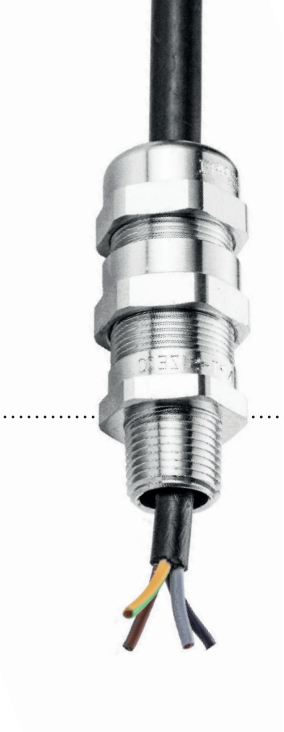


How to order **R SERIES** & complete the **CODE**: see table page 56

Cable glands for unarmoured and wire armoured or braided, tape armoured, lead sheathed cables.

“R series” cable glands offer a wide variety of products, suitable to meet all customer needs.

The cable glands are available in a standard version or with a male or female threaded backnut, the trumpet backnut perfect for mobile poses in which potential damages must be limited caused by repeated bending of the outgoing cable of the cable gland. Suitable versions for cables coated with lead sheathing are also available.

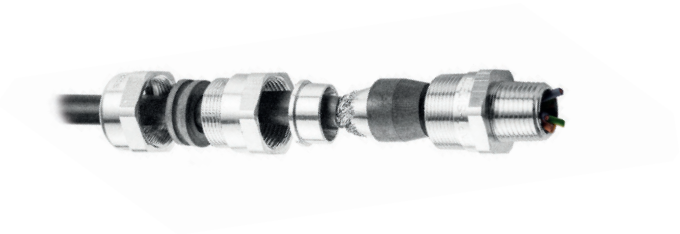
The material of the cable glands may be natural brass or nickel-plated brass, stainless steel AISI 316L and aluminium.

The interior washer may be EPDM or silicone; to be selected according to the operating ambient temperature, like the seal are available in nylon, silicone or PTFE or O-Rings available in EPDM or silicone.

The wide variety of available threads allows users to choose the most suitable for their needs; this will limit the use of threaded adaptors to reduce the overall dimensions and application costs.

R SERIES

Cable glands for hazardous area

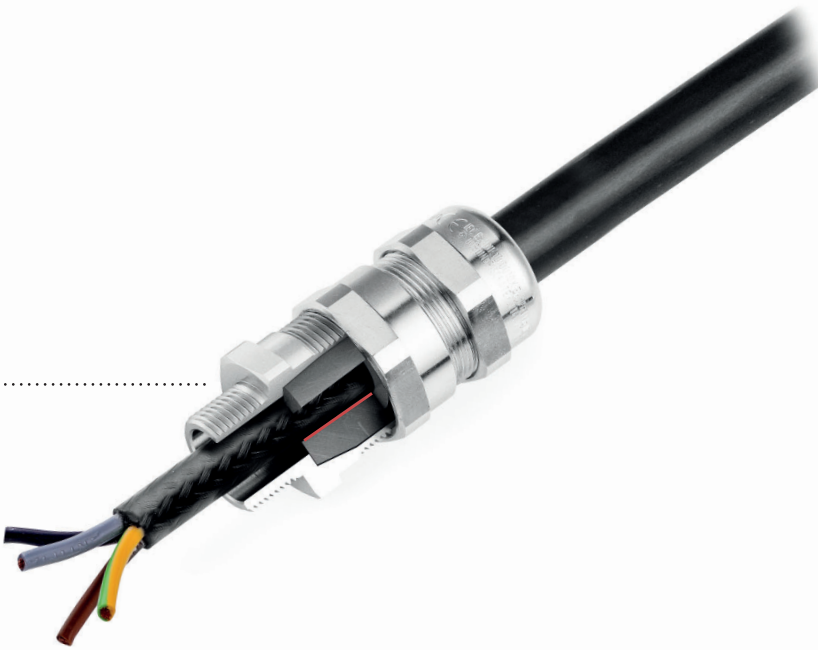


Products features

R SERIES

Cable glands for hazardous area application

Refineries and Petrochemical Plants ·Chemical and Pharmaceutical Plants · Drilling for Gas and/or Petroleum · Gas Distribution Lines and Plants Petrol Stations for Vehicles · Printing Industry · Varnishing Plants · Coal Mines · Waste Water Treatment Plants and Waste Management Grain Storage · Wood Processing · Sugar Processing · Metalworking · Food Industry

