

## Thermowells according DIN 43772

### FEATURES

- Sensor protection for reliable temperature measurement
- Female Instrument connection
- Wide selection of instrument connections
- Compatible to standard or customized stem dimensions
- Suits to a wide spectrum of process connections types

### DESCRIPTION

- Power Generation
- Reactors
- Storage Tanks
- Cooling Towers
- Industrial equipment Manufacture
- Industrial Ovens
- HVAC/R
- Food and Beverage
- Pharmaceutical and Biotech



### SPECIFICATIONS

Form: 2, 3, 2G, 3G, 2F, 3F, 4, 4F, 5, 6, 7, 8 or 9

Bore Diameter: 6, 7, 8 or 9 mm

Max. Length: up to 1 m

Process Connection: Threaded, Flanged or Weld-in

Instrument Connection: Wide variation in dependence of Form  
see ordering code for further details

Material: Brass  
 A 182 F11 Chrome Moly (1.7335)  
 A 182 F22 Chrome Moly (1.7380)  
 Stainless steel 304 (1.4301)  
 Stainless steel 304L (1.4306)  
 Stainless steel 316L (1.4404)  
 Stainless steel 316Ti (1.4571)  
 16 Mo3 (1.5415)

### KEY BENEFITS

- Separation of temperature measuring device from medium
- Protection of thermometer from aggressive media
- Easy replacement of thermometer

