, unless otherwise specified.
Supplied complete with lock nut.

FITTING INSTRUCTIONS
Installation is extremely easy, simply insert cable through the assembled gland and tighten gland nut until cable is secured.

NYLON CABLE GLANDS (IP68)

CABLE GLAND FOR PVC CABLE



Item Number	Mounting Thread (Dia x Pitch)	Cable Range O.D. (mm)	Length of Thread (mm)	Diameter Across Flats (mm)	Rubber Shroud Orange*	Qty per Carton
ALCMG12	M12 x 1.25	3-6.5	7.9	20	ALCSG0	40
ALCMG16	M16 x 1.50	5-10	15.0	22	ALCSG1	25
ALCMG20	M20 x 1.50	10-14	15.0	27	ALCSG2	25
ALCMG25	M25 x 1.50	13-18	15.0	33	ALCSG2L	15
ALCMG32	M32 x 1.50	18-25	14.7	36	ALCSG3	5
ALCMG40	M40 x 1.50	22-32	14.7	46	ALCSG4	4
ALCMG50	M50 x 1.50	30-38	18.0	55	ALCSG5	2
ALCMG63	M63 x 1.50	34-44	18.6	68	ALCSG6	2

* For Black Shroud add 'B' to part number: eg. ALCSG2B

Supplied complete with lock nut.

FITTING INSTRUCTIONS

Installation is extremely easy, simply insert cable through the assembled gland and tighten gland nut until cable is secured.

APPLICATIONS

Indoor or Outdoor use

FUNCTION

Provides water tight seal on Cable Sheath.

APPROVALS

IP68

MATERIAL

Polyamide

SEAL

Neoprene

TEMPERATURE RANGE

-30°C to +80°C.
Up to 150°C intermittent.

ANACONDA

FLEXIBLE METAL CONDUIT FITTINGS (IP66/68)

APPLICATIONS

Indoor or Outdoor wet corrosive environments

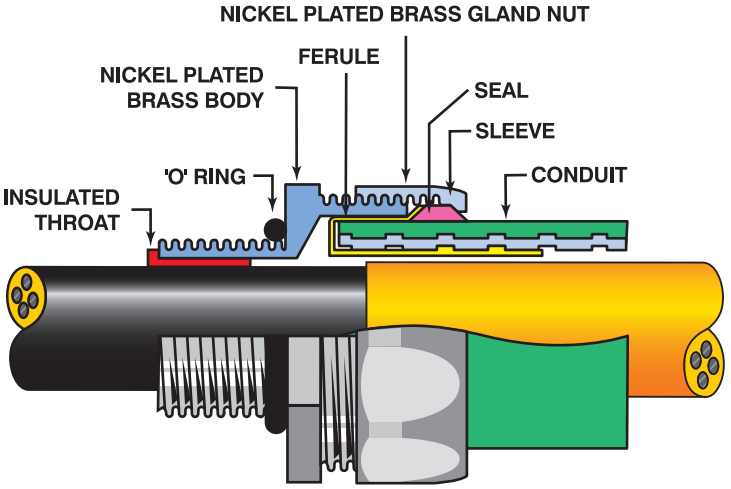
FUNCTION

Provides dust and liquid tight connection to liquid tight flexible metal conduit.

MATERIAL

Body & Cap: Nickel Plated Brass
Ferule: Steel Tin Plated
Inner Seal: Polyamide 6
Throat Insulator: Polyamide 6