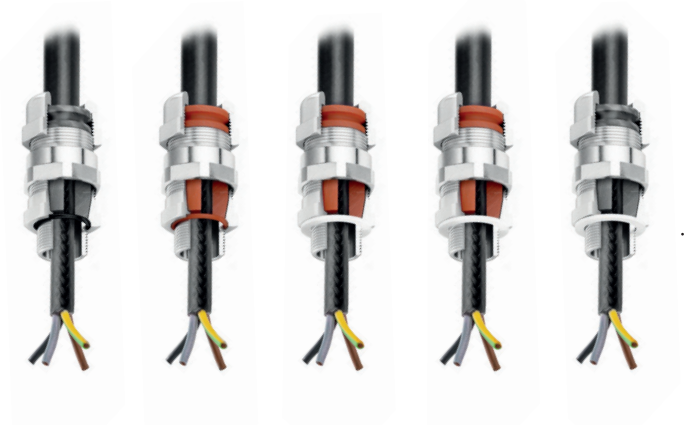


01 Safety

The rubber pad thanks to its particular design, clamps the external diameter of the cable for the entire height of the passage hole, ensuring the highest tensile seal and protecting the cable from any possible damage caused by different rubber pads, with its form which tightens the cable in only one point. This feature means that these cable glands do not require any additional resistance to the cable up to size 50.

02 Taylor-made

Possibility to choose between implementation of the body with OR or flat gasket, according to their needs and following material couplings in compliance with operating temperatures.



OR EPDM + Seals EPDM

OR Silicone + Silicone Seals

Silcone Flat Sealings + Silicone Seals

Teflon Flat Sealings + Silicone Seals

Nylon Flat Sealings + EPDM Seals

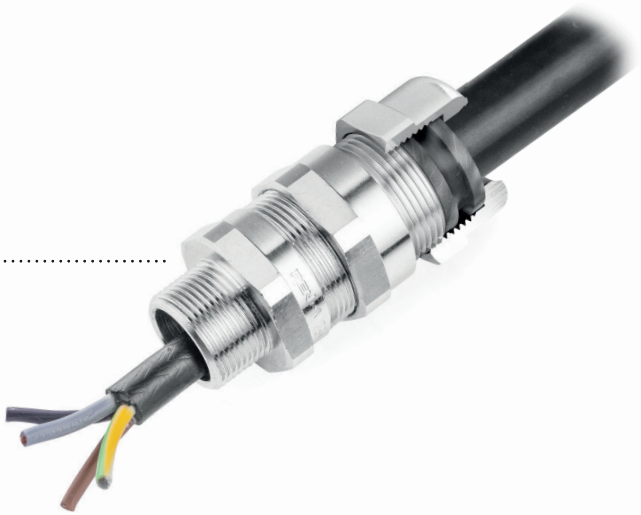
03 Simplicity

Reduced number of components, which reduces the possibility of loosing some parts or incorrect assembly.

04 Design

External rubber pad which locks the outer sheath of the cable, providing protection against water and moisture.

ONLY FOR ARMOURED CABLE



Follow the numbers	0	1	2	3	3E	4	4E	5	6	7	8
Example code	KIT	RAD.	25.	13.	24.	N25.	/	EP.	ON.	OR.	BS
Specific requirements for creator code	Optional code	Type	Size	ø C Max	ø Ce Max	Thread code	Thread code	Seals material code	Material code	Optional code	Optional code
Additional specifications	Kit seals			Inner seal (10,5÷13)	Outer seal (19 ÷ 24)	See tab. of thread page 57	See tab. of thread page 57	EP•SI	OT•ON•S6 AL•AVP	OR ring	Reduced cone

0 Kit version

Includes cable glands and the requested complete series of the rubber seals accompanying the size. Each cable gland is equipped with extra indoor/outdoor rubber pads for each size. The user may choose the rubber pad suitable for the cable diameter or opt for the kit version, which includes all the pads by size.