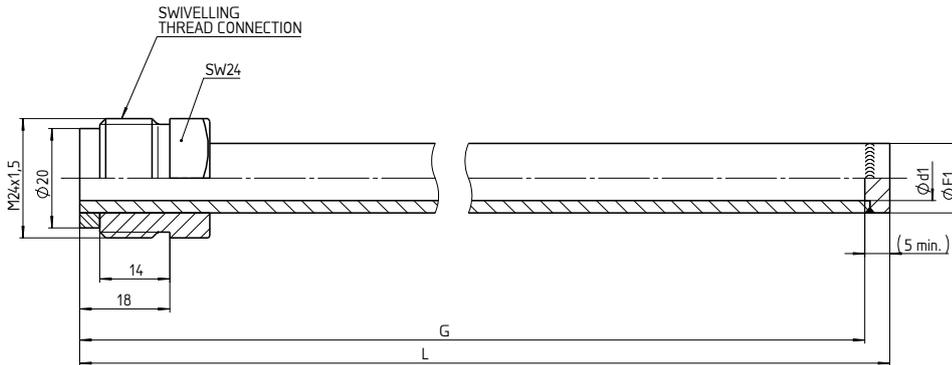
**Data Sheet**

**Thermowells according DIN 43772  
Form 2 and 3**

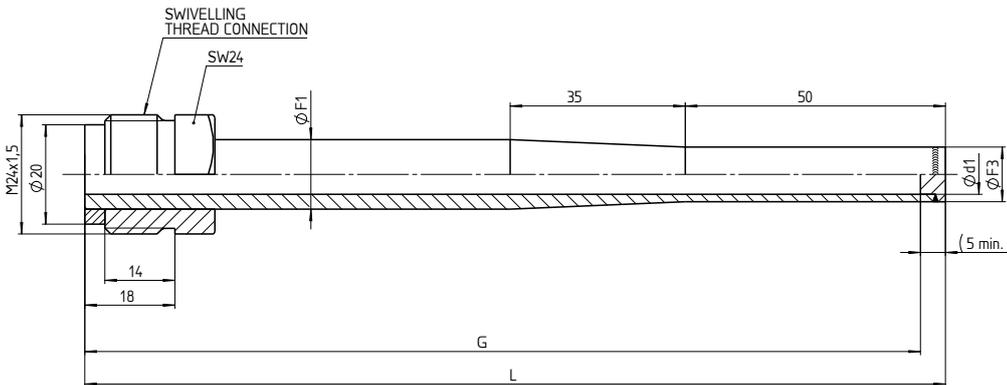
**DIMENSIONS IN MM**

For reference only, consult Ashcroft for specific dimensional drawings

**FORM 2**



**FORM 3**



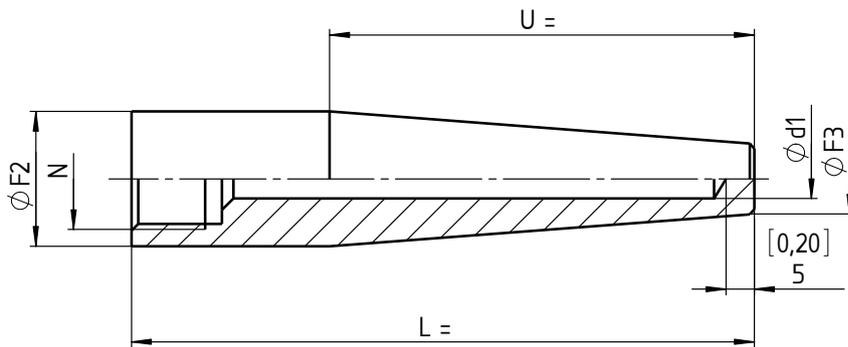
**Data Sheet**

**Thermowells according DIN 43772  
Form 4 and 2G**

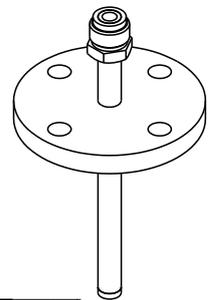
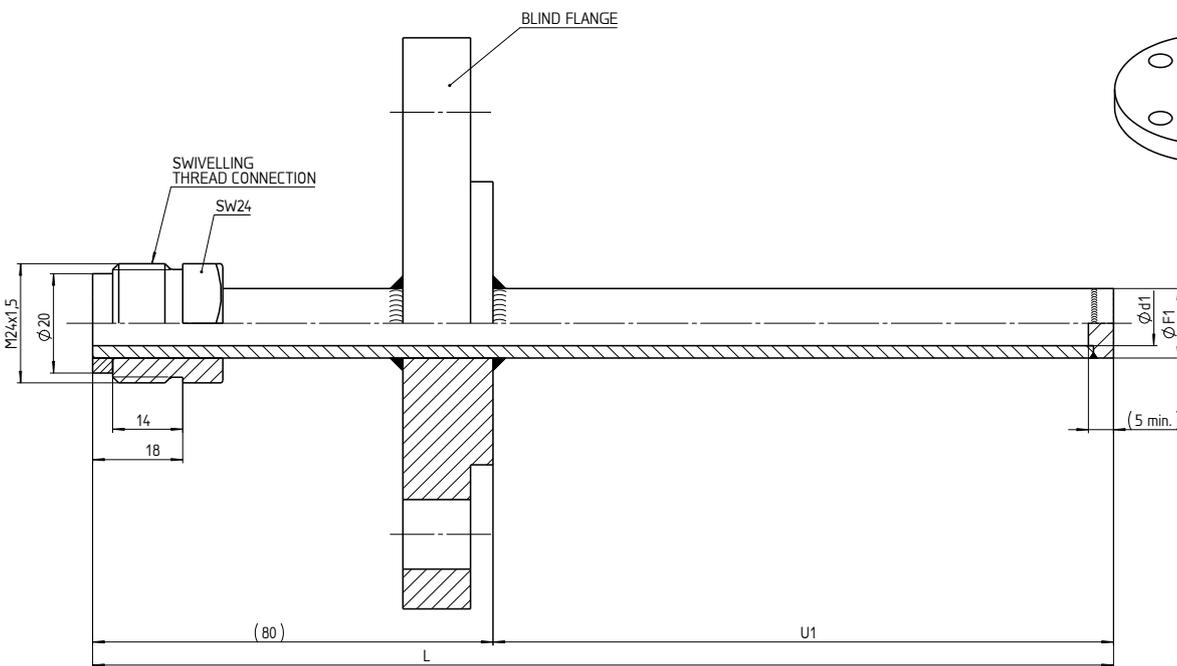
**DIMENSIONS IN MM**