FITTING FOR FLEXIBLE LIQUID TIGHT CONDUIT



Item Number	Conduit		Body Style	Diameter Across Nut		Thread Size Metric BS 6053	Rubber Shroud Orange*	Qty per Carton
	mm	Inch		Flats	Points			
C16/M16	16	3/8	Straight	26mm	29mm	16mm	ALCSG2	10
C16/M16/90A	16	3/8	90 Degrees	26mm	29mm	16mm	ALCSG2	10
C16/M16/45A	16	3/8	45 Degrees	26mm	29mm	16mm	ALCSG2	10
C16/M20	16	3/8	Straight	26mm	29mm	20mm	ALCSG2	10
C16/M20/90A	16	3/8	90 Degrees	26mm	29mm	20mm	ALCSG2	10
C16/M20/45A	16	3/8	45 Degrees	26mm	29mm	20mm	ALCSG2	10
C20/M20	20	1/2	Straight	29mm	32.7mm	20mm	ALCSG2	10
C20/M20/90A	20	1/2	90 Degrees	29mm	32.7mm	20mm	ALCSG2	10
C20/M20/45A	20	1/2	45 Degrees	29mm	32.7mm	20mm	ALCSG2	10
C25/M25	25	3/4	Straight	35mm	38.6mm	25mm	ALCSG2L	10
C25/M25/90A	25	3/4	90 Degrees	35mm	38.6mm	25mm	ALCSG2L	10
C25/M25/45A	25	3/4	45 Degrees	35mm	38.6mm	25mm	ALCSG2L	10
C32/M32	32	1	Straight	45mm	50mm	32mm	ALCSG3L	1
C32/M32/90A	32	1	90 Degrees	45mm	50mm	32mm	ALCSG3L	1
C32/M32/45A	32	1	45 Degrees	45mm	50mm	32mm	ALCSG3L	1
C40/M40	40	1 1/4	Straight	54mm	60mm	40mm	ALCSG5	1
C40/M40/90A	40	1 1/4	90 Degrees	54mm	60mm	40mm	ALCSG5	1
C40/M40/45A	40	1 1/4	45 Degrees	54mm	60mm	40mm	ALCSG5	1
C50/M50	50	1 1/2	Straight	63mm	69.2mm	50mm	ALCSG6	1
C50/M50/90A	50	1 1/2	90 Degrees	63mm	69.2mm	50mm	ALCSG6	1
C50/M50/45A	50	1 1/2	45 Degrees	63mm	69.2mm	50mm	ALCSG6	1
C63/M63	63	2	Straight	72mm	85mm	63mm	ALCSG6L	1
C63/M63/90A	63	2	90 Degrees	72mm	85mm	63mm	ALCSG6L	1
C63/M63/45A	63	2	45 Degrees	72mm	85mm	63mm	ALCSG6L	1

Other thread types available on request (Not PG). Available in Stainless Steel for straight and 90 degree fittings.

* For Black Shroud add 'B' to part number: eg. ALCSG2B

Note: Mounting thread pitch is 1.5mm, unless otherwise specified.

FITTING INSTRUCTIONS

1. Slip Gland Nut on conduit
2. Slip on Nylon Sealing Ring
3. Screw on Ferule in end of conduit (hand tight)
4. Slide the Sealing Ring and Gland Nut towards Ferule
5. Tighten Gland Nut to Body

CONDUIT & FITTINGS SELECTION CHART

ANACONDA

Fittings	CONDUIT Item Numbers			Fittings Item Numbers Nickel Plated brass		
	AEF	HCX	AOR			
Thread ISO Metric	Extra Flex 	Super Grade 	Oil Resistant 	Straight 	45 Degree 	90 Degree 
16mm	AEF38	HCX38	AOR38	C16/M16	C16/M16/45A	C16/M16/90A
20mm	AEF38	HCX38	AOR38	C16/M20	C16/M20/45A	C16/M20/90A
20mm	AEF12	HCX12	AOR12	C20/M20	C20/M20/45A	C20/M20/90A
25mm	AEF34	HCX34	AOR34	C25/M25	C25/M25/45A	C25/M25/90A
32mm	AEF100	HCX100	AOR100	C32/M32	C32/M32/45A	C32/M32/90A
40mm	AEF114	HCX114	AOR114	C40/M40	C40/M40/45A	C40/M40/90A
50mm	AEF112	HCX112	AOR112	C50/M50	C50/M50/45A	C50/M50/90A
63mm	AEF200	HCX200	AOR200	C63/M63	C63/M63/45A	C63/M63/90A

Conduit type AEF see page 22, Conduit type HCX see page 23, Conduit type AOR see page 24.

