

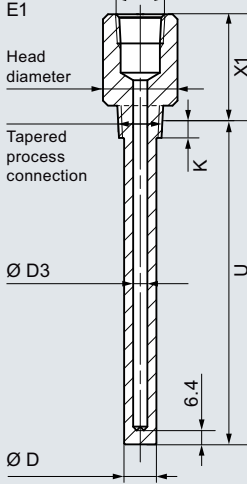
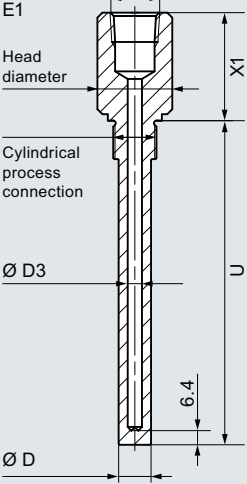
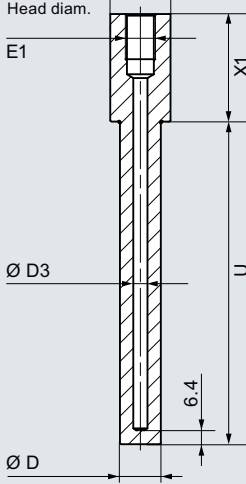
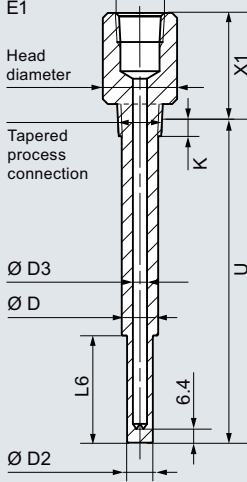
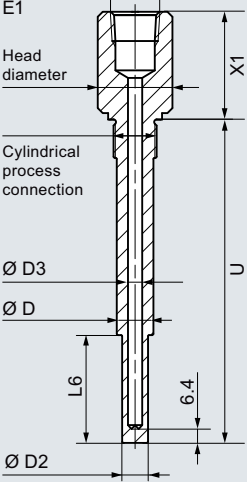
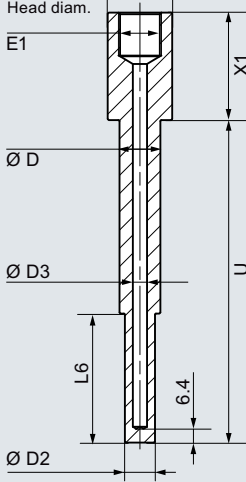
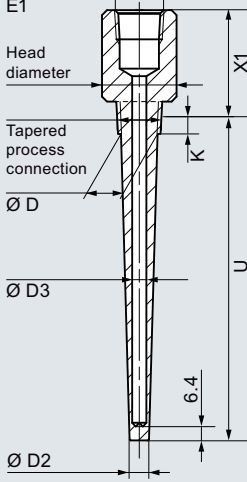
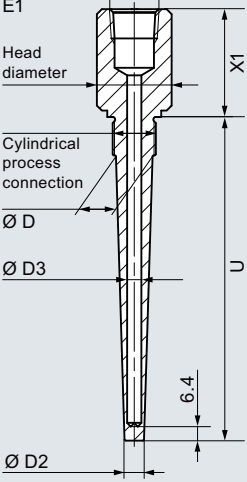
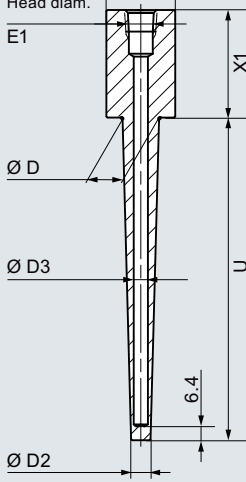
# Temperature Measurement

## SITRANS TSthermowells

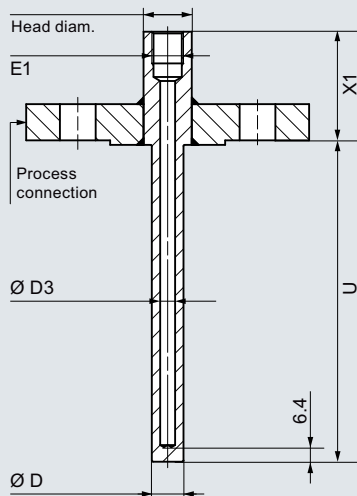
### Thermowells according to ASME B40.9

#### Dimensional drawings

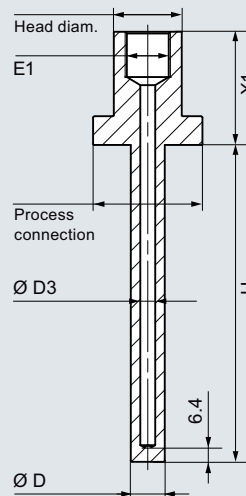
##### Thermowells according to ASME B 40.9

