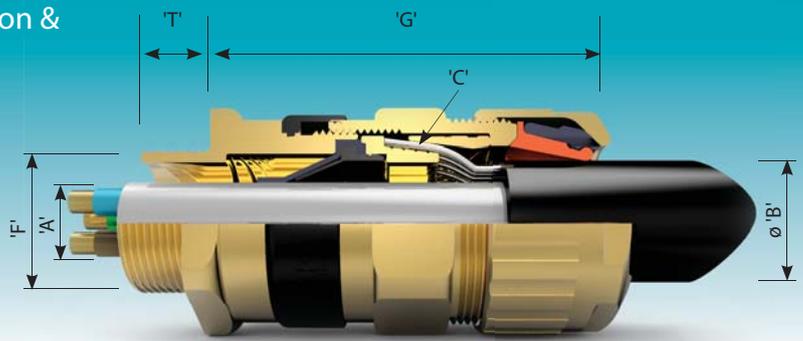


Group II Cable Glands

Flameproof, Increased Safety, Dust Protection & Restricted Breathing
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables.
- For particular use with Cables that exhibit 'Cold Flow' characteristics.
- See technical section for installation rules and regulations.



501/453/UNIV

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------------|--------------------------|--------------------------|------------------|-------|--------------------|---------------|-------|--------------------|-------------------|
| | Metric | NPT * Standard or Option | Inner Sheath 'A' | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | | | Min. | Max. | Min. | Max. | Orientation 1 | Orientation 2 | | | |
| Os | M20 ² | ½" | 3.5 | 8.1 | 5.5 | 12.0 | 0.8 / 1.25 | 0.0 / 0.8 | 61.6 | 24.0 | 26.5 |
| O | M20 ² | ½" | 6.5 | 11.4 | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 61.6 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 8.4 | 14.3 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 63.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 11.1 | 19.7 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 69.9 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 17.6 | 26.5 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 73.2 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 23.1 | 32.5 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 77.9 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 28.9 | 44.4 / 42.3 ¹ | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 93.5 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | 39.9 | 56.3 / 54.3 ¹ | 46.0 | 65.3 | 1.8 / 2.5 | 0.0 / 1.0 | 94.0 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | 50.5 | 68.2 / 65.3 ¹ | 57.0 | 78.0 | 1.8 / 2.5 | 0.0 / 1.0 | 103.0 | 95.0 | 104.0 |
| G | M80 | 3½" | 67.0 | 73.0 | 75.0 | 89.5 | 2.0 / 3.5 | 0.0 / 1.0 | 90.6 | 106.4 | 115.0 |
| H | M90 | 3½" | 67.0 | 77.6 | 75.0 | 89.5 | 2.0 / 3.5 | 0.0 / 1.0 | 90.6 | 115.0 | 130.0 |
| J | M100 | 4" | 75.0 | 91.6 | 88.0 | 104.5 | 2.5 / 4.0 | 0.0 / 1.0 | 90.6 | 127.0 | 142.0 |

¹'T' — Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.

G size and above are available in the 501/453/RAC design style.

All dimensions in millimetres (except * where dimensions are in inches).

¹Smaller value is applicable when selecting reduced NPT entry option.

²Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb, Dust Extb IIIC Db and ExnR IIC Gc (Ex) II 2 / 3GD.
- Certificate No's: For sizes Os to F: Baseefa06ATEX0057X and IECEx BAS 06.0014X. For sizes G to J: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7, IEC/EN 60079-15 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 300 (Sizes Os to F) and AI 303 (Sizes G to J).

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a diaphragm seal on inner sheath of cable which will not damage cables that exhibit 'Cold Flow' characteristics.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Alternative Reversible Armour Clamping Rings (RAC)

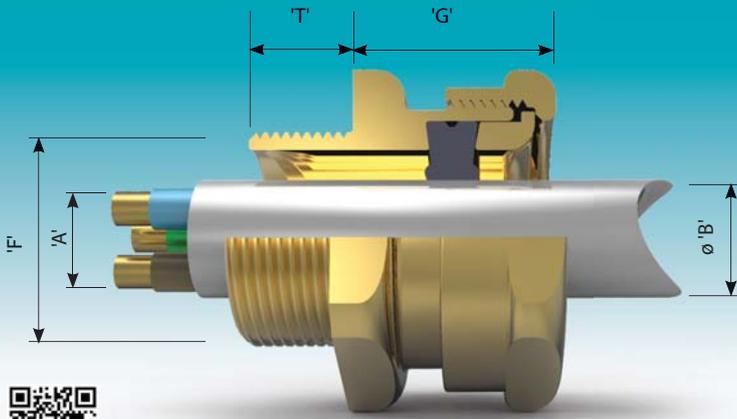
| Size Ref. | SELECTION TABLE | |
|-----------|----------------------------------|---------------|
| | Steel Wire Armour / Braid / Tape | |
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |

Ordering Information

Format for ordering is as follows: Alternative Clamping Ring (AR), add suffix AR to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| 501/453/UNIV | C | M32 | Brass | AR |
| 501/453/UNIV | C | 1 ¼" NPT | Brass | AR |

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us



Application

- The 501/421 cable gland provides a seal on the outer cable sheath
- For use on non-armoured elastomer and plastic insulated cables
- Suitable for installation in Zone 1 (21), Zone 2 (22) and Division 2 hazardous areas.

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | Fully Compressed Length 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|--------------------------|----------------------|------|-----------------------------|--------------------|----------------|
| | Metric | NPT * Standard or Option | Outer Sheath 'B' | | | | | Across Flats | Across Corners |
| | | | Standard Seal | | Alternative Seal (S) | | | | |
| | | | Min. | Max. | Min. | Max. | | | |
| 2K | M16 | - | 3.2 | 8.0 | - | - | 23.5 | 19.0 | 21.2 |
| Os | M20 ² | ½" | 3.2 | 8.0 | - | - | 23.8 | 24.0 | 26.5 |
| O | M20 ² | ½" | 6.5 | 11.9 | - | - | 23.8 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 10.0 | 14.3 | 8.5 | 13.5 | 24.8 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 13.0 | 20.2 | 9.5 | 15.4 | 25.8 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 19.5 | 26.5 | 15.5 | 21.2 | 28.2 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 25.0 | 32.5 | 22.0 | 28.0 | 29.5 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 31.5 | 44.4 / 42.3 ¹ | 27.5 | 34.8 | 40.4 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | 42.5 | 56.3 / 54.3 ¹ | 39.0 | 46.5 | 38.2 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | 54.5 | 68.2 / 65.3 ¹ | 48.5 | 58.3 | 40.5 | 95.0 | 104.0 |
| G | M80 | 3½" | 67.0 | 73.0 | - | - | 41.0 | 106.4 | 115.0 |
| H | M90 | 3½" | 67.0 | 77.6 | - | - | 41.0 | 115.0 | 130.0 |
| J | M100 | 4" | 75.0 | 91.6 | - | - | 41.0 | 127.0 | 142.0 |

'T' — 2K to F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.
All dimensions in millimetres (except * where dimensions are in inches).

