

# Industrial **Cable Glands** & Accessories



# Who we are?

Raychem RPG (P) Ltd., incorporated in 1989, is a 50:50 joint Venture between TE Connectivity, U.S.A. (formerly Tyco Electronics) and RPG Enterprises, India.

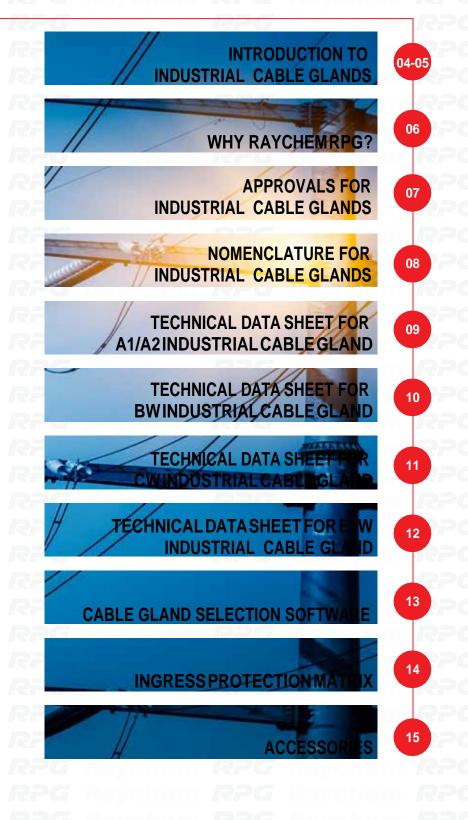
TE Connectivity is a US\$14 Billion global provider for solutions in Network, Transportation, Consumers and Industrial for over 50 years.

RPG Enterprises, an establishment of over 30 years, is one of India's fastest growing business groups with turnover of US\$ 4 Billion. The group has more than fifteen companies managing diverse business interests in the areas of Automotive Tyres, Infrastructure, IT and Specialty including Pharmaceuticals, Power Ancillaries & Plantations.



## Raychem RPG

# INDEX



## INTRODUCTION TO INDUSTRIAL CABLE GLANDS

#### **DEFINING CABLE GLANDS**

A device designed to permit the entry of a cable, flexible cable or insulated conductor into an enclosure, and which provides sealing and retention. It also provides significant functions such as earthing, bonding, insulation, cable guarding, strain relief or a combination of these. They are mechanical fittings that form part of the electrical installation material.

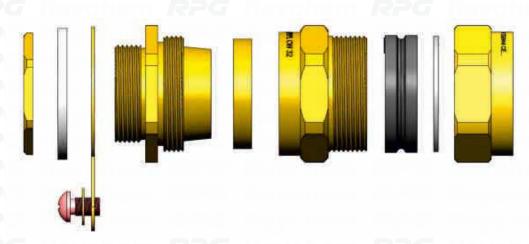
#### PRODUCT DESIGN & CONSTRUCTION

Raychem RPG Cable glands are designed for use with all types of electrical power, control, instrumentation, data telecommunications cables & fire rated Cables. They are used as a sealing and termination device to ensure that the characteristics of the enclosure which the cable enters can be maintained adequately.

#### **SEALING MECHANISM**

Sealing the cable from dust and moisture ensuring maximum protection to the enclosure is the most significant feature of cable glands. At Raychem RPG, we use the optimum rubber material in the following ways to offer efficient sealing.

Compression sealing is an elastomeric sealing ring that has a V-groove that creates a downward seal on the cable inner bedding, when the same compressive force is equally applied to both sides of the seal. Displacement sealing has a shape in the form of a taper which is gradually pushed ahead into the taper on the gland.



- Body armour houses power cable and suppports in clamping cable to junction boxes or external body.
- Mechanical seals (compression & displacement type seals) are used to provide ingress protection to cable gland assembly
- Cone Ring is used to clamp cable armour and support cable in gland body armour lock
- Compression Ring is used to house mechanical seal & provide outer sealing to cable.
- Lock Nut is used to lock cable gland as sembly in junction boxes or external body
- Earth Tag is used to maintain earth conductivity from cable to junction boxes or external body
- Shrouds are used to increase ingress protection and protect cable gland assembly from physical damage

## Raychem RPG

#### **TYPES OF INDUSTRIAL CABLE GLANDS**

- A1/A2 cable gland
- · BW cable gland
- CW cable gland
- E1W cable gland

Cable Gland Primary Code / Secondary Code for Unarmoured and Armoured cables.

| Code  | Definition  |  |  |  |
|-------|---|--|--|--|
| Al/A2 | For unarmoured cable with an elastomeric or plastic outer sheath, with sealing function between the cable gland. (For A2 - seal protection degree IP66) |  |  |  |
| BW    | No Seal/Single wire armour  |  |  |  |
| CW    | Single outer seal/Single wire armour  |  |  |  |
| E1W   | Double (inner and outer seal)/Single wire armour  |  |  |  |

#### **COMPLIANCE STANDARDS**

Raychem RPG manufactured mechanical type Cable glands meet the requirements of BS 6121-1:2005; & IEC/EN 62444 (Harmonized std. for European low voltage directive 2014/35/EU. Raychem RPG Cable Glands are in conformance with IP66 as per IEC 60529:1989/A2:2013-Degrees of Protection provided by enclosures (IP Code). The prime purpose is to define levels of sealing effectiveness of electrical enclosures against intrusion from Dust & water.