7MT21, for screwing in, straight, tapered process connection	7MT21, for screwing in, straight, cylindrical process connection	7MT31, for weld-in, straight process connection
		
7MT22, for screwing in, reduced, tapered process connection	7MT22, for screwing in, reduced, cylindrical process connection	7MT32, for weld-in, reduced process connection
		
7MT23, for screwing in, tapered, tapered process connection	7MT23, for screwing in, tapered, cylindrical process connection	7MT33, for weld-in, tapered process connection
		

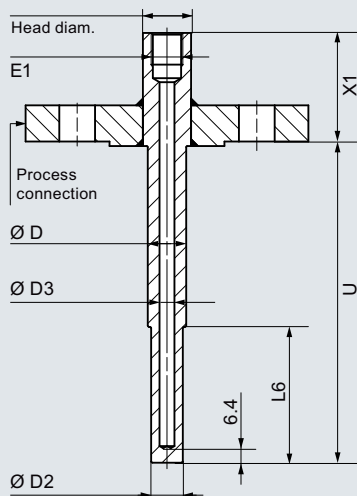
**7MT41, flange connection, straight**



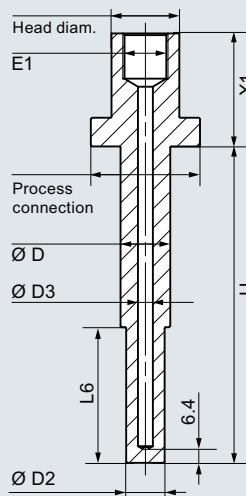
**7MT51, Van Stone type, straight**



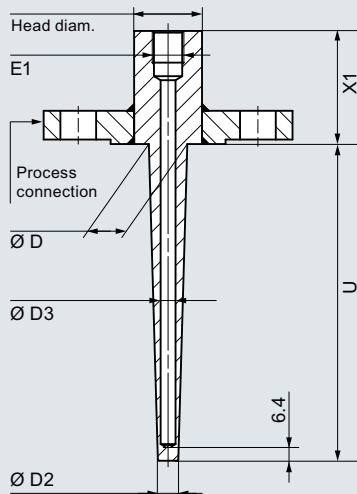
**7MT42, flange connection, reduced**



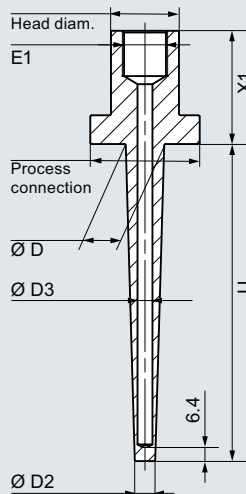
**7MT52, Van Stone type, reduced**



**7MT43, flange connection, tapered**



**7MT53 Van Stone type, tapered**



## Temperature Measurement

### SITRANS TS Thermowells

#### Thermowells according to ASME B40.9

2

#### Selection and Ordering data

Article No.

Order code

#### Thermowells made of barstock according to ASME 40.9

7 M T - - - - -

Click on the Article No. for the online configuration and configuration check in the PIA Life Cycle Portal.

#### Basic model

Standard	Process connection	Form		
ASME	For screwing in	Straight	↗	2 1
ASME	For welding	Straight	↗	3 1
ASME	Flange connection	Straight	↗	4 1
ASME	Van Stone type	Straight	↗	5 1
ASME	For screwing in	Reduced	↗	2 2
ASME	For welding	Reduced	↗	3 2
ASME	Flange connection	Reduced	↗	4 2
ASME	Van Stone type	Reduced	↗	5 2
ASME	For screwing in	Tapered	↗	2 3
ASME	For welding	Tapered	↗	3 3
ASME	Flange connection	Tapered	↗	4 3
ASME	Van Stone type	Tapered	↗	5 3

#### Connection to thermometer E1

M18x1.5	1	
M20x1.5	2	
½-14 NPT	5	
G½	7	
Special version	9	Y 9 9

#### Head diameter of the thermowell

For screwing in - width across flats	For welding	Flange connection	Van Stone head/process connection	
H27	26.7 mm 33.4 mm 48.3 mm	28.6 mm 30 mm	33.4 mm / 51 mm 48.3 mm / 73 mm	0 1 2
H32		32 mm	60.3 mm / 92 mm	3
H36		34 mm		4
H42		38 mm		5

