

Data Sheet

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

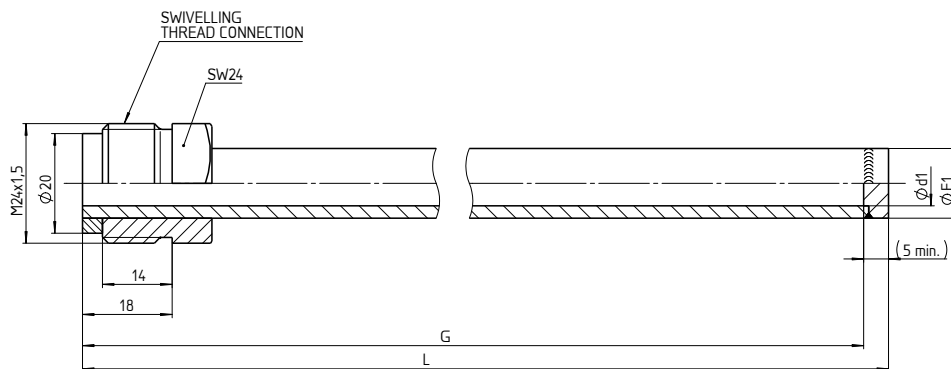
Data Sheet

Thermowells according DIN 43772 Form 2 and 3

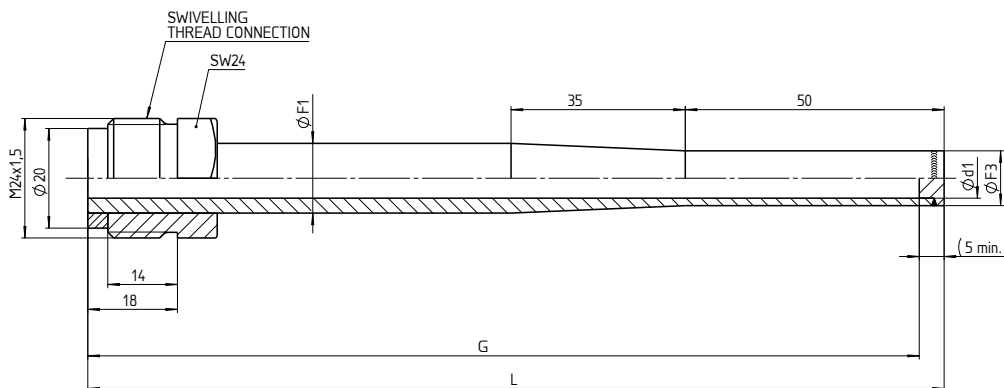
DIMENSIONS IN MM

For reference only, consult Ashcroft for specific dimensional drawings

FORM 2



FORM 3



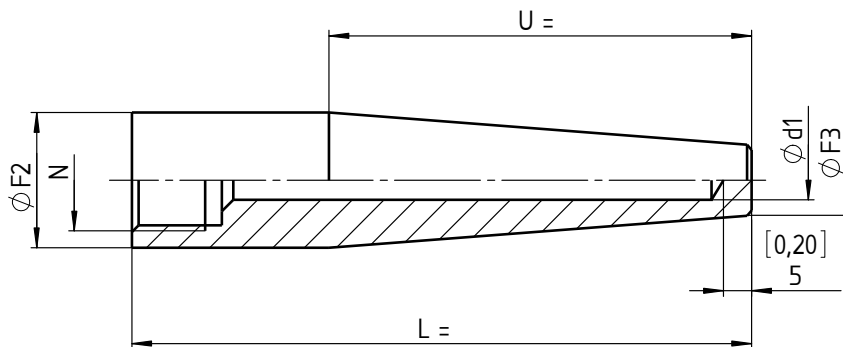
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Thermowells according DIN 43772 Form 4 and 2G