#### **GLAND KIT**

Raychem RPG Brass cable glands supplies will be with complete kit comprising of the following:

- 1. Gland
- 2. Earth Tags
- 3. PVC/LSF/LSZH Shrouds
- 4. Sealing Washers Neoprene or Silicone w.r.t. applications (Power Cables / FR Cables)
- 5. IP Washer

## WHY RAYCHEM RPG?

#### Quality



At Raychem RPG, quality is a long history of success and recognition. Today the company is one of the Indian businesses to have adjusted and certified its progress according to strict regulatory standards:

- Quality (ISO 9001:2015)
- Environment (ISO 14001:2015)
- Safety (OHSAS) 18001:2007

#### **Production Control**



In order to guarantee our productshigh quality standards, the production process must be monitored with constant and careful precision. The control phases a company a lithe stages of production and often use advanced technology form easurement and detection. We use the cutting edge CNC machine for all our manufacturing operations related to maintain the world class standard of Raychem RPG.

#### **Care for Environment**



Raychem RPG believes that industrial development can truly respect, and therefore be compatible with the environment. For Raychem RPG, protecting the environment and the people and things around you is an important responsibility that requires constant and immediate consideration. It is a conscious decision which involves believing in the future.

#### **Competitive Enterprise**



One of Raychem RPG's aims is knowing how to offer its users best possible solution in consideration of the quality-price ratio. The fact that thousands of clients all over the world are faithful to Raychem RPG products demonstrates the technical and economic validity of the solution offered.

#### **Global Capability**



The company's sales network is one of its strengths. It enables Raychem RPG to be present on all the main global markets consequently being as closely as possible to the end customer. The company has it's presence in all over Globe. This direct access to each market allows the Raychem RPG s taff to remain inside the market with the advantage of being closer to the client.

## APPROVALS FOR INDUSTRIAL CABLE GLANDS

Raychem RPG industrial cable gland A1/A2, BW, CW and E1W are CE Approved as per Applicable Low Voltage directive 2014/35/EU and Applicable Standard IEC/EN 62444.



The CE marking indicates a product's compliance with EU legislation and so enables the free movement of products within the European market. By affixing the CE marking to a product, a manufacturer declares, on his sole responsibility, that the product meets all the legal requirements for the CE marking, which means that the product can be sold throughout the European Economic Area.



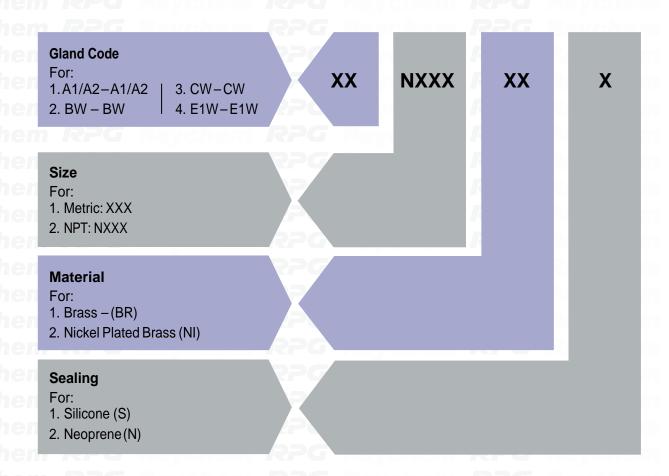
Raychem RPG manufactured cable glands & related accessories are ROHS complaint in accordance with rohs directive 2011/65/EU & its subsequent ammendment directives & is tested for the presence of Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Hex-Cr), Polybrominated biphenyl (PBB), and Polybrominated diphenyl ethers (PBDE) and observed no dangerous substances.



Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) is a European Union regulation dating from 18 December 2006. REACH addresses the production and use of chemical substances, and their potential impacts on both human health and the environment.

The regulation also established the European Chemicals Agency, which manages the technical, scientific and administrative aspects of REACH.

## NOMENCLATURE FOR INDUSTRIAL CABLE GLANDS



#### **Example of Product Code for NPT:**

- 1. A1/A2 RRPL A1/A2N12LBRS
- 2. BW RRPL BWN12LBRS
- 3. CW RRPL CWN12LBRS
- 4. E1W RRPL E1WN12LBRS

#### Example of Product Code for Metric:

- 1. A1/A2 RRPL A1/A2 16L BRN
- 2. BW RRPL BW 16L BRN
- 3. CW RRPLCW16LBRN
- 4. E1W RRPL E1W 16L BRN

## A1 / A2 INDUSTRIAL CABLE GLANDS

#### **Technical Data:**

#### A1 / A2 Industrial Cable Gland:

Raychem RPG Manufacturers A1/A2 Industrial Cable Gland as per the requirement of IEC/EN 62444

#### Technical information:

Design Specification : IEC/EN 62444

Gland Sizes : M16toM100alsoavailableinNPT

Ingress Protection : IP66

Gland Material : Brass, Nickel Plated Brass

Sealing Type : Single Sealing

Operating Temperature : Neoprene -40°C to +100°C

Silicone -50°C to +135°C

Plastic Ring Material : Nylon 66

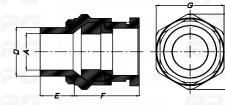
Sealing Method : Displacement Sealing Sealing Area : Cable Outer Sheath

