

# Industrial valves — End-to-end and centre- to-end dimensions for butt welding end valves

ICS 23.060.01

## National foreword

This British Standard is the UK implementation of EN 12982:2009. It supersedes BS EN 12982:2000 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PSE/18/1, Valves - Basic standards.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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## **Foreword**

This document (EN 12982:2009) has been prepared by Technical Committee CEN/TC 69 "Industrial valves", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12982:2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## **Introduction**

The basic series given in this European Standard are taken from the original series shown in Annex A. Changes made to the original series will not be automatically incorporated into this European Standard.

The progress in work in the standardization of the different products may require a revision of this European Standard by adding or subtracting some basic series.

## 1 Scope

This European Standard specifies the end-to-end and centre-to-end dimensions for steel butt-welding end valves with connecting dimensions of welding ends in compliance with EN 12627, used in PN and Class designated piping systems.

The range of PN is:

— PN 10; PN 16; PN 25; PN 40; PN 63; PN 100; PN 160; PN 250; PN 320; PN 400.

The range of Class is:

— Class 150, Class 300, Class 600, Class 900, Class 1 500, Class 2 500.

The range of nominal size is:

— DN 8; DN 10; DN 15; DN 20; DN 25; DN 32; DN 40; DN 50; DN 65; DN 80; DN 100; DN 125; DN 150; DN 200; DN 250; DN 300; DN 350; DN 400; DN 450; DN 500; DN 600; DN 700; DN 750; DN 800; DN 900, DN 1 000; DN 1 200.

NOTE 1 DN 750 is not applicable to PN designated valves.

NOTE 2 See Annex B for the relationship between nominal size (DN) and nominal pipe size (NPS).

NOTE 3 Valves having welding end profiles different from those specified in EN 12627, may use the same dimensions than those specified in Table 1.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 736-1:1995, *Valves — Terminology — Part 1: Definition of types of valves*

EN 736-2:1997, *Valves — Terminology — Part 2: Definition of components of valves*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 736-1:1995 and EN 736-2:1997 and the following apply.

### 3.1

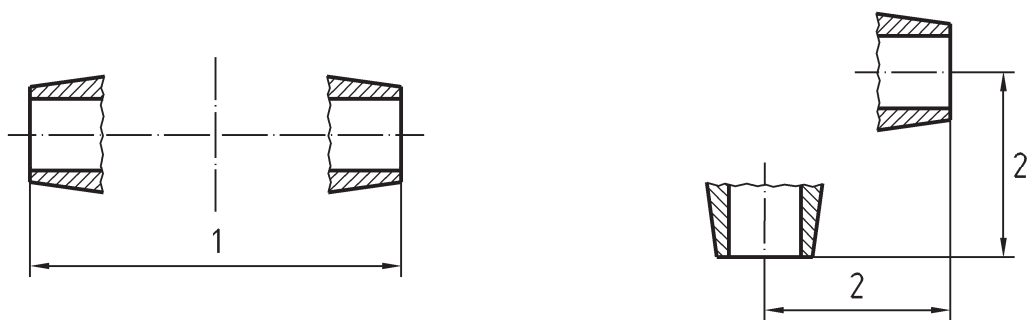
#### **end-to-end dimensions (ETE)**

distance expressed between the ends of the body for straight pattern valves other than those with flanged ends

### 3.2

#### **centre-to-end dimensions (CTE)**

distance expressed between one of the ends of the body and the centre of the body for angle pattern valves other than those with flanged ends



a) Straight and oblique pattern valve

b) Angle pattern valve

**Key**

- 1 ETE
- 2 CTE

Figure 1 – ETE and CTE dimensions

**4 Dimensions and tolerances**

**4.1 Basic series**

The basic series of ETE and CTE dimensions are given in Table 1.

For each type of valve, the basic series to be taken into consideration shall be in accordance with Tables 3 to 12.

NOTE 1 Table 1 gives complete series. In Tables 3 to 12 the columns of series may be reduced.

NOTE 2 For certain sizes/types of valves, alternative dimensions are permitted and are specified in Tables 3 to 12.

NOTE 3 Basic series numbers are corresponding to the basic series given in EN 558.

**4.2 Tolerances**

Tolerances on ETE and CTE dimensions shall be in accordance with Table 2.



