

The nozzle is a branching of the pipe at the place where the thermowell will be mounted; it exists out of a nozzle pipe and a nozzle flange. Every nozzle has standard dimensions. This means that the design of the thermowell should be adjusted to the nozzle. Therefore, the design of the thermowell meets some criteria 1) the stem of the thermowell will fit in the nozzle flange, and 2) the flange of the thermowell matches the flange face of the nozzle flange. Any flange design (e.g. flanged, lap-joint) can be used to the nozzle; as long as the inside diameter of the nozzle is equal to or bigger than the used thermowell root diameter.

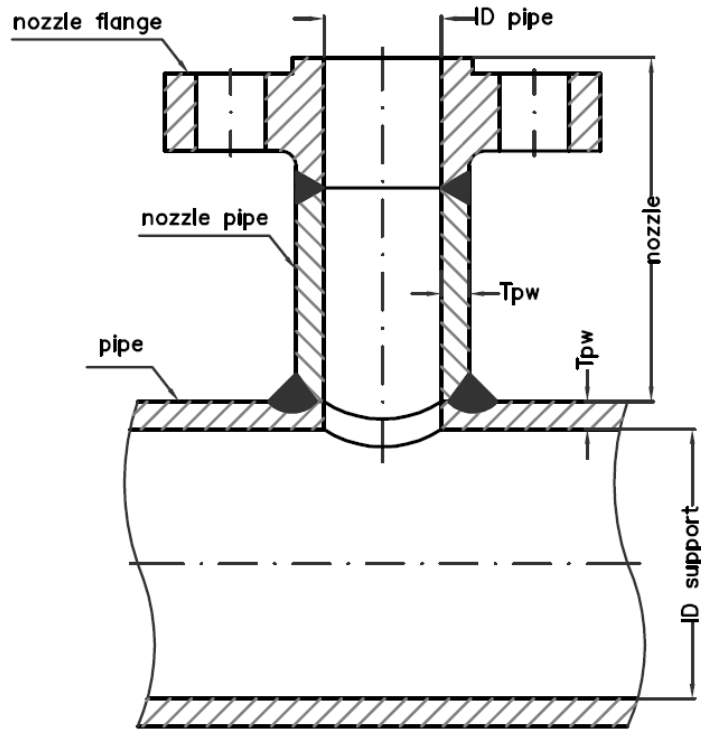
The table shows the standard dimensions of the nozzle pipe, the table can also be used for standard pipe dimensions. It is based on ASME B36.10 Welded and

Seamless Wrought Steel Pipe and ASME B36.19 Stainless Steel Pipe. To select the proper thermowell design for the nozzle the chart is very useful, because the standard dimensions are in direct relation with the characters used by Badotherm:

- IDpipe = Inside diameter
- IDsupport = Inside diameter
- Tpw = Wall thickness

For example: a nozzle pipe of 1 NPS or 25 DN schedule 40 has in outside diameter of 1.31" or 33.40 mm, an inner diameter of 1.05" or 26.65 mm (IDpipe), and a pipe wall thickness of 0.13" or 3.38 mm (Tpw).

