





Introduction to Cable Gland

Functions of Cable Gland

Cable Gland is a device designed to ease the entry of a cable, flexible cable or insulated conductor into an enclosure.

Provide a holding force on the cable to ensure adequate levels of cable pull-out resistance, and prevent lateral and axial loads being applied to the internal cable conductor terminations.

Provide additional sealing on the part of the cable entering the enclosure, when a high degree of ingress protection is required.

Provide additional environmental sealing at the cable entry point, maintaining the ingress protection rating of the enclosure and cable gland combination, with the selection of applicable accessories dedicated to performing this function.

Product Design & Construction

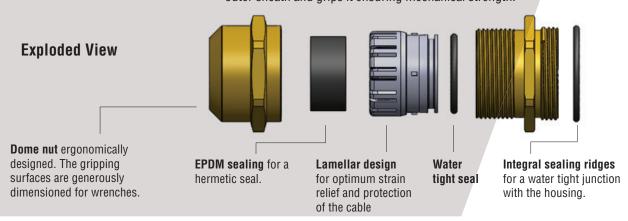
Raychem RPG Cable glands are designed for use with all types of electrical power, control, instrumentation, data telecommunications cables & fire rated Cables. They are used as a sealing and termination device to ensure that the characteristics of the enclosure which the cable enters can be maintained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

Plastic Insert

Plastic insert and seal terminates and secured the cable outer sheath and grips it ensuring mechanical strength.



Approvals:



Raychem RPG manufactured Cable Glands by REACH regulation (EC 1907/2006) which aims to improve the protection of human health and the environment through the better and earlier

identification of the intrinsic properties of chemical substances.



Raychem RPG manufactured Cable Glands & related accessories

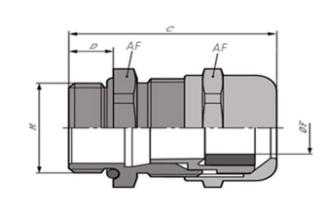
are ROHS compliant in accordancewith RoHS directive 2015/863 (COMMISSION DELEGATED DIRECTIVE (EU)): RoHS 3 its subsequent amendment directives & is tested for the presence Of Lead (Pb), Cadmium (Cd), Mercury (Hg) Hexavalent Chromium (Hex-Cr), Polybrominated Biphenyl (PBB) and Ploy brominated Diphenyl Ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), Disobutyl phthalate (DIBP) and observed no dangerous substance.

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Raychem RPG industrial cable are CE Approved As per Applicable Low Voltage directive

2014/35/EU and Applicable Standard IEC 62444:2010. 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.





Benefits:

- · Highly reliable.
- High quality strain relief and sealing.
- Good performance for standard industrial application.
- Easy assembly install cable gland insert cable tighten cap.

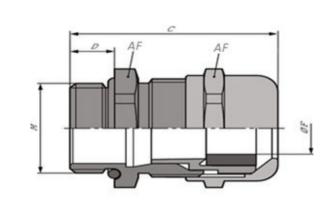
- For metal machines and housing.
- For standard industrial applications in harsh environments.
- · Machine and equipment manufacturing.
- · Chemical industries.

Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-12	M 12 x 1,5	3.0 – 7.0	16	23 – 30	5

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	Dynamic strain stabilityHigh strain relief (DIN EN 62444 Tab. 2A)
Accessories	Lock nut







Benefits:

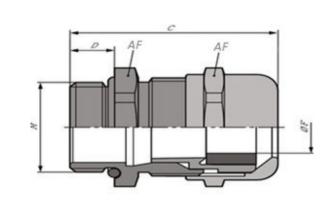
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Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-16	M 16 x 1,5	4.5 – 10.0	20	26 – 34	5

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
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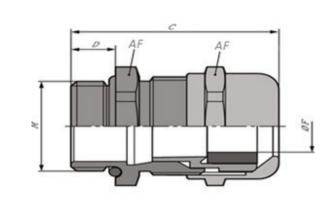
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Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-20	M 20 x 1,5	6.0 – 13.0	24	29 – 37	6

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
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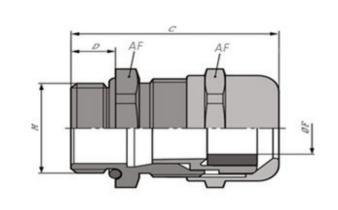
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Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-25	M 25 x 1,5	9.0 – 17.0	29	33 – 42	7