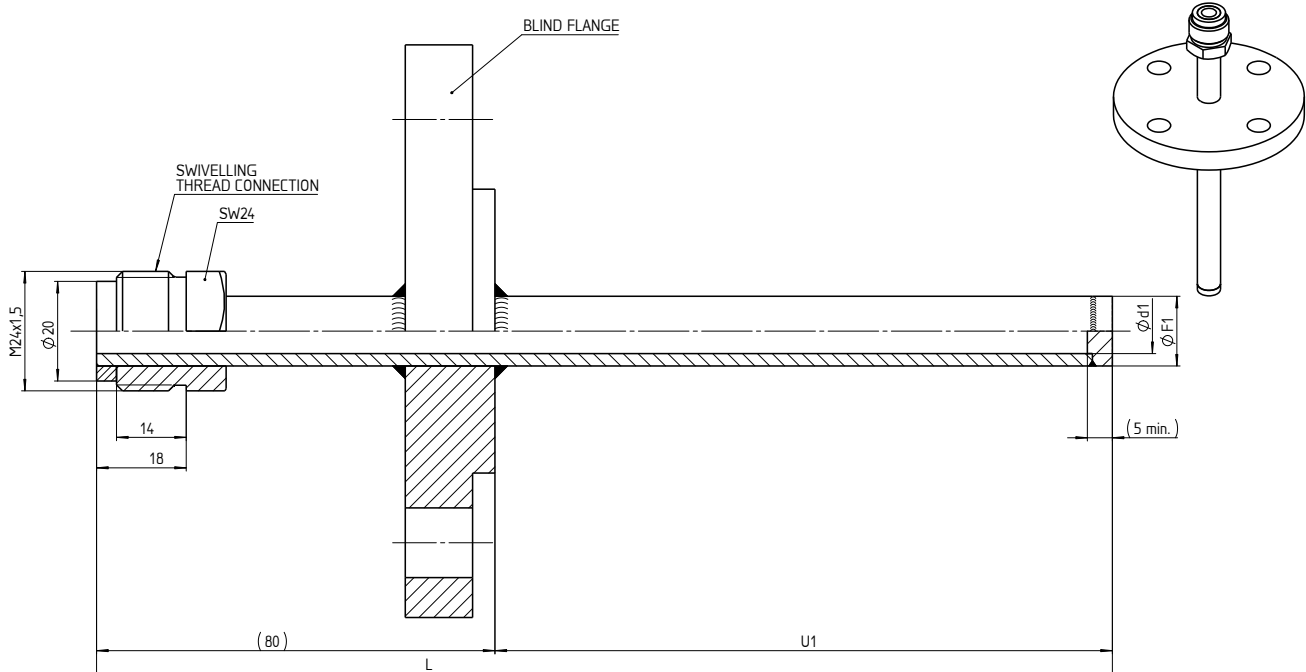
DIMENSIONS IN MM

For reference only, consult Ashcroft for specific dimensional drawings

FORM 4



FORM 2F



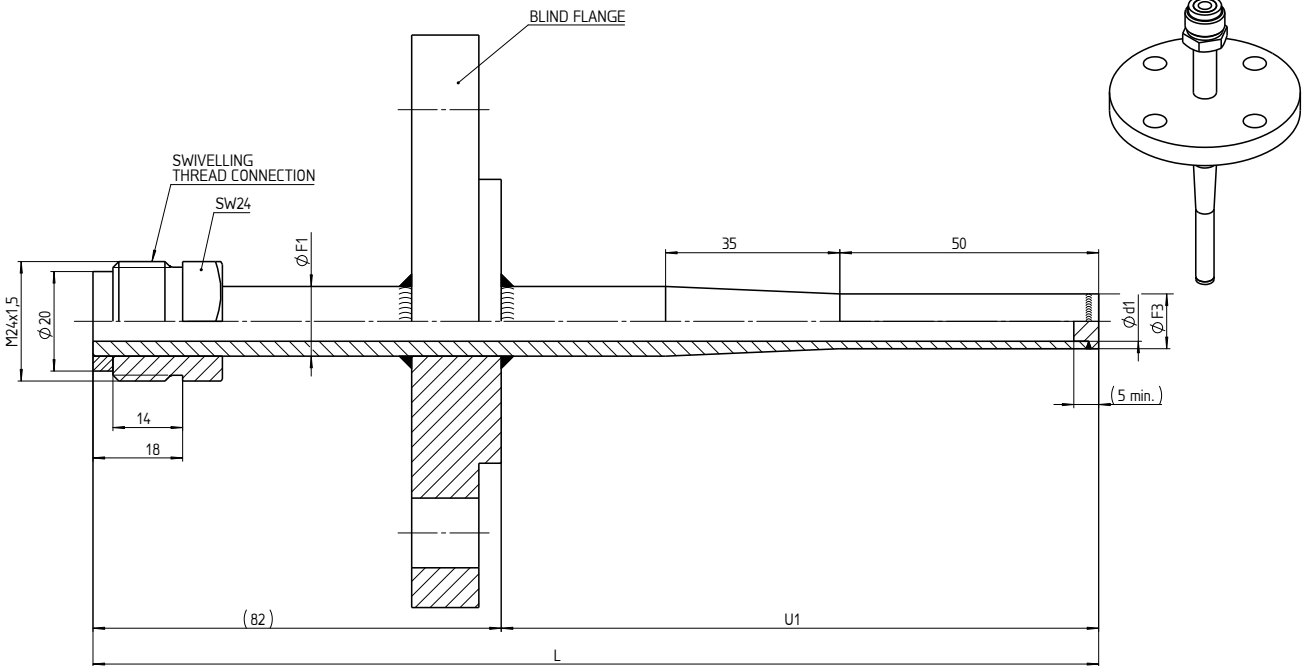
Data Sheet