For reference only, consult Ashcroft for specific dimensional drawings

**FORM 4**



**FORM 2F**





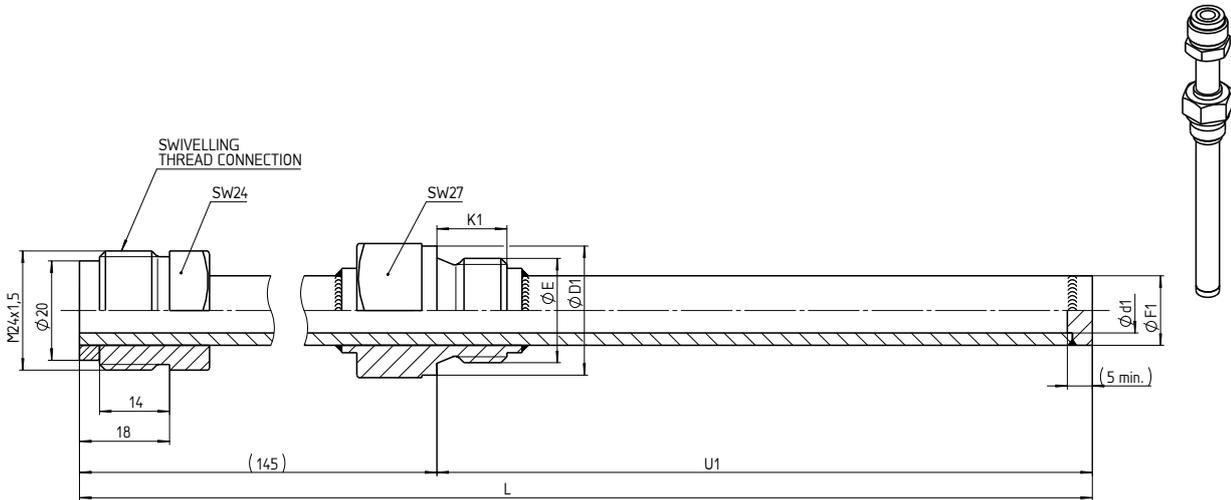
**Data Sheet**

**Thermowells according DIN 43772  
Form 3G and 2F**

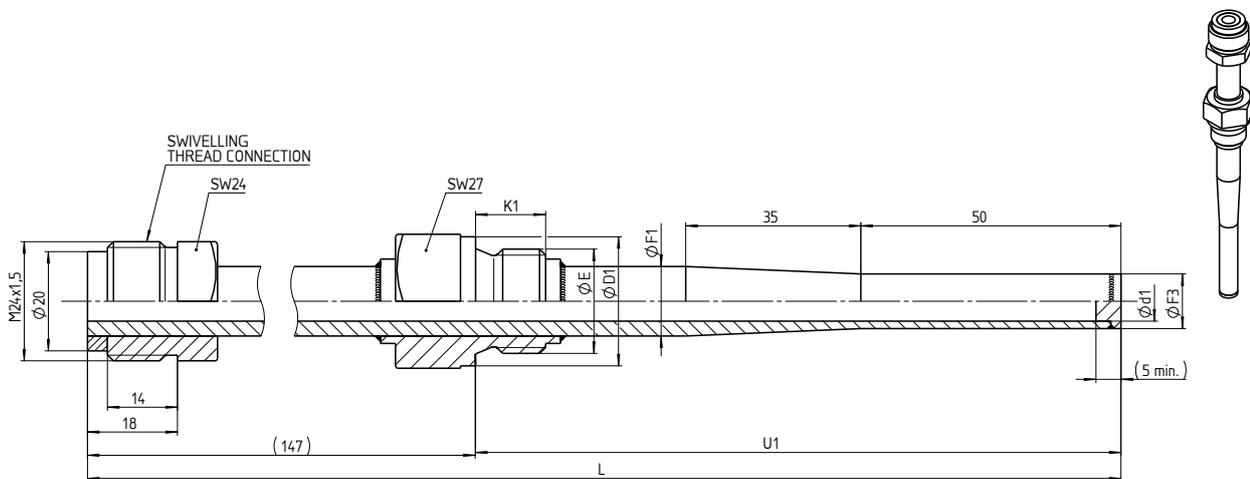
**DIMENSIONS IN MM**

For reference only, consult Ashcroft for specific dimensional drawings

**FORM 2G**



**FORM 3G**





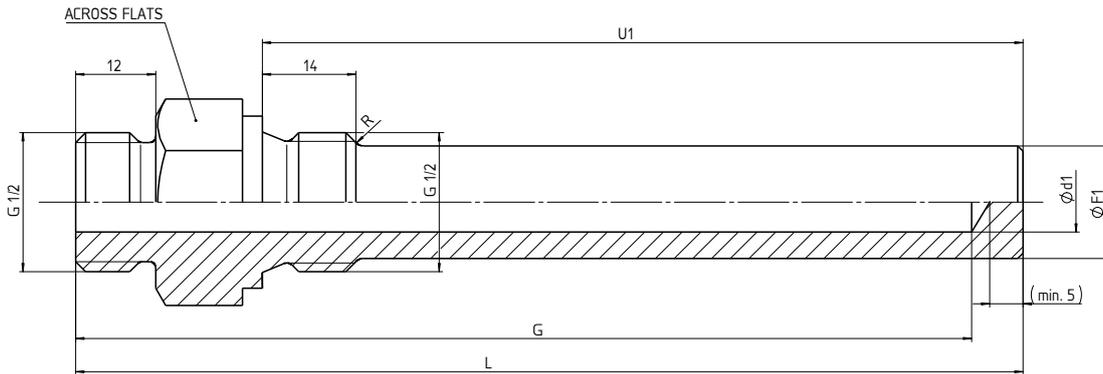
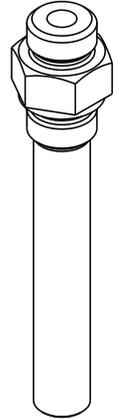


Thermowells according DIN 43772  
Form 9

**DIMENSIONS IN MM**

For reference only, consult Ashcroft for specific dimensional drawings

**FORM 9**



**Thermowell according  
 DIN 43772 Form 2**

ORDERING CODE	EXAMPLE:	TWW-DIN	W2	N	012	14	S	395	A	F1	XC3
<b>Model</b>											
TWW-DIN Weld-in thermowell according DIN 43772											
<b>Form</b>											
W2	Form 2										
<b>Process Connection</b>											
N	Plain										
<b>Thermowell Diameter</b>											
009	Ø 9 mm										
011	Ø 11 mm										
012	Ø 12 mm										
014	Ø 14 mm										
<b>Instrument Connection</b>											
14	M24x1,5										
<b>Shank Type</b>											
S	Straight										
<b>Nominal Length</b>											
305	305 mm										
395	395 mm										
545	545 mm										