DRAWING STANDARD PIPE



DIMENSIONS STANDARD NOMINAL PIPE SIZES

DIAMETER NOMINAL				
DN	OUTSIDE DIAMETER	INSIDE DIAMETER	WALL THICKNESS	SCHEDULE MATEN
6	10,30	6,85	1,73	40
6	10,30	5,47	2,41	80
8	13,70	9,23	2,24	40
8	13,70	7,65	3,02	80
10	17,15	12,52	2,31	40
10	17,15	10,75	3,20	80
15	21,34	15,80	2,77	40
15	21,34	13,87	3,73	80
15	21,34	11,84	4,75	160
20	26,67	20,93	2,87	40
20	26,67	18,85	3,91	80
20	26,67	15,60	5,54	160
25	33,40	26,65	3,38	40
25	33,40	24,31	4,55	80
25	33,40	20,70	6,35	160
32	42,16	35,05	3,56	40
32	42,16	32,46	4,85	80
32	42,16	29,46	6,35	160
40	48,26	40,89	3,68	40
40	48,26	38,10	5,08	80
40	48,26	33,99	7,14	160
50	60,33	52,50	3,91	40
50	60,33	49,25	5,54	80
50	60,33	42,90	8,71	160
65	73,03	62,71	5,16	40
65	73,03	59,01	7,01	80
65	73,03	53,98	9,53	160
80	88,90	77,93	5,49	40
80	88,90	73,66	7,62	80
80	88,90	66,70	11,10	160
90	101,60	95,50	3,05	40
90	101,60	90,12	5,74	80
100	114,30	102,26	6,02	40
100	114,30	97,18	8,56	80
100	114,30	87,33	13,49	160
125	141,30	128,19	6,55	40
125	141,30	122,25	9,53	80
125	141,30	109,55	15,88	160
150	168,28	154,05	7,11	40
150	168,28	146,33	10,97	80
150	168,28	131,80	18,24	160
200	219,08	202,72	8,18	40
200	219,08	193,68	12,70	80
200	219,08	173,05	23,01	160

All dimensions in mm

DN doesn't have a direct relation with the outside or inside diameter

NOMINAL PIPE SIZE				
NPS	OUTSIDE DIAMETER	INSIDE DIAMETER	WALL THICKNESS	SCHEDULE MATEN
1/8"	0,41	0,27	0,07	40
1/8"	0,41	0,22	0,09	80
1/4"	0,54	0,36	0,09	40
1/4"	0,54	0,30	0,12	80
3/8"	0,67	0,49	0,09	40
3/8"	0,67	0,42	0,13	80
1/2"	0,84	0,62	0,11	40
1/2"	0,84	0,55	0,15	80
1/2"	0,84	0,47	0,19	160
3/4"	1,05	0,82	0,11	40
3/4"	1,05	0,74	0,15	80
3/4"	1,05	0,61	0,22	160
1"	1,31	1,05	0,13	40
1"	1,31	0,96	0,18	80
1"	1,31	0,81	0,25	160
1 1/4"	1,66	1,38	0,14	40
1 1/4"	1,66	1,28	0,19	80
1 1/4"	1,66	1,16	0,25	160
1 1/2"	1,90	1,61	0,14	40
1 1/2"	1,90	1,50	0,20	80
1 1/2"	1,90	1,34	0,28	160
2"	2,37	2,07	0,15	40
2"	2,37	1,94	0,22	80
2"	2,37	1,69	0,34	160
2 1/2"	2,87	2,47	0,20	40
2 1/2"	2,87	2,32	0,28	80
2 1/2"	2,87	2,12	0,37	160
3"	3,50	3,07	0,22	40
3"	3,50	2,90	0,30	80
3"	3,50	2,63	0,44	160
3 1/2"	4,00	3,76	0,12	40
3 1/2"	4,00	3,55	0,23	80
4"	4,50	4,03	0,24	40
4"	4,50	3,83	0,34	80
4"	4,50	3,44	0,53	160
5"	5,56	5,05	0,26	40
5"	5,56	4,81	0,37	80
5"	5,56	4,31	0,62	160
6"	6,62	6,06	0,28	40
6"	6,62	5,76	0,43	80
6"	6,62	5,19	0,72	160
8"	8,62	7,98	0,32	40
8"	8,62	7,62	0,50	80
8"	8,62	6,81	0,91	160

All dimensions in inches

NPS doesn't have a direct relation with the outside or inside diameter



Holland – United Kingdom – Romania – India – Thailand – Dubai – USA

To our knowledge, the information contained herein is accurate as of the date of this document. However neither Badotherm, nor its affiliates makes any warranty, express or limited, or accepts any liability in connection with this information or its use. This information is for technical skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other product. The user alone finally determines suitability of any information or material in contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only.

Badotherm reserves the right to make changes to the specifications and materials without prior notice. The latest version of the datasheet can be found on www.badotherm.com.

© 2001 Badotherm, all rights reserved. Trademarks and/or other products referenced herein are either trademarks or registered trademarks of Badotherm.