Table 1 — Dimensions of basic series

Dimensions in millimetres

DN	Basic series																						
	1	2	4	5	7	8 <sup>a</sup>	9 <sup>a</sup>	10	11 <sup>a</sup>	14	15	21	24 <sup>a</sup>	26	32 <sup>a</sup>	33	54	55	56	57 <sup>a</sup>	58 <sup>a</sup>	59 <sup>a</sup>	60
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	130	210	—	—	108	90	105	—	—	115	—	—	—	—	—	—	—	—	—	—	—	—	102
15	130	210	140	165	108	90	105	108	57	115	—	152	83	130	76	—	—	216	264	—	108	132	108
20	150	230	152	190	117	95	115	117	64	120	—	178	95	150	89	—	229	229	273	114	114	137	117
25	160	230	165	216	127	100	115	127	70	125	120	216	108	160	102	—	254	254	308	127	127	154	127
32	180	260	178	229	146	105	130	140	76	130	140	229	114	180	108	—	279	279	349	140	140	175	140
40	200	260	190	241	159	115	130	165	83	140	240	241	121	240	114	152	305	305	384	152	152	193	165
50	230	300	216	292	190	125	150	203	102	150	250	267	146	250	133	178	368	368	451	184	184	225	216
65	290	340	241	330	216	145	170	216	108	170	270	292	165	290	146	216	419	419	508	210	210	254	241
80	310	380	283	356	254	155	190	241	121	180	280	318	178	310	159	254	381	470	578	190	235	289	283
100	350	430	305	432	305	175	215	292	146	190	300	356	216	350	178	305	457	546	673	229	273	337	305
125	400	500	381	508	356	200	250	330	178	200	325	400	254	400	200	381	551	673	794	279	337	397	381
150	480	550	403	559	406	225	275	356	203	210	350	444	279	450	222	457	610	705	914	305	352	457	403
200	600	650	419	660	521	275	325	495	248	230	400	533	330	550	279	584	737	832	1 022	368	416	511	419
250	730	775	457	787	635	325	390	622	311	250	450	622	394	650	311	711	838	991	1 270	419	495	635	457
300	850	900	507	838	749	375	450	698	349	270	500	711	419	750	356	813	965	1 130	1 422	483	565	711	502
350	980	1 025	762	889	—	425	515	787	394	290	550	838	—	850	—	889	1 029	1 257	—	514	629	—	572
400	1 100	1 150	838	991	—	475	575	914	457	310	600	864	—	950	—	991	1 130	1 384	—	660	—	—	610
450	1 200	1 275	914	1 092	—	500	—	978	483	330	650	978	—	1 050	—	1 092	1 219	1 537	—	737	—	—	660
500	1 250	1 400	991	1 194	—	—	700	978	—	350	700	1 016	—	1 150	—	1 194	1 321	1 664	—	825	—	—	711
600	1 450	1 600	1 143	1 397	—	—	—	1 295	—	390	800	1 346	—	1 350	—	1 397	1 549	1 943	—	991	—	—	813
700	1 650	—	1 346	1 549	—	—	—	1 448	—	430	900	1 499	—	1 550	—	1 549	—	—	—	—	—	—	914
750	—	—	1 397	1 651	—	—	—	1 524	—	—	—	1 594	—	—	—	—	—	—	—	—	—	—	914
800	1 850	—	—	1 651	—	—	—	1 676	—	470	1 000	1 778	—	1 750	—	—	—	—	—	—	—	—	965
900	2 050	—	1 727	2 083	—	—	—	1 956	—	510	1 100	2 083	—	1 950	—	—	—	—	—	—	—	—	1 016
1 000	2 250	—	1 981	—	—	—	—	—	—	550	1 200	—	—	2 150	—	—	—	—	—	—	—	—	—
1 200	—	—	—	—	—	—	—	—	—	630	1 400	—	—	—	—	—	—	—	—	—	—	—	—

Table 1 (continued)