¹ Smaller value is applicable when selecting reduced NPT entry option.

² Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex II 2 GD).
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 307.

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.
- Cable glands are marked with ATEX/IECEx and c CSA us certification information as standard.

Ordering Information

Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| 501/421 | C | M32 | Brass | S |
| 501/421 | C | 1 ¼" NPT | Brass | S |

Alternative certification options available:

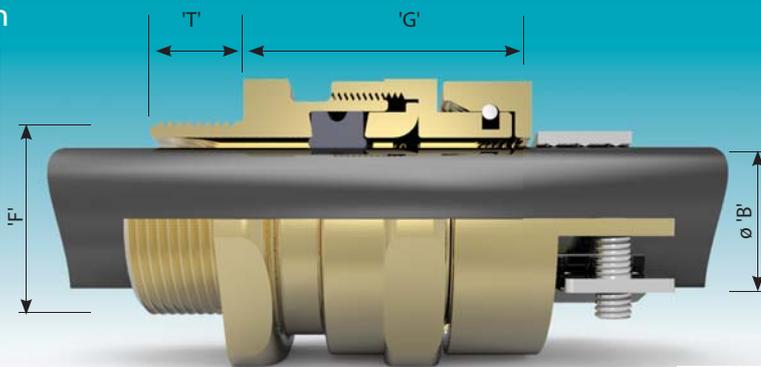


Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

Application

- The 501/421/R cable gland provides a seal and cable clamp on the outer cable sheath and is intended for use on non-armoured elastomer and plastic insulated cables.
- Certified Exd, Exe and Extb.
- Suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.



501/421/R

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|-------------------------|--------------------------|------|----------------------|------|------|--------------------|----------------|
| | | | Outer Sheath 'B' | | | | | Across Flats | Across Corners |
| | Metric | NPT* Standard or Option | Standard Seal | | Alternative Seal (S) | | | | |
| | | | Min. | Max. | Min. | Max. | | | |
| Os | M20 ² | ½" | 3.2 | 8.0 | - | - | 52.0 | 24.0 | 27.7 |
| O | M20 ² | ½" | 6.5 | 11.9 | - | - | 52.0 | 24.0 | 27.7 |
| A | M20 | ¾" or ½" | 10.0 | 14.3 | 9.0 | 13.4 | 52.0 | 30.0 | 34.6 |
| B | M25 | 1" or ¾" | 13.0 | 20.2 | 9.5 | 15.4 | 61.0 | 36.0 | 41.6 |
| C | M32 | 1¼" or 1" | 19.5 | 26.5 | 15.5 | 21.2 | 67.0 | 46.0 | 53.1 |
| C2 | M40 | 1½" or 1¼" | 25.0 | 32.5 | 22.0 | 28.0 | 67.0 | 55.0 | 63.5 |

*T' — Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread.
All dimensions in millimetres (except * where dimensions are in inches).

² Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm

Technical Data

- Flameproof Exd and Increased Safety Exd IIC Gb, Exe IIGb, Extb IIIC Db, Ex II 2 GD
- Certificate No's: Baseefa 06ATEX0056X and IECEx BAS06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 427.

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure.
- Manufactured in Brass (standard), Nickel Plated Brass or 316 Stainless Steel.
- Brass NPT entries are nickel plated as standard.
- Cable clamp provides required clamp and cleat function.

Ordering Information

Format for ordering is as follows:

Certification required i.e. ATEX / IECEx

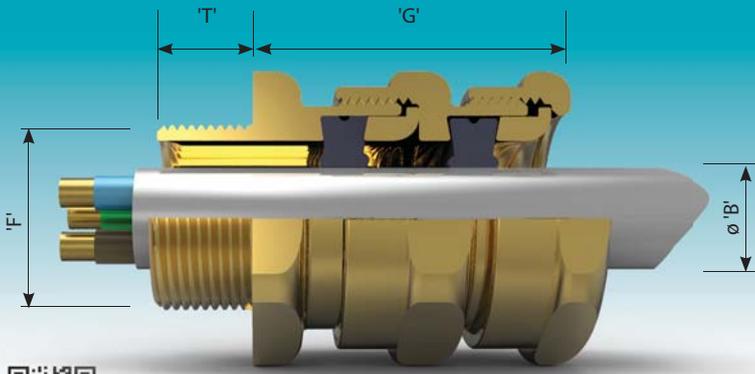
Material & Finish i.e. Brass Nickel Plated

Alternative Seal (S), add suffix S to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| 501/421/R | C | M32 | Brass | S |
| 501/421/R | C | 1 ¼" NPT | Brass | S |

Alternative certification options available:

Flameproof, Increased Safety, Dust Protection
 Class - Zones - Divisions
 Certified ATEX / IECEx / c CSA us



Application

- The 501/423 cable gland provides two independent seals on non-armoured elastomer and plastic insulated cables. The first is a flameproof seal on the inner or outer cable sheath, with an additional IP seal on the outer sheath.
- Certified Exd, Exe and Extb
- Suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|--------------------------|----------------------|------|------|--------------------|----------------|
| | | | Outer Sheath 'B' | | | | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Standard Seal | | Alternative Seal (S) | | | | |
| | | | Min. | Max. | Min. | Max. | | | |
| Os | M20 ² | ½" | 3.2 | 8.0 | - | - | 40.0 | 24.0 | 26.5 |
| O | M20 ² | ½" | 6.5 | 11.9 | - | - | 40.0 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 10.0 | 14.3 | 9.0 | 13.4 | 40.4 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 13.0 | 20.2 | 9.5 | 15.4 | 44.3 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 19.5 | 26.5 | 15.5 | 21.2 | 47.2 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 25.0 | 32.5 | 22.0 | 28.0 | 49.5 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 31.5 | 44.4 / 42.3 ¹ | 27.5 | 34.8 | 72.5 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | 42.5 | 56.3 / 54.3 ¹ | 39.0 | 46.5 | 64.8 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | 54.5 | 68.2 / 65.3 ¹ | 49.5 | 58.3 | 68.0 | 95.0 | 104.0 |
| G | M80 | 3½" | 67.0 | 73.0 | - | - | 68.0 | 106.4 | 115.0 |
| H | M90 | 3½" | 67.0 | 77.6 | - | - | 68.0 | 115.0 | 130.0 |
| J | M100 | 4" | 75.0 | 91.6 | - | - | 68.0 | 127.0 | 142.0 |

¹'T' — Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.
 All dimensions in millimetres (except * where dimensions are in inches).

¹ Smaller value is applicable when selecting reduced NPT entry option.

² Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex II 2 GD).
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X. Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 306.