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
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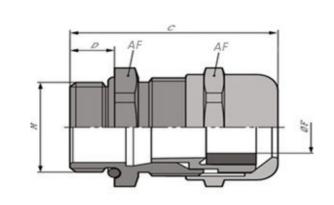
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Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-32	M 32 x 1,5	13.0 – 21.0	36	36 – 44	8

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	Dynamic strain stabilityHigh strain relief (DIN EN 62444 Tab. 2A)
Accessories	Lock nut







Benefits:

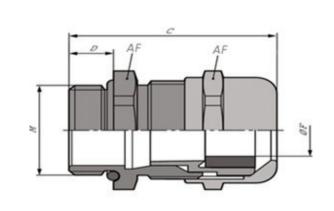
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- · High quality strain relief and sealing.
- Good performance for standard industrial application.
- Easy assembly install cable gland insert cable tighten cap.

- For metal machines and housing
- For standard industrial applications in harsh environments
- · Machine and equipment manufacturing
- · Chemical industries

Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-40	M 40 x 1,5	16.0 – 28.0	46	44 – 55	8

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	Dynamic strain stabilityHigh strain relief (DIN EN 62444 Tab. 2A)
Accessories	Lock nut





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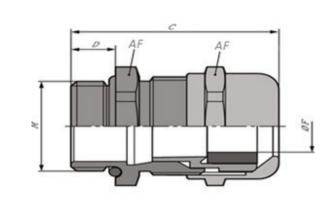
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Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-50	M 50 x 1,5	21.0 – 35.0	55	51 – 62	9

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	Dynamic strain stabilityHigh strain relief (DIN EN 62444 Tab. 2A)
Accessories	Lock nut







Benefits:

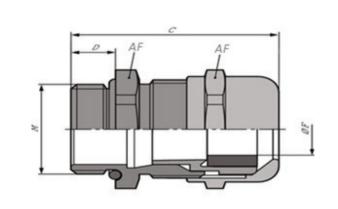
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Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-63	M 63 x 1,5	34.0 – 48.0	68	56 – 67	10

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	Dynamic strain stabilityHigh strain relief (DIN EN 62444 Tab. 2A)
Accessories	Lock nut





Benefits:

- · Highly reliable.
- High quality strain relief and sealing.
- Good performance for standard industrial application.
- Easy assembly install cable gland insert cable tighten cap.

- · For metal machines and housing
- · For standard industrial applications in harsh environments
- · Machine and equipment manufacturing
- · Chemical industries.

Part Code	Size M	Clamping Range ØF (mm)	AF (mm)	C (mm)	D (mm)
RESM-75	M 75 x 1,5	48.0 - 62.0	82	67 – 81	12

Material	Brass, Brass nickel plating
Sealing	EPDM
Clamping insert	PA 66
Oring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	Dynamic strain stabilityHigh strain relief (DIN EN 62444 Tab. 2A)
Accessories	Lock nut

ENGINEERING GROWTH. PIONEERING EXCELLENCE

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EURO SERIES CABLE GLANDS



Raychem RPG Manufacturers Cable Gland as per the requirement of IEC/EN 62444.

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 insulation, cable guarding, strain relief or a combination of these. They are mechanical fittings that form part of the electrical installation material.

The PA 66 sealing inserts are long-term stable and do not outgas. This is why this cable gland is also suitable for applications outdoors and in the chemical industry. The sealing inserts consist of PA 66 and EPDM, the gland bodies of Brass, Brass Nickel Plated & Stainless steel. The glands comply with RoHS (which means free of heavy metals) and thus meet current EU requirements.

Benefits: -

- Highly reliable.
- High quality strain relief and sealing.
- Good performance for standard industrial application.
- Easy assembly: install cable gland insert cable tighten cap.

