

RALD

type



FLAMEPROOF EX D • INCREASED SAFETY EX E • FOR INDOOR & OUTDOOR APPLICATIONS
FOR ARMoured CABLES • INNER LEAD SHEATED



1 Cable glands RALD type (code: RALD)

The sealing ring blocks the cable on the under armour diameter. The addition of the sealing ring on the outer sheath guarantees a complete protection of the cable armour. The lead ring, grounds the lead sheath of the cable. Cable glands EMC tested by triaxial method, according to IEC 62153-4-3, IEC 62153-4-4 standards. 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
 Type examination certificate: INERIS 17 ATEX 3009X (Ex nR IIC Gc)
 IEC Ex: IEC Ex INE 10.0010X
 EAC: RU C-IT.AЯ 45.B.00909
 CCC Ex NEPSI Certificate: Nr. 2021322313003706

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 IEC 60079-0:2018 • EN 60079-1:2014 •
 EN IEC 60079-7:2015/A1:2018 • EN 60079-15:2010 •
 EN 60079-31:2014 • EN 60529:1991
IEC Ex: IEC 60079-0:2017 • IEC 60079-1:2014 •
 IEC 60079-7:2015/A1:2017 • IEC 60079-15:2017 •
 IEC 60079-31:2013 • IEC 60529:1989+A1:1999+A2:2013

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

Armoured: Single armoured cable SWA, Aluminium wire armoured cable AWA, Aluminium strip armoured ASA. Single wire braided cable SWB, Steel tape armored cable STA, Pliable wire armoured cable PWA. Screened flexible wire braided cable CY-SY
Reduced cone available for SWA armoured cables.

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

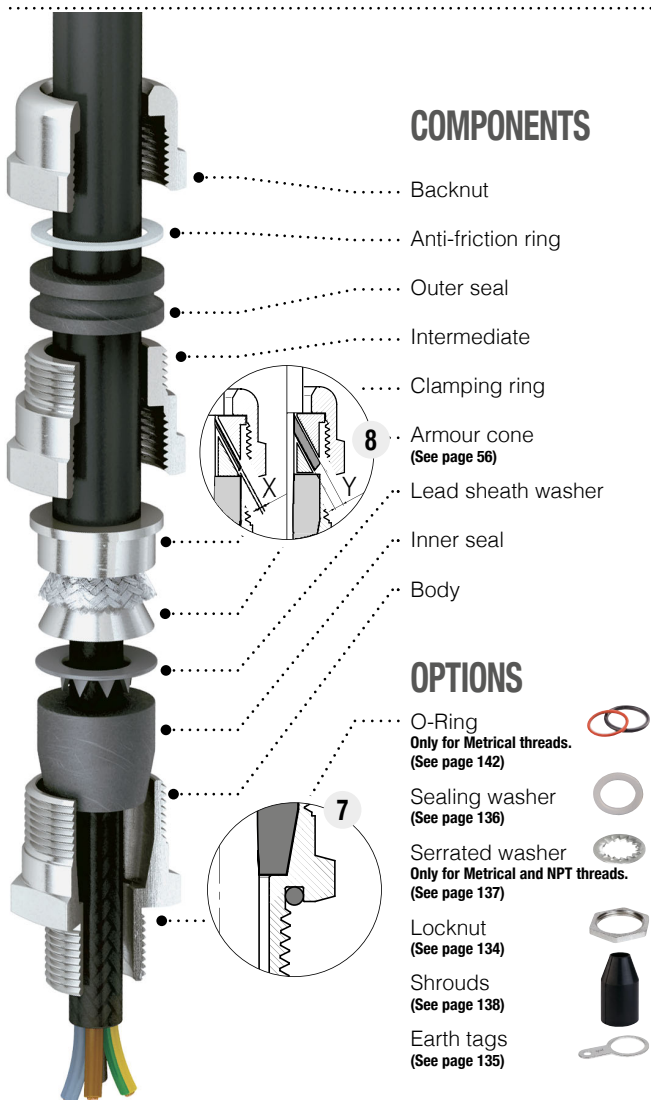
ISO 262 Metrical • ISO 228 • DIN 40430 Pg
 ANSI B1.20.1 NPT • EN 10226 Gk (only for ATEX)

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 with 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.



COMPONENTS

- Backnut
- Anti-friction ring
- Outer seal
- Intermediate
- Clamping ring
- 8 Armour cone (See page 56)
- Lead sheath washer
- Inner seal
- Body

OPTIONS

- O-Ring
Only for Metrical threads.
(See page 142)
- Sealing washer
(See page 136)
- 7 Serrated washer
Only for Metrical and NPT threads.
(See page 137)
- Locknut
(See page 134)
- Shrouds
(See page 138)
- Earth tags
(See page 135)



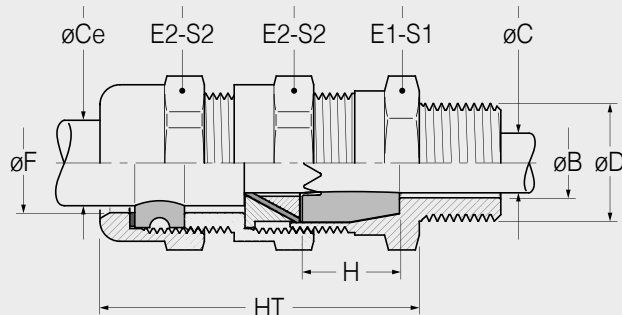
EXAMPLE CODE

See page 56

TECHNICAL DRAWING

0 1 2 3 3E 4 5 6 7 8

| | | | | | | | | | |
|---------------|--------------|------------|------------------------|----------------------|------------------|---------------------|-----------------|---------------|---------------|
| KIT | RALD. | 25. | 13. | 24. | N25. | EP. | ON. | OR. | BS |
| Optional code | Type | Size | ∅ C Max | ∅ Ce Max | Thread code | Seals material code | Material code | Optional code | Optional code |
| Kit series | | | Inner seal (10,5 ÷ 13) | Outer seal (19 ÷ 24) | See tab. page 57 | EP-SI | OT-ON-S6 AL-AVP | O-Ring | Reduced cone |