Dimensions in millimetres

DN	Basic series																					
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	78	79	80	81	82 <sup>a</sup>	83 <sup>a</sup>
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65	—	—
10	—	—	—	130	150	65	70	270	—	—	—	—	—	—	—	—	—	—	—	65	—	90
15	140	—	—	130	150	65	75	270	—	—	—	187	203	194	279	216	108	—	—	65	—	90
20	152	—	—	130	150	75	90	270	—	—	—	187	206	194	279	216	117	—	—	70	—	90
25	165	—	—	130	160	85	100	270	140	140	186	187	210	197	279	216	127	—	—	85	—	90
32	178	—	—	160	180	100	110	270	165	165	237	—	—	—	—	—	140	—	—	100	—	105
40	190	—	190	180	210	140	125	270	178	178	232	222	251	235	330	260	165	—	—	110	—	105
50	216	267	216	210	250	150	150	300	216	216	279	254	286	292	375	318	178	—	—	125	—	115
65	241	305	241	290	340	170	190	360	254	254	330	292	311	292	375	318	190	—	—	150	—	145
80	283	330	283	310	380	180	220	390	305	305	368	318	337	318	460	381	203	—	—	180	152	155
100	305	356	305	350	430	190	270	450	356	406	457	368	394	368	530	406	229	—	—	210	178	175
125	381	381	—	400	500	200	330	525	432	483	533	—	—	—	—	—	—	—	—	—	216	200
150	403	457	457	480	550	210	430	600	508	559	610	451	508	508	768	610	394	330	403	—	254	225
200	419	521	521	600	650	430	460	600	660	711	762	543	610	610	832	762	457	350	419	—	330	275
250	457	559	559	730	775	450	—	730	787	864	914	673	752	762	991	1 016	533	375	457	—	394	325
300	502	635	635	850	900	470	—	850	914	991	1 041	737	819	914	1 130	1 118	610	400	502	—	457	375
350	572	762	762	—	1 025	490	—	980	991	1 067	1 118	851	1 029	—	1 257	—	686	425	530	—	495	—
400	610	838	838	—	1 150	510	—	1 100	1 092	1 194	1 245	1 016	1 108	—	1 422	—	762	450	550	—	—	—
450	660	914	914	—	—	—	—	—	—	1 346	1 397	1 143	—	—	1 727	—	864	540	600	—	—	—
500	711	991	991	—	1 400	550	—	1 250	—	1 473	—	—	—	—	—	—	914	560	620	—	—	—
600	813	1 143	1 143	—	—	590	—	—	—	—	—	—	—	—	—	—	1 067	600	670	—	—	—
700	—	—	1 346	—	—	630	—	—	—	—	—	—	—	—	—	—	1 244	670	750	—	—	—
750	—	—	1 397	—	—	—	—	—	—	—	—	—	—	—	—	—	—	700	795	—	—	—
800	—	—	1 524	—	—	670	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900	—	—	1 727	—	—	710	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1 000	—	—	—	—	—	750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1 200	—	—	—	—	—	830	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 1 (continued)

Dimensions in millimetres

DN	Basic series																			
	84	85	86 <sup>a</sup>	87 <sup>a</sup>	88	89	90	92	93	102	103	104	111							
8	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
10	150	150	75	75	150	130	270	230	115	—	—	—	—	—	—	—	—	—	—	—
15	150	150	75	75	150	130	270	230	115	—	—	—	318	—	—	—	—	—	—	—
20	150	160	75	80	160	130	270	260	130	—	—	—	318	—	—	—	—	—	—	—
25	160	160	80	80	160	130	270	260	130	—	—	—	318	—	—	—	—	—	—	—
32	180	250	90	125	270	160	270	300	150	—	—	—	—	—	—	—	—	—	—	—
40	210	250	105	125	270	160	270	300	150	—	—	—	359	—	—	—	—	—	—	—
50	250	250	125	125	270	190	300	350	175	300	350	350	400	—	—	—	—	—	—	—
65	420	480	210	150	—	—	360	400	200	360	425	425	400	—	—	—	—	—	—	—
80	460	530	230	265	—	—	390	450	225	390	470	470	498	—	—	—	—	—	—	—
100	510	620	255	310	—	—	450	520	260	450	550	550	575	—	—	—	—	—	—	—
125	600	720	300	360	—	—	525	600	300	525	650	650	—	—	—	—	—	—	—	—
150	650	820	325	410	—	—	600	700	350	600	750	750	819	—	—	—	—	—	—	—
200	750	950	375	475	—	—	750	800	400	700	800	900	1 029	—	—	—	—	—	—	—
250	—	—	—	—	—	—	900	900		850	950	1 050	1 270	—	—	—	—	—	—	—
300	—	—	—	—	—	—	1 050	1 050		950	1 150	1 250	1 422	—	—	—	—	—	—	—
350	—	—	—	—	—	—	1 200			1 050	1 350	1 450	1 803	—	—	—	—	—	—	—
400	—	—	—	—	—	—	1 350			1 200	1 550	1 650	—	—	—	—	—	—	—	—
450	—	—	—	—	—	—	1 500			1 350	1 750	1 850	—	—	—	—	—	—	—	—
500	—	—	—	—	—	—	1 650			1 500	1 950	2 050	—	—	—	—	—	—	—	—
600	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
700	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
750	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
800	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
900	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
1 000	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—
1 200	—	—	—	—	—	—	—			—	—	—	—	—	—	—	—	—	—	—