Thermowells according DIN 43772 Form 3F and 4F

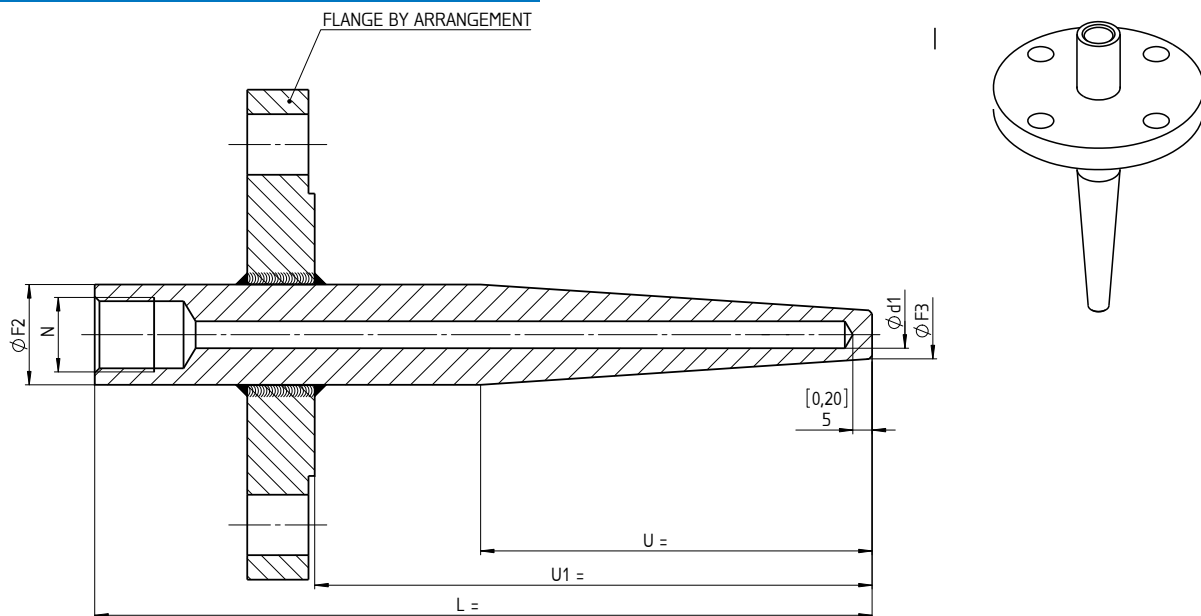
DIMENSIONS IN MM

For reference only, consult Ashcroft for specific dimensional drawings

FORM 3F



FORM 4F



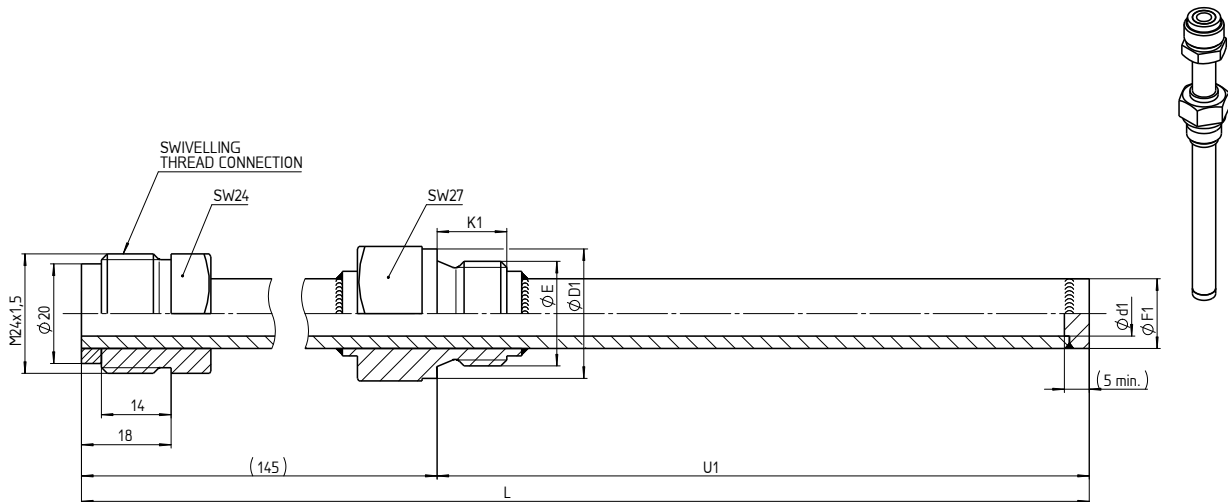
