

Bimetal thermometer For sanitary applications Model TG58SA

WIKA data sheet TM 58.01



for further approvals,
see page 7

Applications

- Hygienic temperature measurement in sanitary applications for the food industry and also biotech and pharmaceutical industries
- Mechanical temperature display on pipelines, heat exchangers, bioreactors, tanks and mobile vessels
- Temperature display during cleaning and sterilisation

Special features

- Safety through mechanical temperature display
- Easy cleanability due to case and wetted parts in hygienic design
- Easy zero point setting
- High overtemperature resistance



Fig. left: Back mount (axial)

Fig. right: Lower mount

Description

The model TG58SA bimetal thermometer has been specifically designed for the high requirements of sanitary applications.

The purely mechanical temperature transmission functions via a bimetal coil in the stem. For applications that require a measurement needing no external power (e.g. with mobile vessels), the TG58SA with case filling is particularly suitable.

On the back of the case, the zero point can be easily corrected.

The stem with its hemispherical base, in conjunction with the aseptic process connections (e.g. clamp, VARINLINE®), enables a dead-space free connection to the process.

The TG58SA in hygienic design can be used for CIP (cleaning in place) and SIP (sterilisation in place) and in wash-down areas. The measuring instrument can thus be cleaned reliably and time-efficiently.

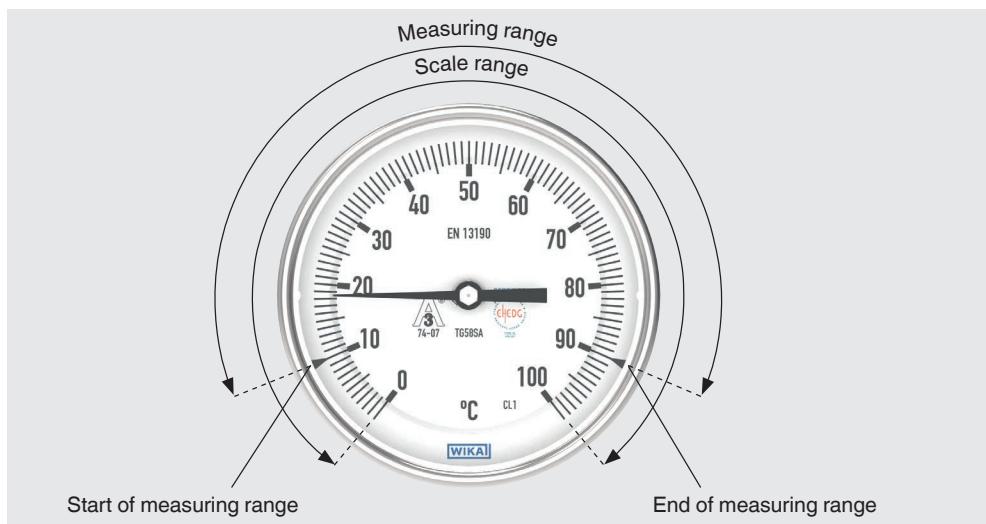
Especially for SIP applications, the thermometer shows a high overtemperature resistance and thus ensures a safe temperature measurement.

Based on a third party verification, the model TG58SA corresponds to the 3-A Sanitary Standard.

A variety of 3.1 and 2.2 certificates are available for GMP-compliant documentation, such as a material certificate or the list of single measured values.

Specifications

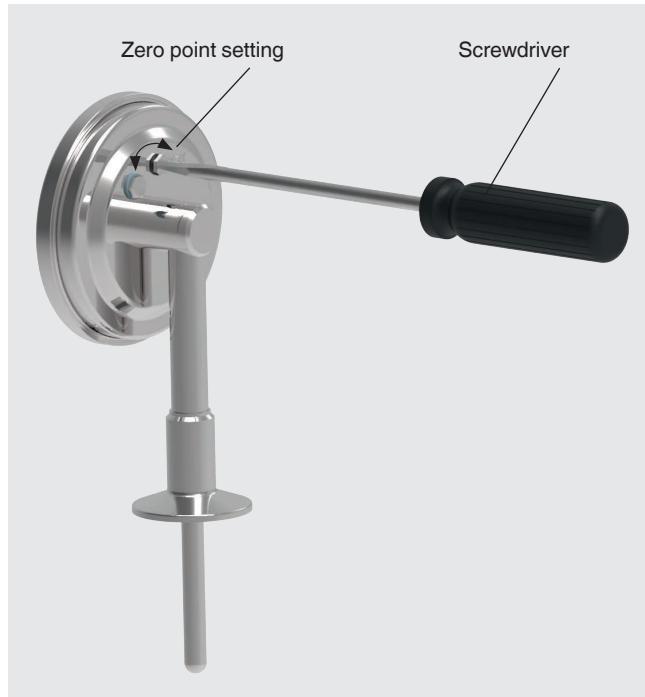
Definition of measuring range and scale range



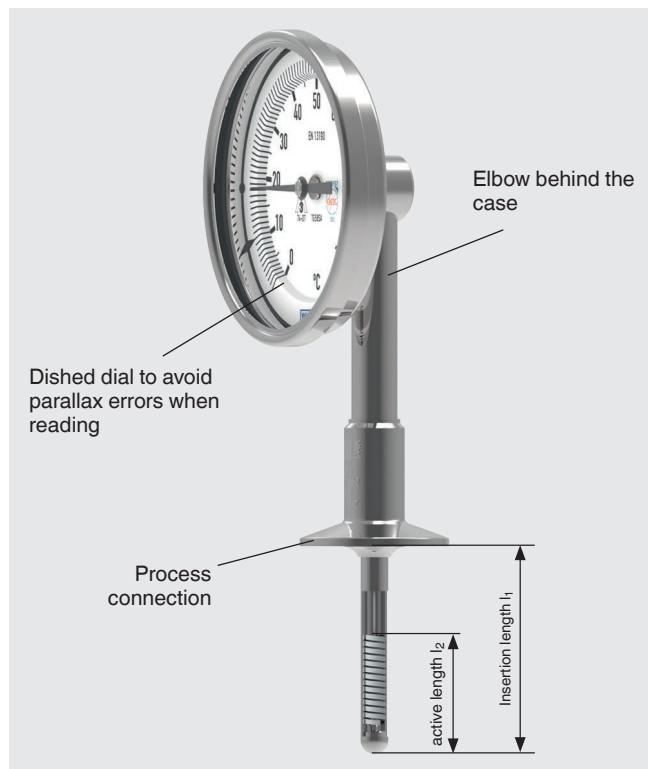
The limits of the measuring range are indicated on the dial by two triangular marks. Only within this range is the stated error limit valid per EN 13190.