#### Head length X1

	Screw-in	Weld-in	Flange	Van Stone	
25 ... 50 mm: Initial 45 mm	✓	✓	✓		0
51 ... 75 mm: Initial 64 mm	✓	✓	✓	✓	1
76 ... 101 mm: Initial 89 mm	✓	✓	✓	✓	2
102 ... 126 mm: Initial 114 mm	✓	✓	✓	✓	3
127 ... 151 mm: Initial 140 mm	✓	✓	✓	✓	4
152 ... 177 mm: Initial 165 mm	✓	✓	✓	✓	5
178 ... 202 mm: Initial 191 mm	✓	✓	✓		6

#### Installation length U

25 ... 126 mm: Initial 25 mm	
127 ... 253 mm: Initial 127 mm	
254 ... 380 mm: Initial 254 mm	
381 ... 507 mm: Initial 381 mm	
508 ... 634 mm: Initial 508 mm	
635 ... 761 mm: Initial 635 mm	
762 ... 888 mm: Initial 762 mm	

A  
B  
C  
D  
E  
F  
G

Selection and Ordering data					Article No.	Order code
<b>Thermowells made of barstock according to ASME 40.9</b>					7 MT	
<b>Thermowell material</b>						
	Screw-in	Weld-in	Flange	Van Stone		
316L / 1.4404	✓	✓	✓	✓		B
Carbon steel	✓	✓	✓	✓		C
Hastelloy C276 / 2.4819 (flange with flanged wheel)			✓	✓		E
Hastelloy C22 / 2.4602 (flange with flanged wheel)			✓	✓		F
304L / 1.4306	✓	✓	✓	✓		H
321 / 1.4541	✓	✓	✓	✓		K
Monel alloy 400 / 2.4360 (flange with flanged wheel)			✓	✓		L
Tantalum (sleeve, thermowell, made of 316/TI/L)			✓	✓		Q
Duplex / 1.4462			✓	✓		P
Super Duplex / 1.4410			✓	✓		R
PTFE coating (thermowell made of 316/TI/L)			✓	✓		U
ECTFE (HALAR) (thermowell made of 316/TI/L)			✓	✓		V
Stellite coating (thermowell made of 316/TI/L)			✓	✓		W
Customer-specific thermowell (head diameter/X1/U/material)	✓		✓	✓		
					9 8 NN	G 1 Y
<b>External diameter of root D/tip D2</b>						
<b>Straight thermowell</b>	<b>Reduced thermowell</b>		<b>Tapered thermowell</b>			
D	D	D2	D	D2		
0.50 in (12.7 mm)						0 0
0.625 in (15.9 mm)	0.625 in (15.9 mm)	0.5 in (12.7 mm)	0.625 in (15.9 mm)	0.5 in (12.7 mm)		0 1
0.75 in (19.1 mm)	0.75 in (19.1 mm)	0.5 in (12.7 mm)	0.75 in (19.1 mm)	0.5 in (12.7 mm)		0 2
1.00 in (25.4 mm)	1.00 in (25.4 mm)	0.5 in (12.7 mm)				0 3
1.25 in (31.8 mm)	1.25 in (31.8 mm)	0.5 in (12.7 mm)	1.00 in (25.4 mm)	0.50 in (12.7 mm)		0 4
1.50 in (38.1 mm)	1.50 in (38.1 mm)	0.5 in (12.7 mm)	1.00 in (25.4 mm)	0.75 in (19.1 mm)		0 5
			1.25 in (31.8 mm)	0.50 in (12.7 mm)		0 7
			1.25 in (31.8 mm)	0.75 in (19.1 mm)		0 8
			1.25 in (31.8 mm)	1.00 in (25.4 mm)		1 0
D = 12 mm (0.47 in)						1 1
D = 14 mm (0.55 in)						1 2
D = 16 mm (0.63 in)			1.50 in (38.1 mm)	0.50 in (12.7 mm)		1 3
D = 19 mm (0.75 in)			1.50 in (38.1 mm)	0.75 in (19.1 mm)		1 4
D = 22 mm (0.87 in)			1.50 in (38.1 mm)	1.00 in (25.4 mm)		1 5
D = 25 mm (0.98 in)			1.50 in (38.1 mm)	1.25 in (31.8 mm)		1 6
D = 27 mm (1.06 in)						3 1
			12 mm (0.47 in)	9 mm (0.35 in)		3 3
			14 mm (0.55 in)	9 mm (0.35 in)		3 6
			16 mm (0.63 in)	9 mm (0.35 in)		3 7
			16 mm (0.63 in)	13 mm (0.51 in)		3 8
			16 mm (0.63 in)	14 mm (0.55 in)		4 1
			19 mm (0.75 in)	9 mm (0.35 in)		4 2
			19 mm (0.75 in)	13 mm (0.51 in)		4 3
			19 mm (0.75 in)	14 mm (0.55 in)		4 6
			22 mm (0.87 in)	9 mm (0.35 in)		4 7
			22 mm (0.87 in)	13 mm (0.51 in)		4 8
			22 mm (0.87 in)	14 mm (0.55 in)		5 0
			22 mm (0.87 in)	16 mm (0.63 in)		5 3
			25 mm (0.98 in)	9 mm (0.35 in)		5 4
			25 mm (0.98 in)	13 mm (0.51 in)		5 5
			25 mm (0.98 in)	14 mm (0.55 in)		5 6
			25 mm (0.98 in)	16 mm (0.63 in)		5 7
			25 mm (0.98 in)	19 mm (0.75 in)		6 1
			27 mm (1.06 in)	9 mm (0.35 in)		6 2
			27 mm (1.06 in)	13 mm (0.51 in)		6 3
			27 mm (1.06 in)	14 mm (0.55 in)		6 4
			27 mm (1.06 in)	16 mm (0.63 in)		6 5
			27 mm (1.06 in)	19 mm (0.75 in)		6 6
			27 mm (1.06 in)	22 mm (0.87 in)		7 0
			32 mm (1.26 in)	9 mm (0.35 in)		7 1
			32 mm (1.26 in)	13 mm (0.51 in)		