REDUCERS Brass (unplated)

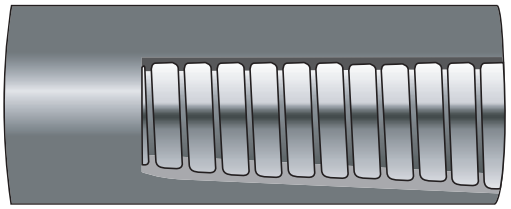
Item Number	Description	Thread Mount	Total Length (mm)	Thread Length (mm)	Dia Across Points (mm)
ALCBCR2016	Brass reducer - Female	M20x1.5 x 16x1.5	21	16	24
ALCBCR2520	Brass reducer - Female	M25x1.5 x 20x1.5	21	16	29
ALCBCR3225	Brass reducer - Female	M32x1.5 x 25x1.5	25	20	36
ALCBCR4032	Brass reducer - Female	M40x1.5 x 32x1.5	25	20	44
ALCBCR5040	Brass reducer - Female	M50x1.5 x 40x1.5	25	20	55
ALCBCR6350	Brass reducer - Female	M63x1.5 x 50x1.5	25	20	67

*Available in stainless steel 16mm to 40mm

TYPE AEF

ANACONDA FLEXIBLE METAL CONDUIT

PROVIDES SUPERIOR HEAT, OIL, CHEMICAL, AND WEATHER RESISTANCE.



APPLICATIONS

Provides cable protection in harsh environments.

FUNCTION

Provides flexible dust and liquid tight protection of cables.

FEATURES

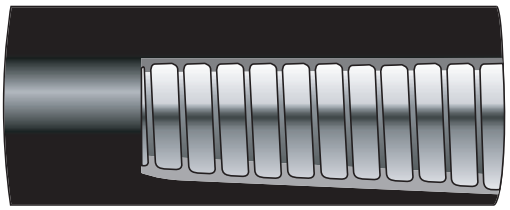
- Extra flexible wiring conduit with galvanized steel core.
- Durable, sunlight resistant, thermoplastic PVC cover.
- Uses standard Anaconda liquid-tight connector for easy installation. See page 20.
- Convenient markings in feet for easy measurement.
- Smooth-appearing cover for exposed applications.
- Manufactured in full trade range of sizes from 10mm through 128mm.
- Rated for temperature range of -20°C to +60°C (–4°F to +140°F).
- Available in grey, orange and special colours on request.

Item Number	Electrical Trade Size		Inside Dia	Approx Inside Bend Dia	Approx Weight kg/30m	Length
	(Inch)	(mm)	(mm)	(mm)		(m)
AEF14-15	1/4	10	6.3	88.9	6.3	15
AEF516-15	5/16	12	10.0	101.6	6.8	15
AEF38-15	3/8	16	12.0	101.6	9.5	15
AEF38-30	3/8	16	12.0	101.6	9.5	30
AEF38-150	3/8	16	12.0	101.6	9.5	150
AEF12-15	1/2	20	16.0	127.0	11.3	15
AEF12-30	1/2	20	16.0	127.0	11.3	30
AEF12-150	1/2	20	16.0	127.0	11.3	150
AEF34-15	3/4	25	21.0	152.4	17.7	15
AEF34-30	3/4	25	21.0	152.4	17.7	30
AEF34-150	3/4	25	21.0	152.4	17.7	150
AEF100-15	1	32	26.0	203.2	23.1	15
AEF100-30	1	32	26.0	203.2	23.1	30
AEF114-15	1-1/4	40	35.0	228.6	29.9	15
AEF112-15	1-1/2	50	40.0	279.4	47.2	15
AEF200-15	2	63	51.5	355.6	61.7	15
AEF300	3	-	78.0	762.0	115.6	7.62
AEF400	4	-	102.0	863.6	164.2	7.62

TYPICAL SPECIFICATION

Conduit shall be Anaconda Sealtite® Type AEF. Conduit shall provide extra flexible wiring conduit with galvanized steel core and sunlight-resistant PVC cover.

