Hygienic
Installation Systems
EHEDG and 3-A certified

KOBOLD

measuring
•
monitoring
•
analysing

EHEDG
DESIGN GROUP EUROPEAN HYGIENIC EQUIPMENT

A3®

- ● Hygienic mounting, confirmed by EHEDG and 3-A reports

- ● p_{max}: 10 bar; t_{max}: 250 °C

- ● Material: stainless steel 1.4404

- ● Defined positions of Pg screwings

- ● Easily welded with collar sleeve

- ● Variable mounting with spherical sleeves

- ● also suited for small pipe cross-section (M12 x 1.5)

Model:
LZE

119

Description

Special demands are made on installation systems for sensors by CIP (Cleaning In Place) and SIP (Sterilization In Place) cleaning processes.

It is important that gaps and cavitys between sleeve and sensor are avoided as product residues that are difficult to remove can collect in these places. What's more, all components of the installation system must be heat resistant to at least 145°C and chemically resistant to the cleaning agents used.

The following sealing methods satisfy these requirements:

1. Metallic sealing system
● with stainless steel sealing cone
  (for temperature sensors, for example)
● with PEEK sealing cone (as insulation for level probes)
2. Clamp screw with sealing washer made of PEEK

Metallic gasket

When the sensor is screwed in and tightened (torque 30-50 Nm) the sealing edge of the weld-in sleeve is slightly deformed, and presses with its own material tension against the cone of the sensor. The Pg screw on the mounted sensor is aligned with the marking on the periphery of the sleeve.

Three different thread versions are available:

● M12x1.5 - very compact, also for small pipe cross-sections
● G 1/2 - large variety of sensors
● G 1 - for large sensors (for example, multi-stem probes)

Metallic gasket for sleeve LZE-NZ0 in section view

Metallic gasket for sleeve LZE-NK2 in section view

Clamp screwing with PEEK gasket

The sensor is sealed with a conical shaped sealing ring made of high-temperature-resistant PEEK material. By tightening the retaining screw the gap between sensor and sleeve is completely filled in and the sealing washer is pressed against the sensor.

Clamp screwing with PEEK sealing washer sleeve LZE-NM in section view


Collar clamp screw LZE-NM in separate parts

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Cylindrical sleeves

Instrument connection:	G 1/2, Ø 30 mm
	G 1, Ø 50 mm
Installation:	weld-on
Sealing system:	metal, 1.4404
Pg position:	defined
Temperature range:	-50 to 250 °C
p_{max}:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NZ0
G 1/2
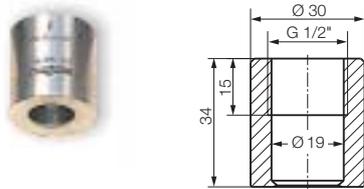
Model LZE-NZ3
G 1/2,
with check
bores
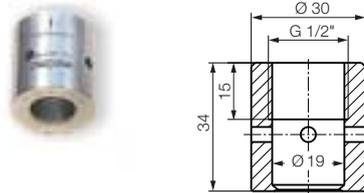
Model LZE-NZ4
G 1/2,
with G 3/4
external thread
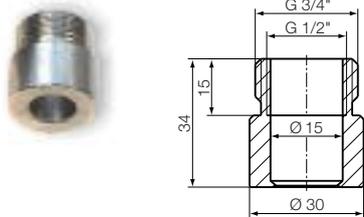
Model LZE-NZ5
G 1/2,
low shape
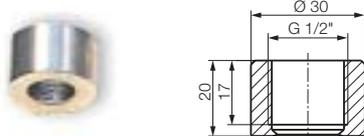
Model LZE-NZ1
G 1
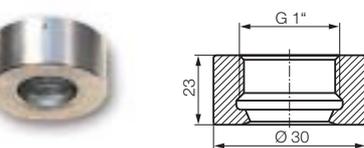
Collar sleeve

Instrument connection	M12 x 1.5; Ø 25
	G 1/2; Ø 40
Installation:	weld-on
Sealing system:	metal, 1.4404
Pg position:	defined
Temperature range:	-50 to 250 °C
p_{max}:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NK2
M12 x 1.5
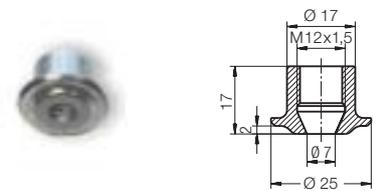
Model LZE-NK0
G 1/2
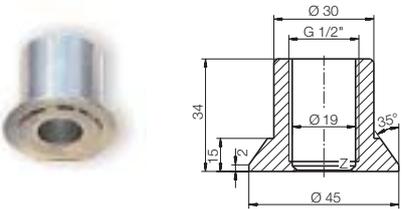
Spherical sleeves