1 Type

RN	RNT	RAT	RNC	RNM	RAC	RAM	RAS	RAD	RATD	RALD
BN	BNT	BAT	BNC	BNM	BAC	BAM	BAS	BAD	BATD	BALD
SN	SNT	SAT	SNC	SNM	SAC	SAM	SAS	SAD	SATD	SALD

2 Size

16	20	25	32	40	50	63	75	90A	90B

3 Ø C Max dimension

Inner seal dimension: choose the max size of the range to compose the code (see drawing and table on data sheet). **For all cable glands.**
Armoured or screened cables: under armour cable diameter.
Unarmoured cables: external cable diameter.

3E Ø Ce Max dimension

Outer seal dimension: choose the max size of the range to compose the code (see drawing and table on data sheet). **Only for type: RAD RALD RATD - BAD BALD BATD** and only for armoured or screened cables: external cable diameter.

4 / 4E Standard threads & threads code

4 - For all cable glands
4E Only for type: RNC RNM RAC RAM - BNC BNM BAC BAM

5 Seals material code

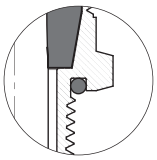
EP	SI
EPDM	Silicone

6 Material code

OT	ON	S6	AL	AVP
Brass	Nickel-plated brass	AISI 316L Stainless Steel	Aluminium	AVP steel

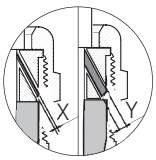
7 O-ring

Alternatively to the flat gasket, in order to ensure the degree of IP protection, it is possible to request the "O-Ring version" cable gland.
For all cable glands, ISO metrical threads only



8 Reduced cone

The cable glands provided are standard and may be used for braided, taped or wired armoured cables with thickness from 0 to 0.9 mm (X). Upon request the cable glands can be provided suited for wire-armoured cables with thickness from 1 to 2.5 mm (Y). In this case add **BS** code.
Only for armoured cable:
RAT RAC RAM RAS RAD RATD RALD - BAT BAC BAM BAS BAD BATD BALD



HOW TO ORDER

R B or S series and complete the code
Check the example code inside every data sheet and follow the numbers.

EXAMPLE

3 **Threads with dimensions less than usual standards the seals dimensional range is reduced.**

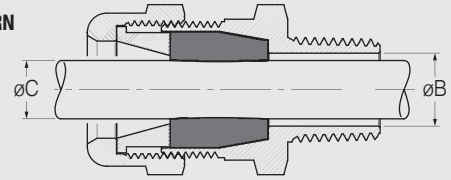
3E *Cable glands type RAD.20. with thread ISO M20 x 1,5 (or superior) the available seals are: 5,5 ÷ 8 • 8 ÷ 10,5 • 10,5 ÷ 13 5 ÷ 10 • 10 ÷ 15*

Cable glands type RAD.20. with thread ISO M16 x 1,5 the available seals are: 5,5 ÷ 8 • 8 ÷ 10,5 5 ÷ 10 • 10 ÷ 15

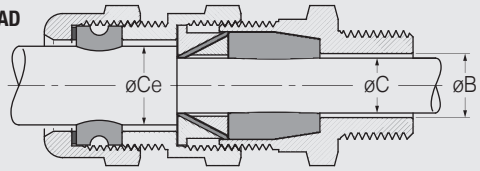
TYPE	SIZE	Ø C Min-Max	Ø Ce Min-Max	ARMOUR RANGE		THREADS			
				Standard cone*	Reduced cone**	Cylindrical ISO 262	Cylindrical ISO 228	Cylindrical DIN 40430	Ta NPT
RAD	20	5,5 ÷ 8 8 ÷ 10,5 10,5 ÷ 13	5 ÷ 10 10 ÷ 15	0 ÷ 0,5	0,5÷ 1,25	M16 x 1,5 **M20 x 1,5** M25 x 1,5	**1 / 2"** 3 / 4"	Pg11 **Pg13,5** Pg16	**1 / 2** 3 / 4
RAD	20	5,5 ÷ 8 8 ÷ 10,5 ~~10,5 ÷ 13~~	5 ÷ 10 10 ÷ 15	0 ÷ 0,5	0,5÷ 1,25	M16 x 1,5 **M20 x 1,5** M25 x 1,5	**1 / 2"** 3 / 4"	Pg11 **Pg13,5** Pg16	**1 / 2** 3 / 4