Finish : Natural Brass or Nickel Plated Brass

Cable Types : Unarmoured
Application : Indoor and Outdoor
Accessories : Lock Nut, Shrouds, IP Washer

Additional Accessories : Adaptor, Reducer





|                   | Standard              | Outional autor Throad                | Overal            | Cable            | Gland Dimensions                     |                                  |                          |                       |                            |  |  |
|-------------------|-----------------------|--------------------------------------|-------------------|------------------|--------------------------------------|----------------------------------|--------------------------|-----------------------|----------------------------|--|--|
|                   | entry threads<br>(D)  | Optional entry Thread                | Diameter (A)      |                  | Entry Thread                         |                                  |                          | Hexago                | n Size                     |  |  |
| Cable Gland Type  | Metric Thread<br>type | NPT Thread type<br>(ordering suffix) | Min. dia.<br>(mm) | Max. dia<br>(mm) | Entry<br>Thread<br>Diameter<br>( D ) | Entry<br>Thread<br>Length<br>(E) | Protrusion<br>length (F) | Across Flat<br>(G mm) | Across<br>Corner<br>(H mm) |  |  |
| RRPL A1/A2 20/16L | M20                   | NPT1/2" (N12S)                       | 3.50              | 8.00             | 20.00                                | 10.00                            | 20.00                    | 22.00                 | 24.50                      |  |  |
| RRPL A1/A2 20 S   | M20                   | NPT1/2" (N12M)                       | 8.50              | 12.00            | 20.00                                | 15.00                            | 22.00                    | 24.00                 | 26.00                      |  |  |
| RRPL A1/A2 20 L   | M20                   | NPT1/2" (N12L)                       | 8.00              | 13.00            | 20.00                                | 15.00                            | 22.00                    | 26.00                 | 29.00                      |  |  |
| RRPL A1/A2 25 S   | M25                   | NPT3/4" (N34S)                       | 9.00              | 17.50            | 25.00                                | 15.00                            | 25.00                    | 30.00                 | 33.00                      |  |  |
| RRPL A1/A2 25 L   | M25                   | NPT3/4" (N34L)                       | 14.00             | 21.00            | 25.00                                | 15.00                            | 26.00                    | 33.50                 | 37.00                      |  |  |
| RRPL A1/A2 32 L   | M32                   | NPT1" (N1L)                          | 18.50             | 26.00            | 32.00                                | 15.00                            | 30.00                    | 41.00                 | 45.50                      |  |  |
| RRPL A1/A2 40 L   | M40                   | NPT1-1/4"(N114L)                     | 25.00             | 33.00            | 40.00                                | 15.00                            | 31.00                    | 50.00                 | 55.50                      |  |  |
| RRPL A1/A2 50 S   | M50                   | NPT1-1/2" (N112L)                    | 31.00             | 38.00            | 50.00                                | 15.00                            | 33.00                    | 55.00                 | 60.50                      |  |  |
| RRPL A1/A2 50 L   | M50                   | NPT2" (N2S)                          | 35.00             | 44.00            | 50.00                                | 15.00                            | 33.00                    | 59.50                 | 67.00                      |  |  |
| RRPL A1/A2 63 S   | M63                   | NPT2" (N2L)                          | 39.00             | 49.30            | 63.00                                | 15.00                            | 35.00                    | 70.00                 | 77.00                      |  |  |
| RRPL A1/A2 63 L   | M63                   | NPT2-1/2" (N212S)                    | 46.00             | 53.50            | 63.00                                | 15.00                            | 35.00                    | 74.00                 | 80.00                      |  |  |
| RRPL A1/A2 75 S   | M75                   | NPT2-1/2" (N212L)                    | 53.00             | 61.50            | 75.00                                | 15.00                            | 35.00                    | 82.00                 | 90.50                      |  |  |
| RRPL A1/A2 75 L   | M75                   | NPT3" (N3L)                          | 60.00             | 67.40            | 75.00                                | 15.00                            | 40.00                    | 84.00                 | 94.00                      |  |  |
| RRPL A1/A2 90 L   | M90                   | NPT3-1/2" (N312L)                    | 66.50             | 78.00            | 90.00                                | 20.00                            | 50.00                    | 101.00                | 114.00                     |  |  |
| RRPL A1/A2 100 L  | M100                  | NPT4" (N4L)                          | 76.00             | 88.00            | 100.00                               | 25.00                            | 50.00                    | 119.00                | 131.00                     |  |  |

 $<sup>\</sup>hbox{\it ***} For customize product refer the nomenclature page}$ 

#### **Raw Material Specification**

 Grade of Brass
 : CuZn39Pb3 /IS 319

 Copper+Nickel Content
 : 56.0 - 59.0%

 Zinc
 : Remainder %

 Lead
 : 2 - 3.5%

Iron : 0.35% Max
Total Impurities : 0.4% / 0.7%

Brass Kit : Brass Cable Gland, Brass Lock

Nut, IP Washer, Shrouds (PVC).

Nickel Plated Brass Kit: Nickel Plated Brass, Cable Gland,

Nickel Plated Lock Nut, IP washer,

Shrouds (PVC).

#### **Product Application:**

Raychem RPG A1/A2 type brass indoor and outdoor cable gland is used with all types of unarmoured cable, providing mechanical cable retention and an environmental seal on the cable outer sheath.