Application: -

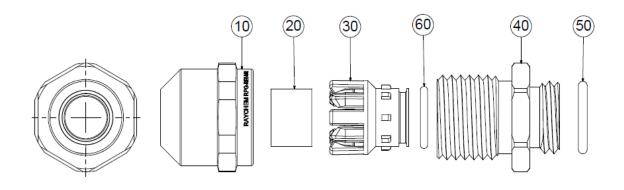
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Technical data: -

Material	Brass, Brass Nickel Plating, Stainless steel
Sealing	EPDM
Clamping insert	PA 66
O ring	EPDM
Seal operating Temperature	-40°C to +100°C
Thread type	Metric (M) ISO Pitch 1.5 (Also available with long thread length)
Degree of protection	IP 68 (5 bar 30 min)
Mechanical strength	High strain relief
Application area	Industrial, chemical industries, petrochemical industries



POS NO.	DESCRIPTION	MATERIAL
10	ENTRY NUT	BRASS / SS316L
20	SEALING RUBBER	EPDM
30	PLASTIC INSERT	POLYAMIDE 66
40	CONE BODY	BRASS / SS316L
50	'O' RING	EPDM
60	'O' RING	EPDM





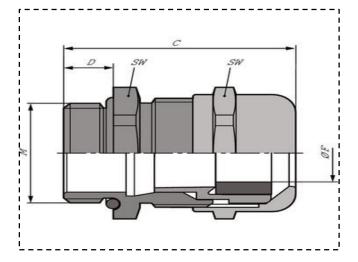


Table: 1 Metric/short thread

Part code	Size M	Clamping Range ØF (mm)	SW (mm)	C (mm)	D (mm)
RESM-12	M 12 x 1,5	3.0 – 7.0	16	23 – 30	5
RESM-16	M 16 x 1,5	4.5 – 10.0	20	26 – 34	5
RESM-20	M 20 x 1,5	6.0 – 13.0	24	29 – 37	6
RESM-25	M 25 x 1,5	9.0 – 16.0	29	33 – 42	7
RESM-32	M 32 x 1,5	13.0 – 21.0	36	36 – 44	8
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Euro Series Cable glands





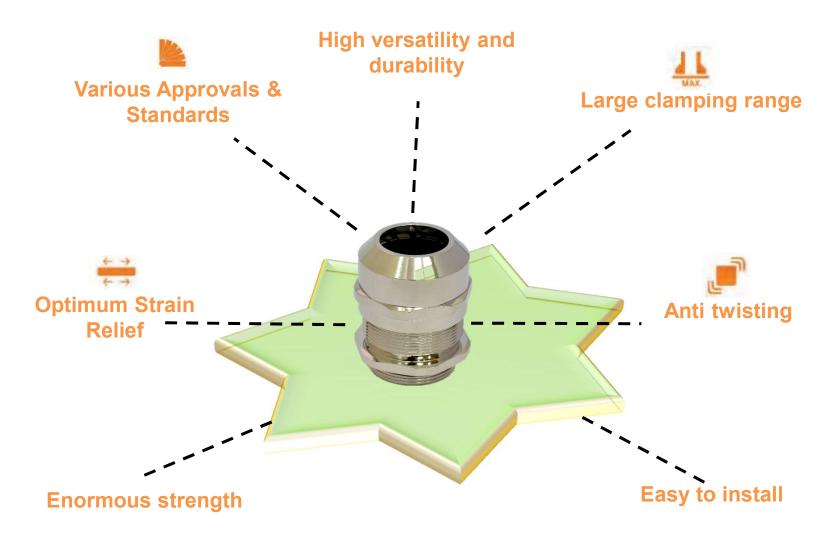






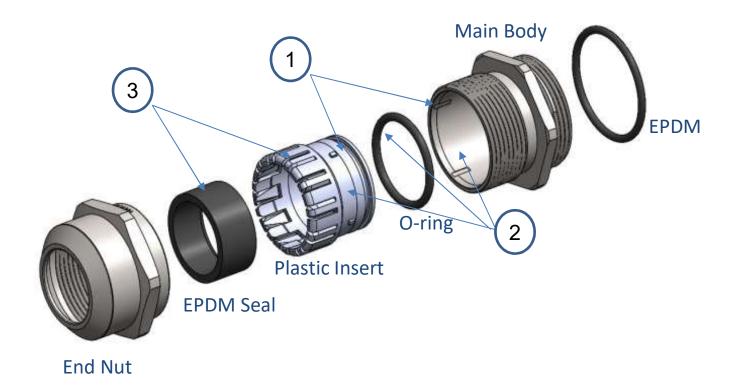


Why choose Euro series?.. Several Reasons





Functions



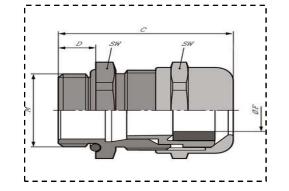
- 1. Anti-twisting Added notch in the plastic and metal part
- 2. IP 68 Added special profile in plastic and metal part and O-ring
- **3. Strain relief** Modified fins and rubber part