SUPERIOR LIQUID-TIGHT RACEWAY FOR WIRING WHERE EXTREME TEMPERATURES APPLY.



APPLICATIONS

Provides cable protection in extreme temperatures. Indoor or outdoor.

FUNCTION

Provide flexible heavy duty cable protection.
Dust and liquid tight.

FEATURES

- Continuously locked galvanised steel core with cord packing and sunlight-resistant thermoplastic PVC cover.
- Has cord packing in sizes 16mm through 40mm for exceptional crush resistance and corrosion protection.
- Special high-temperature thermoplastic PVC rubber compound jacket provides protection in extreme temperature ranges from -60°C to +150°C (–76°F to +302°F).
- Durable sunlight-resistant cover provides superior protection for circuits in hostile environments.
- Uses standard Anaconda liquid-tight connectors for easy installation. See page 20.
- Delivers superior wiring protection where harsh environments are encountered.
- Convenient markings in feet for easy installation.
- Smooth-appearing cover for exposed applications.
- Available with a black cover only.
- Available in a full range of trade sizes from 16mm to 63mm.

Item Number	Electrical Trade Size		Inside Dia	Approx Inside Bend Dia	Approx Weight kg/30m	Length
	(Inch)	(mm)	(mm)	(mm)		(m)
HCX38-30	3/8	16	12	101.6	9.5	30
HCX12-30	1/2	20	16	127.0	11.3	30
HCX34-30	3/4	25	21	152.4	17.7	30
HCX100-30	1	32	26	203.2	23.1	30
HCX114-15	1-1/4	40	35	228.6	29.9	15
HCX112-15	1-1/2	50	40	279.4	47.2	15
HCX200-15	2	63	51.5	355.6	61.7	15

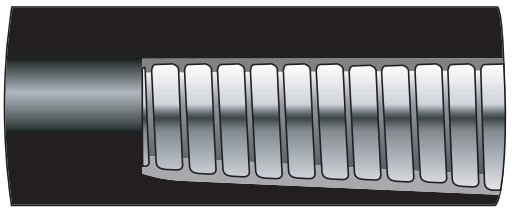
TYPICAL SPECIFICATION

Conduit shall be Anaconda Sealtite® Type HCX. Conduit shall be constructed of continuously locked galvanised steel core with cord packing and sunlight-resistant thermoplastic PVC rubber jacket that, when used with Anaconda fittings, shall provide liquid-tight raceway wiring. Thermoplastic PVC cover shall contain no chlorides and be black in colour.

TYPE AOR

ANACONDA FLEXIBLE METAL CONDUIT

SUPERIOR HEAT, OIL, CHEMICAL, AND WEATHER RESISTANCE.



APPLICATIONS

Provides cable protection in Oil rich environments.

FUNCTION

Flexible heavy duty, oil resistant cable protection.

FEATURES

- Continuously locked galvanised steel core with cord packing and sunlight-resistant thermoplastic PVC cover.
- Uses standard Anaconda liquid-tight connector for easy installation. See page 20.
- Convenient markings in feet for easy measurement.
- Smooth-appearing cover for exposed applications.
- Manufactured in full trade range of sizes from 16mm through 63mm.
- Rated for temperature range of -23°C to +105°C (–9°F to +221°F).
- Available in black and special colours on request.