## **BWINDUSTRIAL CABLE GLAND**

#### **Technical Data:**

#### **BW Industrial Cable Gland:**

Raychem RPG Manufacturers BW Industrial Cable Gland as per IEC/EN 62444, BS6121 Part 1:2005

#### Technical information:

Design Specification : BS6121:Part 1: 2005 IEC/EN 62444
Gland Sizes : M16to M90 also available in NPT

Ingress Protection : IP2X

Gland Material : Brass, Nickel plated brass

Sealing Type : No Sealing

Armour Clamping : TwoPartArmourLock

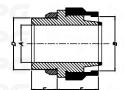
Finish : Natural Brass or Nickel Plated Brass
Cable Types : Steel Wire Armour (SWA),
Aluminium Wire Armour (AWA)

Application : Dry Indoo

Accessories : Lock Nut, Earth Tag & Shrouds

Additional Accessories : Adapter, Reducer







|                  | Standard              | Ontional Fature Throad               | Overall Cable     |                  |                                      | Gl                               | and Dimensio                | ons                      |                               | A            | . Dan |
|------------------|-----------------------|--------------------------------------|-------------------|------------------|--------------------------------------|----------------------------------|-----------------------------|--------------------------|-------------------------------|--------------|-------|
|                  | Entry Thread<br>(D)   | Optional Entry Thread                | Diame             | eter (B)         | Entry Thread                         |                                  |                             | Hexagon Size             |                               | Armour Range |       |
| Cable Gland Type | Metric<br>Thread Type | NPT Thread Type<br>(ordering suffix) | Min. dia.<br>(mm) | Max. dia<br>(mm) | Entry<br>Thread<br>Diameter<br>( D ) | Entry<br>Thread<br>Length<br>(E) | Protrusion<br>Length<br>(F) | Across<br>Flat<br>(G mm) | Across<br>Corner<br>(H<br>mm) | Min          | Max   |
| RRPL BW 16 S     | M16                   | -                                    | 8.0               | 12.0             | 16                                   | 10                               | 23                          | 20                       | 23                            | 0.8          | 1.25  |
| RRPL BW 16 L     | M16                   | -                                    | 8.6               | 13.5             | 16                                   | 10                               | 23                          | 20                       | 23                            | 0.8          | 1.25  |
| RRPL BW 20 S     | M20                   | NPT1/2" (N12S)                       | 12.6              | 16.8             | 20                                   | 10                               | 23                          | 22                       | 24                            | 0.8          | 1.25  |
| RRPL BW 20 L     | M20                   | NPT1/2" (N12L)                       | 14.5              | 20.0             | 20                                   | 10                               | 30                          | 25                       | 28                            | 0.8          | 1.25  |
| RRPL BW 25 S     | M25                   | NPT3/4" (N34S)                       | 19.5              | 24.5             | 25                                   | 10                               | 30                          | 31                       | 34                            | 1.25         | 1.6   |
| RRPL BW 25 L     | M25                   | NPT3/4" (N34L)                       | 20.5              | 26.0             | 25                                   | 10                               | 32                          | 32                       | 36                            | 1.25         | 1.6   |
| RRPL BW 32 L     | M32                   | NPT1" (N1L)                          | 22.0              | 32.5             | 32                                   | 10                               | 36                          | 40                       | 44                            | 1.6          | 2.0   |
| RRPL BW 40 S     | M40                   | NPT1-1/4" (N114S)                    | 30.0              | 38.0             | 40                                   | 10                               | 36                          | 46                       | 51                            | 1.6          | 2.0   |
| RRPL BW 40 L     | M40                   | NPT1-1/4"(N114L)                     | 33.0              | 40.5             | 40                                   | 15                               | 39                          | 49                       | 55                            | 1.6          | 2.0   |
| RRPL BW 50 S     | M50                   | NPT1-1/2" (N112L)                    | 40.5              | 49.0             | 50                                   | 15                               | 40                          | 57                       | 64                            | 2.0          | 2.5   |
| RRPL BW 50 L     | M50                   | NPT2" (N2S)                          | 44.1              | 54.0             | 50                                   | 15                               | 45                          | 62                       | 69                            | 2.0          | 2.5   |
| RRPL BW 63 S     | M63                   | NPT2" (N2L)                          | 51.0              | 58.0             | 63                                   | 15                               | 45                          | 69                       | 78                            | 2.0          | 2.5   |
| RRPL BW 63 L     | M63                   | NPT2-1/2" (N212S)                    | 56.2              | 65.5             | 75                                   | 15                               | 50                          | 75                       | 84                            | 2.0          | 2.5   |
| RRPL BW 75 S     | M75                   | NPT2-1/2" (N212L)                    | 62.0              | 72.0             | 75                                   | 15                               | 50                          | 82                       | 93                            | 2.0          | 2.5   |
| RRPL BW 75 L     | M75                   | NPT3" (N3L)                          | 68.0              | 77.5             | 75                                   | 15                               | 50                          | 88                       | 99                            | 2.5          | 3.0   |
| RRPL BW 90 S     | M90                   | NPT3-1/2" (N312S)                    | 78.0              | 87.0             | 90                                   | 20                               | 55                          | 100                      | 112                           | 3.15         | 4.0   |
| RRPL BW 90 L     | M90                   | NPT3-1/2" (N312L)                    | 78.5              | 88.0             | 90                                   | 20                               | 55                          | 112                      | 120                           | 3.15         | 4.0   |

\*\*For customize product refer the nomen clature page

#### Raw Material Specification:

 Grade of Brass
 : CuZn39Pb3 /IS 319

 Copper+Nickel Content
 : 56.0 - 59.0%

 Zinc
 : Remainder %

 Lead
 : 2-3.5%

 Iron
 : 0.35% Max

 Total Impurities
 : 0.4% /0.7%

Brass Kit : Brass Cable Gland, Brass Lock Nut,

Earth Tag, Shrouds (PVC).