40...999	Nominal length in 1 mm steps										
<b>Bore Diameter</b>											
A	7 mm										
O	9 mm										
<b>Material</b>											
F1	A 182 F11 Chrome Moly (1.7335)										
F2	A 182 F22 Chrome Moly (1.7380)										
S1	Stainless steel 304 (1.4301)										
S2	Stainless steel 304L (1.4306)										
S5	Stainless steel 316L (1.4404)										
S6	Stainless steel 316Ti (1.4571)										
SM	16 Mo3 (1.5415)										
<b>Options (If choosing an option(s) must include a "X")</b>											
<b>Cleaning</b>											
6B	M20 x 1.5										
6W	1/2" NPT 2										
<b>Marking/Tagging</b>											
NF	Tag number stamped on thermowell										
NH	Stainless steel tag wired										
NH1	Extra large stainless steel tag wired										
<b>Testing/Certificates</b>											
CD2	Certificate according to EN 10204 2.2										
C3	Material Traceability Report acc. to EN 10204 3.1										
CD5	Certificate according to NACE for Oilfields MR0175/ISO 15156-2009 and for Refineries MR0103-2010										
MQ	Positive material identification (PMI) test										
W2	Dye penetration test										
HN	Hydrostatic test (internal) acc. Ashcroft standard										
W4	Hydrostatic test (internal) acc. customer standard										
YQ	X-ray (bore concentricity)										



