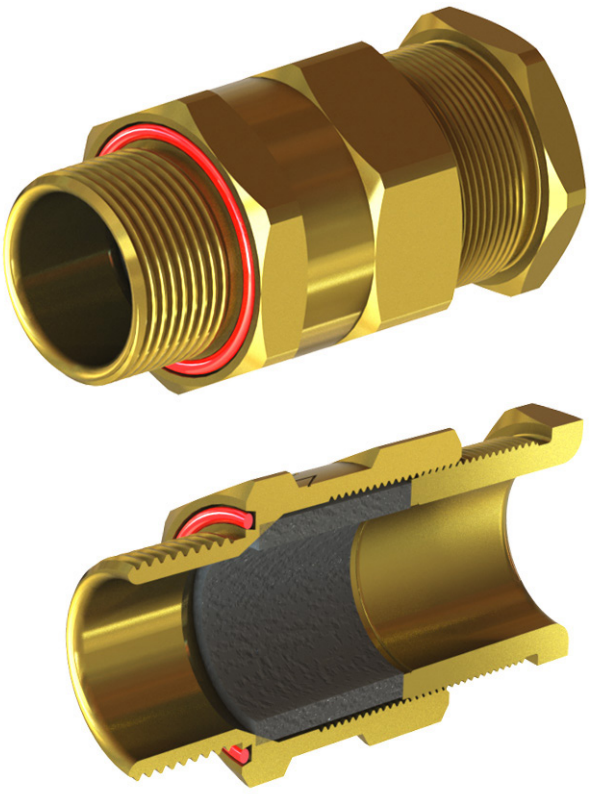
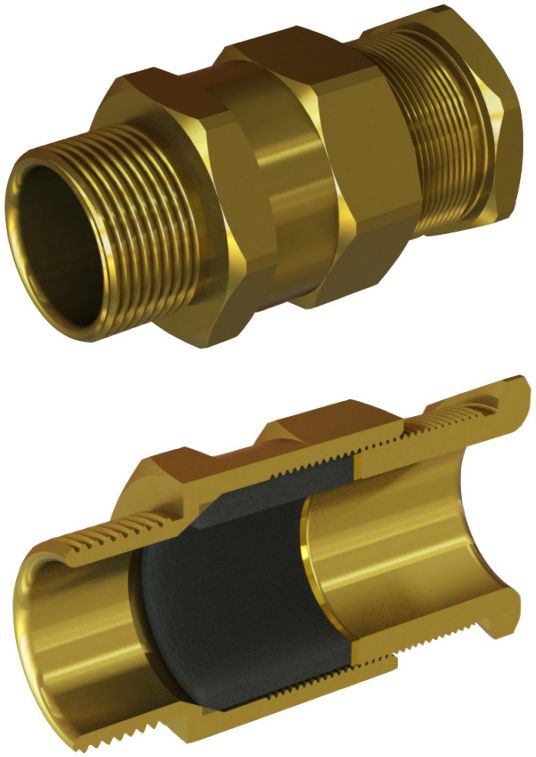


D620



D621

IMPORTANT!
Read this instruction carefully before installing the product

TRANBERG STAHL

THE STRONGEST LINK.

TRANBERG® CABLE GLANDS

TEF D620 Ex d/ Ex e Cable Gland
TEF D621 Ex d/ Ex e Cable Gland
Zone 1, Zone 2 & Safe Area

USER MANUAL

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USER MANUAL

TEF D620 Ex d/ Ex e Cable Gland
TEF D621 Ex d/ Ex e Cable Gland
Zone 1, Zone 2 & Safe Area

General Information

Manufacturer

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Web stahl-tranberg.com

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About this operating instruction:

- Read these operating instructions, especially the safety notes, carefully before use.
- Observe all other applicable documents (See also further documents section).
- Keep the operating instructions throughout the service life of the device.
- Make the operating instructions accessible to operating and maintenance personnell at all times.
- Pass the operating instructions on to each subsequent owner or user of the device.