Technical details

Material	Brass, Brass nickel plating.	
Sealing	EPDM	
Clamping insert	PA 66	
O ring	EPDM	
Seal operating	-40°C to +100°C	
Temperature	-40 C t0 +100 C	
Throad type	Metric (M) ISO Pitch 1.5 (Also available with long	
Thread type	thread length)	
Degree of protection	IP 68	
Mechanical strength	High strain relief	
Accessories	Lock nut	
Sizes	M12 to M75	

Part code	Size Metric	Clamping Range ØF (mm)	SW (mm)	C (mm)	D (mm)
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RESM-16	M 16 x 1,5	4.5 – 10.0	20	26 – 34	5
RESM-20	M 20 x 1,5	6.0 – 13.0	24	29 – 37	6
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RESM-75	M 75 x 1,5	48.0 – 62.0	68	56 – 67	10







Product Tested as per below.

Since the Euro-series cable glands are used in various stressful and hazardous industrial applications and environments, they are tested in order to meet the requirements of diverse industries.

Compliance with European standards such as performance standard *IEC/EN 62444* is vital to ensure aspects such as functional safety, the longevity of performance, and continuity of operation for mission-critical applications. And in order to meet these standards, the cable glands have to comply with specific construction requirements such as the material used, maximum cable diameter, minimum wall thickness etc.



Cable retention test

Acceptance criteria:- The load is maintained for 5 min and end of period the displacement shall not exceed 2mm

Cable anchorage test: -

The test mandrel is pulled 50times for duration 1 sec and end of period displacement shall not exceed 2mm

Cable twist test

The torque is applied for 1 min and deflection of test mandrel shall not turn by more than angle of 45°







Impact test

Acceptance criteria:-After the test there shall no sign of disintegration nor shall there be any cracks visible to normal vision



IP test

Acceptance criteria:-The test is deemed to have pass if there is no ingress of dust and water



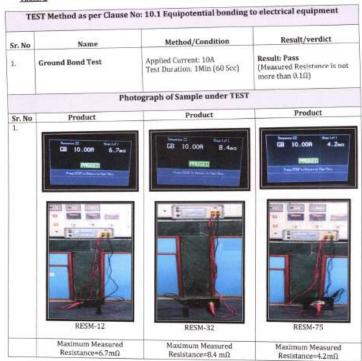




INSTITUTE OF TESTING AND CERTIFICATION (INDIA) PVT. LTD.

	IEC 6244	4	
Clauses	Requirement - Test	Results - Remarks	Verdict

Table: 2



Test Report No.- ITC/TEST/N/1803/37 (India) Py Authorised Signatory

Equipotential bonding to electrical equipment

The Cable gland is assembled to metal plate and resistance measured between plate and cable gland should not exceed 0.1Ω







Certifications & Approval



Raychem RPG Euro series cable gland are CE Approved As per Applicable Low Voltage directive 2014/35/EU and Applicable Standard EN 62444:2013. 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.



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EU Declaration of Conformity





Future: EMC Cable Glands

 Ongoing work with RIC to launch the EMC (ElectroMagentic Compatibility) series cable glands in Q1 of FY21.





Earthing cone type





- ➤ The euro series cable glands find major application across industries such as wind power, food industry, railway, automobile, plant engineering, oil and gas, automation, and chemicals. This is due to its inherent quality of strain relief.
- ➤ The innovative engineering and design help the Euro-series cable glands comply with all of the latest standards. This offers inimitable quality and safety. Built in a variety of materials, sizes, and thread forms, the Euro-series cable glands conform to popular industry standards such as ISO 9001:2015, EN 62444:2013, IEC 62444:2010.
- Whether there is a need for general industry application or one in hazardous and demanding environments, the Euro-series cable glands can efficiently stand up to the test and meet every industrial requirement with ease.







THANK YOU