→ For available display and measuring ranges, see table on page 3

Easy zero point setting



Detail view of the insertion length/active length



Always immerse the active length completely in the process medium to achieve an optimum measuring result and minimise measured errors.

Basic information	
Standard	EN 13190 or ASME B40.200
Nominal size in mm [in]	<ul style="list-style-type: none"> ■ 63 [2] ■ 80 [3] ■ 100 [4] ■ 130 [5]
Window	<ul style="list-style-type: none"> ■ UV-resistant polycarbonate (shatterproof) ■ Instrument glass
Connection location	<ul style="list-style-type: none"> ■ Back mount (axial) ■ Lower mount (radial)
Damping, case filling	<ul style="list-style-type: none"> ■ Without ■ FDA-approved silicone oil (see 21 CFR 173.340 and 177.1210)
Material (in contact with the environment)	
Case, ring	Stainless steel 304
Elbow behind the case (only with lower mount)	Stainless steel 304
Wetted parts	
Material	Stainless steel 316L; welding filler: 318L (1.4576)
Surface roughness	<ul style="list-style-type: none"> ■ Ra ≤ 0,51 µm [20 µin] per ASME BPE SF1 ■ Ra ≤ 0,38 µm [15 µin] per ASME BPE SF4

Measuring element	
Type of measuring element	Bimetal coil
Nominal effective range	
Constant loading (1 year)	Measuring range (EN 13190) After the specified continuous loading, a calibration is recommended

Accuracy specifications	
Accuracy	<ul style="list-style-type: none"> ■ Class 1 per EN 13190 ■ Grade A per ASME B40.200

Scale range in °C	Measuring range ¹⁾ in °C	Scale interval in °C
-50 ... +50	-40 ... +40	1
-20 ... +120	0 ... 100	2
-10 ... +50	0 ... 40	1
-10 ... +100	0 ... 90	1
0 ... 60	10 ... 50	1
0 ... 80	10 ... 70	1
0 ... 100	10 ... 90	1
0 ... 120	10 ... 110	2
0 ... 150	20 ... 130	2
0 ... 200	20 ... 180	2

Scale range in °F	Measuring range ¹⁾ in °F	Scale spacing in °F
-40 ... +120	-20 ... +100	2
0 ... 140	20 ... 120	2
0 ... 200	20 ... 180	2
0 ... 250	30 ... 220	5
20 ... 240	0 ... 190	2
30 ... 400	80 ... 350	5
50 ... 300	100 ... 250	5

1) The measuring range is indicated on the dial by two triangular marks. Only within this range is the stated error limit valid per EN 13190.

Note: Scale range also available as dual scale °C/°F or °F/°C.

Further details on: Scale range							
Unit	<input type="checkbox"/> °C <input type="checkbox"/> °F <input type="checkbox"/> °C/°F (dual scale) <input type="checkbox"/> °F/°C (dual scale)						
Overtemperature resistance¹⁾							
End of scale range ≥ 50 °C [120 °F] ... ≤ 120 °C [250 °F]	+ 100 % overload safety referred to end of scale range						
End of scale range > 120 °C [250 °F] ... ≤ 200 °C [400 °F]	+ 50 % overload safety referred to end of scale range						
Dial							
Scale graduation	<input type="checkbox"/> Single scale <input type="checkbox"/> Dual scale						
Scale colour	<table border="1"> <tr> <td>Single scale</td><td>Black</td></tr> <tr> <td>Dual scale</td><td>Outer scale: Black Inner scale: Red</td></tr> <tr> <td></td><td>Others on request</td></tr> </table>	Single scale	Black	Dual scale	Outer scale: Black Inner scale: Red		Others on request
Single scale	Black						
Dual scale	Outer scale: Black Inner scale: Red						
	Others on request						
Material	Aluminium						
Pointer							
Instrument pointer	Aluminium, black						

1) Overtemperature resistance only in non-hazardous areas

Process connection					
Type of process connection	<input type="checkbox"/> DIN 11864-1, liner with union nut <input type="checkbox"/> DIN 11864-2, aseptic flange with notch <input type="checkbox"/> DIN 11864-3, clamp with notch <input type="checkbox"/> Clamp connection <input type="checkbox"/> VARINLINE®				
Size	<table border="1"> <tr> <td>DIN 11864-1, liner with union nut</td><td> <input type="checkbox"/> DN 25 <input type="checkbox"/> DN 32 <input type="checkbox"/> DN 40 <input type="checkbox"/> DN 26.9 <input type="checkbox"/> DN 33.7 <input type="checkbox"/> DN 42.4 <input type="checkbox"/> DN 48.3 <input type="checkbox"/> DN 1" <input type="checkbox"/> DN 1 ½" <input type="checkbox"/> DN 2" </td></tr> <tr> <td>DIN 11864-2, aseptic flange with notch</td><td> <input type="checkbox"/> DN 15 <input type="checkbox"/> DN 20 <input type="checkbox"/> DN 25 <input type="checkbox"/> DN 32 <input type="checkbox"/> DN 40 <input type="checkbox"/> DN 50 <input type="checkbox"/> DN 17.2 <input type="checkbox"/> DN 21.3 <input type="checkbox"/> DN 26.9 <input type="checkbox"/> DN 33.7 <input type="checkbox"/> DN 42.4 <input type="checkbox"/> DN 48.3 <input type="checkbox"/> DN ¾" <input type="checkbox"/> DN 1" <input type="checkbox"/> DN 1 ½" <input type="checkbox"/> DN 2" </td></tr> </table>	DIN 11864-1, liner with union nut	<input type="checkbox"/> DN 25 <input type="checkbox"/> DN 32 <input type="checkbox"/> DN 40 <input type="checkbox"/> DN 26.9 <input type="checkbox"/> DN 33.7 <input type="checkbox"/> DN 42.4 <input type="checkbox"/> DN 48.3 <input type="checkbox"/> DN 1" <input type="checkbox"/> DN 1 ½" <input type="checkbox"/> DN 2"	DIN 11864-2, aseptic flange with notch	<input type="checkbox"/> DN 15 <input type="checkbox"/> DN 20 <input type="checkbox"/> DN 25 <input type="checkbox"/> DN 32 <input type="checkbox"/> DN 40 <input type="checkbox"/> DN 50 <input type="checkbox"/> DN 17.2 <input type="checkbox"/> DN 21.3 <input type="checkbox"/> DN 26.9 <input type="checkbox"/> DN 33.7 <input type="checkbox"/> DN 42.4 <input type="checkbox"/> DN 48.3 <input type="checkbox"/> DN ¾" <input type="checkbox"/> DN 1" <input type="checkbox"/> DN 1 ½" <input type="checkbox"/> DN 2"
DIN 11864-1, liner with union nut	<input type="checkbox"/> DN 25 <input type="checkbox"/> DN 32 <input type="checkbox"/> DN 40 <input type="checkbox"/> DN 26.9 <input type="checkbox"/> DN 33.7 <input type="checkbox"/> DN 42.4 <input type="checkbox"/> DN 48.3 <input type="checkbox"/> DN 1" <input type="checkbox"/> DN 1 ½" <input type="checkbox"/> DN 2"				
DIN 11864-2, aseptic flange with notch	<input type="checkbox"/> DN 15 <input type="checkbox"/> DN 20 <input type="checkbox"/> DN 25 <input type="checkbox"/> DN 32 <input type="checkbox"/> DN 40 <input type="checkbox"/> DN 50 <input type="checkbox"/> DN 17.2 <input type="checkbox"/> DN 21.3 <input type="checkbox"/> DN 26.9 <input type="checkbox"/> DN 33.7 <input type="checkbox"/> DN 42.4 <input type="checkbox"/> DN 48.3 <input type="checkbox"/> DN ¾" <input type="checkbox"/> DN 1" <input type="checkbox"/> DN 1 ½" <input type="checkbox"/> DN 2"				