Instrument connection:	M12 x 1.5; Ø 25
	G 1/2; Ø 40
Installation:	weld-on
Sealing system:	metal, 1.4404
Pg position:	defined
Temperature range:	-50 to 250 °C
p_{max}:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NU2
M12 x 1.5

Model LZE-NU0
G 1/2

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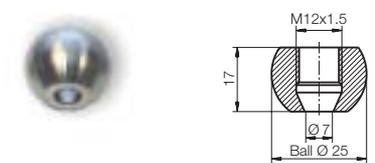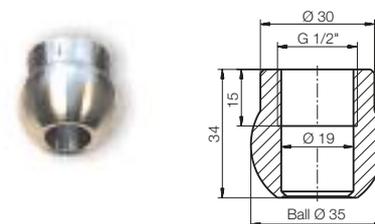
Clamp screwings

Instrument connection:	M12x1.5; Ø 25
Installation:	weld-on
Sealing system:	PEEK ring
Material:	1.4404
Pg position:	rotatable
Temperature range:	-50 to 150°C
pmax:	10 bar

Collar shape:
model
LZE-NMK
M12x1.5
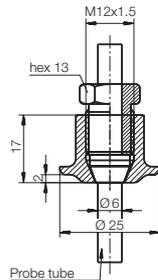
Spherical shape
model
LZE-NMU
M12x1.5
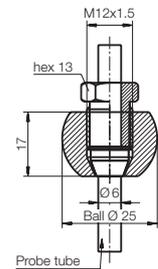
Adaptor for pipe sleeves DIN 11851, DRD

Instrument connection:	M12
	G 1/2; G 1
Nominal diameter:	DN 50
Sealing system:	metal
Pg position:	rotatable
Temperature range:	-50 to 150°C
pmax:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NL1
G 1
DN 50
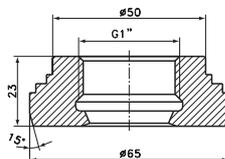
Other sizes:

Model LZE-NL2
M12x1.5
DN 50

Model LZE-NL0
G 1/2
DN 50

Varivent adaptor

Instrument connection:	M12x1.5;
	G 1/2; G 1;
Nominal diameter:	DN 40-162
Sealing system:	metal, 1.4404
Pg position:	rotatable
Temperature range:	-50 to 150°C
pmax:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model
LZE-NV1
G 1
Type 40/50
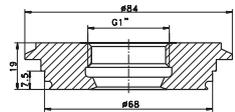
Other sizes:

Model LZE-NV2
M12x1.5
Type 40/50

Model LZE-NV0
G 1/2
Type 40/50

## Tri-Clamp adaptor

Instrument connection:	M12x1.5
	G 1/2; G 1
Nominal diameter:	DN 50
Sealing system:	metal
Pg position:	rotatable
Temperature range:	-50 to 150°C
pmax:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NC1
G 1
DN 50
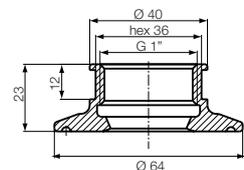
Other sizes:

Model LZE-NC2
M12x1.5
DN 50

Model LZE-NC0
G 1/2
DN 50

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G1 adaptor

Instrument connection:	G 1/2
Nominal diameter	G 1
Installation:	screw
Sealing system:	metal, 1.4404
Pg position:	defined
Temperature range:	-50 to 250 °C
p_{max}:	10 bar
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NG0
G 1/2

hex 27
G 1/2"
15
34
Ø 19
G 1"

Sleeve for temperature sensor

Instrument connection:	M12x1.5 G 1/2
Installation:	weld-on
Temperature range:	-50 to 250 °C
p_{max}:	LZE-NH2: 60 bar LZE-NH0: 20 bar
Material:	st. steel, 1.4404

Model LZE-NH2
M12 x 1.5

Ball Ø 25
M12x1.5
hex 13
17
92
85
Ø 6.4
Ø 10

Model LZE-NH0
G 1/2

Ø 30
G 1/2"
24
13
Immersion lenght EL–50/150/250
Ø 8.8x1
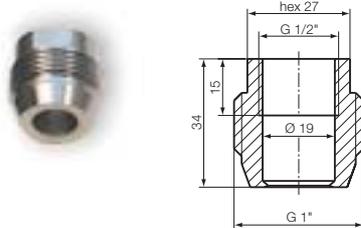
Dummy flange