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- Provides superior cable retention to standard unarmoured cable glands, with a seal at two independent points.
- When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows:

Alternative Seal (S), add suffix S to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| 501/423 | C | M32 | Brass | S |
| 501/423 | C | 1 ¼" NPT | Brass | S |

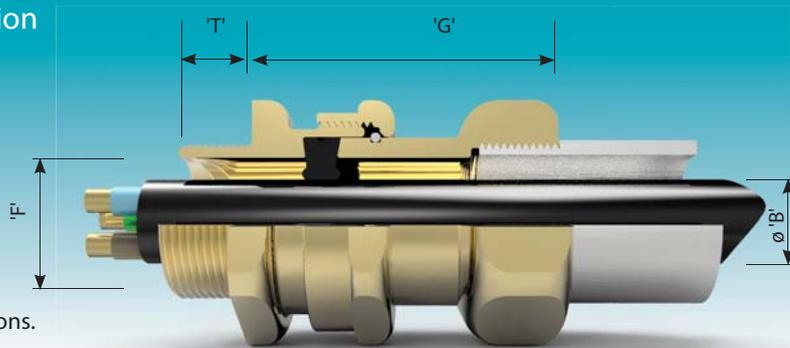


Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

Application

- Outdoor or indoor use.
- For use with non-armoured elastomer and plastic insulated cables installed in conduit.
- See technical section for installation rules and regulations.



501/414

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | | | Cable Acceptance Details | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------|--------------------------|--------------------------|------------------------|----------------------|------|------|--------------------|----------------|
| | Male | | Female | | Outer Sheath 'B' | | | | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Metric | NPT # Standard or Option | Standard Seal | | Alternative Seal (S) | | | | |
| | | | | | Min. | Max. | Min. | Max. | | | |
| Os | M20 ² | ½" | M20 | - | 3.2 | 8.0 | - | - | 54.5 | 24.0 | 26.5 |
| O | M20 ² | ½" | M20 | - | 6.5 | 11.9 | - | - | 54.5 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | M20 | - | 10.0 | 14.3 | 9.0 | 13.4 | 56.4 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | M25 | - | 13.0 | 20.2 | 9.5 | 15.4 | 48.2 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | M32 | - | 19.0 | 26.5 | 15.5 | 21.2 | 61.6 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | M40 | - | 25.0 | 32.5 | 22.0 | 28.0 | 64.6 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | M50 | - | 31.5 | 44.4/42.3 ¹ | 27.5 | 34.8 | 83.2 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | M63 | - | 42.5 | 56.3/54.3 ¹ | 39.0 | 46.5 | 83.2 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | M75 | - | 54.5 | 68.2/65.3 ¹ | 49.5 | 58.3 | 86.4 | 95.0 | 104.0 |

¹ 'T' — All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard.

¹ Smaller value is applicable when selecting reduced NPT male entry option.

² Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm

NPT female thread sizes equivalent to those shown in the table for the male thread size are available. Hexagon dimensions as shown may alter.

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex) II 2 GD.
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 310.

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- Provides a cable retention seal onto the cables outer sheath.
- When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the cables outer sheath pass into the enclosure. The braid must be suitably terminated into the enclosure.
- Provides female running coupler for cable gland or conduit entry.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

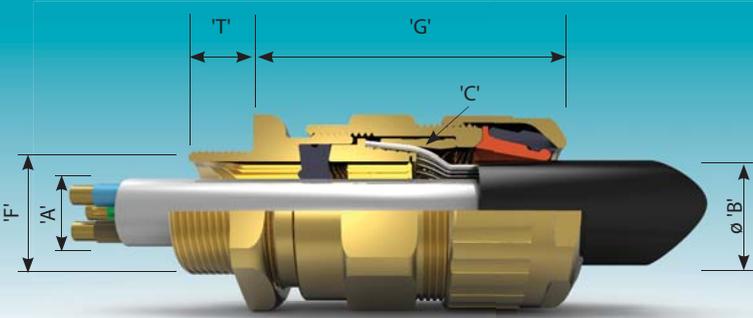
Format for ordering is as follows:

Alternative Seal (S), add suffix S to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|---------|----------|------------|
| 501/414 | C | M32 | Brass | S |
| 501/414 | C | 1¼" NPT | Brass | S |

Alternative certification options available:

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us



Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables.
- See technical section for installation rules and regulations.



CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|----------------------------|--------------------------|--------------------------|----------------------|------|------------------|-------|--------------------|---------------|------|--------------------|----------------|
| | Metric | "NPT * Standard or Option" | Inner Sheath 'A' | | | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | | | Standard Seal | | Alternative Seal (S) | | | | Orientation 1 | Orientation 2 | | | |
| | | | Min. | Max. | Min. | Max. | Min. | Max. | | | | | |
| Os | M20 ² | ½" | 3.2 | 8.0 | - | - | 5.5 | 12.0 | 0.8 / 1.25 | 0.0 / 0.8 | 52.0 | 24.0 | 26.5 |
| O | M20 ² | ½" | 6.5 | 11.9 | - | - | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 52.0 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 10.0 | 14.3 | 9.0 | 13.4 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 53.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 13.0 | 20.2 | 9.5 | 15.4 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 59.5 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 19.5 | 26.5 | 15.5 | 21.2 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 64.0 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 25.0 | 32.5 | 22.0 | 28.0 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 68.3 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 31.5 | 44.4 / 42.3 ¹ | 27.5 | 34.8 | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 79.0 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | 42.5 | 56.3 / 54.3 ¹ | 39.0 | 46.5 | 46.0 | 65.3 | 1.8 / 2.5 | 0.0 / 1.0 | 78.4 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | 54.5 | 68.2 / 65.3 ¹ | 49.5 | 58.3 | 57.0 | 78.0 | 1.8 / 2.5 | 0.0 / 1.0 | 83.7 | 95.0 | 104.0 |
| G | M80 | 3½" | 67.0 | 73.0 | - | - | 75.0 | 89.5 | 2.0 / 3.5 | 0.0 / 1.0 | 95.6 | 106.4 | 115.0 |
| H | M90 | 3½" | 67.0 | 77.6 | - | - | 75.0 | 89.5 | 2.0 / 3.5 | 0.0 / 1.0 | 95.6 | 115.0 | 130.0 |
| J | M100 | 4" | 75.0 | 91.6 | - | - | 88.0 | 104.5 | 2.5 / 4.0 | 0.0 / 1.0 | 95.6 | 127.0 | 142.0 |

¹T — Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.
All dimensions in millimetres (except * where dimensions are in inches).

¹ Smaller value is applicable when selecting reduced NPT entry option.

² Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm.

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db II 2 GD.
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X. Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01. (Deluge Seal Optional)
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 302.