Process connection	
DIN 11864-3, clamp with notch	<ul style="list-style-type: none"> ■ DN 15 ■ DN 20 ■ DN 25 ■ DN 32 ■ DN 40 ■ DN 50 ■ DN 65 ■ DN 17.2 ■ DN 21.3 ■ DN 26.9 ■ DN 33.7 ■ DN 42.4 ■ DN 48.3 ■ DN 60.3 ■ DN ¾" ■ DN 1" ■ DN 1½" ■ DN 2" ■ DN 2½"
Clamp connection (dimensions per ASME BPE, DIN 32676 and ISO 2852)	<ul style="list-style-type: none"> ■ DN 25 ■ DN 32 ■ DN 40 ■ DN 50 ■ DN 21.3 ■ DN 26.9 ■ DN 33.7 ■ DN 42.4 ■ DN 48.3 ■ DN 60.3 ■ DN ¾" ■ DN 1" ■ DN 1½" ■ DN 2" ■ DN 2½"
VARINLINE®	<ul style="list-style-type: none"> ■ Form F ■ Form N
	Others on request
Stem	
Diameter	<ul style="list-style-type: none"> ■ 6.35 mm [1/4 in] ■ 9.52 mm [3/8 in]
Material (wetted)	Stainless steel 316L

Operating conditions	
Ambient temperature range (at the case)	-20 ... +60 °C [-4 ... +140 °F]
Storage temperature range	-50 ... +70 °C [-60 ... +160 °F]
Cleaning and sterilisation (CIP and SIP) ¹⁾	150 °C [302 °F] continuously for wetted parts
Max. operating pressure at stem	16 bar [232 psi] up to max. 40 bar [580 psi], dependent on process connection
Ingress protection (IP code) per IEC/EN 60529	<ul style="list-style-type: none"> ■ IP66 ■ IP67 ■ NEMA 4X/6
Insertion length l ₁	<p>30 ... 300 mm [1.18 ... 11.81 in]</p> <p>Minimum insertion length is dependent upon scale range, connection location and diameter → See table on page 6</p>

¹⁾ The temperature must be below the overtemperature resistance of the instrument. The following scale ranges must not be cleaned or sterilised with max. 150 °C [302 °F]:
0 ... 60 °C, -50 ... +50 °C, 0 ... 140 °F, -40 ... +120 °F.

Minimum insertion length l_1 in mm [in]				
Scale range in °C	Back mount		Lower mount	
	Ø 6.35 mm [1/4 in]	Ø 9.52 mm [3/8 in]	Ø 6.35 mm [1/4 in]	Ø 9.52 mm [3/8 in]
-50 ... +50	55 [2.17]	50 [1.97]	55 [2.17]	50 [1.97]
-20 ... +120	40 [1.58]	45 [1.77]	40 [1.58]	45 [1.77]
-10 ... +50	50 [1.97]	50 [1.97]	50 [1.97]	50 [1.97]
-10 ... +100	60 [2.36]	50 [1.97]	60 [2.36]	50 [1.97]
0 ... 60	50 [1.97]	50 [1.97]	45 [1.77]	45 [1.77]
0 ... 80	55 [2.17]	50 [1.97]	60 [23.62]	55 [2.17]
0 ... 100	35 [1.38]	35 [1.38]	50 [1.97]	45 [1.77]
0 ... 120	35 [1.38]	30 [1.18]	45 [1.77]	40 [1.58]
0 ... 150	40 [1.58]	40 [1.58]	40 [1.58]	40 [1.58]
0 ... 200	35 [1.38]	30 [1.18]	35 [1.38]	35 [1.38]

Minimum insertion length l_1 in mm [in]				
Scale range in °F	Back mount		Lower mount	
	Ø 6.35 mm [1/4 in]	Ø 9.52 mm [3/8 in]	Ø 6.35 mm [1/4 in]	Ø 9.52 mm [3/8 in]
-40 ... +120	55 [2.17]	45 [1.77]	55 [2.17]	45 [1.77]
0 ... 140	40 [1.58]	35 [1.38]	45 [1.77]	65 [2.56]
0 ... 200	45 [1.77]	40 [1.58]	45 [1.77]	40 [1.58]
0 ... 250	40 [1.58]	35 [1.38]	40 [1.58]	35 [1.38]
20 ... 240	30 [1.18]	55 [2.17]	65 [2.56]	55 [2.17]
30 ... 400	45 [1.77]	35 [1.38]	45 [1.77]	55 [2.17]
50 ... 300	56 [2.21]	45 [1.77]	50 [1.97]	45 [1.77]