<sup>a</sup> CTE dimensions for angle pattern valves.

**Table 2 — Tolerances**

Dimensions in millimetres

ETE or CTE dimension		Tolerance
above	up to and including	
0	250	$\pm 2$
250	500	$\pm 3$
500	800	$\pm 4$
800	1 000	$\pm 5$
1 000	1 600	$\pm 6$
1 600	2 500	$\pm 8$

Table 3 — Gate valves

PN/Class	ETE series																
	4	5	15	26	33	54	55	56	60	61	69	70	71	90	102	103	104
PN 10 — PN 16			X						X	X							
PN 25 — PN 40	X		X <sup>b</sup>	X <sup>c</sup>					X <sup>a</sup>								
PN 63 — PN 100		X		X	X									X			
PN 160						X					X			X	X		
PN 250 — PN 320							X					X		X <sup>d</sup>	X <sup>d</sup>	X	
PN 400								X					X			X	X
Class 150			X						X	X							
Class 300	X		X	X					X								
Class 600		X		X	X									X			
Class 900						X					X			X	X		
Class 1 500						X								X	X	X	
Class 2 500								X					X			X	X
<p><sup>a</sup> Alternative ETE dimensions are 190 (DN 40); 787 (DN 600).</p> <p><sup>b</sup> For PN 25 only.</p> <p><sup>c</sup> For PN 40 only.</p> <p><sup>d</sup> For PN 250 only.</p>																	

Table 4 — Plug valves

PN/Class	ETE series						
	5	54	55	56	62	67	68
PN 10 — PN 16					X	X	X
PN 25 — PN 40					X <sup>a</sup>	X	X
PN 63 — PN 100	X <sup>b, c</sup>					X	X
PN 160		X <sup>d, e</sup>					
PN 250 — PN 320			X <sup>f, g</sup>				
PN 400				X			
Class 150					X	X	X
Class 300					X <sup>a</sup>	X	X
Class 600	X <sup>b, c</sup>					X	X
Class 900		X <sup>d, e</sup>					
Class 1 500			X <sup>f, g</sup>				
Class 2 500				X			

<sup>a</sup> Dimensions for DN 50, 65, 80, 100 are for short pattern only.  
<sup>b</sup> Dimensions for DN 450, 500, 600 are for venturi pattern only.  
<sup>c</sup> Dimensions for DN 25, 32 are for regular pattern only.  
<sup>d</sup> Dimension for DN 100 is for venturi pattern only.  
<sup>e</sup> Dimensions for DN 25, 32, 40, 50, 65, 80 are for regular pattern only.  
<sup>f</sup> Dimension for DN 400 is for venturi pattern only.  
<sup>g</sup> Dimensions for DN 25, 32, 40, 50, 65, 80, 100 are for regular pattern only.

Table 5 — Ball valves

PN/Class	ETE series									
	5	54	55	56	61	63	67	68	78	81
PN 10 — PN 16					X	X <sup>a</sup>	X	X	X	X
PN 25 — PN 40					X	X <sup>b</sup>	X	X		X
PN 63 — PN 100	X						X	X		
PN 160		X								
PN 250 — PN 320			X							
PN 400				X						
Class 150					X	X <sup>a</sup>	X	X	X	X
Class 300					X	X <sup>b</sup>	X	X		X
Class 600	X						X	X		
Class 900		X								
Class 1 500			X							
Class 2 500				X						

<sup>a</sup> Alternative ETE dimensions are: 273 (DN 65); 310 (DN 80); 350 (DN 100).  
<sup>b</sup> Alternative ETE dimensions are: 403 (DN 150); 502 (DN 200); 568 (DN 250); 648 (DN 300).

