

## IMPORTANT!

Read this instruction carefully before installing the product



TRANBERG

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THE STRONGEST LINK.

# TRANBERG® ADAPTORS

TEF 66x Adaptor

Zone 1, Zone 2 & Safe Area

## USER MANUAL

### R. STAHL TRANBERG AS

Main office | Strandsvingen 6 | N-4032 Stavanger, Norway | T +47 51 57 89 00 | E info.no-st@r-stahl.com | stahl-tranberg.com  
Oslo office | Luhrtoppen 2 | N-1470 Lørenskog, Norway | T +47 24 08 44 10 | E info.no-os@r-stahl.com | stahl-tranberg.com

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## General Information

### Manufacturer

R. STAHL TRANBERG AS

**Web** stahl-tranberg.com

### Main office:

Strandsvingen 6  
N-4032 Stavanger  
Norway

**T** +47 51 57 89 00

**E** info.no@r-stahl.com

### Oslo office:

Luhrtoppen 2  
N-1470 Lørenskog  
Norway

**T** +47 24 08 44 10

**E** info.no-os@r-stahl.com

## About these operating instructions:

- 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.

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R. Stahl Tranberg Revision: F



## Further documents for this product:

- Datasheet TEF 66x, TPS4441
- ATEX Certificate 13ATEX 1553X
- IECEx Certificate, IECEx NEM 13.0025X
- Declaration of Conformity (DoC), TDC4875

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Technical Data	
Ex protection	 II 2 G Ex d / Ex e IIC Gb
	 II 2 G Ex eb IIC
Ingress Protection metric	IP 66/67
Ingress Protection NPT	IP 54
Ambient temperature	-60°C to +135°C
Thread length metric	15mm
Thread length NPT	According to NPT thread size
Certificates	IECEX NEM 13.0025X & NEMKO 13ATEX 1553X
Material housing	Brass or stainless steel (AISI 316/ EN 1.14404)
Material sealing metric male threads	Silicone o-ring
Material sealing NPT threads	None (A tapered thread will pull tight and therefore make a fluid tight seal)

## Applications

- Outdoor or indoor use in marine, off-shore and industrial environments.
- Can for example be used in already existing cable glands instead of changing the hole diameter in the enclosure.
- 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, always use safety gear suited for the task. Be certain to follow codes, regulations and/or specific procedures that are related to the installation.

To ensure IP66/67, make sure that the o-ring seal is in good contact with the enclosure wall. There shall be no gap between the adaptor and the enclosure wall.

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.

## Special conditions for use

- Only one adaptor is permitted for each cable entry. Blanking elements shall not be used with adaptors. When NPT threads are used with Ex d enclosure, threads must conform to ANSI/ASME B1.20.1

## 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 13ATEX 1553X
- IECEx Certificate, IECEx NEM 13.0025X

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## 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 adaptors should not be installed in zinc or aluminum enclosures outdoor or in humid environments.	Brass adaptors should not be installed in zinc or aluminum enclosures outdoor or in humid environments.
3	Enclosure interface sealing method	o-ring for metric threads, none for NPT threads	o-ring for metric threads, none for NPT threads
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	Less than the thread length of the cable gland.	Thread length minus 6mm (Thread L 9mm -6mm = 3mm & Thread L 15mm-6mm= 9mm)
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

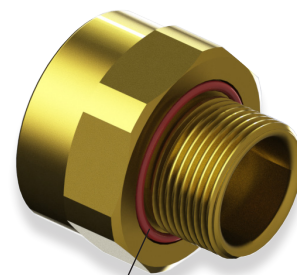
## Installation Instructions

**Before installing the component, ensure that:**

- The adaptor is installed according to the instructions required by the standard and will not invalidate the specific characteristics of the Ex protection of the electrical equipment on which they are mounted.
- The adaptor is not damaged.
- The o-ring/gasket is not damaged and that the gasket bearing areas are flat.

### Installation:

1. For adaptors with o-ring seal, check that the o-ring is fixed into the recessed slot.
2. Adaptors with NPT threads do not have any sealing arrangement. In contrast to straight Metric threads, a tapered thread will pull tight and therefore make a fluid tight seal.
3. When used in a sheet metal enclosure, use a lock nut inside the enclosure to fasten the adaptor.
4. For installation in "d" explosion proof enclosures, make sure that sufficient number of threads is engaged. Min. 5 threads.
5. Screw the adaptor fully into the threads and tighten it with a wrench.
6. For type of protection Ex d stopping plug shall not be used in an adapter.