Item Number	Electrical Trade Size		Inside Dia	Approx Inside Bend Dia	Approx Weight kg/30m	Length
	(Inch)	(mm)	(mm)	(mm)		(m)
AOR38-15	3/8	16	12.0	101.6	9.5	15
AOR38-30	3/8	16	12.0	101.6	9.5	30
AOR12-15	1/2	20	16.0	127.0	11.3	15
AOR12-30	1/2	20	16.0	127.0	11.3	30
AOR34-15	3/4	25	21.0	152.4	17.7	15
AOR34-30	3/4	25	21.0	152.4	17.7	30
AOR100-15	1	32	26.0	203.2	23.1	15
AOR100-30	1	32	26.0	203.2	23.1	30
AOR114-15	1-1/4	40	35.0	228.6	29.9	15
AOR112-15	1-1/2	50	40.0	279.4	47.2	15
AOR200-15	2	63	51.5	355.6	61.7	15

TYPICAL SPECIFICATION

Conduit shall be Anaconda Sealtite® Type OR. Conduit shall be constructed of continuously locked galvanized steel core with cord packing and sunlight-resistant thermoplastic PVC cover. Thermoplastic PVC cover shall be highly resistant to petroleum and most synthetic oils.

INSULPUTTY/EPOXY RESIN

FEATURES

- Two part epoxy with yellow inner curing agent and white outer base material.
- Ready mixable by kneading by hand or spatula.
- Excellent mechanical and electrical characteristics.
- Mix putty in two to five minutes.
- Putty remains workable for approximately 45 minutes (at 23°C, workable life reduces as temperature rises).
- Putty cures within one hour.
- Cured material can be sanded and drilled.

Item Number	Length (mm)
ALCIP38	38
ALCIP125	125
ALCIP180	180

SPECIFICATION

Storage:	Store in cool dry place.
Electrical resistance:	30,000 Megohms (ASTM D 149).
Dielectric Strength:	300v/mm @ 6.4mm (ASTM D 149).
Shrinkage during cure:	<1%.

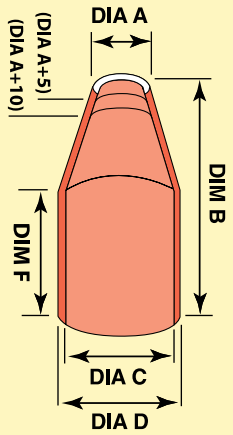
APPLICATIONS

Ideal for filling and sealing, bonds to most common cable insulating materials, metals and ceramics. Insulputty is approved for use with cable barrier glands in hazardous areas and has the consistency of modelling clay, allowing it to be moulded and forced into cavities without the spills and mess of more liquid sealants.

FUNCTION

Insulputty provides sealing where there are uneven contours. Repairs to rigid plastics and threaded holes. Also suitable for filling and bonding.

SHROUDS



Item Number	Cable Dia Dim A (mm)	Overall length B (mm)	Parallel length F (mm)	Outside Dia D (mm)	Inside Dia C (mm)	Qty per Carton
ALCSG0S	2	44	20	22	20	50
ALCSG1S	6	69	43	28	25	50
ALCSG2S	10	76	50	32	29	40
ALCSG2L	12	87	55	38	35	30
ALCSG3S	14	96	60	43	40	20
ALCSG3L	18	100	65	47	44	20
ALCSG4S	20	108	65	54	51	20
ALCSG5S	29	115	70	65	62	5
ALCSG6S	38	126	75	78	75	5
ALCSG6L	42	127	80	85	81	5
ALCSG7S	48	135	85	95	91	4
ALCSG8S	62	140	90	109	104	1
ALCSG9S	62	170	110	120	114	1
ALCSG10S	78	135	88	130	124	1
ALCSG11S	87	137	88	150	144	1

For Black shroud add 'B' to part number: eg. ALCSG7SB PVC Shrouds also available, contact customer service.

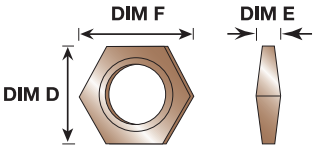
Alco shrouds have been relied upon for many years within the industry but have changed little since their introduction.