# Temperature Measurement

## SITRANS TS Thermowells

### Thermowells according to ASME B40.9

#### Selection and Ordering data

Article No.

Order code

#### Thermowells made of barstock according to ASME 40.9

7 MT - - - - -

#### External diameter of root D/tip D2 (continued)

Straight thermowell		Reduced thermowell		Tapered thermowell	
D		D	D2	D	D2
				32 mm (1.26 in)	14 mm (0.55 in)
				32 mm (1.26 in)	16 mm (0.63 in)
				32 mm (1.26 in)	19 mm (0.75 in)
				32 mm (1.26 in)	22 mm (0.87 in)
				32 mm (1.26 in)	25 mm (0.98 in)
				34 mm (1.34 in)	9 mm (0.35 in)
				34 mm (1.34 in)	13 mm (0.51 in)
				34 mm (1.34 in)	14 mm (0.55 in)
				34 mm (1.34 in)	16 mm (0.63 in)
				34 mm (1.34 in)	19 mm (0.75 in)
				34 mm (1.34 in)	22 mm (0.87 in)
				34 mm (1.34 in)	25 mm (0.98 in)
Customer-specific		Customer-specific		Customer-specific	

7 2
7 3
7 4
7 5
7 6
8 0
8 1
8 2
8 3
8 4
8 5
8 6
9 0
L 1 Y

#### Process connection

Thread for 7MT2... (Screw-in thermowells)

- G $\frac{1}{2}$ "
- G $\frac{3}{4}$ "
- G1"
- R $\frac{1}{2}$ "
- R $\frac{3}{4}$ "
- R1"
- $\frac{1}{2}$ " NPT
- $\frac{3}{4}$ " NPT
- 1" NPT
- M20 x 1.5
- M27 x 2
- M33 x 2

Flange according to EN 1092-1 for 7MT4... (Flange thermowells), Sealing surface Initial: B1 for uncoated variants

- DN 25, PN 10 - 40
- DN 40, PN 10 - 40
- DN 50, PN 10 - 16
- DN 50, PN 25 - 40

Flange according to ASME B16.5 for 7MT4... (Flange thermowells), Sealing surface Initial: RF for uncoated variants

- 1.00 inch; Class 150
- 1.00 inch; Class 300
- 1.00 inch; Class 600
- 1.50 inch; Class 150
- 1.50 inch; Class 300
- 1.50 inch; Class 600
- 1.50 inch; Class 900
- 1.50 inch; Class 1500
- 1.50 inch; Class 2500
- 2.00 inch; Class 150
- 2.00 inch; Class 300
- 2.00 inch; Class 600
- 3.00 inch; Class 150
- 3.00 inch; Class 300
- 3.00 inch; Class 600
- 4.00 inch; Class 150
- 4.00 inch; Class 300
- 4.00 inch; Class 600