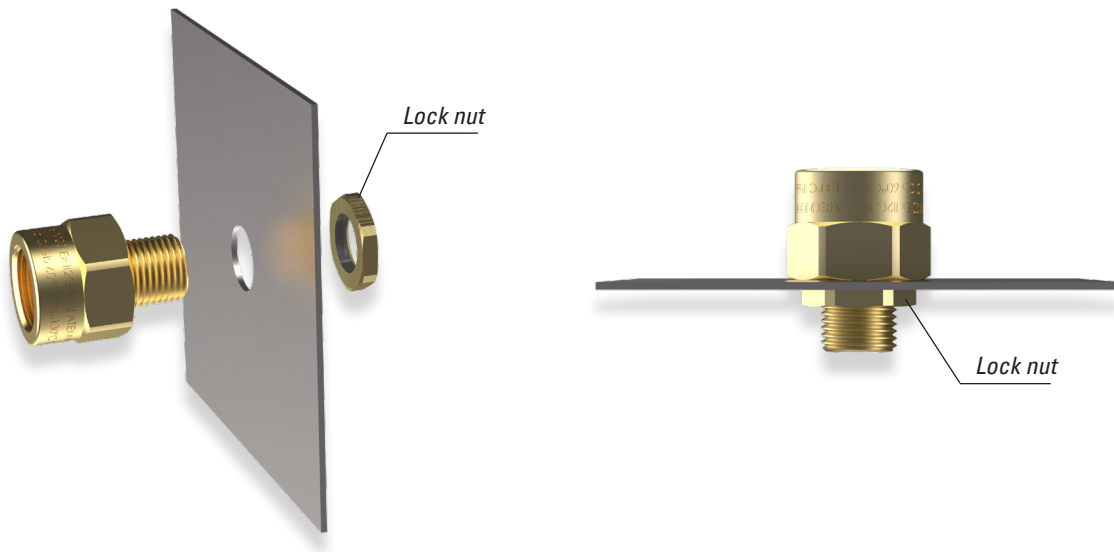
*O-ring fixed in recessed slot*

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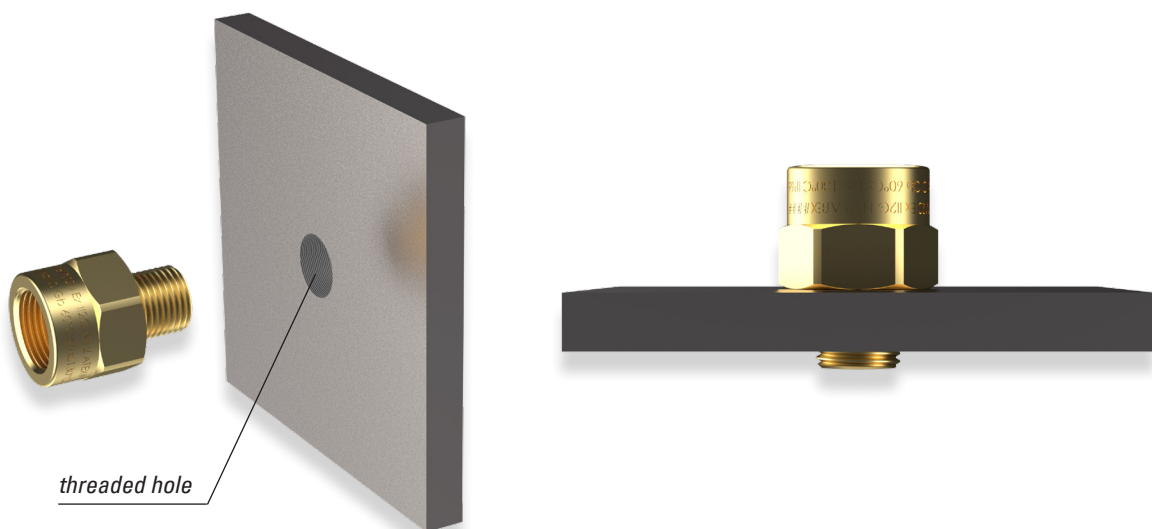
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## Assembly in hole without threads:



## Assembly in hole with threads:



## Tightening Torque Gland Body and Lock Nut (if applicable)

Gland size	Torque (Nm)
M16 & 1/2" NPT	16
M20 & 3/4" NPT	20
M25 & 1" NPT	25
M32 & 1 1/4" NPT	32
M40 & 2" NPT	40
M63 & 2 1/2" NPT	63
M75 & 3" NPT	75
M90	90

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