Approvals

Logo	Description	Region
	3-A Hygienic design This instrument is 3-A marked, based on a third party verification for conformance to the 3-A standard.	USA
	EHEDG Hygienic design EL Class I Closed equipment, wet cleaned-in-place (CIP) without dismantling	European Union

Optional approvals

Logo	Description	Region
	EU declaration of conformity ATEX directive Hazardous areas - Ex h Zone 1 gas II 2G Ex h IIC T6 ... T1 Gb X Zone 20 dust II 2D Ex h IIIC T85 ... T450 °C Db X	European Union

Manufacturer's information and certificates

Logo	Description
-	Manufacturer's declaration regarding regulation (EC) no. 1935/2004
-	Manufacturer's declaration GB 4806.1-2016 China National Food Safety Standard - Good Manufacturing Practice GB 31603-2015 (GMP)

Certificates (option)

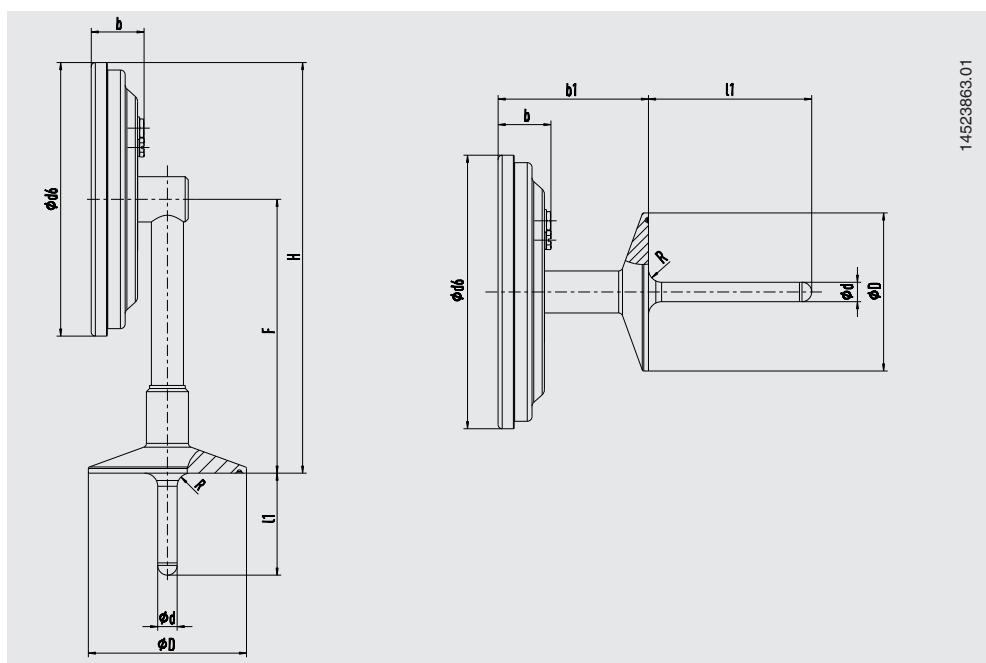
Certificates	
Certificates	<ul style="list-style-type: none"> ■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy, free from substances of animal origin) ■ 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metal parts, indication accuracy)
Certification packages	
Food	<ul style="list-style-type: none"> ■ 2.2 confirmation of the class and indication accuracy ■ 3.1 inspection certificate for wetted metal parts
Pharmaceuticals	<ul style="list-style-type: none"> ■ 3.1 inspection certificate with 3 test points ■ 3.1 inspection certificate for wetted metal parts ■ 2.2 test report: State of the art ■ 2.2 test report: Surface finish quality of wetted metal parts

→ For approvals and certificates, see website

Dimensions in mm [in]

Clamp connection

Dimensions in accordance with ASME BPE, DIN 32676 and matched to ISO 2852 (withdrawn)



Legend:

- b Case incl. zero point screw
- Od Stem diameter
- Od₆ Outer diameter of crimp ring
- Od Outer diameter of flange
- l₁ Insertion length
- R Radius of flange

Size	Dimensions in mm [in]		Matched to clamp connection in accordance with				Max. operating pressure at stem
	D	R	DIN 32676 row A	DIN 32676 row B	ASME BPE, DIN 32676 row C	ISO 2852 ¹⁾	
TC50	50.5 [1.99]	6.4 [0.25] ²⁾	■ DN 25 ■ DN 32 ■ DN 40	■ DN 21.3 ■ DN 26.9 ■ DN 33.7	■ DN 1" ³⁾ ■ DN 1 ½"	■ DN 25 ■ DN 33.7 ■ DN 38	25 bar [362 psi]
TC64	64 [2.52]	6.4 [0.25]	DN 50	■ DN 42.4 ■ DN 48.3	DN 2"	■ DN 40 ■ DN 51	16 bar [232 psi]
TC77	77.5 [3.16]	6.4 [0.25]	-	DN 60.3	DN 2 ½"	DN 63.5	16 bar [232 psi]

1) Withdrawn

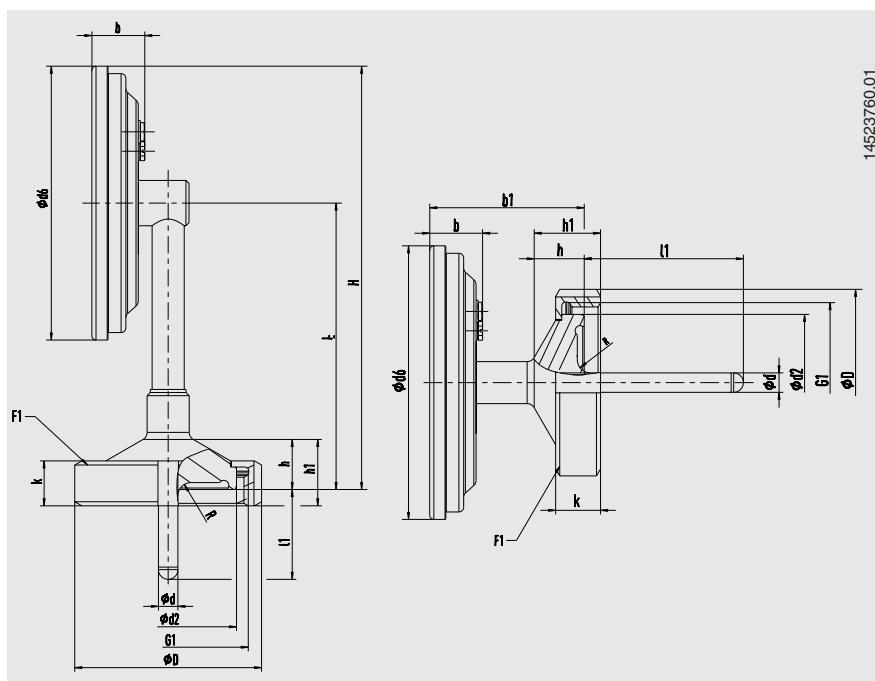
2) Radius R= 3.2 mm [0.125 in] for DN 21.3 in accordance with DIN 32676 row B