Data Sheet

Thermowells according DIN 43772 Form 3G and 2F

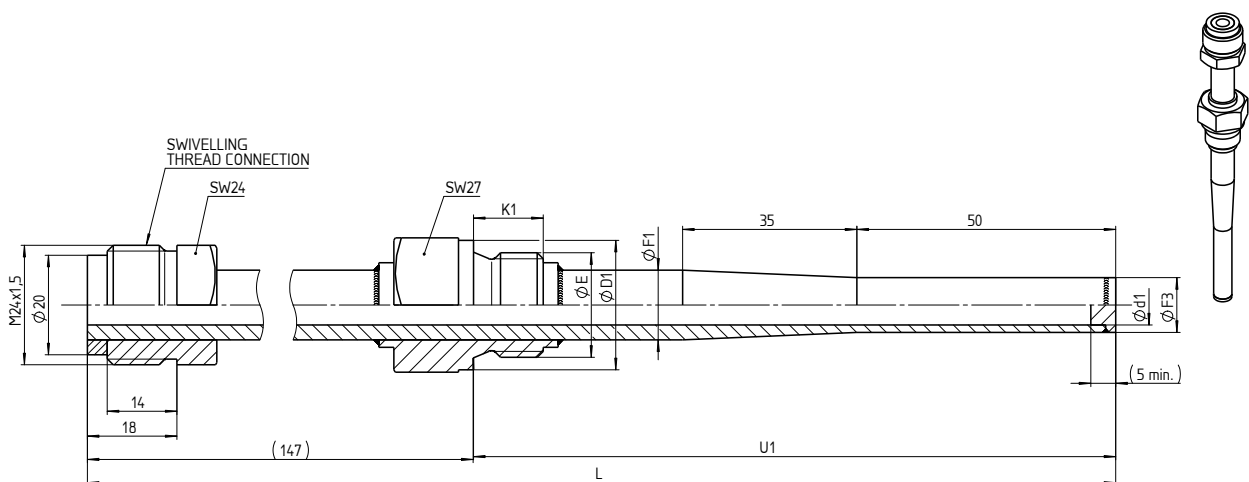
DIMENSIONS IN MM

For reference only, consult Ashcroft for specific dimensional drawings

FORM 2G

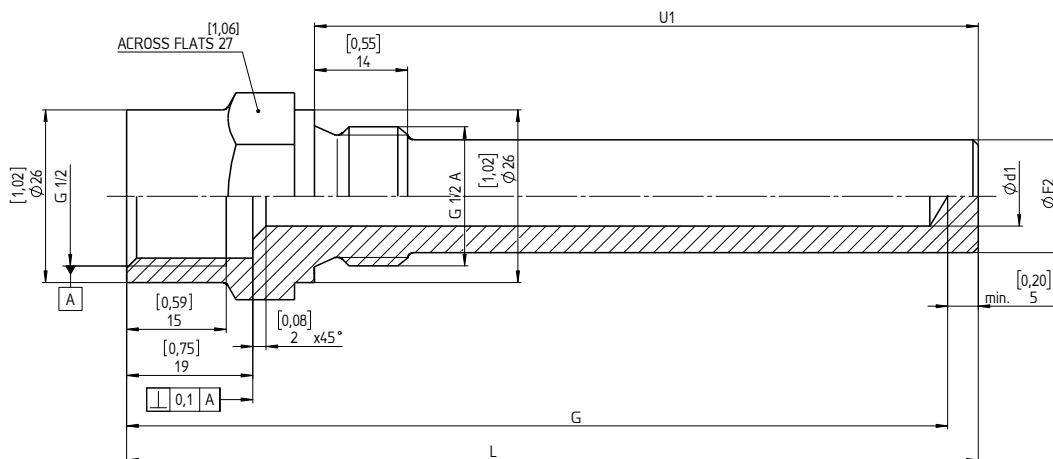