Document no: TUM4720

R. Stahl Tranberg Revision: E

Further documents for this product:

- Datasheet D620, TPS4870
- Datasheet D621, TPS4521
- ATEX Certificate, Presafe 14 ATEX 1532
- IECEx Certificate, IECEx PRE 14.0023
- Declaration of Conformity (DoC), TDC4873

USER MANUAL

TEF D620 Ex d/ Ex e Cable Gland
TEF D621 Ex d/ Ex e Cable Gland
Zone 1, Zone 2 & Safe Area

Technical Data	
Ex protection	Ⓔx II 2 G Ex d/Ex e IIC Gb
Ingress Protection	IP 66/67
Ambient temperature	-60°C to +135°C
Thread length	15mm
Certificates	IECEx PRE 14.0023 Presafe 14ATEX 1532
Material housing	Brass or stainless steel (AISI 316/ EN 1.14404)
Material sealing and gasket D620 gland	Silicone
Material sealing and gasket D621 gland	Silicone sealing and PTFE gasket
Cable type	Unarmoured & braided
Sealing techique	TRANBERG® special patented gasket
Sealing areas	Cable outer sheath

Applications

- Outdoor or indoor for unarmoured cables.
- Sealing on cables outer sheath only.
- Suitable for use in hazardous areas, zone 1, zone 2 and safe area.

Tools required

- Wrench according to size of cable gland

Content in box

- The product is fully assembled, and ready for installation.

Safety precautions

Note that changes made to the product and / or installation of components which do not conform to the approval, may be a safety violation. The manufacturer will in no circumstance be held responsible for such activity.

For your health and safety, alway use safety gear suited for the task. Be certain to follow codes, regulations and/or specific procedures tha are related to the installation.

To ensure IP66/67, make sure that the o-ring seal or the PTFE gasket is in good contact with the enclosure wall. There shall be no gap between the cable gland and the enclosure wall when an o-ring is used, and no gap between the PTFE washer and the enclosure wall or the cable gland when a PTFE washer is used.

To ensure this, we recommend a chamfer of the threads in any threaded enclosure of 1-1,5mmx45°.

If the chamfer is too small, the insertion of the gland may be difficult or impossible, and if the chamfer is too large, the o-ring seal may not seal properly with the enclosure wall.

It is the installer`s responsibility to verify that the seal after installation is sufficient for both clearance holes and threaded holes.

Clamping requirements

The TEF D620 and D621 cable gland is fully compliant with the IEC/EN 60079-0 clamping test requirement with a 100% pull-out force integrated in the gland assembly due to the gasket material developed by R. Stahl Tranberg (International Patent Classification).

The special type of gasket material is made out of an elastic, expandable material with an ad-mixture of coarse grained particles of hardness sufficient for engagement with the surface of a cable.

It will prevent the cable from slipping while it is tightened inside the gland. This will help to protect the cable from stress and damage and it will relieve the strain on the electrical connection and circuitry inside the equipment.

Maintenance instructions

- The product should be inspected according to company routines and/or relevant to national regulations for your country.

Approvals

Compliance standards:
Directive 2014/34/EU

IEC 60079-0-*

IEC 60079-7-*

IEC 60079-1-*

** Refer to EU Declaration of conformity for more details.*

- ATEX Certificate: Presafe 14 ATEX 1532
- IECEx Certificate: IECEx PRE 14.0023

USER MANUAL

TEF D620 Ex d/ Ex e Cable Gland
TEF D621 Ex d/ Ex e Cable Gland
Zone 1, Zone 2 & Safe Area