Table 6 — Globe valves and lift check valves — straight and oblique patterns

PN/Class	ETE series																	
	1	5	10	21	26	54	55	56	64	65	69	70	71	84	85	88	89	90
PN 10 — PN 16	X		X						X									
PN 25 — PN 40	X			X <sup>c</sup>					X									
PN 63 — PN 100		X			X					X								X
PN 160						X				X	X			X				X
PN 250 — PN 320							X					X			X <sup>a</sup>	X	X	
PN 400								X					X		X <sup>a</sup>	X	X <sup>e</sup>	
Class 150	X		X <sup>b</sup>						X									
Class 300	X			X <sup>c, d</sup>					X									
Class 600		X			X					X								X
Class 900						X				X	X			X				X
Class 1 500							X					X			X <sup>a</sup>	X	X	
Class 2 500								X					X		X <sup>a</sup>	X	X	

<sup>a</sup> Alternative ETE dimension is: 300 (DN 65).

<sup>b</sup> For Class 150 lift check valves, use: 356 (DN 125); 406 (DN 150); 914 (DN 400).

<sup>c</sup> DN 15 and DN 20 are for lift check valves only.

<sup>d</sup> For Class 300 lift check valves, use: 203 (DN 25); 216 (DN 32); 229 (DN 40); 559 (DN 200).

<sup>e</sup> Alternative ETE-dimension is 90 (DN 8, DN 10, DN 15).

**Table 7 — Globe valves, and lift check valves — angle pattern**

PN/Class	CTE series												
	8	9	11	24	32	57	58	59	82	83	86	87	93
PN 10 — PN 16	X		X							X			
PN 25 — PN 40	X				X					X			
PN 63 — PN 100		X		X						X			
PN 160		X				X			X		X		
PN 250 — PN 320							X					X	X
PN 400								X				X	
Class 150	X		X							X			
Class 300	X				X					X			
Class 600		X		X						X			
Class 900		X				X			X		X		
Class 1 500							X					X	X
Class 2 500								X				X	



Table 8 — Check valves<sup>1)</sup>

PN/Class	ETE series															
	1	5	10	21	26	54	55	56	64	65	69	70	71	90	102	104
PN 10 — PN 16	X		X						X							
PN 25 — PN 40	X			X					X							
PN 63 — PN 100		X			X					X						
PN 160						X				X	X			X		
PN 250 — PN 320							X					X			X <sup>a</sup>	
PN 400								X					X			X <sup>b</sup>
Class 150	X		X						X							
Class 300	X			X					X							
Class 600		X			X					X						
Class 900						X				X	X			X		
Class 1 500							X					X			X <sup>a</sup>	
Class 2 500								X					X			X <sup>b</sup>
<sup>a</sup> Alternative ETE dimensions for check valves are: 250 (DN 50); 340 (DN 65); 380 (DN 80); 430 (DN 100); 500 (DN 125); 550 (DN 150).																
<sup>b</sup> Alternative ETE dimensions for check valves are: 250 (DN 50); 400 (DN 65); 450 (DN 80); 520 (DN 100); 600 (DN 125); 700 (DN 150).																

1) For lift check valves — straight and oblique patterns, use Table 6. For lift check valves — angle pattern, use Table 7.

**Table 9 — Globe control valves — straight pattern**

PN/Class	ETE series									
	1	2	56	72	73	74	75	76	92	111
PN 10 — PN 16	X			X	X					
PN 25 — PN 40	X			X	X					
PN 63 — PN 100		X		X	X					
PN 160		X				X	X			
PN 250 — PN 320						X	X		X	
PN 400			X					X		X
Class 150	X			X	X					
Class 300	X			X	X					
Class 600		X		X	X					
Class 900		X				X	X			
Class 1 500						X	X		X	
Class 2 500			X					X		X

**Table 10 — Globe control valves — angle pattern**

PN/Class	CTE series			
	8	9	93	73 <sup>a</sup>
PN 10 — PN 16	X			
PN 25 — PN 40	X			
PN 63 — PN 100		X		
PN 160		X		
PN 250 — PN 320			X	
PN 400				
Class 150	X			X
Class 300	X			X
Class 600		X		X
Class 900		X		
Class 1 500			X	
Class 2 500				

<sup>a</sup> Use half the dimensions of series 73.