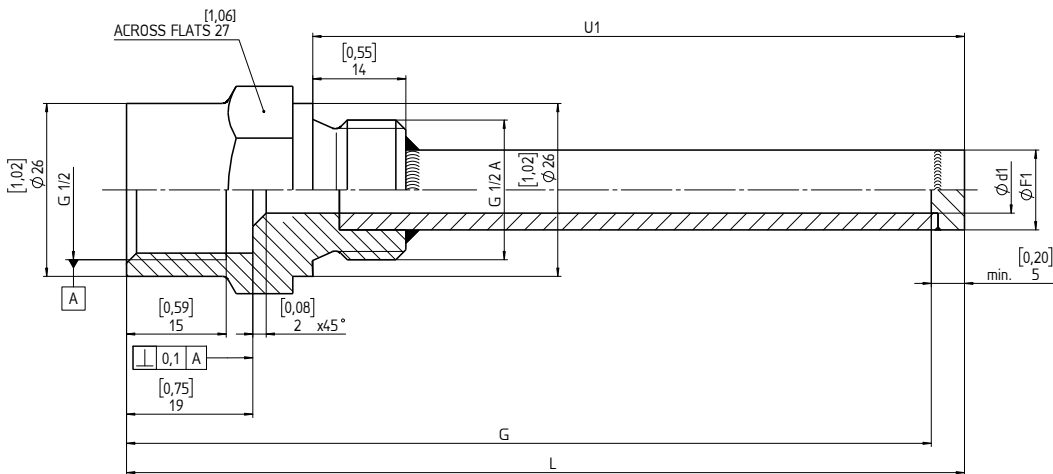
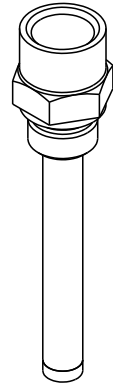


FORM 3G



DIMENSIONS IN MM

FORM 5



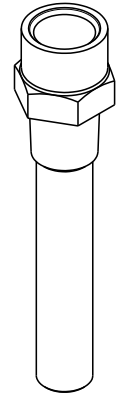
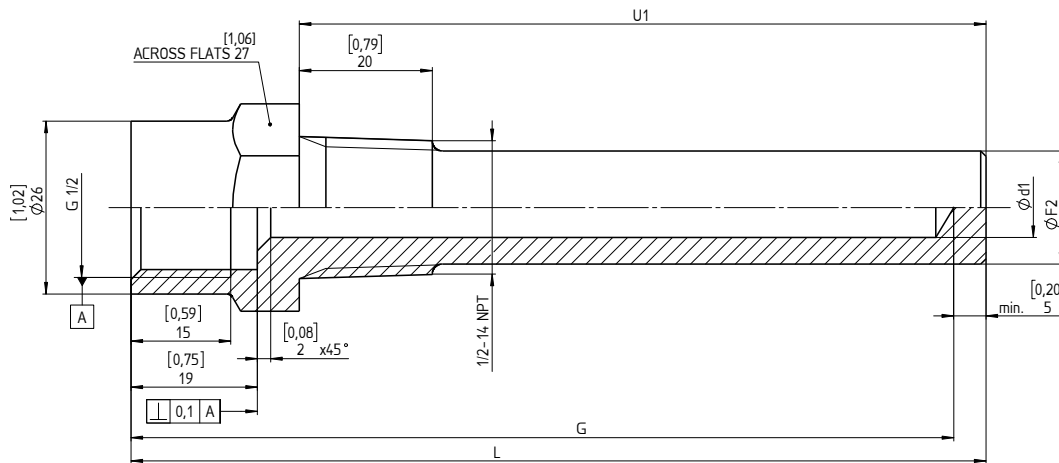
Data Sheet