Nickel Plated Brass Kit: Nickel Plated Brass Cable Gland, Nickel Plated

Lock Nut, Earth Tag, Shrouds (PVC).

#### **Product Application:**

Raychem RPG BW type brass indoor cable gland is used with all types of Steel Wire Armour (SWA) and Aluminium Wire Armour (AWA) cable providing mechanical cable retention and electrical continuity via armour wire termination. The BW design offers the benefit of a longer body to protect the armour wires from impact.

## **CWINDUSTRIAL CABLE GLAND**

#### **Technical Data:**

#### **CW Industrial Cable Gland:**

Raychem RPG Manufacturers CW Industrial Cable Gland as per IEC/EN 62444, BS6121 Part 1:2005

Technical information :

**Armour Clamping** 

Design Specification : BS6121 Part 1:2005 IEC/EN 62444
Gland Sizes : M16to M90 also available in NPT

Ingress Protection : IP66

Gland Material : Brass, Nickel plated brass
Operating Temperature : Neoprene -40°C to+100° C

Silicone -50°C to+135°C Three Part Armour Lock

Plastic Ring Material : Nylon 66

Sealing Method : Compression Sealing Sealing Area : Cable Outer Sheath

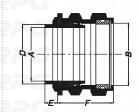
Finish : Natural Brass or Nickel Plated Brass
Cable Types : Steel Wire Armour (SWA),

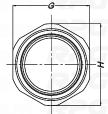
Aluminium Wire Armour (AWA)
Application Indoor and Outdoor

Accessories : LockNut, EarthTag, IPWasher & Shrouds

Additional Accessories : Adapter, Reducer







|                  | Standard                 |                                      | Cable Under Armour/ Overall Cable |                   |                  |                                      |                                  |                             |                          |                            |       |              |  |
|------------------|--------------------------|--------------------------------------|-----------------------------------|-------------------|------------------|--------------------------------------|----------------------------------|-----------------------------|--------------------------|----------------------------|-------|--------------|--|
|                  | Entry<br>thread (D)      | Optional Entry Thread                | Bedding<br>Diameter (A)           |                   | Diameter (B)     |                                      |                                  |                             |                          | on Size                    | Armou | Armour Range |  |
| Cable Gland Type | Metric<br>Thread<br>Type | NPT Thread Type<br>(ordering suffix) | Max. dia.(mm)                     | Min. dia.<br>(mm) | Max. dia<br>(mm) | Entry<br>Thread<br>Diameter<br>( D ) | Entry<br>Thread<br>Length<br>(E) | Protrusior<br>Length<br>(F) | Across<br>Flat<br>(G mm) | Across<br>Corner<br>(H mm) | Min   | Max          |  |
| RRPL CW 16 S     | M16                      | -                                    | 9.0                               | 4.0               | 7.5              | 16.0                                 | 10.0                             | 40                          | 20.50                    | 22.70                      | 0.8   | 1.25         |  |
| RRPL CW 16 L     | M16                      | -                                    | 9.0                               | 7.0               | 11.0             | 16.0                                 | 10.0                             | 40                          | 20.50                    | 22.70                      | 0.8   | 1.25         |  |
| RRPL CW 20 S     | M20                      | NPT1/2"(N12S)                        | 13.0                              | 10.5              | 14.5             | 20.0                                 | 10.0                             | 47                          | 22.20                    | 24.20                      | 0.8   | 1.25         |  |
| RRPL CW 20 L     | M20                      | NPT1/2"(N12L)                        | 14.5                              | 14.0              | 18.5             | 20.0                                 | 10.0                             | 47                          | 26.20                    | 29.00                      | 0.8   | 1.25         |  |
| RRPL CW 25 S     | M25                      | NPT3/4"(N34S)                        | 18.6                              | 18.4              | 23.2             | 25.0                                 | 10.0                             | 50                          | 31.00                    | 34.50                      | 1.25  | 1.6          |  |
| RRPL CW 25 L     | M25                      | NPT3/4"(N34L)                        | 20.7                              | 20.0              | 25.5             | 25.0                                 | 10.0                             | 50                          | 36.00                    | 39.20                      | 1.25  | 1.6          |  |
| RRPL CW 32 L     | M32                      | NPT1"(N1L)                           | 27.4                              | 25.5              | 33.0             | 32.0                                 | 10.0                             | 55                          | 41.00                    | 46.00                      | 1.6   | 2.0          |  |
| RRPL CW 40 S     | M40                      | NPT1-1/4"(N114S)                     | 32.7                              | 31.0              | 36.5             | 40.0                                 | 15.0                             | 60                          | 49.50                    | 55.50                      | 1.6   | 2.0          |  |
| RRPL CW 40 L     | M40                      | NPT1-1/4"(N114L)                     | 33.5                              | 34.5              | 40.0             | 40.0                                 | 15.0                             | 60                          | 49.50                    | 54.50                      | 1.6   | 2.0          |  |
| RRPL CW 50 S     | M50                      | NPT1-1/2"(N112L)                     | 41.0                              | 39.0              | 46.7             | 50.0                                 | 15.0                             | 65                          | 57.00                    | 63.50                      | 2.0   | 2.5          |  |
| RRPL CW 50 L     | M50                      | NPT2"(N2S)                           | 44.5                              | 43.5              | 51.0             | 50.0                                 | 15.0                             | 65                          | 62.00                    | 69.60                      | 2.0   | 2.5          |  |
| RRPL CW 63 S     | M63                      | NPT2"(N2L)                           | 50.1                              | 47.5              | 55.6             | 63.0                                 | 15.0                             | 70                          | 73.00                    | 81.00                      | 2.0   | 2.5          |  |
| RRPL CW 63 L     | M63                      | NPT2-1/2"(N212S)                     | 56.0                              | 54.0              | 62.2             | 63.0                                 | 15.0                             | 70                          | 78.00                    | 86.00                      | 2.0   | 2.5          |  |
| RRPL CW 75 S     | M75                      | NPT2-1/2"(N212L)                     | 63.0                              | 61.5              | 68.0             | 75.0                                 | 15.0                             | 75                          | 84.50                    | 95.50                      | 2.0   | 2.5          |  |
| RRPL CW 75 L     | M75                      | NPT3"(N3L)                           | 68.0                              | 67.0              | 75.5             | 75.0                                 | 15.0                             | 75                          | 91.00                    | 102.20                     | 2.5   | 3.0          |  |
| RRPL CW 90 S     | M90                      | NPT3-1/2"(N312S)                     | 79.0                              | 75.5              | 85.0             | 90.0                                 | 20.0                             | 90                          | 100.00                   | 110.00                     | 3.15  | 4.0          |  |
| RRPL CW 90 L     | M90                      | NPT3-1/2"(N312L)                     | 79.0                              | 80.0              | 88.7             | 90.0                                 | 20.0                             | 90                          | 103.00                   | 114.00                     | 3.15  | 4.0          |  |