Changes in the requirements for cable glands in hazardous areas have resulted in some glands being longer than previous models. This has necessitated appropriate lengthening of the shrouds to accept the longer glands. Note that the original PVC shrouds are long enough to accept the current gland range except for the HAW range.

While making the necessary changes Alco also looked at the technology and requirements of today and improved the gland shroud range accordingly. The new Alco shrouds are made of Silicon Rubber and latest improvements include:

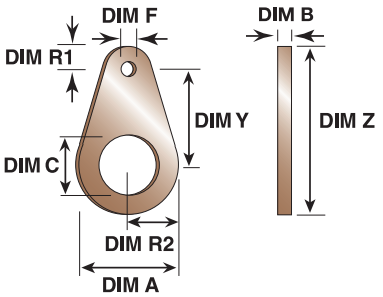
- Temperature rating 220°C compared to 75 or 90°C of PVC
- 15 sizes to better suit glands from 17.5 to 140mm across flats
- Silicon Rubber is softer with better impact absorption
- Silicon Rubber is more easily stretched to install on glands
- Guide rings to cut shroud cone for larger cables
- Halogen free - low smoke emission in fire situations
- Halogen free - no corrosive acid gas emission in fire situations
- ROHS compliant (lead, mercury, cadmium and chromium free)
- UV resistant
- Cross linked material not subject to creep at elevated temperatures
- Insulation properties (VR) 10 x PVC
- Oil and chemical resistant

LOCKNUTS (METAL)



Item Number	Description	Width (mm) Dimension 'D' (+0.5, -0.0)	Width (mm) Dimension 'F' (+0.5, -0.0)	Depth (mm) Dimension 'E'	Thread
ALCPLN12	LOCKNUT, 12mm, Brass, Nickel Plated	14.40	22.00	4.00	M12 x P1.5
ALCPLN16	LOCKNUT, 16mm, Brass, Nickel Plated	19.20	24.00	4.00	M16 x P1.5
ALCPLN20	LOCKNUT, 20mm, Brass, Nickel Plated	24.00	30.00	4.00	M20 x P1.5
ALCPLN25	LOCKNUT, 25mm, Brass, Nickel Plated	30.00	37.00	5.00	M25 x P1.5
ALCPLN32	LOCKNUT, 32mm, Brass, Nickel Plated	38.40	45.00	5.00	M32 x P1.5
ALCPLN40	LOCKNUT, 40mm, Brass, Nickel Plated	48.00	55.00	8.00	M40 x P1.5
ALCPLN50	LOCKNUT, 50mm, Brass, Nickel Plated	60.00	65.00	8.00	M50 x P1.5
ALCPLN63	LOCKNUT, 63mm, Brass, Nickel Plated	75.60	83.00	8.00	M63 x P1.5
ALCPLN75	LOCKNUT, 75mm, Brass, Nickel Plated	90.00	110.00	9.50	M75 x P1.5
ALCPLN90	LOCKNUT, 90mm, Brass, Nickel Plated	108.00	124.00	9.50	M90 x P1.5
ALCPLN105	LOCKNUT, 105mm, Brass, Nickel Plated	126.00	144.00	9.50	M105 x P1.5
ALCPLN120	LOCKNUT, 120mm, Brass, Nickel Plated	144.00	165.00	9.50	M120 x P1.5

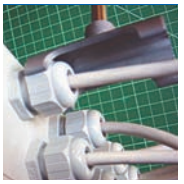
EARTH TAGS (METAL)