"Ø B" must be bigger than "Ø C" and "Ø Ce" See "Table of threads" below for "Ø B" dimension.

RN



RAD



4 4E TABLE OF THREADS

NPT	ØB	CODE
1/4" NPT	8	**N12**
3/8" NPT	11	**N16**
1/2" NPT	15	**N20**
3/4" NPT	19	**N25**
1" NPT	25	**N32**
1" 1/4 NPT	31	**N40**
1" 1/2 NPT	37	**N50**
2"	47	**N63**
2"1/2	57	**N75**
3"	68	**N90**

EN 10226	ØB	CODE
1/4"	8	**R12**
3/8"	11	**R16**
1/2"	15	**R20**
3/4"	19	**R25**
1"	25	**R32**
1"1/4	31	**R40**
1"1/2	37	**R50**
2"	47	**R63**
2"1/2	57	**R75**
3"	68	**R90**

ISO262-M	ØB	CODE
M 12 x 1,5	7	**I12**
M 16x1,5	11	**I16**
M 20x1,5	15	**I20**
M 25x1,5	19	**I25**
M 32x1,5	25	**I32**
M 40x1,5	35	**I40**
M 50x1,5	44	**I50**
M 63x1,5	57	**I63**
M 75x1,5	68	**I75**
M 90	82	**I90**

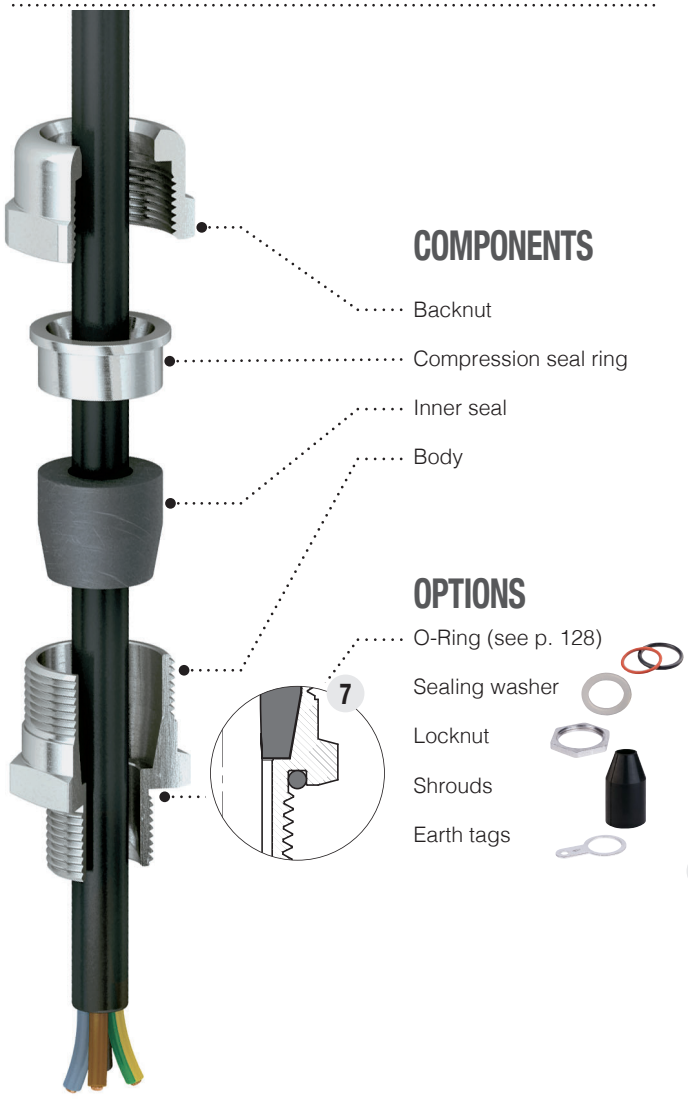
ISO 228	ØB	CODE
1/4"	8	**B12**
3/8"	11	**B16**
1/2"	15	**B20**
3/4"	19	**B25**
1"	25	**B32**
1" 1/4	31	**B40**
1" 1/2	37	**B50**
2"	47	**B63**
2" 1/2	57	**B75**
3"	68	**B90**

