

# DIN

DIN (Deutsches Institute für Normung,

).

DIN

:

- Plate Flanges for welding: DIN 2573 Slip-on Plate Flange PN6, DIN 2576 Slip-on Plate Flange PN10 ;
- Loose Plate Flanges: DIN 2641 Lap Joint Flange PN6, DIN 2642 Lap Joint Flange PN10, DIN 2655 Lap Joint Flange PN25, DIN 2656 Lap Joint Flange PN40;
- Loose plate flanges with weld-neck collar: DIN 2673 - PN10, DIN 2674 - PN16, DIN 2675 - PN25, DIN 2676 - PN40 ;

# EN

(European Committee for

Standardization),

EN.

DIN EN 1092-1

DIN EN 13445-3,

11

:

- Flanges with narrow-face (smooth-bore, ) or full-face gasket ( );
- Flanges with o-ring gasket ( );
- Parted loose-type flanges ( ).

EN 1092-1 DIN.

EN 1092-1,

DIN

EN 1092-1,

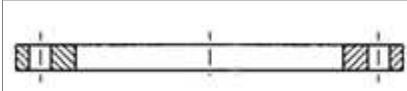
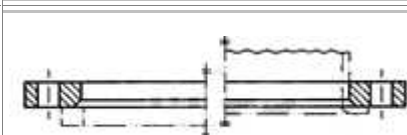
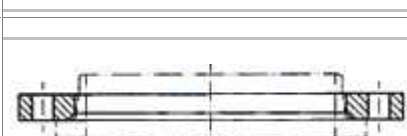
DIN,

"+".

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DIN.

## DIN EN 1092-1

		EN	(PN)							
			2,5	6	10	16	25	40	63	100
Plate flanges for welding ( )		01	+	2573	2576	+	+	+	+	+
Loose plate flanges with weld-on plate collar ( )		02	+	2641	2642	+	2655	2656	-	-
Loose plate flanges with weld-neck collar ( c )		04	-	-	2674	2675	2676	2676	-	-

# ASME/ANSI

ASME/ANSI (ASME - American Society of Mechanical Engineers -

- , American National Standards Institute -

)

ASME/ANSI B16.5 - 1996 - Pipe Flanges and Flanged Fittings.

Slip on (SO) Flanges, Lap Joint Flanges.

ASME/ANSI B16.5,

(Class,

): 150, 300, 400, 600, 900, 1500, 2500.

" " / 2,

" " 6.



Weld Neck Flange, WN Flange.

" (neck)

## 12821-80

12821-80 " 0,1 20,0 ( 1 200 / <sup>2</sup>). "Steel butt-welded flanges for  $P_{nom}$  from 0,1 to 20,0 MPa (from 1 to 200 kgf/cm<sup>2</sup>). Design and dimensions".

12829-67, 12833-67 12835-67.

12815-80,

9

: 1)

; 2)

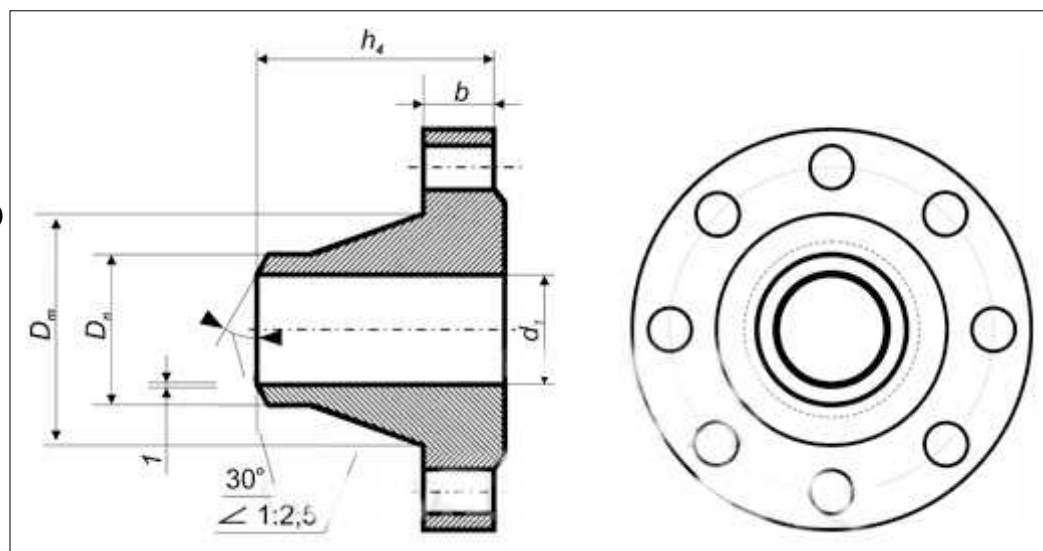
; 3)