Instrument connection:	M12x1.5 G 1/2; G 1
Installation:	closing the sleeves
Sealing system:	metal
Temperature range:	-50 to 250 °C
p_{max}:	10 bar
Material:	st. steel, 1.4404
3.1.B certificate acc. to AD-W2:	available as an option

Model LZE-NB2
M12 x 1.5

hex 13
27.5
19.5
M12x1.5

Model LZE-NB0
G 1/2
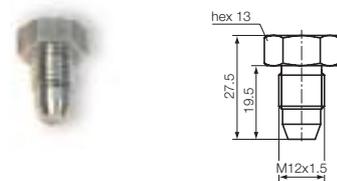
hex 22
45
37
23
Ø 18
G 1/2"

Model LZE-NB1
G 1

hex 36
35.2
27.2
G 1"
Ø 30

Dimensions

Detail X (M 5:1) Seal

Sealing cone TFP-41

Sealing face LZE-NZ0

Detail Y (M 5:1) Seal

Sealing cone TFP-41

Sealing face LZE-NM

Protection tube of the probe

Detail Z (M 5:1) Gasket

Locking screw

PEEK-Sealing ring

Sealing face LZE-NM

Protection tube of the probe
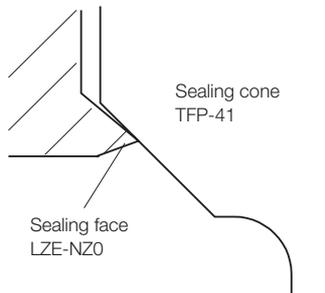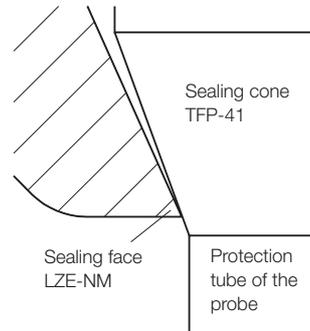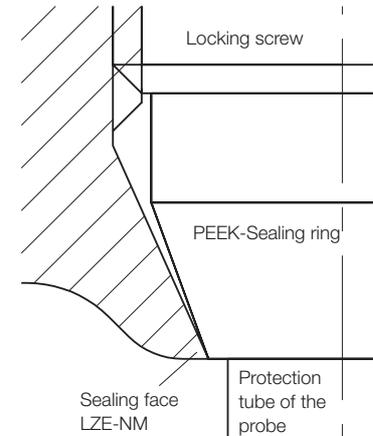
Overview of sleeve systems LZE

Thread system for measuring sensor	Model designation of sleeve	Description of shape	Thread system for measuring sensor	Model designation of sleeve	Description of shape
M12 x 1.5	LZE-NK2	Collar sleeve	G 1/2	LZE-NL0	Sanitary pipe/DRD adaptor
M12 x 1.5	LZE-NU2	Spherical sleeve	G 1/2	LZE-NV0	Varivent adaptor
M12 x 1.5	LZE-NMK	Collar clamp screw	G 1/2	LZE-NC0	Triclamp adaptor
M12 x 1.5	LZE-NMU	Ball clamp screw	G 1/2	LZE-NG	G 1 adaptor
M12 x 1.5	LZE-NL2	Sanitary pipe/DRD adaptor	G 1/2	LZE-NH0	Sleeve for sensor
M12 x 1.5	LZE-NV2	Varivent adaptor	G 1/2	LZE-NB0	Dummy flange
M12 x 1.5	LZE-NC2	Tri Clamp adaptor	G 1	LZE-NZ1	Cylindrical sleeve
M12 x 1.5	LZE-NH2	Sleeve for sensor	G 1	LZE-NL1	Sanitary pipe/DRD adaptor
M12 x 1.5	LZE-NB2	Dummy flange	G 1	LZE-NV1	Varivent adaptor
G 1/2	LZE-NZ0	Cylindrical sleeve	G 1	LZE-NC1	Tri Clamp adaptor
G 1/2	LZE-NZ3	Cylinder with check bore	G 1	LZE-NB1	Dummy flange
G 1/2	LZE-NZ4	Cylinder with G 3/4 A			
G 1/2	LZE-NZ5	Cylinder low			
G 1/2	LZE-NK0	Collar sleeve			
G 1/2	LZE-NU0	Spherical sleeve			