3) Dimensions in accordance with ASME BPE DT-7-1 type B and DIN 32676 series C

NS in mm [in]	Dimensions in mm [in]				
	d ₆	F	H	b	b ₁
63 [2]	69.7 [2.74]	102.1 [4.02]	136.9 [5.39]	26.95 [1.06]	74.75 [2.94]
80 [3]	83.5 [3.29]	108.95 [4.29]	150.7 [5.93]	26.2 [1.03]	74 [2.91]
100 [4]	106.9 [4.21]	120.65 [4.75]	174.1 [6.85]	26.83 [1.06]	74.63 [2.94]
130 [5]	134.1 [5.28]	134.25 [5.29]	201.3 [7.93]	26 [1.02]	73.8 [2.91]

The permissible pressures are, when using suitable clamps and sealing materials, designed for a temperature of -10 +140 °C [14 ... 284 °F].

Threaded connection per DIN 11864-1, liner with union nut



Legend:

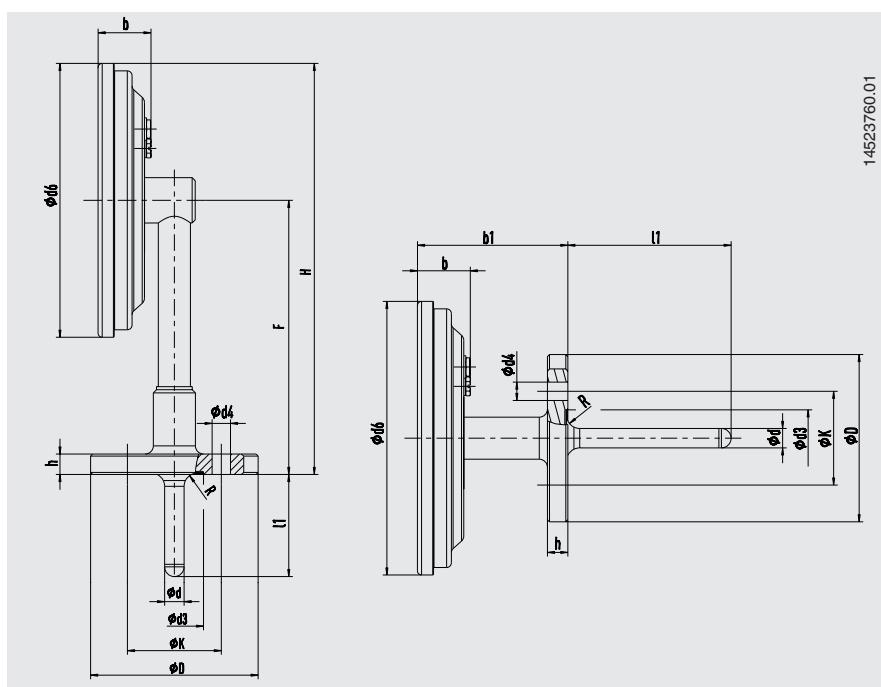
- b Case incl. zero point screw
- Ød Stem diameter
- Ød₂ Outer diameter of flange
- Ød₆ Outer diameter of crimp ring
- ØD Outer diameter of union nut
- F₁ DN grooved union nut F in accordance with DIN 11851
- G₁ Female thread of grooved union nut
- h Flange height
- h₁ Height of flange incl. grooved union nut
- k Height of union nut
- l Insertion length
- R Radius of flange

Size	Dimensions in mm [in]										Max. operating pressure at stem
	d	D	F ₁	k	G ₁	h	d ₂	h ₁	R		
DN 25	■ 6.35 [1/4] ■ 9.52 [3/8]	63 [2.48]	DN 25	21 [0.83]	Rd 52 x 1/6	15.0 [0.59]	42.9 [1.69]	27 [1.06]	6.4 [0.25]	40 bar [580 psi]	
DN 32	■ 6.35 [1/4] ■ 9.52 [3/8]	70 [2.76]	DN 32	21 [0.83]	Rd 58 x 1/6	17.8 [0.70]	48.9 [1.92]	28 [1.10]	6.4 [0.25]	40 bar [580 psi]	
DN 40	■ 6.35 [1/4] ■ 9.52 [3/8]	78 [3.07]	DN 40	21 [0.83]	Rd 65 x 1/6	19.8 [0.78]	54.9 [2.16]	28 [1.10]	6.4 [0.25]	40 bar [580 psi]	
DN 26.9	■ 6.35 [1/4] ■ 9.52 [3/8]	63 [2.48]	DN 25	21 [0.83]	Rd 52 x 1/6	15.0 [0.59]	42.9 [1.69]	27 [1.06]	6.4 [0.25]	40 bar [580 psi]	
DN 33.7	■ 6.35 [1/4] ■ 9.52 [3/8]	70 [2.76]	DN 32	21 [0.83]	Rd 58 x 1/6	17.8 [0.70]	48.9 [1.92]	28 [1.10]	6.4 [0.25]	40 bar [580 psi]	
DN 42.4	■ 6.35 [1/4] ■ 9.52 [3/8]	78 [3.07]	DN 40	21 [0.83]	Rd 65 x 1/6	19.8 [0.78]	54.9 [2.16]	28 [1.10]	6.4 [0.25]	25 bar [362 psi]	
DN 48.3	■ 6.35 [1/4] ■ 9.52 [3/8]	92 [3.62]	DN 50	22 [0.87]	Rd 78 x 1/6	24.5 [0.96]	66.9 [2.63]	30 [1.18]	6.4 [0.25]	25 bar [362 psi]	
DN 1"	■ 6.35 [1/4] ■ 9.52 [3/8]	63 [2.48]	DN 25	21 [0.83]	Rd 52 x 1/6	15.0 [0.59]	42.9 [1.69]	27 [1.06]	6.4 [0.25]	40 bar [580 psi]	
DN 1 1/2"	■ 6.35 [1/4] ■ 9.52 [3/8]	78 [3.07]	DN 40	21 [0.83]	Rd 65 x 1/6	19.8 [0.78]	54.9 [2.16]	28 [1.10]	6.4 [0.25]	40 bar [580 psi]	
DN 2"	■ 6.35 [1/4] ■ 9.52 [3/8]	92 [3.62]	DN 50	22 [0.87]	Rd 78 x 1/6	24.5 [0.96]	66.9 [2.63]	30 [1.18]	6.4 [0.25]	25 bar [362 psi]	