Conditions for holes

		Threaded holes	Clearance holes
1	Tolerance class	Mxx (6H) is required for Ex d and recommended for Ex e. Tolerance class for Ex e is max. 6G/6H. Ref. ISO 965-1 and ISO 965-3	Nominal thread size -0,0mm/ +0,2mm
2	Enclosure material limitations	Brass glands should not be installed in zinc or aluminum enclosures outdoor or in humid environments.	Brass glands should not be installed in zinc or aluminum enclosures outdoor or in humid environments.
3	Enclosure interface sealing method	O-ring for D620 and PTFE gasket for D621	O-ring for D620 and PTFE gasket for D621
4	Maximum surface roughness of the enclosure face for sealing	Ra 6,4µm, better than 3,2µm is recommended.	Ra 6,4µm, better than 3,2µm is recommended.
5	Thickness range for the enclosure wall	For installation in Ex d enclosures the min. wall thickness shall not be less than 9mm with standard thread pitch for 1,5mm. For installation in Ex e enclosures the wall thickness should not be less than: 4mm wo / locknut for sizes M10 - M20 5mm wo / locknut for size M25 6mm wo / locknut for sizes M32 - M75 7mm wo / locknut for sizes M90 - M100	For installation in Ex e enclosures the wall thickness of clearance holes shall not be less than 1mm. Maximum wall thickness is determined by the following: Thread length(9mm/15mm) - Locknut thickness - 1,5mm 4mm locknut for sizes M10 - M20 5mm locknut for size M25 6mm locknut for sizes M32 - M75 7mm locknut for sizes M90 - M100 Example without sealing washer and/or earth tag: M20: 9mm - 4mm - 1,5 = 3,5mm Example with 1mm sealing washer and 1mm earth tag: M20: 9mm-4mm-2mm-1,5mm=1,5mm
6	Perpendicularity	+/-1° or 0,2mm at the outer edge of the gland, whichever is SMALLER.	+/-1° or 0,2mm at the outer edge of the gland, whichever is SMALLER.
7	Permitted use and location of any earth tags	Earth tags should be installed on the inside of the enclosure. Thickness of tag and lock nut to be included in the thickness consideration in point 5.	Earth tags should be installed on the inside of the enclosure. Thickness of tag and lock nut to be included in the thickness consideration in point 5.
8	For chamfered holes	The outermost edge must not have a greater diameter than the center of the O-ring.	The outermost edge must not have a greater diameter than the center of the O-ring.
9	Lock nuts	Use only Tranberg ® locking nuts, or other types recommended by the manufacturer	Use only Tranberg ® locking nuts, or other types recommended by the manufacturer

USER MANUAL

TEF D620 Ex d/ Ex e Cable Gland
TEF D621 Ex d/ Ex e Cable Gland
Zone 1, Zone 2 & Safe Area

Installation Instructions

Before installing the component, ensure that:

- Cable glands shall be installed according to the instructions required by the standard and shall not invalidate the specific characteristics of the Ex protection of the electrical equipment on which they are mounted.
- The cable gland is not damaged.
- The o-ring/gasket is not damaged and that the gasket bearing areas are flat.
- The cable diameter is withing the clamping area of the sealing ring.

Installation:

1. Screw the gland body (4) into the enclosure and tighten it with a wrench. For tighening torque see the table on the last page in this user manual. When used in a sheet metal enclosure, use a lock nut inside the enclosure to fasten the gland body. For the D621 series, use a PTFE gasket (6) between the gland body and the enclosure.
2. Place the compression nut (1) over the cable.
3. Place the washer (2), then the sealing ring (3) over the cable.
4. Carefully cut back the outer sheet of the cable to suit the equipment. * It is recommended to leave a minimum of 5mm outer sheat inside the enclosure.
5. Feed the conductors through the gland body (4). Conductors and outer sheath goes through the connector(4) and into the enclosure.
6. Press the sealing ring (3) and washer (2) into the gland body (4) by hand.
7. Use a wrench to fully tighten the compression nut (1). For tightening torque see the table on th last page in this user manual. Make sure the sealing ring is tight against the cable.
8. Pull the cable to make sure the sealing ring tightens around the cable.