**Thermowell according  
 DIN 43772 Form 3**

ORDERING CODE	EXAMPLE:	TWW-DIN	W3	N	012	14	H	367	N	S5	XC3
<b>Model</b>											
TWW-DIN Weld-in thermowell according DIN 43772											
<b>Form</b>											
W3 Form 3											
<b>Process Connection</b>											
N Plain											
<b>Thermowell Diameter</b>											
012 Ø 12 mm											
014 Ø 14 mm											
<b>Instrument Connection</b>											
14 M24x1,5 Female											
<b>Shank Type</b>											
H Tapered											
<b>Nominal Length</b>											
307 307 mm											
367 367 mm											
427 427 mm											
40...999 Nominal length in 1 mm steps											
<b>Bore Diameter</b>											
N 6 mm											
C 8 mm											
<b>Material</b>											
F1 A 182 F11 Chrome Moly (1.7335)											
F2 A 182 F22 Chrome Moly (1.7380)											
S1 Stainless steel 304 (1.4301)											
S2 Stainless steel 304L (1.4306)											
S5 Stainless steel 316L (1.4404)											
S6 Stainless steel 316Ti (1.4571)											
SM 16 Mo3 (1.5415)											
<b>Options (If choosing an option(s) must include a "X")</b>											
<b>Cleaning</b>											
6B Cleaned for gaseous Oxygen or other strong oxidizing agents											
6W Cleaned for oxidizing processes other than Oxygen											
<b>Marking/Tagging</b>											
NF Tag number stamped on thermowell											
NH Stainless steel tag wired											
NH1 Extra large stainless steel tag wired											
<b>Testing/Certificates</b>											
CD2 Certificate according to EN 10204 2.2											
C3 Material Traceability Report acc. to EN 10204 3.1											
CD5 Certificate according to NACE for Oilfields MR0175/ISO 15156-2009 and for Refineries MR0103-2010											
MQ Positive material identification (PMI) test											
W2 Dye penetration test											
HN Hydrostatic test (internal) acc. Ashcroft standard											
W4 Hydrostatic test (internal) acc. customer standard											
YQ X-ray (bore concentricity)											



**Thermowell according  
 DIN 43772 Form 4**
**ORDERING CODE**      **EXAMPLE:** TWW-DIN   **W4**   **N**   **026**   **7**   **H**   **410**   **275**   **N**   **S6**   **XC3**
**Model**

TWW-DIN Weld-in thermowell according DIN 43772

**Form**

W4 Form 4

**Process Connection**

N Plain

**Thermowell Diameter**

 018 18h7  
 024 24h7  
 026 26h7  
 032 32h11

**Instrument Connection**

 2 1/2 NPT Female  
 4 G 1/2 Female  
 7 M20x1,5 Female  
 10 G 3/4 Female  
 11 M14x1,5 Female  
 12 M18x1,5 Female  
 13 M27x2 Female

**Shank Type**

H Tapered

**Nominal Length**

 110 110 mm  
 140 140 mm  
 170 170 mm  
 200 200 mm  
 260 260 mm  
 410 410 mm  
 40...999 Nominal length in 1 mm steps

**Immersion Length**

 065 65 mm  
 073 73 mm  
 125 125 mm  
 133 133 mm  
 275 275 mm  
 40...600 Nominal length in 1 mm steps

**Bore Diameter**

 A 7 mm  
 C 8 mm  
 J 11 mm  
 L 13 mm  
 N 6 mm  
 O 9 mm  
 P 14 mm  
 Q 3,5 mm

**Material**

 F1 A 182 F11 Chrome Moly (1.7335)  
 F2 A 182 F22 Chrome Moly (1.7380)  
 S1 Stainless steel 304 (1.4301)  
 S2 Stainless steel 304L (1.4306)  
 S5 Stainless steel 316L (1.4404)  
 S6 Stainless steel 316Ti (1.4571)  
 SM 16 Mo3 (1.5415)


**Thermowell according  
 DIN 43772 Form 4**
**ORDERING CODE**
**EXAMPLE:**

TWW-DIN

**W4**
**N**
**026**
**7**
**H**
**410**
**275**
**N**
**S6**
**XC3**

Options (If choosing an option(s) must include a "X")

**Cleaning**

- 6B Cleaned for gaseous Oxygen or other strong oxidizing agents
- 6W Cleaned for oxidizing processes other than Oxygen

**Marking/Tagging**

- NF Tag number stamped on thermowell
- NH Stainless steel tag wired
- NH1 Extra large stainless steel tag wired