**Table 11 — Butterfly valves**

PN/Class	ETE series			
	14	66	79	80
PN 10 — PN 16	X	X	X	X
PN 25 — PN 40	X	X	X	X
Class 150	X	X	X	X
Class 300	X	X	X	X

**Table 12— Diaphragm valves**

PN/Class	ETE series	
	1	7
PN 10 — PN 16	X	X
Class 150	X	X

## Annex A (informative)

### Origin of basic series

**Table A.1 — Origin of basic series**

Basic series	Origin
1	DIN 3202-2:1982, Series S7; DIN 3202-1:1984, Series F 1
2	DIN 3202-1:1984, Series F2
4	ANSI/ASME B16.10-92, Table 2, column 10
5	ANSI/ASME B16.10-92, Table 4, column 5
7	BS 2080:1989, Table 1, Series 7
8	DIN 3202-1:1984, Series F 32
9	DIN 3202-1:1984, Series F 33
10	ANSI/ASME B16.10-92, Table 1, column 15
11	ANSI/ASME B16.10-92, Table 1, column 16
14	DIN 3202-1:1984, Series F4
15	DIN 3202-2:1982, Series S8
21	ANSI/ASME B16.10-92, Table 2, columns 15 and 17
24	ANSI/ASME B16.10-92, Table 4, column 12
26	DIN 3202-2:1982, Series S9
32	ANSI/ASME B16.10-92, Table 2, column 16
33	ANSI/ASME B16.10-92, Table 4, column 6
54	ANSI/ASME B16.10-92, Table 5, column 5
55	ANSI/ASME B16.10-92, Table 6, column 5
56	ANSI/ASME B16.10-92, Table 7, column 1
57	ANSI/ASME B16.10-92, Table 5, column 7
58	ANSI/ASME B16.10-92, Table 6, column 7
59	ANSI/ASME B16.10-92, Table 7, column 6
60	ANSI/ASME B16.10-92, Table 1, column 9
61	ANSI/ASME B16.10-92, Table 1, column 21
62	ANSI/ASME B16.10-92, Table 1, column 12 and Table 2, column 12
63	ANSI/ASME B16.10-92, Table 1, column 20
64	DIN 3202-2:1982, Series S2
65	DIN 3202-2:1982, Series S3
66	DIN 3202-2:1982, Series S5
67	DIN 3202-2:1982, Series S13
68	DIN 3202-2:1982, Series S14
69	ANSI/ASME B16.10-92, Table 5, columns 2 and 6
70	ANSI/ASME B16.10-92, Table 6, columns 2 and 6
71	ANSI/ASME B16.10-92, Table 7, columns 2 and 5
72	ANSI/ISA-75.08.05 -2002
73	ANSI/ISA-75.08.05- 2002
74	ANSI/ISA-75.08.05- 2002
75	ANSI/ISA-75.08.05- 2002
76	ANSI/ISA-75.08.05- 2002
78	ANSI/ASME B16.10-92, Table 1, column 18

**Table A.1** (continued)

Basic series	Origin
79	a
80	a
81	NF E 29-470:1989, Table 3
82	ANSI/ASME B16.10-92, Table 5, column 8
83	DIN 3202-2:1982, Series S31
84	a
85	a
86	a
87	a
88	a
89	a
90	DIN 3202-2:1982, Series S10
92	DIN 3202-1:1984, Series 3, to be agreed
93	0,5 x DIN 3202-1:1982, Series 3, to be agreed
102	a
103	a
104	a
111	ANSI/ISA-75.08.05-2002
<sup>a</sup> According to agreements between and proposals of CEN/TC 69 Working Bodies involved in the preparation of this European Standard.	

**Annex B**  
(informative)

**Relationship between DN (nominal size) and nominal pipe size (NPS)**

**Table B.1 — Relationship between DN (nominal size) and nominal pipe size (NPS)**

<b>Nominal size</b>	DN	8	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
	NPS	—	—	½	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14

<b>Nominal size</b>	DN	400	450	500	600	700	750	800	900	1 000	1 200
	NPS	16	18	20	24	28	30	32	36	40	48

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