Item Number	Description	Width (mm) Dimension A (+0.5, -0.0)	Width (mm) Dimension C (+0.5, -0.0)	Depth (mm) Dimension B	Width (mm) Dimension F (+0.5, -0.0)	Width (mm) Dimension Z (+0.5, -0.0)	Width (mm) Dimension Y (+0.5, -0.0)	Radius R1 (mm)	Radius R2 (mm)
ALCET12	EARTH TAG, 12mm, Nickel Plated Brass	28.86	12.45	1.80	7.00	55.00	30.00	10.00	11.25
ALCET16	EARTH TAG, 16mm, Nickel Plated Brass	28.86	16.48	1.80	7.00	55.00	30.00	10.00	14.43
ALCET20	EARTH TAG, 20mm, Nickel Plated Brass	28.86	20.40	1.80	7.00	55.00	30.00	10.00	14.43
ALCET25	EARTH TAG, 25mm, Nickel Plated Brass	37.55	25.50	1.80	10.50	69.00	41.30	12.00	18.78
ALCET32	EARTH TAG, 32mm, Nickel Plated Brass	43.30	32.64	1.80	12.00	85.00	51.00	12.00	21.65
ALCET40	EARTH TAG, 40mm, Nickel Plated Brass	54.85	40.80	1.80	13.50	100.00	54.00	20.00	27.43
ALCET50	EARTH TAG, 50mm, Nickel Plated Brass	66.40	51.25	2.00	13.50	120.00	62.00	20.00	33.20
ALCET63	EARTH TAG, 63mm, Nickel Plated Brass	80.83	63.95	2.00	13.50	141.00	84.00	20.00	40.42
ALCET75	EARTH TAG, 75mm, Nickel Plated Brass	103.93	76.13	2.00	13.50	172.00	100.00	20.00	51.97
ALCET90	EARTH TAG, 90mm, Nickel Plated Brass	127.02	91.35	2.00	13.50	190.00	102.00	25.00	63.51
ALCET105	EARTH TAG, 105mm, Nickel Plated Brass	138.60	106.58	2.00	13.50	205.00	110.00	25.00	69.30
ALCET120	EARTH TAG, 120mm, Nickel Plated Brass	161.65	121.80	2.00	13.50	235.00	131.00	25.00	80.83

CABLE GLAND & CONDUIT FITTING WRENCH

Cable gland wrench can be used even in the applications with a high density of glands side by side. Self ratcheting, to lock or unlock glands easily. The tools fit to a standard handle bar and come in all standard SW sizes of plastic and brass Hex glands. Also fits conduit fittings (page 20).

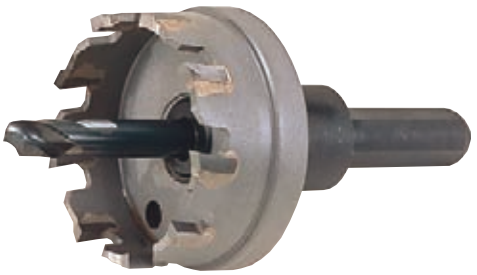


Item number	Description	Outer measurement across wrench	Diameter across gland flats
GHB	Gland wrench handle bar	-	-
BGW-17	Suits cable gland type SW17	25.6mm	17mm
BGW-19	Suits cable gland type SW19	28.6mm	19mm
BGW-22	Suits cable gland type SW22	32.8mm	22mm
BGW-24	Suits cable gland type SW24	35.8mm	24mm
BGW-27	Suits cable gland type SW27	41mm	27mm
BGW-29	Suits cable gland type SW29	45mm	29mm

To select appropriate wrench refer to diameter across flats of gland.

HOLESAWS

Gland Size	R Series Mild Steel	MHE Series Steel	MHT Series Stainless Steel
12	WATR509	WATMHE13C	-
16	WATR510	WATMHE16C	WATMHT16C
20	WATR513	WATMHE20C	WATMHT20C
25	WATR516	WATMHE25C	WATMHT25C
32	WATR520	WATMHE32C	WATMHT32C
40	WATR526	WATMHE40C	WATMHT40C
50	WATR532	WATMHE50C	WATMHT50C
63	WATR540	WATMHE64C	WATMHT65C
75	WATR548	WATMHE76C	WATMHT70C
90	WATR558	WATMHE89C	WATMHT89C



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