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a seal on the cables inner sheath.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Alternative Reversible Armour Clamping Rings (RAC)

SELECTION TABLE

| Size Ref. | Steel Wire Armour / Braid / Tape | |
|-----------|----------------------------------|---------------|
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |

Ordering Information

Format for ordering is as follows:
Alternative Clamping Ring (AR), add suffix AR to ordering information. Alternative Seal (S), add suffix S to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| 501/453/RAC | C | M32 | Brass | AR |
| 501/453/RAC | C | 1 ¼" NPT | Brass | AR |
| 501/453/RAC | C | M32 | Brass | S |
| 501/453/RAC | C | 1 ¼" NPT | Brass | S |

Alternative certification options available:

Connection Solutions

www.ehawke.com

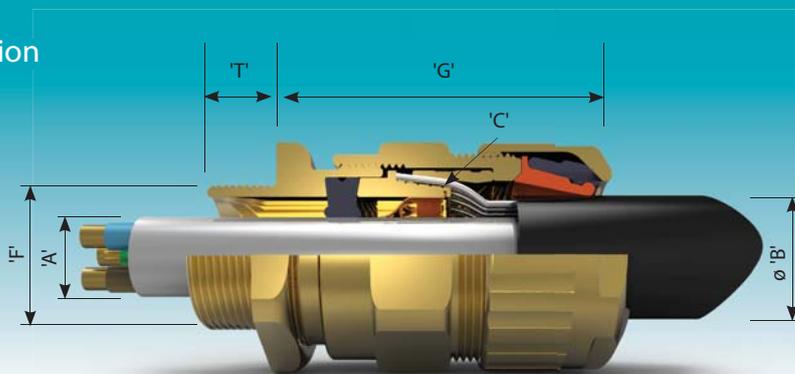
Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

(for Lead Sheath Cables)

Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables with a lead inner sheath.
- See technical section for installation rules and regulations.



501/453/RAC/L

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|-------------------------------|--------------------------|----------------------------------|------|------------------|-------|--------------------|---------------|------|--------------------|----------------|
| | Metric | NPT * Standard or Option | Inner Sheath 'A' | | | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | | | Standard Seal (L) Seal + Bond | | Alternative Seal (K) Seal + Bond | | | | Orientation 1 | Orientation 2 | | | |
| | | | Min. | Max. | Min. | Max. | Min. | Max. | | | | | |
| O | M20 ² | ½" | 6.5 | 10.5 | - | - | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 52.0 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | - | - | 9.0 | 13.4 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 53.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 13.0 | 19.0 | 9.5 | 15.4 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 59.5 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 19.5 | 25.0 | 15.5 | 21.2 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 64.0 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 25.0 | 31.2 | 22.0 | 28.0 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 68.3 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 31.5 | 42.3 / 42.8 ¹ | 27.5 | 34.8 | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 79.0 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | 42.5 | 53.3 / 54.5 ¹ | 39.0 | 46.5 | 46.0 | 65.3 | 1.8 / 2.5 | 0.0 / 1.0 | 78.4 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | 54.5 | 66.0 / 64.3 ¹ | 48.5 | 58.3 | 57.0 | 78.0 | 1.8 / 2.5 | 0.0 / 1.0 | 83.7 | 95.0 | 104.0 |
| G | M80 | 3½" | 67.0 | 70.0 | - | - | 75.0 | 89.5 | 2.0 / 3.15 | 0.0 / 1.0 | 95.6 | 106.4 | 115.0 |
| H | M90 | 3½" | 67.0 | 75.0 | - | - | 75.0 | 89.5 | 2.0 / 3.15 | 0.0 / 1.0 | 95.6 | 115.0 | 130.0 |
| J | M100 | 4" | 75.0 | 89.5 | - | - | 88.0 | 104.5 | 2.5 / 4.0 | 0.0 / 1.0 | 95.6 | 127.0 | 142.0 |

¹'T' — O - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.
All dimensions in millimetres (except * where dimensions are in inches).

¹Smaller value is applicable when selecting reduced NPT entry option.

²Size O is available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex) II 2 GD.
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01 (Deluge Seal Optional).
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 302 and AI 336.

Features

- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a seal and an electrical bond to the cables lead inner sheath.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Deluge protection option available, contact Hawke Technical Sales for details.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows:
Standard Inner Seal + Bond, add suffix L to ordering information.
Alternative Inner Seal + Bond, add suffix K to ordering information.
Alternative Clamping Ring (AR), add suffix AR to ordering information.

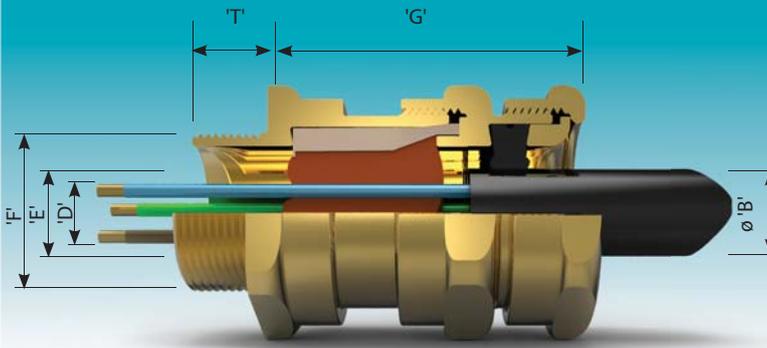
| Cable Gland Type | Size | Thread | Lead | Material | (Optional) |
|------------------|------|----------|------|----------|------------|
| 501/453/RAC | C | M32 | L | Brass | AR |
| 501/453/RAC | C | 1 ¼" NPT | L | Brass | AR |
| 501/453/RAC | C | 1 ¼" NPT | K | Brass | AR |

Alternative Reversible Armour Clamping Rings (RAC)

| Size Ref. | SELECTION TABLE | |
|-----------|----------------------------------|---------------|
| | Steel Wire Armour / Braid / Tape | |
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |



Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx



Application

- Outdoor or indoor use.
- For use with non-armoured elastomer and plastic insulated cables.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area and exceeding 2 litres in volume.
- See technical section for installation rules and regulations.



CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|-------------------------|--------------------------|-----------------------|-------------------|------------------|------|----------------------|------|------|--------------------|----------------|
| | | | Inner Sheath / Cores | | | Outer Sheath 'B' | | | | | Across Flats | Across Corners |
| | Metric | NPT* Standard or Option | 'D' Max. Over Cores | 'E' Max. Inner Sheath | Max. No. of Cores | Standard Seal | | Alternative Seal (S) | | | | |
| | | | | | | Min. | Max. | Min. | Max. | | | |
| Os | M20 | ½" | 8.0 | 8.0 | 16 | 3.0 | 8.0 | - | - | 56.4 | 24.0 | 26.5 |
| O | M20 | ½" | 8.9 | 10.0 | 16 | 6.5 | 11.9 | - | - | 56.4 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 11.0 | 12.5 | 30 | 10.0 | 14.3 | 8.5 | 13.4 | 55.8 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 16.2 | 18.4 | 32 | 13.0 | 20.2 | 9.5 | 15.4 | 58.8 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 21.9 | 24.7 | 60 | 19.0 | 26.5 | 15.5 | 21.2 | 62.0 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 26.3 | 29.7 | 80 | 25.0 | 32.5 | 22.0 | 28.0 | 64.5 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 37.1 | 41.7 | 100 | 31.5 | 44.4 | 27.5 | 34.8 | 72.8 | 65.0 | 70.8 |

*'T' — Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.
All dimensions in millimetres (except * where dimensions are in inches).

