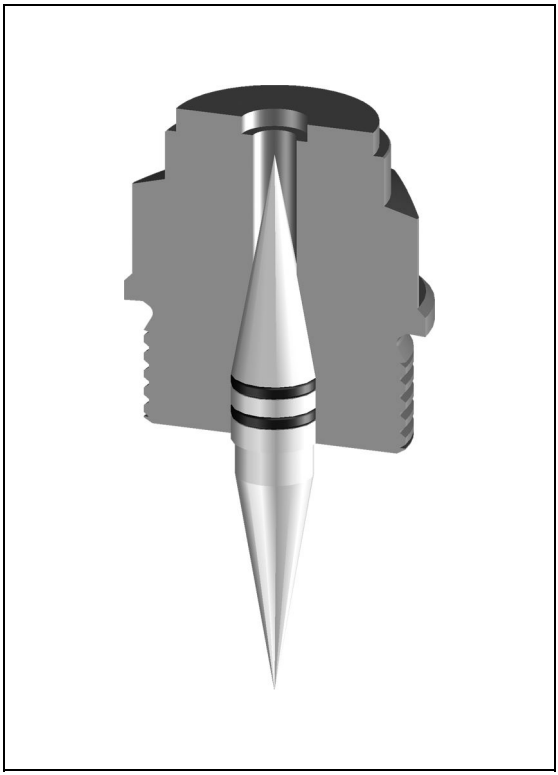
Supplementary instructions

Antenna impedance cone

for VEGAPULS 62 and 68



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Radar

Contents

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1 For your safety

1.1 Authorised personnel

All operations described in this operating instructions manual must be carried out only by trained specialist personnel authorised by the plant operator.

During work on and with the device the required personal protective equipment must always be worn.

1.2 Appropriate use

The antenna impedance cone is a replacement part for VEGAPULS 62 and 68 radar sensors.

1.3 Warning about misuse

Inappropriate or incorrect use of the instrument can give rise to application-specific hazards, e.g. vessel overfill or damage to system components through incorrect mounting or adjustment.

1.4 General safety instructions

The safety information in the operating instructions manual of the respective sensor must be noted.

1.5 Safety instructions for Ex areas

Please note the Ex-specific safety information for installation and operation in Ex areas. These safety instructions are part of the operating instructions manual and come with the Ex-approved instruments.

Use in dust-Ex applications is not permitted.

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2 Product description

2.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- Antenna impedance cone with seal
- Plastic washer as installation help
- Documentation
  - this operating instructions manual

2.2 Principle of operation

Functional principle

The antenna impedance cone is used to provide optimum transmission of microwaves from the waveguide inside the radar sensor to the horn antenna and back. Furthermore, it seals off the inside of the waveguide from process influences.

A damaged or extremely dirty impedance cone can influence the transmission quality and lead to degradation of the measured values.

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3 Mounting

3.1 Mounting preparations

The following tools are required for mounting:

- Hexagon spanner size 3
- Emery paper as gripping means
- Mounting help from the scope of delivery

3.2 Mounting steps

Mounting

Proceed as follows:

1 Loosen the hexagon screws (3) on the antenna socket
2 Remove the antenna (4)
3 Pull out the existing impedace cone carefully
4 Place the mounting help on the released opening

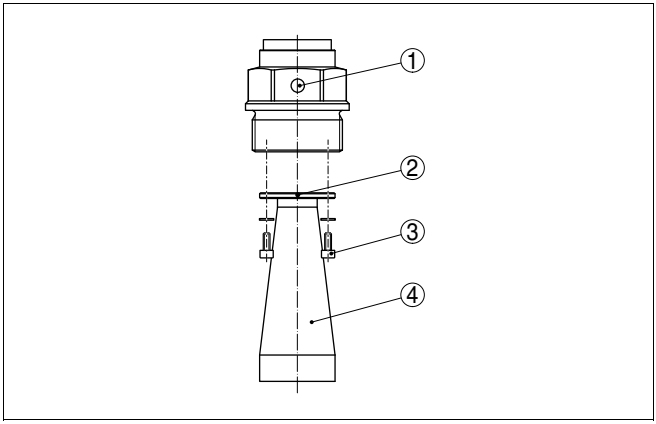

Fig. 1: Dismounting of the horn antenna

1 Marking
2 Chamfer (only with rinsing air connection)
3 Hexagon screws on the antenna socket (4 pcs.)
4 Antenna

The bevel on the outside of the mounting aid must point away from the process fitting.

5 Insert the new impedance cone with seal carefully

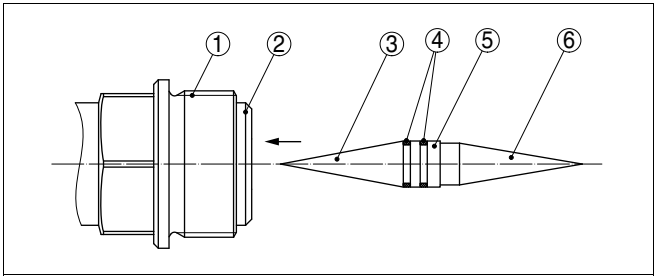

Fig. 2: Installation impedance cone

1 Process fitting
2 Bevel, mounting help
3 Cone, inner side
4 Two seals
5 Shoulder
6 Cone, outer side

One side of the cylindrical part in the middle of the cone has a small shoulder. This shoulder must point to the outside and after insertion be flush with the process fitting.

6 Remove the mounting help

7 Retighten the antenna with hexagon screws to the antenna socket; torque max. 10 Nm (7.5 lbf ft)

VEGAPULS radar sensors with rinsing air connection or with antenna extension have a notch on the antenna socket. This notch must be aligned with the marking on the hexagon of the process fitting.[1)]

[1)] The marking indicates the orientation of the polarisation plane of the radar signal.

4 Supplement

4.1 Technical data

Materials

Impedance cone	PTFE (TFM 1600)
Seals	FKM (Viton), FFKM (Kalrez 2035, 6230, 6375)

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