; 4)

; 5)

; 6)

; 7)



; 8)

; 9)

12821-80

$D_y$  50

1,0

(10 / 2)

25,

1 (

):

1-50-10

25

12821-80,

:

1 -

50 -

10 -

25 -

12821-80

(

1-100-2,5

37 9941 4290 00,

- 37 9941-5233 05.

15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200,

250, 300, 350, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1600, 1800

: 6,

10, 16, 25, 40, 63, 100, 160, 200 / 2.

## DIN

DIN

(Deutsches Institute für Normung,

).

DIN

(Welding Neck Flanges)

:

• DIN 2627 Weld Neck Flange PN400,

• DIN 2628 Weld Neck Flange PN250,

• DIN 2629 Weld Neck Flange PN320,

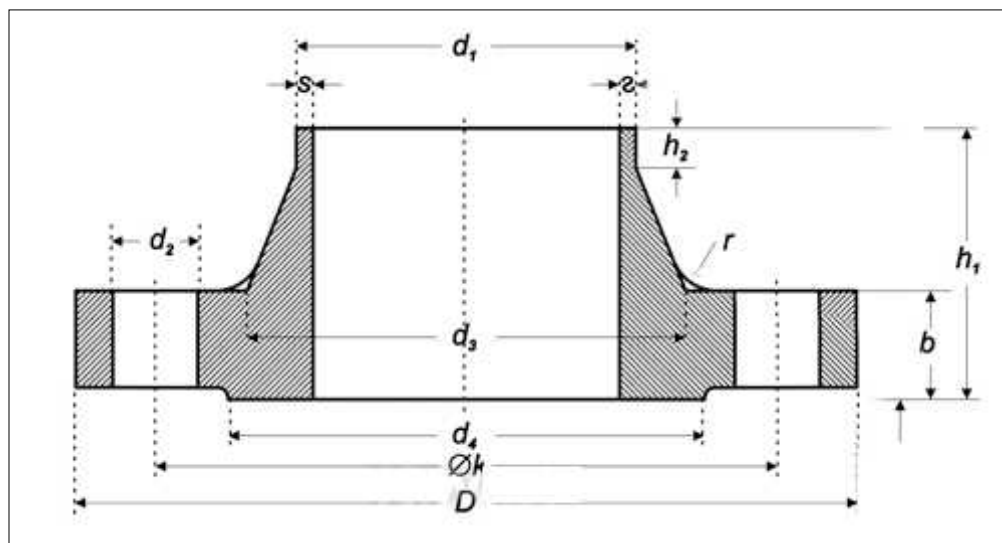
• DIN 2630 Weld Neck Flange PN1 and 2.5,