¹ Smaller value is applicable when selecting reduced NPT entry option.

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex II 2 GD).
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 6079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 456.

Features

- Provides an inspectable, repairable barrier seal to the individual insulated cores within the cable, and prevents entry of the products of an explosion into the cable.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- QSP putty offers fast curing time and sets in half the time of the standard putty.
- Provides a cable retention seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows:

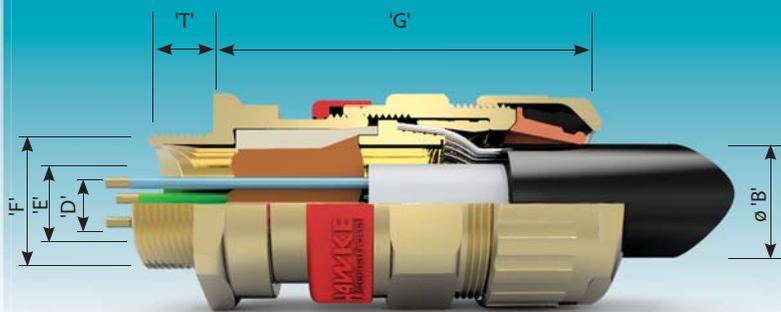
Alternative Seal (S), add suffix S to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| ICG 623/QSP | C | M32 | Brass | S |
| ICG 623/QSP | C | 1 ¼" NPT | Brass | S |

Two part sealing compound and assembly instructions are supplied with the cable gland.



Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx



Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area.
- See technical section for installation rules and regulations.

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|----------------------|-------------------|------------------|------|--------------------|---------------|------|--------------------|----------------|
| | | | Inner Sheath / Cores | | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Max. Over Cores 'D' | Max Inner Sheath 'E' | Max. No. of Cores | Min | Max | Orientation 1 | Orientation 2 | | | |
| Os | M20 | ½" | 8.9 | 10.0 | 16 | 5.5 | 12.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| O | M20 | ½" | 8.9 | 10.0 | 16 | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 11.0 | 12.5 | 30 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 16.2 | 18.4 | 32 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 73.6 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 21.9 | 24.7 | 60 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 78.0 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 26.3 | 29.7 | 80 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 82.4 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 37.1 | 41.7 | 100 | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 88.7 | 65.0 | 70.8 |

'T' — Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.
All dimensions in millimetres (except * where dimensions are in inches).

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb, Dust Extb IIIC Db and ExnR IIC Gc (Ex) II 2 / 3GD.
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 454

Features

- Provides an inspectable, repairable barrier seal to the individual insulated cores within the cable, and prevents entry of the products of an explosion into the cable.
- QSP putty offers fast curing time and sets in half the time of the standard putty.
- Provides armour clamping, using one clamping arrangement for all armour / braid types.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Alternative Reversible Armour Clamping Rings (RAC)

SELECTION TABLE

| Size Ref. | Steel Wire Armour / Braid / Tape | |
|-----------|----------------------------------|---------------|
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |

Ordering Information

Format for ordering is as follows: Alternative Seal (AR), add suffix AR to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|----------|----------|------------|
| ICG 653/UNIV/QSP | C | M32 | Brass | AR |
| ICG 653/UNIV/QSP | C | 1 ¼" NPT | Brass | AR |

Two part sealing compound and assembly instructions are supplied with the cable gland.

Alternative certification options available:

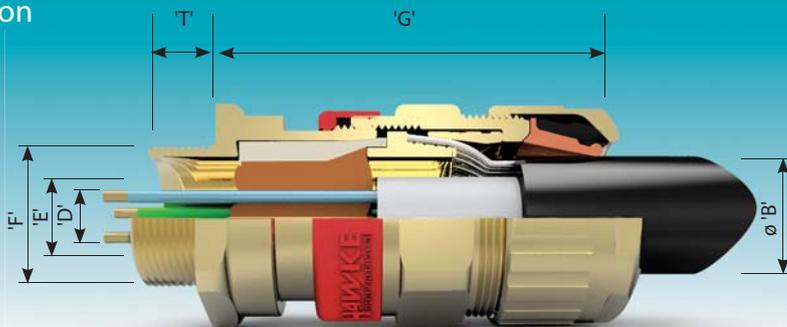


Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area.
- See technical section for installation rules and regulations.



ICG 653/UNIV

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------|------|--------------------|---------------|------|--------------------|----------------|
| | | | Inner Sheath / Cores | | | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Max. Over Cores 'D' | Max Inner Sheath 'E' | NOTE 1 Max. No. of Cores | NOTE 2 Max. No. of Cores | Min | Max | Orientation 1 | Orientation 2 | | | |
| Os | M20 | 1/2" | 8.9 | 10.0 | 12 | 6 | 5.5 | 12.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| O | M20 | 1/2" | 8.9 | 10.0 | 12 | 6 | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| A | M20 | 3/4" or 1/2" | 11.0 | 12.5 | 15 | 10 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 30.0 | 32.5 |
| B | M25 | 1" or 3/4" | 16.2 | 18.4 | 30 | 21 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 73.6 | 36.0 | 39.5 |
| C | M32 | 1 1/4" or 1" | 21.9 | 24.7 | 42 | 42 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 78.0 | 46.0 | 50.5 |
| C2 | M40 | 1 1/2" or 1 1/4" | 26.3 | 29.7 | 60 | 60 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 82.4 | 55.0 | 60.6 |
| D | M50 | 2" or 1 1/2" | 37.1 | 41.7 | 80 | 80 | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 88.7 | 65.0 | 70.8 |
| E | M63 | 2 1/2" or 2" | 47.8 | 53.5 | 100 | 100 | 46.0 | 65.3 | 1.8 / 2.5 | 0.0 / 1.0 | 92.7 | 80.0 | 88.0 |
| F | M75 | 3" or 2 1/2" | 59.0 | 66.2 / 65.3 ¹ | 120 | 120 | 57.0 | 78.0 | 1.8 / 2.5 | 0.0 / 1.0 | 99.4 | 95.0 | 104.0 |

'T' — Metric entry threads are 1.5mm pitch as standard, 15mm length of thread. All dimensions in millimetres (except * where dimensions are in inches).
Note 1: ATEX / IECEx certification only - Note 2: All other certification.

¹Smaller value is applicable when selecting reduced NPT entry option. Note: Larger sizes are available.

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb, Dust Extb IIIC Db and ExnR IIC Gc Ex II 2 / 3GD.
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 301

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- Provides an inspectable, repairable barrier seal to the individual insulated cores within the cable, and prevents entry of the products of an explosion into the cable.
- Provides armour clamping, using one clamping arrangement for all armour / braid types.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows: Alternative Seal (AR), add suffix AR to ordering information.

| Cable Gland Type | Size | Thread | Material | (Optional) |
|------------------|------|------------|----------|------------|
| ICG 653/UNIV | C | M32 | Brass | AR |
| ICG 653/UNIV | C | 1 1/4" NPT | Brass | AR |

Two part sealing compound and assembly instructions are supplied with the cable gland.