NS in mm [in]	Dimensions in mm [in]				
	d ₆	F	H	b	b ₁
63 [2]	69.7 [2.74]	108.05 [4.25]	142.9 [5.63]	26.95 [1.06]	76.75 [3.02]
80 [3]	83.5 [3.29]	114.95 [4.53]	156.7 [6.17]	26.2 [1.03]	76 [2.99]
100 [4]	106.9 [4.21]	126.65 [4.99]	180.1 [7.09]	26.83 [1.06]	76.63 [3.02]
130 [5]	134.1 [5.28]	140.25 [5.52]	207.3 [8.16]	26 [1.02]	75.8 [2.98]

The permissible pressures are, when using suitable clamps and sealing materials, designed for a temperature of -10 +140 °C [14 ... 284 °F].

Flanges per DIN 11864-2, aseptic flange with notch



Legend:

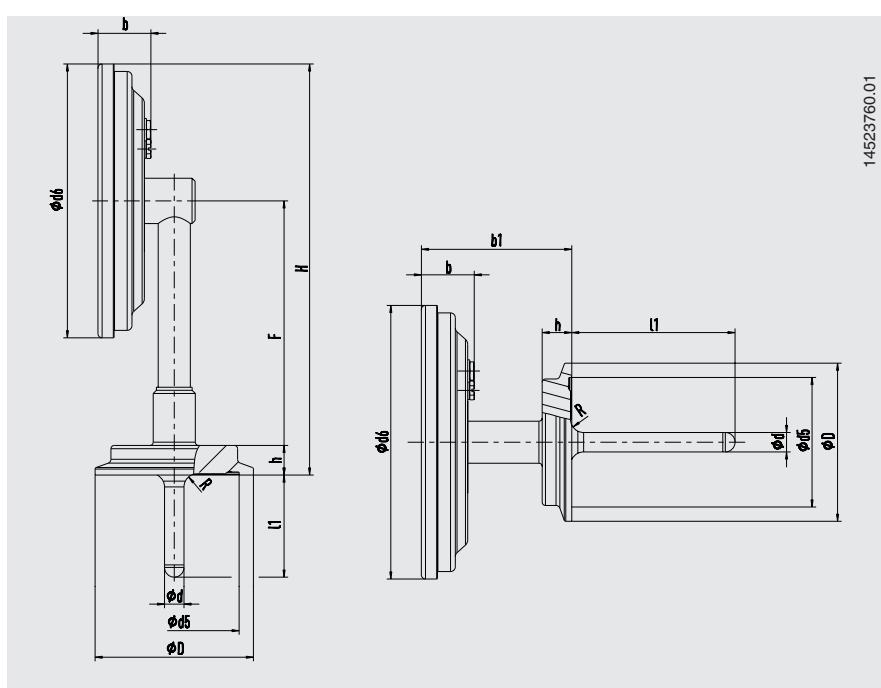
- b Case incl. zero point screw
- Ød Stem diameter
- Ød₃ Outer diameter of groove
- Ød₄ Diameter of flange bore
- Ød₆ Outer diameter of crimp ring
- ØD Outer diameter of flange
- h Flange height
- ØK Pitch circle diameter, flange holes
- l₁ Insertion length
- R Radius of flange

Size	Dimensions in mm [in]							Max. operating pressure at stem
	d	D	h	d ₃	d ₄	K	R	
DN 15	6.35 [1/4] or 9.52 [3/8]	59 [2.32]	10 [0.39]	28.4 [1.12]	9 [0.35]	42 [1.65]	3.2 [0.13]	25 bar [362 psi]
DN 20	6.35 [1/4] or 9.52 [3/8]	64 [2.52]	10 [0.39]	32.4 [1.28]	9 [0.35]	47 [1.85]	6.4 [0.25]	25 bar [362 psi]
DN 25	6.35 [1/4] or 9.52 [3/8]	70 [2.76]	10 [0.39]	38.4 [1.51]	9 [0.35]	53 [2.09]	6.4 [0.25]	25 bar [362 psi]
DN 32	6.35 [1/4] or 9.52 [3/8]	76 [2.99]	10 [0.39]	47.7 [1.88]	9 [0.35]	59 [2.32]	6.4 [0.25]	25 bar [362 psi]
DN 40	6.35 [1/4] or 9.52 [3/8]	82 [3.23]	10 [0.39]	53.7 [2.11]	9 [0.35]	65 [2.56]	6.4 [0.25]	25 bar [362 psi]
DN 50	6.35 [1/4] or 9.52 [3/8]	94 [3.70]	10 [0.39]	65.7 [2.59]	9 [0.35]	77 [3.03]	6.4 [0.25]	16 bar [232 psi]
DN 17.2	6.35 [1/4] or 9.52 [3/8]	59 [2.32]	10 [0.39]	26.4 [1.04]	9 [0.35]	42 [1.65]	3.2 [0.13]	25 bar [362 psi]
DN 21.3	6.35 [1/4] or 9.52 [3/8]	62 [2.44]	10 [0.39]	30.4 [1.20]	9 [0.35]	45 [1.77]	3.2 [0.13]	25 bar [362 psi]
DN 26.9	6.35 [1/4] or 9.52 [3/8]	69 [2.72]	10 [0.39]	36.1 [1.42]	9 [0.35]	52 [2.05]	6.4 [0.25]	25 bar [362 psi]
DN 33.7	6.35 [1/4] or 9.52 [3/8]	74 [2.91]	10 [0.39]	45.4 [1.79]	9 [0.35]	57 [2.24]	6.4 [0.25]	25 bar [362 psi]
DN 42.4	6.35 [1/4] or 9.52 [3/8]	82 [3.23]	10 [0.39]	54.1 [2.13]	9 [0.35]	65 [2.56]	6.4 [0.25]	16 bar [232 psi]
DN 48.3	6.35 [1/4] or 9.52 [3/8]	88 [3.46]	10 [0.39]	60.0 [2.36]	9 [0.35]	71 [2.80]	6.4 [0.25]	16 bar [232 psi]
DN ¾	6.35 [1/4] or 9.52 [3/8]	59 [2.32]	10 [0.39]	28.4 [1.12]	9 [0.35]	42 [1.65]	3.2 [0.13]	25 bar [362 psi]
DN 1"	6.35 [1/4] or 9.52 [3/8]	66 [2.60]	10 [0.39]	34.4 [1.35]	9 [0.35]	49 [1.93]	6.4 [0.25]	25 bar [362 psi]
DN 1 ½"	6.35 [1/4] or 9.52 [3/8]	79 [3.11]	10 [0.39]	50.5 [1.99]	9 [0.35]	62 [2.44]	6.4 [0.25]	25 bar [362 psi]
DN 2"	6.35 [1/4] or 9.52 [3/8]	92 [3.62]	10 [0.39]	63.5 [2.50]	9 [0.35]	75 [2.95]	6.4 [0.25]	16 bar [232 psi]