 $\hbox{\it **} For customize product refer the nomenclature page}$ 

Raw Material Specification:

**Total Impurities** 

 Grade of Brass
 : CuZn39Pb3 /IS319

 Copper+Nickel Content
 : 56.0 - 59.0%

 Zinc
 : Remainder %

 Lead
 : 2 - 3.5%

 Iron
 : 0.35% Max

Brass Kit : Brass Cable Gland Brass Lock Nut, IP Washer, Earth Tag, Shrouds (PVC).

Nickel Plated Brass Kit: Nickel Plated Brass, Cable Gland, Nickel Plated Lock Nut, Nickel Plated

Earth Tag, IP washer, Shrouds (PVC).

#### **Product Application:**

Raychem RPG CW type brass indoor & outdoor cable gland is used with all types of Steel Wire Armour (SWA) and Aluminium Wire Armour (AWA) cable providing mechanical cable retention and electrical continuity via armour wire termination.

: 0.4% / 0.7%

## **E1WINDUSTRIAL CABLE GLAND**

#### **Technical Data:**

#### E1W Industrial Cable Gland:

Raychem RPG Manufacturers E1W Industrial Cable Gland as per IEC/EN 62444, BS6121 Part 1:2005

**Technical information:** 

Armour Clamping

Design Specification : BS6121 Part 1:2005 IEC/EN62444
Gland Sizes : M16to M90 also available in NPT

Ingress Protection : IP66

Gland Material : Brass, Nickel Plated Brass

Operating Temperature : Neoprene -40°C to+100°C

Silicone -50°C to+135°C

: Three Part Armour Lock

Plastic Ring Material : Nylon 66

Sealing Method : Double Compression Sealing

Sealing Area : Cable Outer Sheath / Cable Inner Sheath
Finish : Natural Brass or Nickel Plated Brass

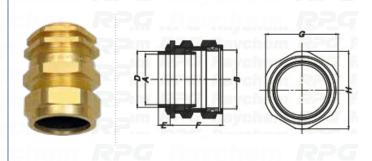
Cable Types : Steel Wire Armour (SWA),

Aluminium Wire Armour (AWA)