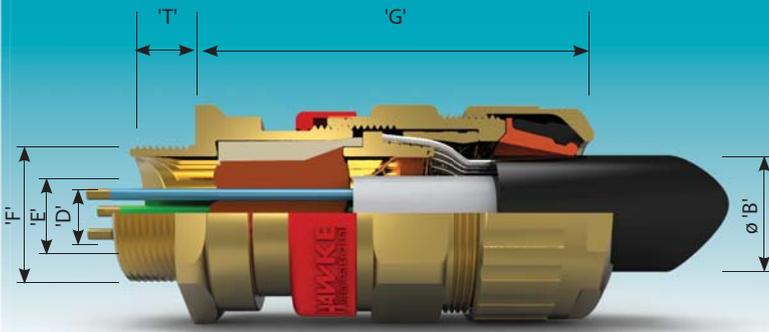
Alternative Reversible Armour Clamping Rings (RAC)

| Size Ref. | SELECTION TABLE | |
|-----------|-----------------|---------------|
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |



Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx

(for Lead Sheath Cables)



Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables with a lead inner sheath.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area.
- See technical section for installation rules and regulations.

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|----------------------|-------------------|------------------|------|--------------------|---------------|------|--------------------|----------------|
| | Metric | NPT * Standard or Option | Inner Sheath / Cores | | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | | | 'D' Max. Over Cores | Max Inner Sheath 'E' | Max. No. of Cores | Min. | Max. | Orientation 1 | Orientation 2 | | | |
| Os | M20 | ½" | 8.5 | 10.0 | 16 | 5.5 | 12.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| O | M20 | ½" | 8.5 | 10.0 | 16 | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 10.8 | 12.5 | 30 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 16.2 | 18.4 | 32 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 73.6 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 21.9 | 24.7 | 60 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 78.0 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 26.3 | 29.7 | 80 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 82.4 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 37.1 | 41.7 | 100 | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 88.7 | 65.0 | 70.8 |

'T' — All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex II 2 GD).
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 454 and AI 336.

Ordering Information

Format for ordering is as follows: Alternative Seal (AR), add suffix AR to ordering information.

| Cable Gland Type | Size | Thread | Lead | Material | (Optional) |
|------------------|------|----------|------|----------|------------|
| ICG 653/UNIV/QSP | C | M32 | L | Brass | AR |
| ICG 653/UNIV/QSP | C | 1 ¼" NPT | L | Brass | AR |

Two part sealing compound and assembly instructions are supplied with the cable gland.

Features

- Provides an inspectable, repairable barrier seal to the individual insulated cores within the cable, and prevents entry of the products of an explosion into the cable.
- QSP putty offers fast curing time and sets in half the time of the standard putty.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- Provides armour clamping, using one clamping arrangement for all armour / braid types.
- Provides a seal and an electrical bond on the cables lead inner sheath.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Alternative Reversible Armour Clamping Rings (RAC)

| Size Ref. | SELECTION TABLE | |
|-----------|----------------------------------|---------------|
| | Steel Wire Armour / Braid / Tape | |
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |

Connection Solutions

www.ehawke.com

Alternative certification options available:



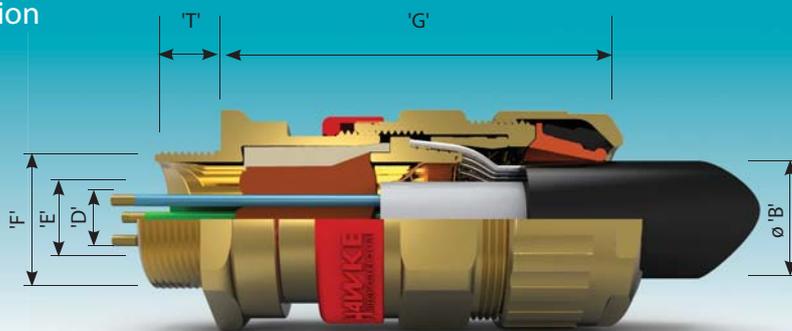
Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

(for Lead Sheath Cables)

Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables with a lead inner sheath.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area.
- See technical section for installation rules and regulations.



ICG 653/UNIV/L

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|----------------------|--------------------------|--------------------------|------------------|------|--------------------|---------------|------|--------------------|----------------|
| | Metric | NPT * Standard or Option | Inner Sheath / Cores | | | | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | | | 'D' Max. Over Cores | Max Inner Sheath 'E' | NOTE 1 Max. No. of Cores | NOTE 2 Max. No. of Cores | Min. | Max. | Orientation 1 | Orientation 2 | | | |
| Os | M20 | ½" | 8.5 | 10.0 | 12 | 6 | 5.5 | 12.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| O | M20 | ½" | 8.5 | 10.0 | 12 | 6 | 9.5 | 16.0 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 24.0 | 26.5 |
| A | M20 | ¾" or ½" | 10.8 | 12.5 | 15 | 10 | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 67.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 16.2 | 18.4 | 30 | 21 | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 73.6 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 21.9 | 24.7 | 42 | 42 | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 78.0 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | 26.3 | 29.7 | 60 | 60 | 28.0 | 41.0 | 1.6 / 2.0 | 0.0 / 0.7 | 82.4 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | 37.1 | 41.7 | 80 | 80 | 36.0 | 52.6 | 1.8 / 2.5 | 0.0 / 1.0 | 88.7 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | 47.8 | 53.3 | 100 | 100 | 46.0 | 65.3 | 1.8 / 2.5 | 0.0 / 1.0 | 92.7 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | 59.0 | 64.0 | 120 | 120 | 57.0 | 78.0 | 1.8 / 2.5 | 0.0 / 1.0 | 99.4 | 95.0 | 104.0 |

'T' — All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.
Note 1: ATEX / IECEx certification only - Note 2: All other certification.

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex) II 2 GD.
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 301 and AI 336.

Features

- Provides an inspectable, repairable barrier seal to the individual insulated cores within the cable, and prevents entry of the products of an explosion into the cable.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- Provides armour clamping, using one clamping arrangement for all armour / braid types.
- Provides a seal and an electrical bond on the cables lead inner sheath.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows: Alternative Seal (AR), add suffix AR to ordering information.

| Cable Gland Type | Size | Thread | Lead | Material | (Optional) |
|------------------|------|----------|------|----------|------------|
| ICG 653/UNIV | C | M32 | L | Brass | AR |
| ICG 653/UNIV | C | 1 ¼" NPT | L | Brass | AR |

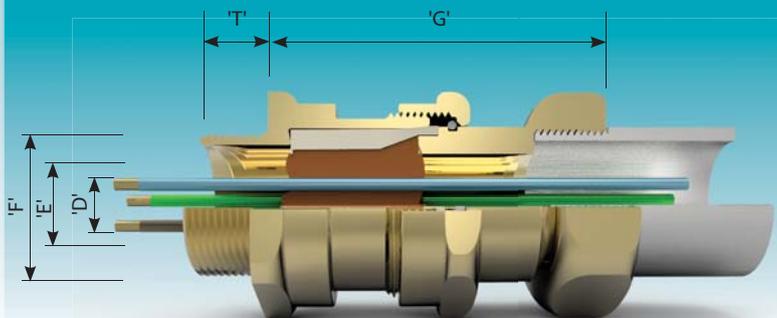
Two part sealing compound and assembly instructions are supplied with the cable gland.