USER MANUAL

TEF D620 Ex d/ Ex e Cable Gland
TEF D621 Ex d/ Ex e Cable Gland
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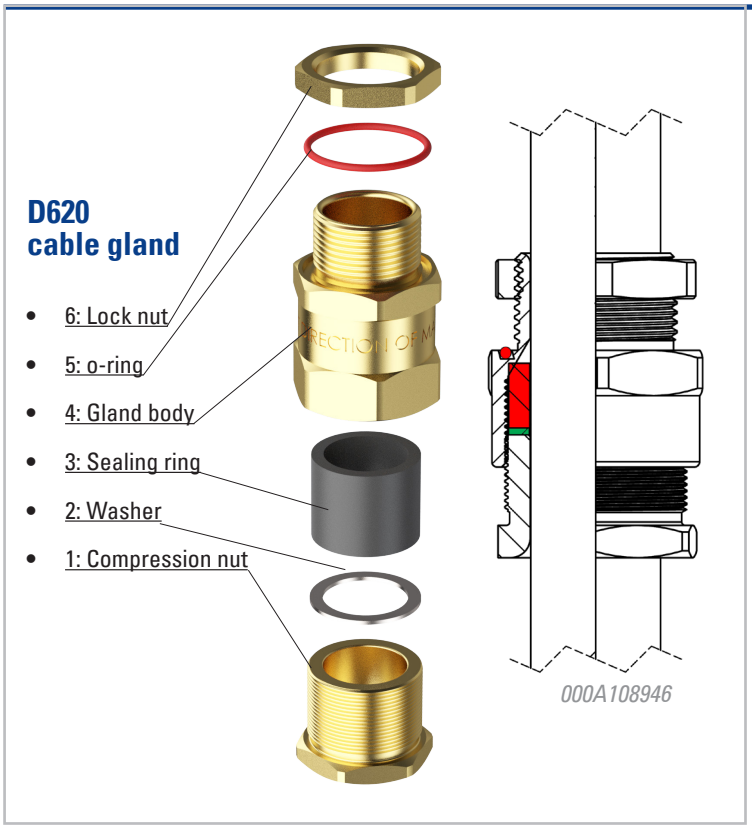