Application : Indoor and Outdoor

Accessories : LockNut, Earth Tag, Shrouds & IP Washer

Additional Accessories : Adapter, Reducer



|                  | Standard Optional        |                                      |                   | Cable Under Armour/ Bedding Diameter Overall Cable |                   |                     | Gland Dimensions                     |                                  |                             |                          |                            | Armour Range   |      |
|------------------|--------------------------|--------------------------------------|-------------------|--|-------------------|---------------------|--------------------------------------|----------------------------------|-----------------------------|--------------------------|----------------------------|----------------|------|
|                  | Entry<br>Thread (D)      | Entry Thread                         | beading<br>(A     |  | Diame             | Diameter (B ) Entry |                                      | ntry Thread                      |                             | Hexagon Size             |                            | Allioui Kalige |      |
| Cable Gland Type | Metric<br>Thread<br>Type | NPT Thread Type<br>(ordering suffix) | Min. dia.<br>(mm) | Max. dia.<br>(mm)                                  | Min. dia.<br>(mm) | Max. dia<br>(mm)    | Entry<br>Thread<br>Diameter<br>( D ) | Entry<br>Thread<br>Length<br>(E) | Protrusion<br>Length<br>(F) | Across<br>Flat<br>(G mm) | Across<br>Corner<br>(H mm) | Min            | Max  |
| RRPL E1W 16 L    | M16                      | -                                    | 3.0               | 7.5  | 6.5               | 11.5                | 16                                   | 15.0                             | 40                          | 22.0                     | 24.0                       | 8.0            | 1.25 |
| RRPLE1W20S       | M20                      | NPT1/2"(N12S)                        | 6.0               | 10.0   | 10.5              | 15.0                | 20                                   | 15.0                             | 45                          | 22.0                     | 24.0                       | 8.0            | 1.25 |
| RRPL E1W 20 L    | M20                      | NPT1/2"(N12L)                        | 10.2              | 14.0   | 14.8              | 19.0                | 20                                   | 15.0                             | 45                          | 27.0                     | 30.0                       | 8.0            | 1.25 |
| RRPLE1W25S       | M25                      | NPT3/4"(N34S)                        | 12.5              | 16.0   | 18.0              | 21.5                | 25                                   | 15.0                             | 50                          | 31.0                     | 35.0                       | 1.25           | 1.6  |
| RRPL E1W 25 L    | M25                      | NPT3/4"(N34L)                        | 14.0              | 19.7   | 19.5              | 25.5                | 25                                   | 15.0                             | 50                          | 35.0                     | 39.0                       | 1.25           | 1.6  |
| RRPL E1W 32 L    | M32                      | NPT1"(N1L)                           | 16.8              | 25.0   | 23.0              | 31.3                | 32                                   | 15.0                             | 55                          | 44.0                     | 48.0                       | 1.6            | 2.0  |
| RRPLE1W40S       | M40                      | NPT1-1/4"(N114S)                     | 24.8              | 31.5   | 31.0              | 38.0                | 40                                   | 15.0                             | 60                          | 51.5                     | 57.5                       | 1.6            | 2.0  |
| RRPL E1W 40 L    | M40                      | NPT1-1/4"(N114L)                     | 28.0              | 33.5   | 33.5              | 40.0                | 40                                   | 15.0                             | 60                          | 51.5                     | 57.5                       | 1.6            | 2.0  |
| RRPLE1W50S       | M50                      | NPT1-1/2"(N112L)                     | 32.0              | 42.0   | 39.0              | 45.0                | 50                                   | 15.0                             | 65                          | 64.5                     | 72.0                       | 2.0            | 2.5  |
| RRPL E1W 50 L    | M50                      | NPT2"(N2S)                           | 37.0              | 42.0   | 44.0              | 49.3                | 50                                   | 15.0                             | 65                          | 64.5                     | 72.0                       | 2.0            | 2.5  |
| RRPLE1W63S       | M63                      | NPT2"(N2L)                           | 41.5              | 50.5   | 48.5              | 58.0                | 63                                   | 18.0                             | 70                          | 70.0                     | 77.0                       | 2.0            | 2.5  |
| RRPL E1W 63 L    | M63                      | NPT2-1/2"(N212S)                     | 50.0              | 57.5   | 57.0              | 65.0                | 63                                   | 18.0                             | 70                          | 78.0                     | 87.5                       | 2.0            | 2.5  |
| RRPLE1W75S       | M75                      | NPT2-1/2"(N212L)                     | 55.0              | 59.5   | 62.0              | 67.0                | 75                                   | 20.0                             | 76                          | 84.0                     | 92.5                       | 2.0            | 2.5  |
| RRPL E1W 75 L    | M75                      | NPT3"(N3L)                           | 59.0              | 68.0   | 66.4              | 78.5                | 75                                   | 20.0                             | 79                          | 95.0                     | 108.0                      | 2.5            | 3.0  |
| RRPL E1W 90 L    | M90                      | NPT3-1/2"(N312L)                     | 66.5              | 75.5   | 72.0              | 88.0                | 90                                   | 20.0                             | 96                          | 105.0                    | 122.0                      | 3.15           | 4.0  |

\*\*For customize product refer the nomenclature page

| Raw Material Specific | cation:              | <b>Brass Kit</b>  |
|-----------------------|----------------------|-------------------|
| Grade of Brass        | : CuZn39Pb3 / IS 319 |                   |
| Copper+Nickel Content | : 56.0 - 59.0%       |                   |
| Zinc                  | : Remainder %        | Nickel Plated Bra |
| Lead                  | : 2 - 3.5%           |                   |
| Iron                  | : 0.35% Max          |                   |
| Total Impurities      | : 0.4% / 0.7%        |                   |

ss Kit : Brass Cable Gland, Brass

Lock Nut, IP Washer, Earth Tag, Shrouds (PVC).

ickel Plated Brass Kit: Nickel Plated Brass Cable

Gland, Nickel Plated Lock Nut, IP washer, Earth Tag, Shrouds (PVC).