NS in mm [in]	Dimensions in mm [in]				
	d ₆	F	H	b	b ₁
63 [2]	69.7 [2.74]	102.1 [4.02]	136.9 [5.39]	26.95 [1.06]	74.75 [2.94]
80 [3]	83.5 [3.29]	108.95 [4.29]	150.7 [5.93]	26.2 [1.03]	74 [2.91]
100 [4]	106.9 [4.21]	120.65 [4.75]	174.1 [6.85]	26.83 [1.06]	74.63 [2.94]
130 [5]	134.1 [5.28]	134.25 [5.29]	201.3 [7.93]	26 [1.02]	73.8 [2.91]

The permissible pressures are, when using suitable clamps and sealing materials, designed for a temperature of -10 +140 °C [14 284 °F].

Clamp connection per DIN 11864-3, clamp with notch



Legend:

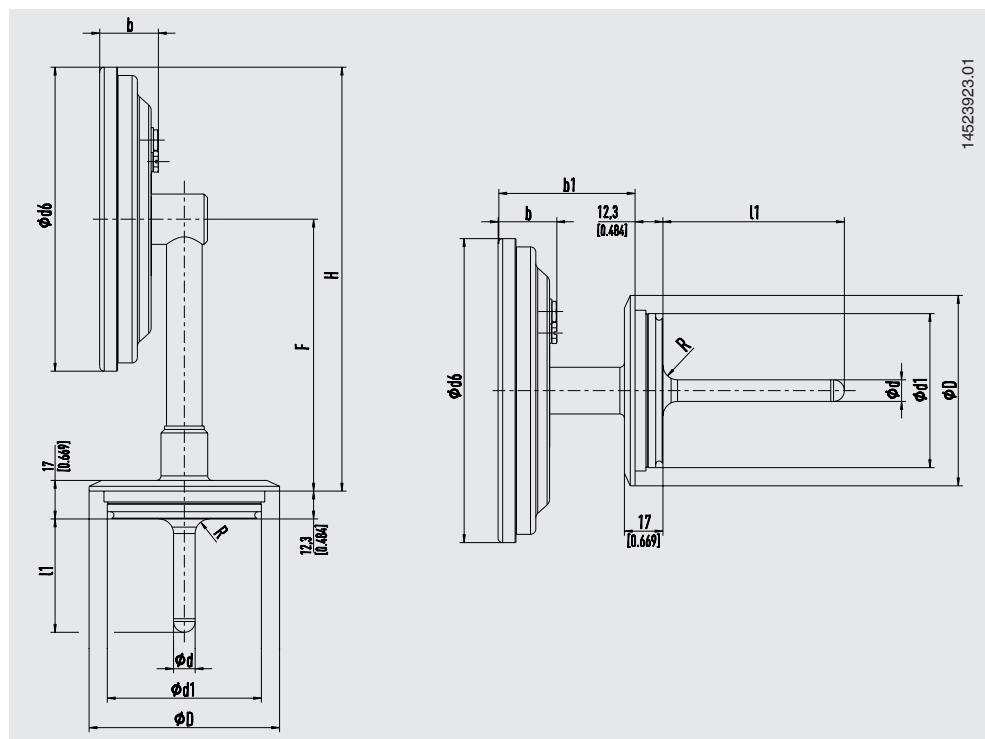
- b Case incl. zero point screw
- Ød Stem diameter
- Ød₅ Outer diameter of groove
- Ød₆ Outer diameter of crimp ring
- ØD Outer diameter of flange
- h Flange height
- l₁ Insertion length
- R Radius of flange