Thermowells according DIN 43772 Form 7 and 8

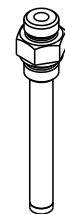
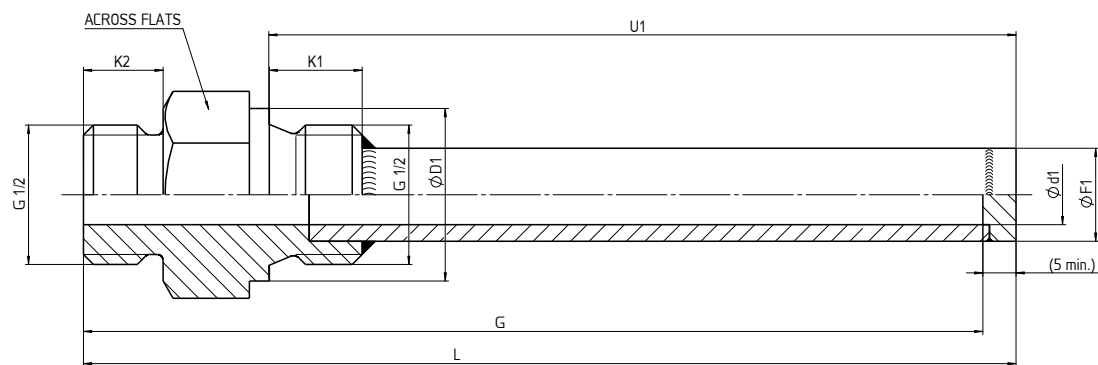
DIMENSIONS IN MM

For reference only, consult Ashcroft for specific dimensional drawings

FORM 7



FORM 8



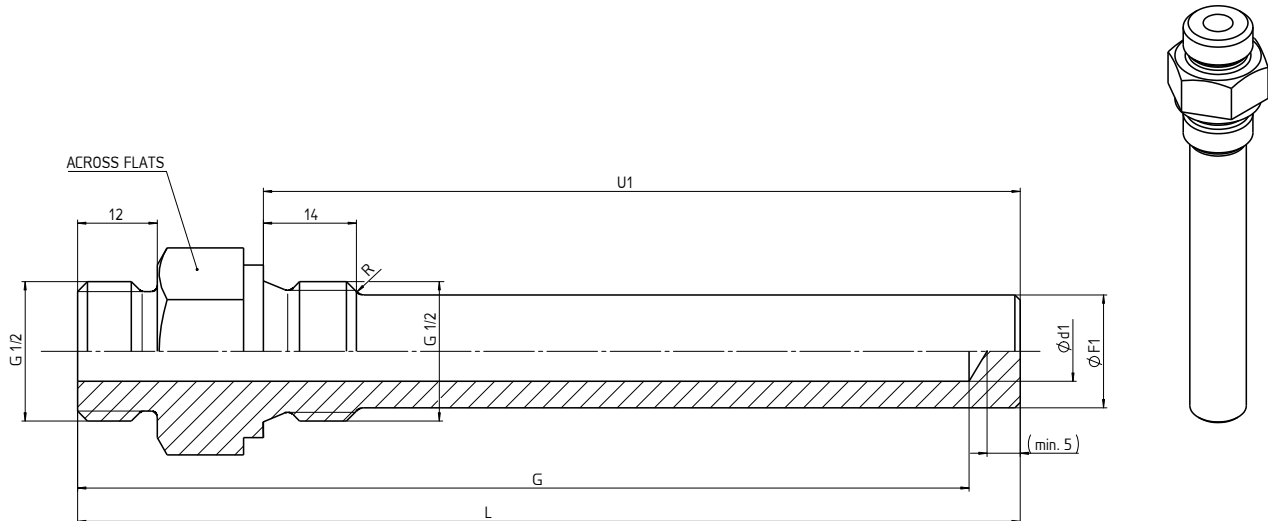
Data Sheet

Thermowells according DIN 43772 Form 9

DIMENSIONS IN MM

For reference only, consult Ashcroft for specific dimensional drawings

FORM 9



Data Sheet

Thermowell according DIN 43772 Form 2

ORDERING CODE	EXAMPLE:	TWW-DIN	W2	N	012	14	S	395	A	F1	XC3
Model											
TWW-DIN Weld-in thermowell according DIN 43772											
Form											
W2 Form 2											
Process Connection											
N Plain											
Thermowell Diameter											
009 Ø 9 mm											
011 Ø 11 mm											
012 Ø 12 mm											
014 Ø 14 mm											
Instrument Connection											
14 M24x1,5											
Shank Type											
S Straight											
Nominal Length											
305 305 mm											
395 395 mm											
545 545 mm											
40...999 Nominal length in 1 mm steps											
Bore Diameter											
A 7 mm											
O 9 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)											
Options (If choosing an option(s) must include a "X")											
Cleaning											
6B M20 x 1.5											
6W 1/2" NPT 2											
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)											