Alternative Reversible Armour Clamping Rings (RAC)

| Size Ref. | Steel Wire Armour / Braid / Tape | |
|-----------|----------------------------------|---------------|
| | Orientation 1 | Orientation 2 |
| B | 0.9 - 1.25 | 0.5 - 0.9 |
| C | 1.2 - 1.6 | 0.6 - 1.2 |
| C2 | 1.2 - 1.6 | 0.6 - 1.2 |
| D | 1.45 - 1.8 | 1.0 - 1.45 |
| E | 1.45 - 1.8 | 1.0 - 1.45 |
| F | 1.45 - 1.8 | 1.0 - 1.45 |



Flameproof, Increased Safety, Dust Protection
 Class - Zones - Divisions
 Certified ATEX / IECEx / c CSA us



Application

- Outdoor or indoor use.
- For use with conduit incorporating individual insulated conductors.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area and exceeding 2 litres in volume.
- See technical section for installation rules and regulations.

CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | | | Inner Sheath / Cores | | | 'G' Metric | Hexagon Dimensions | |
|-----------|-----------------------|-----------------------------|--------|-----------------------------|----------------------|----------------------|-------------------|---------------|--------------------|----------------|
| | Male | | Female | | Max. Over Cores 'D' | Max Inner Sheath 'E' | Max. No. of Cores | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Metric | NPT * Standard or Option | | | | | | |
| A | M20 | ¾" or ½" | M20 | ¾" or ½" | 11.0 | 12.5 | 30 | 74 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | M25 | 1" or ¾" | 16.2 | 18.4 | 32 | 65 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | M32 | 1¼" or 1" | 21.9 | 24.7 | 60 | 80 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | M40 | 1½" or 1¼" | 26.3 | 29.7 | 80 | 83 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | M50 | 2" or 1½" | 37.1 | 41.7 | 100 | 94 | 65.0 | 70.8 |

'T' — All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex II 2 GD).
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 459.

Features

- Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable or conduit.
- Seals conductors at entry to enclosure via conduit or enables an existing cable gland to be converted to a barrier type cable gland.
- The device is fitted with a simple compound filled chamber which permits packing around individual insulated conductors.
- QSP putty offers fast curing time and sets in half the time of the standard putty.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- If required, external voids can be repaired.
- Provides female running coupler for cable gland or conduit entry.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows:

| Cable Gland Type | Size | Male Thread | Female Thread | Material |
|------------------|------|-------------|---------------|----------|
| CSB 656N/QSP | C | M32 | M32 | Brass |
| CSB 656N/QSP | C | 1 ¼" NPT | M32 | Brass |

Two part sealing compound and assembly instructions are supplied with the cable gland.

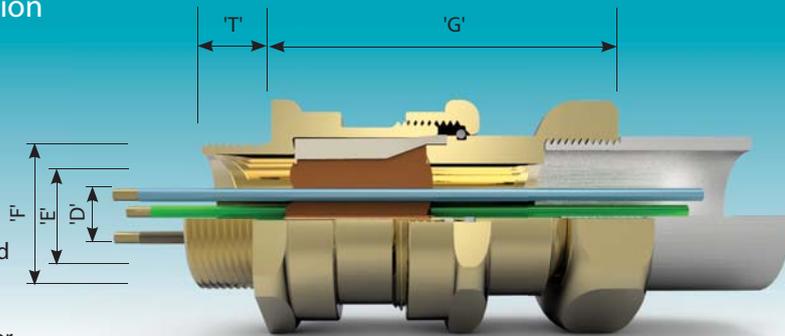


Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx / c CSA us

Application

- Outdoor or indoor use.
- For use with conduit incorporating individual insulated conductors.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
 - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area and exceeding 2 litres in volume.
- See technical section for installation rules and regulations.



CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | | | Inner Sheath / Cores | | | 'G' Metric | Hexagon Dimensions | |
|-----------|-----------------------|-----------------------------|--------|-----------------------------|----------------------|----------------------|-------------------|---------------|--------------------|----------------|
| | Male | | Female | | Max. Over Cores 'B' | Max Inner Sheath 'E' | Max. No. of Cores | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Metric | NPT * Standard or Option | | | | | | |
| A | M20 | ¾" or ½" | M20 | ¾" or ½" | 11.0 | 12.5 | 15 | 74 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | M25 | 1" or ¾" | 16.2 | 18.4 | 30 | 65 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | M32 | 1¼" or 1" | 21.9 | 24.7 | 42 | 80 | 46.0 | 50.5 |
| C2 | M40 | 1½" or 1¼" | M40 | 1½" or 1¼" | 26.3 | 29.7 | 60 | 83 | 55.0 | 60.6 |
| D | M50 | 2" or 1½" | M50 | 2" or 1½" | 37.1 | 41.7 | 80 | 94 | 65.0 | 70.8 |
| E | M63 | 2½" or 2" | M63 | 2½" or 2" | 47.8 | 53.5 | 100 | 97 | 80.0 | 88.0 |
| F | M75 | 3" or 2½" | M75 | 3" or 2½" | 59.0 | 66.2 / 65.3' | 120 | 100 | 95.0 | 104.0 |

'T' — All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.

* Smaller value is applicable when selecting reduced NPT male entry option. Hexagon dimensions as shown may alter.

Technical Data

ATEX/IECEx

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db (Ex) II 2 GD.
- Certificate No's: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 375.

c CSA us

- Flameproof AExd IIC Gb, Increased Safety AExe IIC Gb and Dust AExtD Zone 21.
- Explosion-proof Class 1 Division 2 Groups ABCD, Class II Division 2 Groups EFG, Class III.
- Certificate No's: CSA1015065 for Marine Shipboard Cable.
- Construction and Test Standards: UL 60079-0, UL 60079-1, UL 60079-7, ISA 60079-31, CSA 22.2 No: 60079-0, CSA 22.2 No: 60079-1, CSA 22.2 No: 60079-7, CSA 22.2 No: 60079-31, UL 2225

Features

- Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable or conduit.
- Seals conductors at entry to enclosure via conduit or enables an existing cable gland to be converted to a barrier type cable gland.
- The device is fitted with a simple compound filled chamber which permits packing around individual insulated conductors.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- If required, external voids can be repaired.
- Provides female running coupler for cable gland or conduit entry.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows:

| Cable Gland Type | Size | Male Thread | Female Thread | Material |
|------------------|------|-------------|---------------|----------|
| CSB 656N | C | M32 | M32 | Brass |
| CSB 656N | C | 1 ¼" NPT | M32 | Brass |

Two part sealing compound and assembly instructions are supplied with the cable gland.