| SIZE | ∅ C Min - Max Inner seal | ∅ Ce Min - Max Outer seal | ARMOUR RANGE | | ∅ D - THREADS | | | | | DIMENSIONS | | | | | | | |
|------------|--------------------------------|---------------------------------|------------------|------------------|---------------|---------|-----------|---------|----------|------------|----|-----|----|-----|-----|-----|-----|
| | | | Standard cone X* | Reduced cone Y** | Cylindrical | | | Tapered | | Weight | F | HT | H | E1 | S1 | E2 | S2 |
| | | | | | ISO 262 | ISO 228 | DIN 40430 | NPT | EN 10226 | | | | | | | | |
| 16 (EP) | 4 ÷ 7 | 5 ÷ 10 | 0 ÷ 0,5 | 0,5 ÷ 0,75 | M12x1,5 | 1 / 4" | Pg7 | 1 / 4" | 1 / 4" | 126 | 16 | 58 | 20 | 24 | 26 | 24 | 26 |
| | 7 ÷ 10 | | | | | | | | | | | | | | | | |
| 16 (SI) | 4 ÷ 6 | 10 ÷ 15 | 0 ÷ 0,5 | 0,5 ÷ 0,75 | M16x1,5 | 3 / 8" | Pg9 | 3 / 8" | 3 / 8" | 126 | 16 | 58 | 20 | 24 | 26 | 24 | 26 |
| | 6 ÷ 8 | | | | | | | | | | | | | | | | |
| 20 | 8 ÷ 10 | 10 ÷ 15 | 0 ÷ 0,5 | 0,5 ÷ 1,25 | M20x1,5 | 1 / 2" | Pg11 | 1 / 2" | 1 / 2" | 228 | 20 | 64 | 20 | 30 | 33 | 32 | 35 |
| | 5,5 ÷ 8 | | | | | | | | | | | | | | | | |
| 25 | 8 ÷ 10,5 | 15 ÷ 20 | 0 ÷ 0,5 | 0,5 ÷ 1,25 | M20x1,5 | 3 / 4" | Pg16 | 3 / 4" | 3 / 4" | 264 | 25 | 64 | 20 | 35 | 38 | 36 | 39 |
| | 10,5 ÷ 13 | | | | | | | | | | | | | | | | |
| 32 | 13 ÷ 15,5 | 20 ÷ 26 | 0 ÷ 1 | 1 ÷ 1,6 | M25x1,5 | 1" | Pg21 | 1" | 1" | 484 | 32 | 83 | 25 | 42 | 47 | 45 | 49 |
| | 15,5 ÷ 18 | | | | | | | | | | | | | | | | |
| 40 | 18 ÷ 21 | 26 ÷ 32 | 0 ÷ 1 | 1 ÷ 1,6 | M40x1,5 | 1" 1/4 | Pg29 | 1" 1/4 | 1" 1/4 | 576 | 38 | 83 | 25 | 48 | 53 | 50 | 55 |
| | 21 ÷ 24 | | | | | | | | | | | | | | | | |
| 50 | 24 ÷ 27 | 31 ÷ 37 | 0 ÷ 1 | 1 ÷ 2 | M40x1,5 | 1" 1/2 | Pg36 | 1" 1/2 | 1" 1/2 | 730 | 44 | 83 | 25 | 55 | 60 | 57 | 62 |
| | 27 ÷ 30 | | | | | | | | | | | | | | | | |
| 63 | 30 ÷ 33 | 42 ÷ 48 | 0 ÷ 1 | 1 ÷ 2 | M50x1,5 | 2" | Pg42 | 2" | 2" | 961 | 54 | 83 | 25 | 68 | 74 | 67 | 73 |
| | 33 ÷ 36 | | | | | | | | | | | | | | | | |
| 75 | 36 ÷ 39 | 52 ÷ 58 | 0 ÷ 1 | 1 ÷ 2 | M63x1,5 | 2" 1/2 | Pg48 | 2" 1/2 | 2" 1/2 | 1392 | 65 | 83 | 25 | 80 | 86 | 80 | 88 |
| | 39 ÷ 42 | | | | | | | | | | | | | | | | |
| 90a | 42 ÷ 45 | 64 ÷ 72 | 0 ÷ 2 | 2 ÷ 2,5 | M75x1,5 | 3" | / | 3" | 3" | 3026 | 74 | 115 | 30 | 100 | 107 | 100 | 107 |
| | 45 ÷ 48 | | | | | | | | | | | | | | | | |
| 90b | 48 ÷ 51 | 70 ÷ 78 | 0 ÷ 2 | 2 ÷ 2,5 | M90x2 | 3" | / | 3" | 3" | 2432 | 80 | 115 | 30 | 100 | 107 | 100 | 107 |
| | 51 ÷ 54 | | | | | | | | | | | | | | | | |

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

• Inside the size, the external rubber seals may be matched with any interior rubber seals, compatible with the cable size. (See on page 57)

* Standard cone X: Suitable for all approved armour cables except SWA cables ** 8 Reduced cone Y: Suitable for SWA cables (code: BS)