DIN 40430	ØB	CODE
Pg 7	7	**P12**
Pg 9	11	**P16**
Pg 11	15	**P20**
Pg 13,5	19	**P25**
Pg 16	25	**P32**
Pg 21	35	**P40**
Pg 29	44	**P50**
Pg 36	37	**P63**
Pg 42	47	**P75**
Pg 48	54	**P90**

RN type

IP66/68 · SI Silicone seals °C -65°÷+220° · EP EPDM seals °C -40°÷+100° · RoHS Compliant · CE · Ex · IECEx · EAC

FLAMEPROOF EX D • INCREASED SAFETY EX E • FOR INDOOR & OUTDOOR APPLICATIONS
FOR UNARMOURED CABLES • OUTER SHEATH SEAL



1 Cable glands RN type (code: **RN**)
The sealing ring blocks the cable on the cable sheath outer diameter. Metric cable glands are made according to EN 62444 standard. Maintenance and installation operations and product selection must be done in accordance with IEC EN 60079-14 and 17 standards.

Application fields Surface - Group II • Mines - Group I

Approvals / Certifications
ATEX INERIS 06 ATEX 0014X
IEC Ex: IEC Ex INE 10.0010X
EAC: RU C-IT.АЯ 45.B.00909
Type examination certificate: INERIS 17 ATEX 3009X (Ex nR IIC Gc)

Protection type
Ex db IIC • Ex eb II (gas) • Ex tb IIIC (dusts) • Ex db I • Ex eb I (mines)

EPL (Equipment protection level)
Zone 1-2: Mb mines • Gb, Gc gas
Zone 21-22: Db Dc combustible dusts

Execution
Ex db IIC • Ex eb II • Ex tb IIIC • Ex db I • Ex eb I Db
according to
ATEX: EN 60079-0:2012 • EN 60079-1:2014 • EN 60079-7:2015 • EN 60079-31:2014 • EN 60529:1991
IEC Ex: IEC 60079-0:2011 • IEC 60079-1:2014 • IEC 60079-7:2015 • IEC 60079-15:2010 • IEC 60079-31:2013 • IEC 60529:1989

5 Ambient temperatures in services: sealing washers materials
EPDM seals -40°C ÷ + 100°C (code: **EP**)
Silicone seals -65°C ÷ + 220°C (code: **SI**)

Cable type
Unarmoured

6 Available materials
Brass (code: **OT**) • Nickel-plated brass (code: **ON**)
AISI316L Stainless steel (code: **S6**) • Aluminium (code: **AL**)
AVP Steel (code: **AVP**)

Available threads
ISO 262 Metrical • ISO 228 • DIN 40430 Pg
ANSI B1.20.1 NPT • EN 10226 Gk (only for ATEX)

Degree of protection
The cable glands degree of protection is **IP66** or **IP66/68**, 30-meters depth for 7 days according to the IEC EN 60529 standard; the degree of protection IP 68 is obtained by using flat sealing rings on cable glands with cylindrical threads. Without gaskets, the degree of protection is IP 66. If the cable glands with cylindrical or tapered threads are screwed on the threaded hole of an apparatus, in order to guarantee an IP66 or IP66/68 degree of protection, threaded parts must be sealed with Loctite or similar. In order to maintain the IPX8 degree of protection, the cable entry shall be fitted on enclosure witch satisfies an immersion test under 30 meters of water during 7 days. Metric cable glands are made in accordance to EN 62444 Standard.