Data Sheet

Thermowell according DIN 43772 Form 3

ORDERING CODE	EXAMPLE:	TWW-DIN	W3	N	012	14	H	367	N	S5	XC3
Model											
TWW-DIN Weld-in thermowell according DIN 43772											
Form											
W3 Form 3											
Process Connection											
N Plain											
Thermowell Diameter											
012 Ø 12 mm											
014 Ø 14 mm											
Instrument Connection											
14 M24x1,5 Female											
Shank Type											
H Tapered											
Nominal Length											
307 307 mm											
367 367 mm											
427 427 mm											
40...999 Nominal length in 1 mm steps											
Bore Diameter											
N 6 mm											
C 8 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)											
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)											



Data Sheet

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)												



Data Sheet

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)



Data Sheet

Thermowell according DIN 43772 Form 2G

ORDERING CODE			EXAMPLE:	TWT-DIN	2G	B	27	13	S	395	R	S6	XC3
Model													
TWT-DIN				Threaded thermowell according DIN 43772									
Form													
2G				Form 2G									
Process Connection													
B				Parallel									
P				NPT									
Connection Size													
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									
Instrument Connection													
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									
Shank Type													
H				Tapered		3G							
S				Straight		2G							
Nominal Length													
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				Nomainal length in 1 mm steps									
Bore Diameter													
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							
Material													
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)									



Data Sheet

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)



Data Sheet

Thermowell according DIN 43772 Form 3G

ORDERING CODE		EXAMPLE:	TWT-DIN	3G	B	27	14	H	367	8	S6	XC3
Model												
TWT-DIN		Threaded thermowell according DIN 43772										
Form												
3G		Form 3G										
Process Connection												
B		Parallel										
P		NPT										
Connection Size												
50		1/2" NPT Male										
10		1" NPT Male										
16		M20x1,5 Male										
31		M25x1,5 Male										
27		M27x2 Male										
33		M33x2 Male										
Instrument Connection												
14		M24x1,5 Female										
Shank Type												
H		Tapered										
Nominal Length												
307		307 mm										
367		367 mm										
427		427 mm										
40...999		Nominal length in 1 mm steps										
Bore Diameter												
N		6 mm										
C		8 mm										
Material												
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)										
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)										



Data Sheet

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

ORDERING CODE		EXAMPLE:	TWF-DIN	3F	PN40	DN50	13	S	410	N	S6	XC3
Model												
TWF-DIN	Flanged thermowell according DIN 43772 with Flange according EN 1092-1											
Form		Flange style										
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)										
Rating												
J	PN10											
K	PN16											
L	PN25											
M	PN40											
N	PN64											
P	PN80											
Q	PN100											
R	PN250											
Connection Size												
10	DN25											
15	DN40											
20	DN50											
30	DN80											
Instrument Connection												
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											
Shank Type												
H	Tapered											
S	Straight											
Nominal Length												
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)



Data Sheet

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

ORDERING CODE		EXAMPLE:	TWT-DIN	T8	B	27	13	S	288	O	S6	XC3
Model												
TWT-DIN	Threaded thermowell according DIN 43772											
Form												
T5	Form 5											
T6	Form 6											
T7	Form 7											
T8	Form 8											
T9	Form 9											
Process Connection												
B	Parallel											
P	NPT											
Connection Size												
50	1/2" NPT Male											
10	1" NPT Male											
16	M20x1,5 Male											
31	M25x1,5 Male											
27	M27x2 Male											
33	M33x2 Male											
Instrument Connection												
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											
Shank Type												
S	Straight											
Nominal Length												
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											
Bore Diameter												
A	7 mm											
J	11 mm											
L	13 mm	not T7										
O	9 mm											
P	14 mm	not T7										
Material												
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
- 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)