• DIN 2631 Weld Neck Flange PN6,

• DIN 2632 Weld Neck Flange PN10,

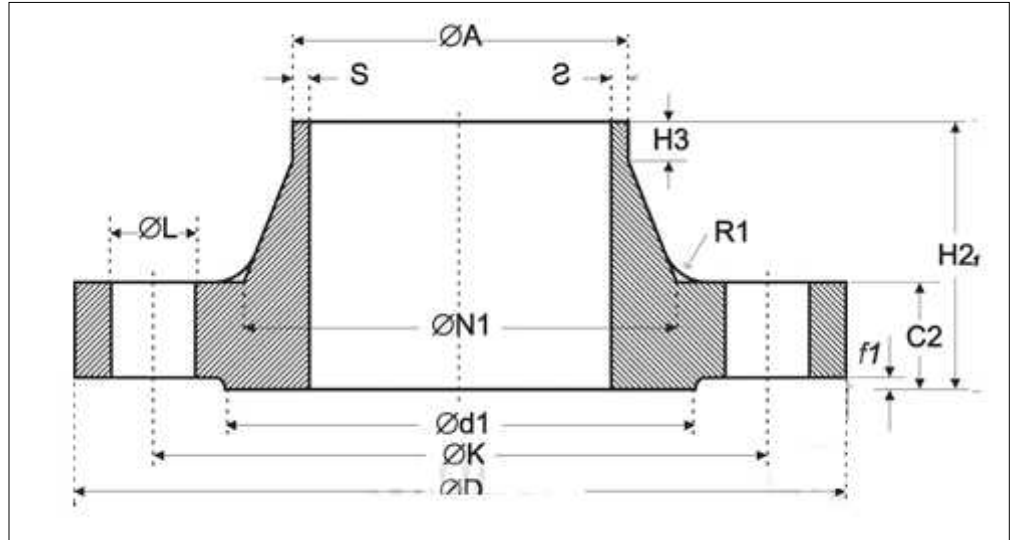
• DIN 2633 Weld Neck Flange PN16,

• DIN 2634 Weld Neck Flange PN25,



- DIN 2635 Weld Neck Flange PN40,
- DIN 2636 Weld Neck Flange PN64,
- DIN 2637 Weld Neck Flange PN100,
- DIN 2638 Weld Neck Flange PN160.
- DIN 86029 Hubbed Slip-on Flange PN10, DIN 86030 Hubbed Slip-on Flange PN16.

EN



(European Committee for Standardization), EN. DIN EN 1092-1

(Weld-neck flanges) (type, typ) 11 - Weld-neck flanges PN 2,5, PN 6, PN 10, PN 25, PN 40, PN 63, PN 100. PN (nominal pressure) - , / ².

EN 1092-1 DIN

EN 1092-1

EN 1092-1,

DIN,

"+".

"-"

DIN.

1602638--4002627--

DIN EN 1092-1

		Weld-neck flanges ( )	Hubbed slip-on flanges for welding( )	Hubbed threaded flanges( )
<b>EN</b>		<b>11</b>	<b>12</b>	<b>13</b>
<b>PN</b>	<b>2,5</b>	2630	-	-
	<b>6</b>	2631	+	2565
	<b>10</b>	2632	86029	+
	<b>16</b>	2633	86030	2566
	<b>25</b>	2634	+	+
	<b>40</b>	2635	+	2567

63	2636		+	2568
100	2637		+	2569
250	2628		-	-
320	2629		-	-

## ASME/ANSI

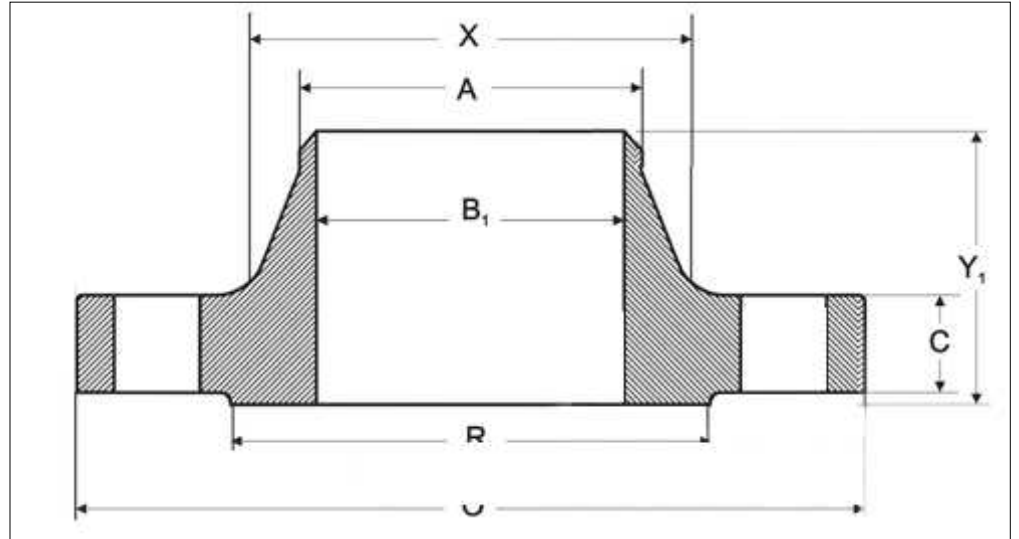
ASME/ANSI (ASME - American Society of Mechanical Engineers -