**Testing/Certificates**

- CD2 Certificate according to EN 10204 2.2
- C3 Material Traceability Report acc. to EN 10204 3.1
- CD5 Certificate according to NACE for Oilfields MR0175/ISO 15156-2009 and for Refineries MR0103-2010
- MQ Positive material identification (PMI) test
- W2 Dye penetration test
- HN Hydrostatic test (internal) acc. Ashcroft standard
- W4 Hydrostatic test (internal) acc. customer standard
- YQ X-ray (bore concentricity)



**Thermowell according  
 DIN 43772 Form 2G**

<b>ORDERING CODE</b>		<b>EXAMPLE:</b>	TWT-DIN	<b>2G</b>	<b>B</b>	<b>27</b>	<b>13</b>	<b>S</b>	<b>395</b>	<b>R</b>	<b>S6</b>	<b>XC3</b>
<b>Model</b>		TWT-DIN	Threaded thermowell according DIN 43772									
<b>Form</b>		2G	Form 2G									
<b>Process Connection</b>		B	Parallel									
		P	NPT									
<b>Connection Size</b>		50	1/2" NPT Male									
		75	3/4" NPT Male									
		10	1" NPT Male									
		16	M20x1,5 Male									
		31	M25x1,5 Male									
		27	M27x2 Male									
		33	M33x2 Male									
<b>Instrument Connection</b>		4	G 1/2 Female									
		7	M20x1,5 Female									
		10	G 3/4 Female									
		13	M27x2 Female									
		14	M24x1,5 Female									
		15	G 1/2 Male									
		16	G 3/4 Male									
<b>Shank Type</b>		H	Tapered	3G								
		S	Straight	2G								
<b>Nominal Length</b>		305	305 mm	2G								
		395	395 mm	2G								
		545	545 mm	2G								
		307	307 mm	3G								
		367	367 mm	3G								
		427	427 mm	3G								
		40...999	Nominal length in 1 mm steps									
<b>Bore Diameter</b>		R	9 x 1 tube for 7 mm bore	2G								
		S	11 x 2 tube for 7 mm bore	2G								
		T	12 x 2,5 tube for 7 mm bore	2G								
		C	8 mm	3G								
		N	6 mm	3G								
<b>Material</b>		F1	A 182 F11 Chrome Moly (1.7335)	2G								
		F2	A 182 F22 Chrome Moly (1.7380)									
		S1	Stainless steel 304 (1.4301)									
		S2	Stainless steel 304L (1.4306)									
		S5	Stainless steel 316L (1.4404)									
		S6	Stainless steel 316Ti (1.4571)									
		SM	16 Mo3 (1.5415)									



**Thermowell according  
 DIN 43772 Form 2G**
**ORDERING CODE**      **EXAMPLE:** TWT-DIN   **2G**   **B**   **27**   **13**   **S**   **395**   **R**   **S6**   **XC3**

Options (If choosing an option(s) must include a "X")

**Cleaning**

- 6B      Cleaned for gaseous Oxygen or other strong oxidizing agents
- 6W      Cleaned for oxidizing processes other than Oxygen

**Marking/Tagging**

- NF      Tag number stamped on thermowell
- NH      Stainless steel tag wired
- NH1     Extra large stainless steel tag wired

**Testing/Certificates**

- CD2     Certificate according to EN 10204 2.2
- C3      Material Traceability Report acc. to EN 10204 3.1
- CD5     Certificate according to NACE for  
 Oilfields MR0175/ISO 15156-  
 2009 and for Refineries MR0103-  
 2010
- MQ      Positive material identification (PMI) test
- W2      Dye penetration test
- HN      Hydrostatic test (internal) acc. Ashcroft standard
- W4      Hydrostatic test (internal) acc. customer standard
- YQ      X-ray (bore concentricity)