#### **Product Application:**

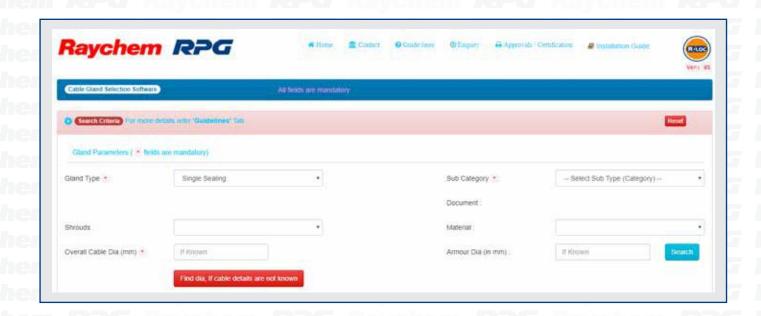
Raychem RPG E1W type brass indoor and outdoor cable gland is used with Steel Wire Armour (SWA) cable providing an environmental seal on the cable inner sheath and cable outer sheath. The cable gland provides mechanical cable retention and electrical continuity via the armour termination. Separate tightening actions for the inner Compression seal and the armour termination allow maximum control over the pressure applied to the cable inner covering.

## **CABLE GLAND SELECTION SOFTWARE**

Raychem RPG has introduced cable gland selection software and designers now can find the right gland for their requirement. Operators may either specify environmental requirements and cable characteristics or use cable manufacturer's codes and product descriptions to access the data sheet for the relevant product.

#### Reference Standard:

- Internationally followed standard
- BS 6121-1: 2005
- IEC/EN62444



## **INGRESS PROTECTIONMARIX**

| First Divit   | Protec                                   | tion against Solid Foregin Objects and Ac                                | cess to Hazardous Parts   |
|---------------|--|--|---|
| First Digit — | Illustration                             | Method   | Explanation   |
| 0 -           |  | Non-Protected  | Non-Protected   |
| 1             | 50mm                                     | Protected against solid foreign objects of 50mm diameter and greater.    | Protected against access to hazardous parts with the back of a hand |
| 2             | 12.5mm                                   | Protected against solid foreign objects of 12.5 mm diameter and greater. | Protected against access to hazardous parts with a finger           |
| 2             | 2.5mm                                    | Protected against solid foreign objects of 2.5mm diameter and greater.   | Protected against access to hazardous parts withtool                |
| 4             | 1mm<br>O                                 | Protected against solid foreign objects of 1.0mm diameter and greater.   | Protected against access to hazardous parts with wire               |
| 5             |  | Dust-protected   | Protected against access to hazardous parts with wire               |
| 6             | 20 00 00 00 00 00 00 00 00 00 00 00 00 0 | Dust-tight   | Protected against access to hazardous parts with wire               |

| Second |  | Protection against Liquids                                      |
|--------|--|---|
| Digit  | Illustration                           | Method  |
| 0      | -                                      | Non-Protected   |
| 1      |  | Protected against drop of water falling vertically              |
| 2      | 60000000000000000000000000000000000000 | Protected against drop of water falling at up to 15° vertically |
| 2      |  | Protected against spraying water upto 60° vertically            |
| 4      |  | Protected against splashing water from all direction            |
| 5      |  | Protected against jet of water from all direction               |
| 6      |  | Protected against powerful jet of water from all direction      |
| 7      | 1m (Min)                               | Protected against the effects of temporary immersion            |
| 8      | tm                                     | Protected against the effects of continues immersion            |

Please refer to appropriate catalogue pages for specific ingress Protection rating according to their design and construction





#### Material:

- Brass
- Nickel platedbrass

#### Features:

- Designed to provide flexibility when there is conflict between the type of size of cable gland thread and cable entry hole in the equipment.
- Available in standard sizes from M16 to M100.
- Thread conversions available in METRIC, NPT, PG.





## Material:

- Brass
- Nickel plated brass

#### Features:

- Means of connection or an earth bond around the cable gland.
- Available in various shapes and in standard sizes.
- Ensures earth continuity between the electrical equipment & the gland.
- Can be coated or plated as per Customer specification.

| Metric | Product Code |
|--------|--------------|
| M16    | RRPLET-16    |
| M20    | RRPLET-20    |
| M25    | RRPLET-25    |
| M32    | RRPLET-32    |
| M40    | RRPLET-40    |

| Size | Product Code |
|------|--------------|
| M50  | RRPLET-50    |
| M63  | RRPLET-63    |
| M75  | RRPLET-75    |
| M90  | RRPLET-90    |





- Brass
- Nickel platedbrass

#### Features:

- Usedinfasteningglandstotheglandplate.
- Available in Metric, NPT & PG.

Sizes: M16 to M90

| Metric | Product Code |
|--------|--------------|
| M16    | RRPLLN-16    |
| M20    | RRPLLN-20    |
| M25    | RRPLLN-25    |
| M32    | RRPLLN-32    |
| M40    | RRPLLN-40    |

| Metric | Product Code |
|--------|--------------|
| M50    | RRPLLN-50    |
| M63    | RRPLLN-63    |
| M75    | RRPLLN-75    |
| M90    | RRPLLN-90    |





- High Grade Poly Vinyl Chloride
- Low Smoke and Low Flammable compound
- Low Smoke Zero Halogen.

#### Features:

- Provide additional enhances IP rating of the Gland Terminals.
- Effective solution to weather and corrosion protection of a Cable Gland.
- Available in same gland size compatible to each size of the Cable Gland.
- The arrow end of the sleeve can be readily cut with a knife, enabling it to be slipped over a wide range
  of cable diameters and assists ease of installations.



# Raychem RPG

ENGINEERING GROWTH. PIONEERING EXCELLENCE

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