American National Standards Institute -

),

Welding Neck

ASME/ANSI B16.5 - 1996 - "Pipe Flanges and Flanged Fittings" ASME/ANSI B16.47 "Large Diameter Steel Flange". ASME/ANSI B16.5



( (26 - 60 ) 1/2 24 )

ASME/ANSI B16.47.

- A - (neck diameter weld neck, hub diameter at bevel);
- X - (hub diameter);
- Y1 - (weld neck length through hub);
- C - (thickness);
- R - (raised face diameter);
- O - (outside diameter);
- B1 - (weld neck bore);

ASME/ANSI B16.5,

(Class,

): 150, 300, 400, 600, 900, 1500, 2500.

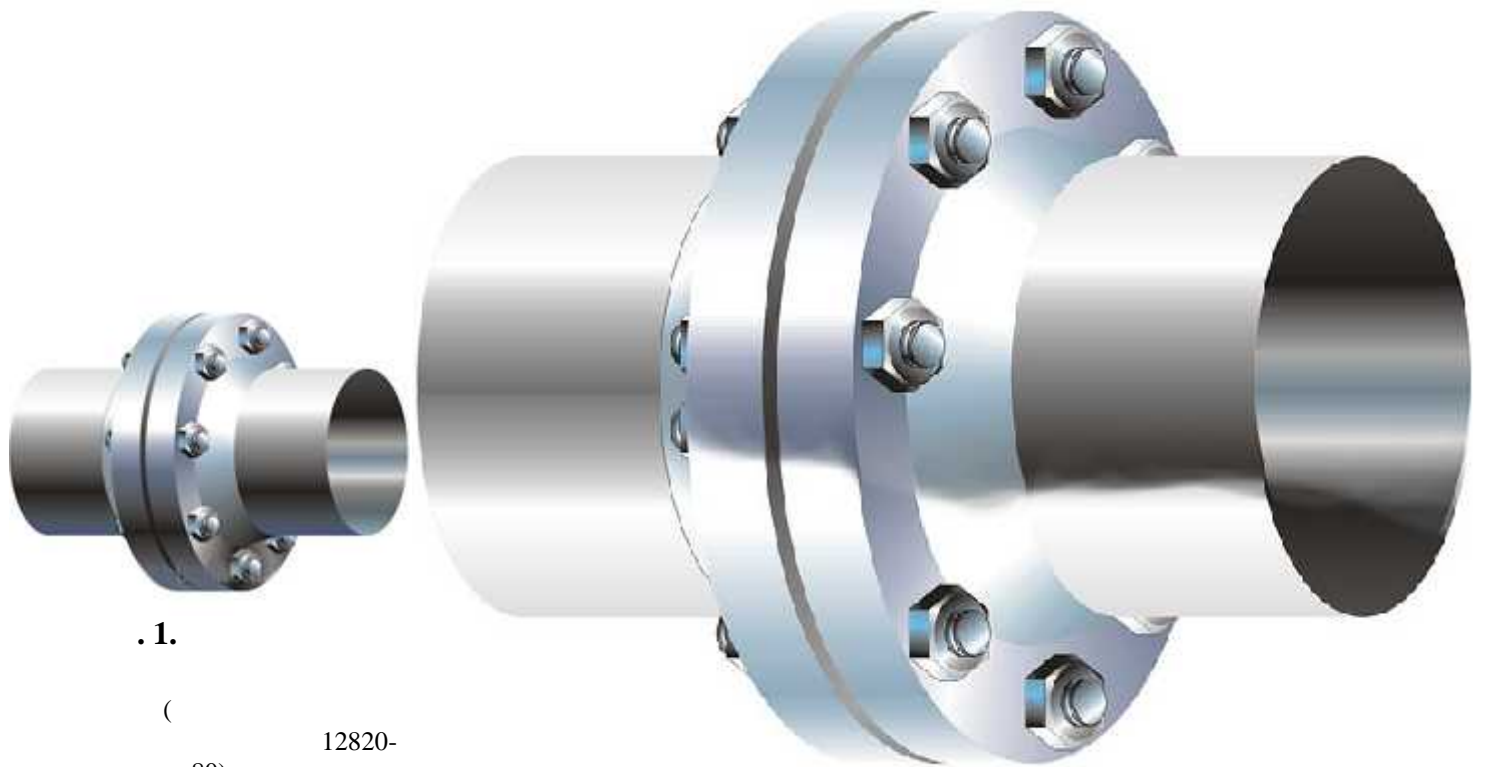
" " / 2, 75, 150, 300, 400, 600, 900.