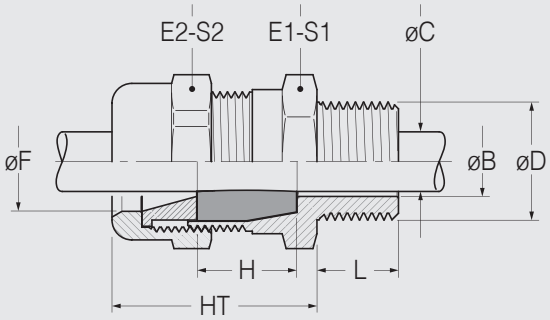
0 Kit version (code: **KIT**)
Includes cable glands and
the requested complete series of
the rubber seals accompanying the size.

EXAMPLE CODE

See page 56

0	1	2	3	4	5	6	7
KIT	**RN.**	**25.**	**13.**	**N25.**	**EP.**	**ON.**	**OR**
Optional code	Type	Size	Ø C Max	Thread code	Seals material code	Material code	Optional code
Kit series			**Inner seal (10,5 ÷ 13)**	**See tab. page 57**	**EP-SI**	**OT-ON-S6 AL-AVP**	**O-Ring**

TECHNICAL DRAWING



2	3	4					DIMENSIONS							
		Ø D - THREADS												
		Cylindrical			Tapered									
SIZE	Ø C Min - Max Inner seal	ISO 262	ISO 228	DIN 40430	NPT	EN 10226	Weight	F	HT	H	E1	S1	E2	S2
16 (EP)	4 ÷ 7 7 ÷ 10	M12x1,5 **M16x1,5** M20x1,5	1 / 4" **3 / 8"** 1 / 2"	Pg7 Pg9 **Pg11** Pg13,5	1 / 4" **3 / 8"** 1 / 2"	1 / 4" **3 / 8"** 1 / 2"	94	16	38	20	24	26	24	26
16 (SI)	4 ÷ 6 6 ÷ 8 8 ÷ 10													
20	5,5 ÷ 8 8 ÷ 10,5 10,5 ÷ 13	M16x1,5 **M20x1,5** M25x1,5	**1 / 2"** 3 / 4"	Pg11 **Pg13,5** Pg16	**1 / 2"** 3 / 4"	**1 / 2"** 3 / 4"	156	20	40	20	30	33	32	35
25	8 ÷ 10,5 10,5 ÷ 13 13 ÷ 15,5 15,5 ÷ 18	M20x1,5 **M25x1,5**	**3 / 4"** 1"	**Pg16** Pg21	**3 / 4"** 1"	**3 / 4"** 1"	185	25	40	20	35	38	36	39
32	13 ÷ 15,5 15,5 ÷ 18 18 ÷ 21 21 ÷ 24	M25x1,5 **M32x1,5**	**1"**	**Pg21** Pg29	**1"**	**1"**	340	32	52	25	42	47	45	49
40	21 ÷ 24 24 ÷ 27 27 ÷ 30	**M40x1,5**	**1" 1/4**	**Pg29**	**1" 1/4**	**1" 1/4**	421	38	52	25	48	53	50	55
50	24 ÷ 27 27 ÷ 30 30 ÷ 33 33 ÷ 36	M40x1,5 **M50x1,5**	**1" 1/2**	**Pg36**	**1" 1/2**	**1" 1/2**	537	44	52	25	55	60	57	62
63	36 ÷ 39 39 ÷ 42 42 ÷ 45	M50x1,5 **M63 x 1,5**	**2"**	**Pg42** Pg48	**2"**	**2"**	749	54	52	25	68	74	67	72
75	45 ÷ 48 48 ÷ 51 51 ÷ 54	M63x1,5 **M75x1,5**	**2" 1/2**	**Pg48**	**2" 1/2**	**2" 1/2**	1085	65	52	25	80	86	80	88
90a	54 ÷ 58 58 ÷ 62	M75x1,5 **M90x2**	**3"**	/	**3"**	**3"**	2125	74	67	30	100	107	100	107
90b	60 ÷ 64 64 ÷ 68						1759	80						

• **Standard Threads in bold** • *Dimensions are in millimeters* • *Weight in grams (gr) of brass version*