CSB 656N

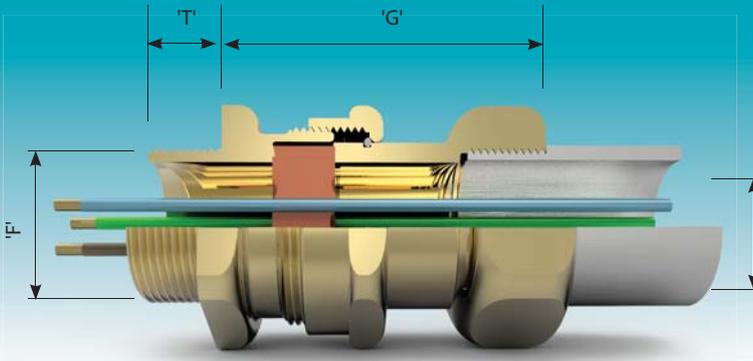


Alternative certification options available:





Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx



Application

- Outdoor or indoor use.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
- See technical section for installation rules and regulations.



CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|-----------------------------|--------|-----------------------------|-------|--------------------|----------------|
| | Male | | Female | | | Across Flats | Across Corners |
| | Metric | NPT * Standard or Option | Metric | NPT # Standard or Option | | | |
| A | M20 | ¾" or ½" | M20 | - | 69.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | M25 | - | 61.0 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | M32 | - | 61.95 | 46.0 | 50.5 |

'T' — All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.

NPT female thread sizes equivalent to those shown in the table for the male thread size are available. Hexagon dimensions as shown may alter.

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db Ex II 2 GD.
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 309.

Features

- Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable.
- The required number of holes for the cores are punched in the seal by means of a special tool to suit the core size.
- Provides female running coupler for cable gland or conduit entry.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

CABLE GLAND SIZE FOR CORE SIZE AND NUMBER

| Max. No. of Cores | Cores Cross Sectional Area mm ² | | | | |
|-------------------|--|-------|-------|-----|------|
| | 1.5 | 2.5 | 4.0 | 6.0 | 10.0 |
| 7 | A & B | A & B | B & C | C | C |
| 4 | - | - | - | B | - |
| 3 | - | - | - | - | B |

PUNCH TOOL SIZE DETAILS

| Punch Ref. | No. 1 | No. 2 | No. 3 |
|-----------------------------|-----------|-----------|-------|
| Cores C.S.A.mm ² | 1.5 - 2.5 | 4.0 - 6.0 | 10.0 |

Ordering Information

To select the correct size punch tool, please see table. Format for ordering is as follows:

| Cable Gland Type | Size | Thread | Material | Punch Tool Required |
|------------------|------|----------|----------|---------------------|
| SB 474 | C | M32 | Brass | Punch Tool No. 1 |
| SB 474 | C | 1 ¼" NPT | Brass | Punch Tool No. 1 |

Alternative certification options available:

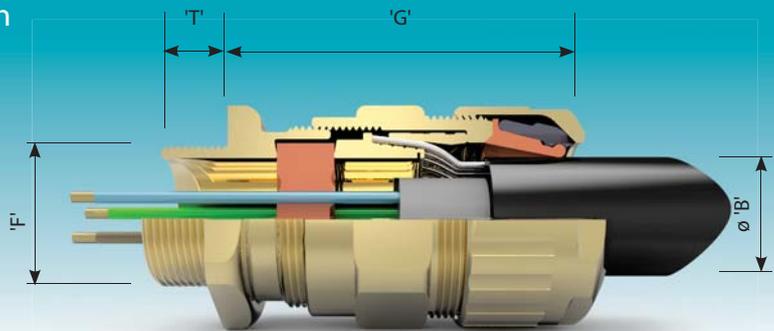


Group II Cable Glands

Flameproof, Increased Safety, Dust Protection
Class - Zones - Divisions
Certified ATEX / IECEx

Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables.
- For particular use with:-
 - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
 - Cables that exhibit 'Cold Flow' characteristics.
- See technical section for installation rules and regulations



CABLE GLAND SELECTION TABLE

| Size Ref. | Entry Thread Size 'F' | | Cable Acceptance Details | | | | 'G' | Hexagon Dimensions | |
|-----------|-----------------------|--------------------------|--------------------------|------|--------------------|---------------|------|--------------------|----------------|
| | Metric | NPT * Standard or Option | Outer Sheath 'B' | | Armour / Braid 'C' | | | Across Flats | Across Corners |
| | | | Min. | Max. | Orientation 1 | Orientation 2 | | | |
| A | M20 | ¾" or ½" | 12.5 | 20.5 | 0.8 / 1.25 | 0.0 / 0.8 | 53.0 | 30.0 | 32.5 |
| B | M25 | 1" or ¾" | 16.9 | 26.0 | 1.25 / 1.6 | 0.0 / 0.7 | 69.5 | 36.0 | 39.5 |
| C | M32 | 1¼" or 1" | 22.0 | 33.0 | 1.6 / 2.0 | 0.0 / 0.7 | 64.0 | 46.0 | 50.5 |

* — Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.
All dimensions in millimetres (except * where dimensions are in inches).

Technical Data

- Flameproof Exd IIC Gb, Increased Safety Exe IIC Gb and Dust Extb IIIC Db $\text{Ex} \text{II} 2 \text{GD}$.
- Certificate No's: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7 and IEC/EN 60079-31.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01 (Deluge Seal Optional).
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 312.

Features

- Provides a barrier seal to the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable.
- The required number of holes for the cores are punched in the seal by means of a special tool to suit the core size.
- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Deluge protection option available, contact Hawke Technical Sales for details.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

CABLE GLAND SIZE FOR CORE SIZE AND NUMBER

| Max. No. of Cores | Cores Cross Sectional Area mm ² | | | | |
|-------------------|--|-------|-------|-----|------|
| | 1.5 | 2.5 | 4.0 | 6.0 | 10.0 |
| 7 | A & B | A & B | B & C | C | C |
| 4 | - | - | - | B | - |
| 3 | - | - | - | - | B |

PUNCH TOOL SIZE DETAILS

| Punch Ref. | No. 1 | No. 2 | No. 3 |
|-----------------------------|-----------|-----------|-------|
| Cores C.S.A.mm ² | 1.5 - 2.5 | 4.0 - 6.0 | 10.0 |

Deluge protection option available.

Ordering Information

To select the correct size punch tool, please see table.
Format for ordering is as follows:

| Cable Gland Type | Size | Thread | Material | Punch Tool Required |
|------------------|------|----------|----------|---------------------|
| PSG 553/RAC | C | M32 | Brass | Punch Tool No. 1 |
| PSG 553/RAC | C | 1 ¼" NPT | Brass | Punch Tool No. 1 |