" " 6. ANSI/ASME B16.47

20, 20 ( ), 09 2 ( : 3, ) - , 13 ; 15 5 ( ); , 10 17 13 2 , 10 17 13 3 , 20 13, 14 17 2, 08 18 10 , 12 18 10 , 06 28 , 10 17 13 2 , 10 17 13 3 , 10 11 23 3

(15 15 ),  
ANSI/ASMI, DIN, EN

( 20), (09 2 ),  
(12 18 10 ).



.1.

( 12820-80)

.2.

12821-80)



- 0,1 20,0 ( 1 200 / ²). 12821-80. « .»
- 2,5 ( 1 25 / ²). 12820-80. « 12820-80.»
- 12815-80. « 0,1 20,0 ( 1 200 / ²).»
- 12822-80. « 0,1 2,5 ( 1 25 / ²). .»
- 28759.1-90.
- 28759.2-90.



○ 28759.3-90.  
 ○ 28759.4-90.

• 28919-91. «  
 .»

• 9399-81. « 20,0 100,0  
 (200-1000 / ²). .»

• 34-42-836-86.  
 • 26-842-73. «  
 .»

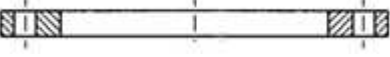

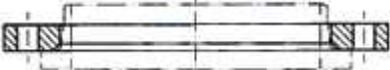
• 26-18-12-96. « 4,0 16,0 .»


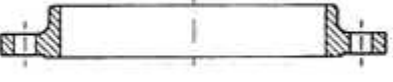

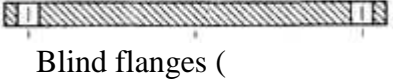
28338-89  
 49 ( , D , DN,  
 ), — ,

15, 20, 25, 50, 80, 100, 200  
 (500, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000, 2200,  
 2400, 2800, 3000, 3400, 4000 )

( , PN, / ², ), 26349-84  
 20°C.