For 7MT3... and 7MT5... (Weld-in and Van Stone thermowells)

- Without (optional collar flange for Van-Stone see "Options")

1 A  
1 B  
1 C  
1 D  
1 E  
1 F  
1 G  
1 H  
1 J  
1 L  
1 M  
1 N  
2 D  
2 F  
2 H  
2 J  
3 E  
3 F  
3 G  
3 K  
3 L  
3 M  
3 N  
3 P  
3 Q  
3 R  
3 S  
3 T  
4 C  
4 D  
4 E  
4 G  
4 H  
4 J

0 N

Selection and Ordering data					Article No.	Order code
<b>Thermowells made of barstock according to ASME 40.9</b>					7 M T	
<b>Process connection material (identical to thermowell)</b>						
	Screw-in	Weld-in	Flange	Van Stone		
316L / 1.4404	✓		✓	✓		B
Carbon steel	✓		✓			C
Hastelloy C276 / 2.4819 (Flange with flanged wheel)			✓			E
Hastelloy C22 / 2.4602			✓			F
304L / 1.4306	✓		✓			H
321 / 1.4541	✓		✓			K
Monel alloy 400 / 2.4360 (Flange with flanged wheel)			✓			L
Tantal (sleeve, thermowell made of 316/TI/L)			✓			Q
Duplex / 1.4462			✓			P
Super Duplex			✓			R
PTFE coating (thermowell made of 316/TI/L)			✓			U
ECTFE (HALAR) (thermowell made of 316/TI/L)			✓			V
Stellite coating (thermowell made of 316/TI/L)			✓			W
Customer-specific	✓		✓	✓		9NN
<b>Bore D3</b>						
D3 = 6.6 mm (0.260 in)						2
Customer-specific						9 R 1 Y

Auswahl- und Bestelldaten	Kurzangabe
<b>Options</b>	
Add "-Z" to Article No. and add options, separate extensions with "+".	
<b>Acceptance test certificate according to EN 10204-3.1</b>	
Material certificate for wetted parts	C12
PMI (positive material ident.) for wetted parts	C15
Pressure test	C31
Helium leak test	C32
Surface crack test	C33
Visual, dimensional and functional check	C34
Compliance with order	C35
X-ray test for welding seams	C41
Ultrasound test for welding seams	C44
X-ray test concentricity of bore hole	C47
Ultrasound test concentricity of bore hole	C48
MR-01-75 NACE conformity	C50
MR-01-03 NACE conformity	C53
Grease-free (cleaned for oxygen applications, for example)	C51
<b>Additional options</b>	
Thread protection stainless steel plug and chain	A55
Forged flange	A76
Sealing surface with concentric lines	A77
TAG-marking	Y15
<b>Full penetration options</b>	
Process connection welded	G02
<b>Surface treatment, options on request</b>	
Wetted parts stained, neutralized and passivated	W01
Wetted parts electropolished	W02

Auswahl- und Bestelldaten	Kurzangabe
<b>Additional flange sealing surfaces</b>	
FF-Flat Face according to ASME B16.5	A70
RTJ-Ring-Type Joint according to ASME B16.5	A71
Type B2 according to EN1092-1	A72
Type C according to EN1092-1	A73
Type D according to EN1092-1	A74
<b>Additional information</b>	
Add "-Z" to Article No. and specify Order code.	
Additional information in plain text: Thermowell (head diameter/X1/U/material)	G1Y
Additional information in plain text: AD root D / [tip D2]	L1Y
Additional information in plain text: Process connection (material/type):	N1Y
Additional information in plain text: Bore hole D3:	R1Y
<b>Customer specific production</b>	
Length options U: Specify special installation length (in spec. area)	Y44
Length options X1: Specify special length extension (in spec. area)	Y45
Processing and quotation number of special version: specify in plain text	Y99
<b>Optional collar flanges 316L (Van Stone only)</b>	
1.00 inch, Class 150 sealing surface initial: RF	B24
1.00 inch, Class 300 sealing surface initial: RF	B25
1.00 inch, Class 600 sealing surface initial: RF	B26
1.50 inch, Class 150 sealing surface initial: RF	B29
1.50 inch, Class 300 sealing surface initial: RF	B30
1.50 inch, Class 600 sealing surface initial: RF	B31
2.00 inch, Class 150 sealing surface initial: RF	B35
2.00 inch, Class 300 sealing surface initial: RF	B36
2.00 inch, Class 600 sealing surface initial: RF	B37