**Thermowell according  
 DIN 43772 Form 3G**

<b>ORDERING CODE</b>		<b>EXAMPLE:</b>	TWT-DIN	3G	B	27	14	H	367	8	S6	XC3
<b>Model</b>		TWT-DIN	Threaded thermowell according DIN 43772									
<b>Form</b>		3G	Form 3G									
<b>Process Connection</b>		B	Parallel									
		P	NPT									
<b>Connection Size</b>		50	1/2" NPT Male									
		10	1" NPT Male									
		16	M20x1,5 Male									
		31	M25x1,5 Male									
		27	M27x2 Male									
		33	M33x2 Male									
<b>Instrument Connection</b>		14	M24x1,5 Female									
<b>Shank Type</b>		H	Tapered									
<b>Nominal Length</b>		307	307 mm									
		367	367 mm									
		427	427 mm									
		40...999	Nominal length in 1 mm steps									
<b>Bore Diameter</b>		N	6 mm									
		C	8 mm									
<b>Material</b>		F2	A 182 F22 Chrome Moly (1.7380)									
		S1	Stainless steel 304 (1.4301)									
		S2	Stainless steel 304L (1.4306)									
		S5	Stainless steel 316L (1.4404)									
		S6	Stainless steel 316Ti (1.4571)									
		SM	16 Mo3 (1.5415)									
<b>Options (If choosing an option(s) must include a "X")</b>												
<b>Cleaning</b>												
6B		Cleaned for gaseous Oxygen or other strong oxidizing agents										
6W		Cleaned for oxidizing processes other than Oxygen										
<b>Marking/Tagging</b>												
NF		Tag number stamped on thermowell										
NH		Stainless steel tag wired										
NH1		Extra large stainless steel tag wired										
<b>Testing/Certificates</b>												
CD2		Certificate according to EN 10204 2.2										
C3		Material Traceability Report acc. to EN 10204 3.1										
CD5		Certificate according to NACE for Oilfields MR0175/ISO 15156-2009 and for Refineries MR0103-2010										
MQ		Positive material identification (PMI) test										
W2		Dye penetration test										
HN		Hydrostatic test (internal) acc. Ashcroft standard										
W4		Hydrostatic test (internal) acc. customer standard										
YQ		X-ray (bore concentricity)										



**Thermowell according  
 DIN 43772 Form 2F, 3F and 4F**

<b>ORDERING CODE</b>		<b>EXAMPLE:</b>	TWF-DIN	3F	PN40	DN50	13	S	410	N	S6	XC3
<b>Model</b>												
TWF-DIN	Flanged thermowell according DIN 43772 with Flange according EN 1092-1											
<b>Form</b>		<b>Flange style</b>										
A2	Form 2F	Form A (flat)										
A3	Form 3F	Form A (flat)										
A4	Form 4F	Form A (flat)										
B2	Form 2F	Form B1 or B2 (raised)										
B3	Form 3F	Form B1 or B2 (raised)										
B4	Form 4F	Form B1 or B2 (raised)										
D2	Form 2F	Form C (tongued)										
D3	Form 3F	Form C (tongued)										
D4	Form 4F	Form C (tongued)										
N2	Form 2F	Form D (grooved)										
N3	Form 3F	Form D (grooved)										
N4	Form 4F	Form D (grooved)										
<b>Rating</b>												
J	PN10											
K	PN16											
L	PN25											
M	PN40											
N	PN64											
P	PN80											
Q	PN100											
R	PN250											
<b>Connection Size</b>												
10	DN25											
15	DN40											
20	DN50											
30	DN80											
<b>Instrument Connection</b>												
4	G 1/2 Female											
7	M20x1,5 Female											
10	G 3/4 Female											
11	M14x1,5 Female											
12	M18x1,5 Female											
13	M27x2 Female											
14	M24x1,5 Male											
<b>Shank Type</b>												
H	Tapered											
S	Straight											
<b>Nominal Length</b>												
200	200 mm											
260	260 mm											
305	305 mm											
307	307 mm											
367	367 mm											
395	395 mm											
410	410 mm											
427	427 mm											
545	545 mm											
40...999	Nominal length in 1 mm steps											



**ORDERING CODE**
**EXAMPLE:**

TWF-DIN

**3F**
**PN40**
**DN50**
**13**
**S**
**410**
**N**
**S6**
**XC3**
**Bore Diameter**

A	7 mm
C	8 mm
J	11 mm
L	13 mm
N	6 mm
O	9 mm
P	14 mm
Q	3,5 mm
R	9 x 1 tube for 7 mm bore
S	11 x 2 tube for 7 mm bore
T	12 x 2,5 tube for 7 mm bore