26 0,1 800 / ².  
 DIN, EN ( )  
 : EN 1092-1 ( , European Committee  
 for Standardization), DIN (Deutsches Institute fur Normung, ).  
 EN 1092-1 EN 1092-1 DIN.  
 EN 1092-1 DIN. EN 1092-1,  
 1092-1, DIN, " + ". " - " , EN  
 DIN.  
**DIN EN 1092-1**

	EN	(PN)											
		2,5	6	10	16	25	40	63	100	160	250	320	400
 Plate flanges for welding ( )	01	+	2573	2576	+	+	+	+	+	-	-	-	-
 Loose plate flanges with weld-on plate collar ( )	02	+	2641	2642	+	2655	2656	-	-	-	-	-	-
 Loose plate flanges with weld-neck collar ( )	04	-	-	2674	2675	2676	2676	-	-	-	-	-	-

	<b>11</b>	2630	2631	2632	2633	2634	2635	2636	2637	2638	2628	2629	2627
Weld-neck flanges ( )													
	<b>12</b>	-	+	86029	86030	+	+	+	+	-	-	-	-
Hubbed slip-on flange for welding ( )													
	<b>13</b>	-	2565	+	2566	+	2567	2568	2569	-	-	-	-
Flange hubbed threaded ( )													
	<b>05</b>	+	2527	2527	2527	2527	2527	2527	2527	-	-	-	-
Blind flanges ( )													

ANSI/ASME B 16.5, ANSI/ASME B 16.47, API 6A

( , D , DN)

(1 = 2,54

).

( , PN)

(Class, -

, lb/in<sup>2</sup>, psi, pounds per squared inch): 150, 300, 400, 600, 900, 1500, 2000, 2500, 3000, 5000, 10000, 15000, 20000.

1 psi = 0,00689476	1 M = 10,19716213 / <sup>2</sup>	1 psi = 0,070306955 / <sup>2</sup>
(psi, pounds per squared inch, lbf/in <sup>2</sup> , lb.p.sq.in.)		( , at, / <sup>2</sup> , )
150	1,03	10,55
300	2,07	21,09
400	2,76	28,12
600	4,14	42,18
900	6,21	63,28



1500	10,34	105,46
2000	13,79	140,61
3000	20,68	210,92
5000	34,47	351,53
10000	68,95	703,07
15000	103,42	1054,60
20000	137,90	1406,14

ANSI/ASME B16.5

1/2 — 24 ;

(26 - 60 )

ASME/ANSI B16.47. (ASME — American Society of Mechanical Engineers — Standards Institute — American National Standards Institute — American Petroleum Institute, API 6 A (API — API 6 A (API — ANSI B 16.5

Mechanical Engineers — Standards Institute — (pressure class 2000 lbs) 20000 American Petroleum Institute,

), API 6A

ASME B 16.5.

ANSI/ASME B

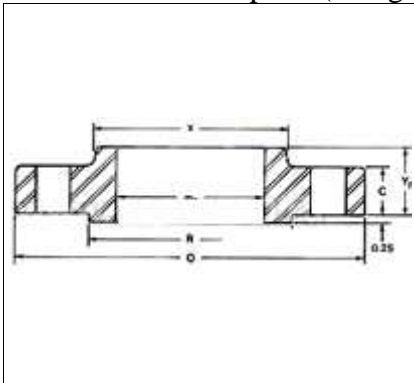
16.5 API 6 A.

**ANSI/ASME B 16.5 API 6 A**

	ASME	API	ASME	API	API
<b>Welding Neck ( )</b>	600	2000	2 — 10	2 1/16 — 11	1 1/2 — 10
	900	3000	2 — 10	2 1/16 — 11	1 1/2 — 10
	1500	5000	2 — 10	2 1/16 — 11	1 1/2 — 10
<b>Threaded and integral flanges ( )</b>	900	3000	2 — 20	2 1/16 — 20 3/4	1 1/2 — 20
	1500	5000	2 — 10	2 1/16 — 11	1 1/2 — 10

ANSI/ASME, API (Flange designs).