Size	Dimensions in mm [in]					Max. operating pressure at stem
	d	D	h	d ₅	R	
DN 15	6.35 [1/4] or 9.52 [3/8]	34.0 [1.34]	12.0 [0.47]	28.4 [1.12]	3.2 [0.13]	40 bar [580 psi]
DN 20	6.35 [1/4] or 9.52 [3/8]	50.5 [1.99]	12.0 [0.47]	32.4 [1.28]	6.4 [0.25]	40 bar [580 psi]
DN 25	6.35 [1/4] or 9.52 [3/8]	50.5 [1.99]	10.5 [0.41]	38.4 [1.51]	6.4 [0.25]	40 bar [580 psi]
DN 32	6.35 [1/4] or 9.52 [3/8]	50.5 [1.99]	14.0 [0.55]	47.7 [1.88]	6.4 [0.25]	40 bar [580 psi]
DN 40	6.35 [1/4] or 9.52 [3/8]	64.0 [2.52]	14.0 [0.55]	53.7 [2.11]	6.4 [0.25]	40 bar [580 psi]
DN 50	6.35 [1/4] or 9.52 [3/8]	77.5 [3.05]	14.5 [0.57]	65.7 [2.59]	6.4 [0.25]	25 bar [362 psi]
DN 65	6.35 [1/4] or 9.52 [3/8]	91.0 [3.58]	16.5 [0.65]	81.7 [3.22]	6.4 [0.25]	25 bar [362 psi]
DN 17.2	6.35 [1/4] or 9.52 [3/8]	34.0 [1.34]	12.0 [0.47]	26.4 [1.04]	3.2 [0.13]	40 bar [580 psi]
DN 21.3	6.35 [1/4] or 9.52 [3/8]	34.0 [1.34]	13.0 [0.51]	30.4 [1.20]	3.2 [0.13]	40 bar [580 psi]
DN 26.9	6.35 [1/4] or 9.52 [3/8]	50.5 [1.99]	9.0 [0.35]	36.1 [1.42]	6.4 [0.25]	40 bar [580 psi]
DN 33.7	6.35 [1/4] or 9.52 [3/8]	50.5 [1.99]	14.0 [0.55]	45.4 [1.79]	6.4 [0.25]	40 bar [580 psi]
DN 42.4	6.35 [1/4] or 9.52 [3/8]	64.0 [2.52]	14.0 [0.55]	54.1 [2.13]	6.4 [0.25]	25 bar [362 psi]
DN 48.3	6.35 [1/4] or 9.52 [3/8]	64.0 [2.52]	15.0 [0.59]	60.0 [2.36]	6.4 [0.25]	25 bar [362 psi]
DN 60.3	6.35 [1/4] or 9.52 [3/8]	91.0 [3.58]	17.0 [0.67]	72.0 [2.83]	6.4 [0.25]	25 bar [362 psi]
DN ¾	6.35 [1/4] or 9.52 [3/8]	34.0 [1.34]	12.0 [0.47]	28.4 [1.12]	3.2 [0.13]	40 bar [580 psi]
DN 1"	6.35 [1/4] or 9.52 [3/8]	50.5 [1.99]	10.5 [0.41]	34.4 [1.35]	6.4 [0.25]	40 bar [580 psi]
DN 1 ½"	6.35 [1/4] or 9.52 [3/8]	64.0 [2.52]	14.0 [0.55]	50.5 [1.99]	6.4 [0.25]	40 bar [580 psi]
DN 2"	6.35 [1/4] or 9.52 [3/8]	77.5 [3.05]	14.5 [0.57]	63.5 [2.50]	6.4 [0.25]	25 bar [362 psi]
DN 2 ½"	6.35 [1/4] or 9.52 [3/8]	91.0 [3.58]	17.5 [0.69]	75.9 [2.99]	6.4 [0.25]	25 bar [362 psi]

NS in mm [in]	Dimensions in mm [in]				
	d ₆	F	H	b	b ₁
63 [2]	69.7 [2.74]	102.1 [4.02]	136.9 [5.39]	26.95 [1.06]	74.75 [2.94]
80 [3]	83.5 [3.29]	108.95 [4.29]	150.7 [5.93]	26.2 [1.03]	74 [2.91]
100 [4]	106.9 [4.21]	120.65 [4.75]	174.1 [6.85]	26.83 [1.06]	74.63 [2.94]
130 [5]	134.1 [5.28]	134.25 [5.29]	201.3 [7.93]	26 [1.02]	73.8 [2.91]

The permissible pressures are, when using suitable clamps and sealing materials, designed for a temperature of -10 +140 °C [14 ... 284 °F].

VARINLINE® form F and N



Legend:

- b Case incl. zero point screw
- ϕd_6 Stem diameter
- ϕd_1 Outer diameter of groove
- ϕd_6 Outer diameter of crimp ring
- ϕD Outer diameter of flange
- l_1 Insertion length
- R Radius of flange

Size	NS in mm [in]	Dimensions in mm [in]				Max. operating pressure at stem
		d	d_1	D	R	
Form F	63 [2]	■ 6.35 [1/4] ■ 9.52 [3/8]	49.95 [1.97]	66 [2.60]	6.4 [0.25]	25 bar [362 psi]
	80 [3]	■ 6.35 [1/4] ■ 9.52 [3/8]	49.95 [1.97]	66 [2.60]	6.4 [0.25]	25 bar [362 psi]
	100 [4]	■ 6.35 [1/4] ■ 9.52 [3/8]	49.95 [1.97]	66 [2.60]	6.4 [0.25]	25 bar [362 psi]
	130 [5]	■ 6.35 [1/4] ■ 9.52 [3/8]	49.95 [1.97]	66 [2.60]	6.4 [0.25]	25 bar [362 psi]
Form N	63 [2]	■ 6.35 [1/4] ■ 9.52 [3/8]	67.95 [2.68]	84 [3.31]	6.4 [0.25]	25 bar [362 psi]
	80 [3]	■ 6.35 [1/4] ■ 9.52 [3/8]	67.95 [2.68]	84 [3.31]	6.4 [0.25]	25 bar [362 psi]
	100 [4]	■ 6.35 [1/4] ■ 9.52 [3/8]	67.95 [2.68]	84 [3.31]	6.4 [0.25]	25 bar [362 psi]
	130 [5]	■ 6.35 [1/4] ■ 9.52 [3/8]	67.95 [2.68]	84 [3.31]	6.4 [0.25]	25 bar [362 psi]

NS in mm [in]	Dimensions in mm [in]				
	d_6	F	H	b	b_1
63 [2]	69.7 [2.74]	102.1 [4.02]	136.9 [5.39]	26.95 [1.06]	74.75 [2.94]
80 [3]	83.5 [3.29]	108.95 [4.29]	150.7 [5.93]	26.2 [1.03]	74 [2.91]
100 [4]	106.9 [4.21]	120.65 [4.75]	174.1 [6.85]	26.83 [1.06]	74.63 [2.94]
130 [5]	134.1 [5.28]	134.25 [5.29]	201.3 [7.93]	26 [1.02]	73.8 [2.91]

The permissible pressures are, when using suitable clamps and sealing materials, designed for a temperature of -10 +140 °C [14 ... 284 °F].

Ordering information

Model / Nominal size / Connection location / Unit / Scale range / Process connection / Stem diameter / Insertion length l_1 / Approvals / Certificates / Options

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