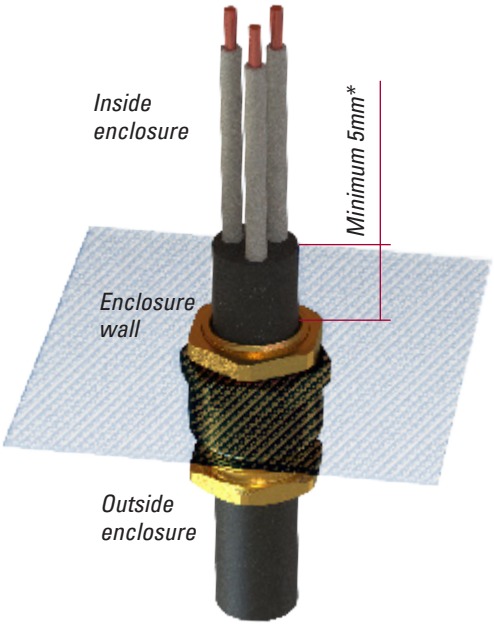

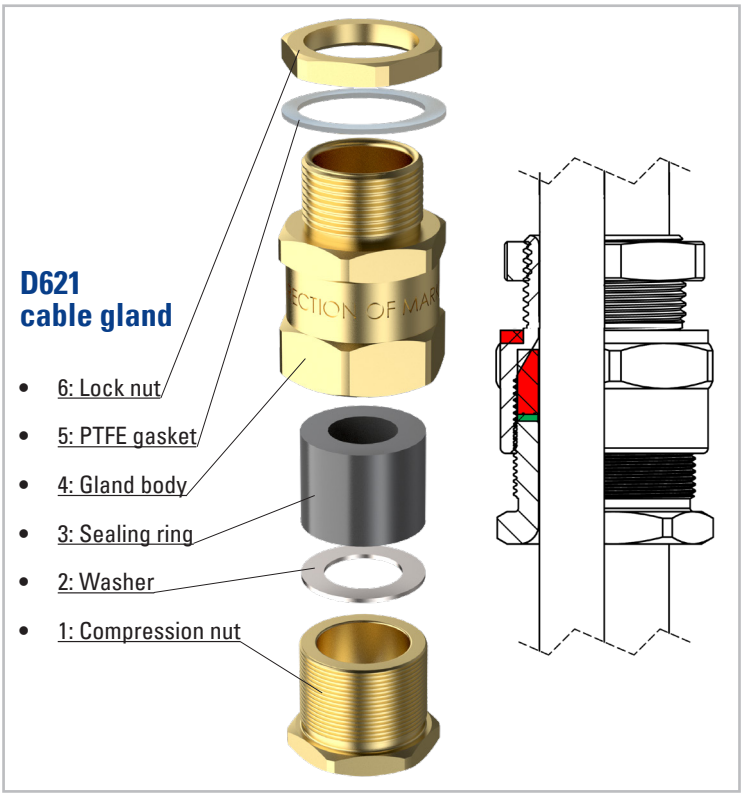

Tightening torque gland body & lock nut

Gland size	Torque (Nm)
M16	16
M20	20
M25	25
M32	32
M40	40

Tightening torque gland body & lock nut

Gland size	Torque (Nm)
M50	50
M63	63

Tightening torque compression nut

Sealing ring code	Torque (Nm)
A1	7
B1	7
B2	10
C1	5
C2	10
C3	12
D1	10
D2	10
D9	10
E1	30
E2	30
F1	30
T1	30
G1	60
G2	80
H1	100
I1	100
I2	100
J1	100
J2	100
K1	100
K2	100

Tightening torque compression nut

Sealing ring code	Clamping range
A1	2,0-6,0 mm
B1	5,0-9,1 mm
B2	4,5-7,5 mm
C1	9,0-14,3 mm
C2	6,0-10,0 mm
C3	8,5-13,0 mm
D1	15,0-20,1 mm
D2	11,0-15,0 mm
D9	13,0-17,0 mm
E1	22,0-26,5 mm
E2	18,0-24,0 mm
F1	26,5-32,4 mm
T1	24,5-29,0 mm
G1	32,0-38,5 mm
G2	29,0-35,0 mm
H1	35,5-41,0 mm
I1	40,0-44,5 mm
I2	38,0-43,0 mm
J1	44,0-50,5 mm
J2	42,0-46,0 mm
K1	50,0-56,5 mm
K2	47,0-53,0 mm

Subject to change without prior notice

TUM4720 REV. G 04.05.2023

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EU Declaration of Conformity
EU-Konformitätserklärung
Déclaration de Conformité UE

STAHL TRANBERG

R. Stahl Tranberg AS • Strandsvingen 6 • 4032 Stavanger • Norway
declares in its sole responsibility, *erklärt in alleiniger Verantwortung, déclare sous sa seule responsabilité,*

that the product: *dass das Produkt:* *que le produit:*	TEF D620 Cable Glands
Type(s), *Typ(en), type(s):*	**D620**

is in conformity with the requirements of the following directives and standards.
mit den Anforderungen der folgenden Richtlinien und Normen übereinstimmt.
est conforme aux exigences des directives et des normes suivantes.

Directive(s) / *Richtlinie(n) / Directive(s)*	***Standard(s)*** / *Norm(en) / Norme(s)*
2014/34/EU **ATEX Directive** *2014/34/EU* *ATEX-Richtlinie* *2014/34/UE* *Directive ATEX* (OJ L 96, 29.3.2014, p. 309–356)	EN 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015 EN IEC 60079-7:2015/A1:2018
Marking, *kennzeichnung, marquage:*	**II 2 G Ex d IIC Gb** **II 2 G Ex e IIC Gb** CE 0470
EC/EU Type Examination Certificate: *EG/EU-Baumusterprüfbescheinigung:* *Attestation d'examen CE/UE de type:*	Presafe 14 ATEX 1532 DNV GL Presafe AS Veritasveien 3, 1363 Høvik, NORWAY – NB2460
2014/35/EU: **Low Voltage Directive** *2014/35/EU* *Niederspannungsrichtlinie* *2014/35/UE:* *Directive Basse Tension*	N/A
2014/30/EU **EMC Directive** *2014/30/EU* *EMV-Richtlinie* *2014/30/UE* *Directive CEM* (OJ L 96, 29.3.2014, p. 79–106)	***N/A***
2011/65/EU **RoHS Directive** *2011/65/EU* *RoHS-Richtlinie* *2011/65/UE* *Directive RoHS* (OJ L 174, 01.07.2011, p. 88–110)	EN IEC 63000:2018
The technical documentation for this equipment is retained at the following address *Die technische Dokumentation für dieses Gerät wird unter folgender Adresse aufbewahrt* *La documentation technique de cet équipement est conservée à l'adresse suivante*	R. Stahl Tranberg AS, Strandsvingen 6, 4032 Stavanger, Norway.

Stavanger, 02.03.2021

Place and date *Ort und Datum* *Lieu et date*	**Alf Kristoffer Askildsen** R&D Manager	**Kjell Are Berg-Hagen** QA/HMS Manager