**Material**

F1	A 182 F11 Chrome Moly (1.7335)
S1	Stainless steel 304 (1.4301)
S2	Stainless steel 304L (1.4306)
S5	Stainless steel 316L (1.4404)
S6	Stainless steel 316Ti (1.4571)
SM	16 Mo3 (1.5415)

**Options (If choosing an option(s) must include a "X")**
**Cleaning**

6B	Cleaned for gaseous Oxygen or other strong oxidizing agents
6W	Cleaned for oxidizing processes other than Oxygen

**Marking/Tagging**

NF	Tag number stamped on thermowell
NH	Stainless steel tag wired
NH1	Extra large stainless steel tag wired

**Testing/Certificates**

CD2	Certificate according to EN 10204 2.2
C3	Material Traceability Report acc. to EN 10204 3.1
CD5	Certificate according to NACE for Oilfields MR0175/ISO 15156-2009 and for Refineries MR0103-2010
MQ	Positive material identification (PMI) test
W2	Dye penetration test
HN	Hydrostatic test (internal) acc. Ashcroft standard
W4	Hydrostatic test (internal) acc. customer standard
YQ	X-ray (bore concentricity)



**Thermowell according  
 DIN 43772 Form 5, 6, 7, 8 and 9**

<b>ORDERING CODE</b>		<b>EXAMPLE:</b>	TWT-DIN	T8	B	27	13	S	288	O	S6	XC3
<b>Model</b>												
TWT-DIN	Threaded thermowell according DIN 43772											
<b>Form</b>												
T5	Form 5											
T6	Form 6											
T7	Form 7											
T8	Form 8											
T9	Form 9											
<b>Process Connection</b>												
B	Parallel											
P	NPT											
<b>Connection Size</b>												
50	1/2" NPT Male											
10	1" NPT Male											
16	M20x1,5 Male											
31	M25x1,5 Male											
27	M27x2 Male											
33	M33x2 Male											
<b>Instrument Connection</b>												
4	G 1/2 Female											
7	M20x1,5 Female											
10	G 3/4 Female											
13	M27x2 Female											
15	G 1/2 Male											
16	G 3/4 Male											
<b>Shank Type</b>												
S	Straight											
<b>Nominal Length</b>												
110	110 mm	T5, T6 or T7										
170	170 mm	T5, T6 or T7										
260	260 mm	T5, T6 or T7										
410	410 mm	T5, T6 or T7										
101	101 mm	T8 or T9										
138	138 mm	T8 or T9										
198	198 mm	T8 or T9										
288	288 mm	T8 or T9										
438	438 mm	T8 or T9										
40...999	Nominal length in 1 mm steps											
<b>Bore Diameter</b>												
A	7 mm											
J	11 mm											
L	13 mm	not T7										
O	9 mm											
P	14 mm	not T7										
<b>Material</b>												
AA	Brass											
F1	A 182 F11 Chrome Moly (1.7335)											
F2	A 182 F22 Chrome Moly (1.7380)											
S1	Stainless steel 304 (1.4301)											
S2	Stainless steel 304L (1.4306)											
S5	Stainless steel 316L (1.4404)											
S6	Stainless steel 316Ti (1.4571)											
SM	16 Mo3 (1.5415)											



**ORDERING CODE****EXAMPLE:**

TWT-DIN

T8

B

27

13

S

288

O

S6

XC3

Options (If choosing an option(s) must include a "X")

**Cleaning**

- 6B Cleaned for gaseous Oxygen or other strong oxidizing agents  
 6W Cleaned for oxidizing processes other than Oxygen

**Marking/Tagging**

- NF Tag number stamped on thermowell  
 NH Stainless steel tag wired  
 NH1 Extra large stainless steel tag wired

**Testing/Certificates**

- CD2 Certificate according to EN 10204 2.2  
 C3 Material Traceability Report acc. to EN 10204 3.1  
 Certificate according to NACE for  
 Oilfields MR0175/ISO 15156-  
 2009 and for Refineries MR0103-  
 2010  
 MQ Positive material identification (PMI) test  
 W2 Dye penetration test  
 HN Hydrostatic test (internal) acc. Ashcroft standard  
 W4 Hydrostatic test (internal) acc. customer standard  
 YQ X-ray (bore concentricity)