- Flanges ANSI/ASME Slip On (Flange SO) — ;



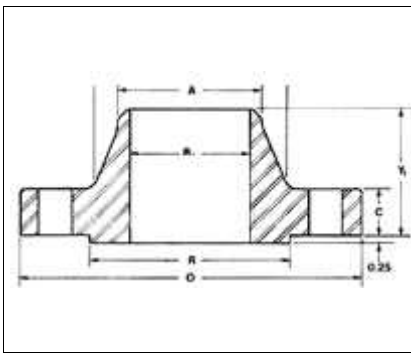
Slip On

DN: 1/2 - 60 ;

Class: 150 - 1500, 1500 lbs

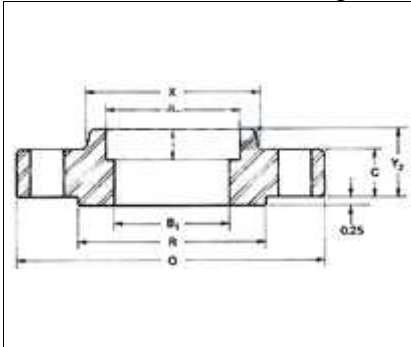
1/2 - 2 1/2 (ANSI B 16.5); 75 -

- ANSI/ASME Welding Neck Flanges (WN, Weld Neck) — ( ) ;



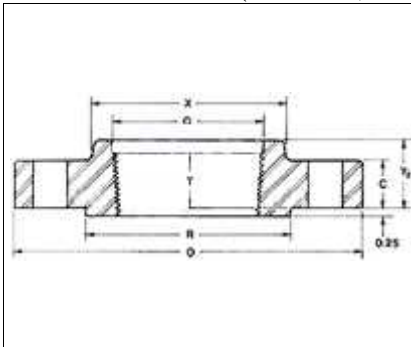
( « » )  
 DN: 1/2 – 60 ;  
 Class: 150 – 2500 (ANSI B 16.5); 75 – 900, 900 lbs 26 – 48  
 (ANSI B 16.47)

- ANSI/ASME Socket Weld Flanges (SW) — ( ) ;



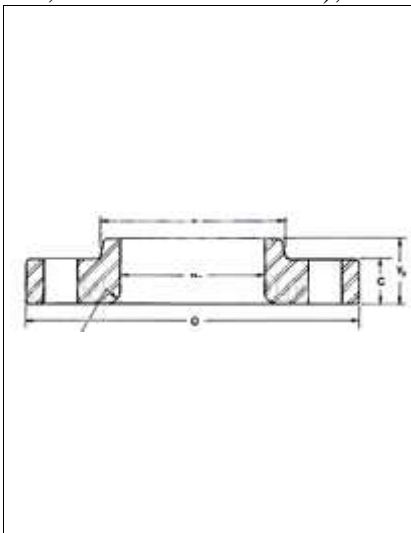
( )  
 . Socket weld  
 DN: 1/2 – 24  
 Class: 150 – 1500, 1500 lbs 1/2 – 2 1/2 (ANSI B 16.5)

- ANSI/ASME Threaded (Screwed, ST) Flanges — ( ) ;



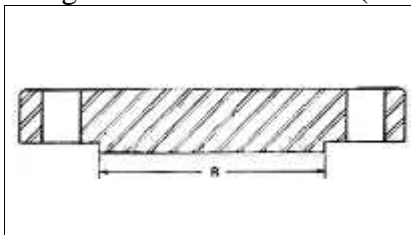
DN: 1/2 – 3  
 Class: 150 – 1500, 1500 lbs 1/2 – 2 1/2 (ANSI B 16.5)

- Flanges ANSI/ASME Lap Joint (LJ, Lapped Flange) — ( ) ;



Slip On,  
 (stub).  
 (Lap-Joint Flanges)  
 DN: 1/2 – 24  
 Class: 150 – 1500, 1500 lbs 1/2 – 2 1/2 (ANSI B 16.5)

- Flange ANSI/ASME Blind (Blank) — ANSI ASME Blind Flange.

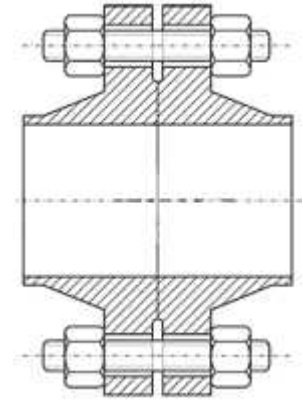
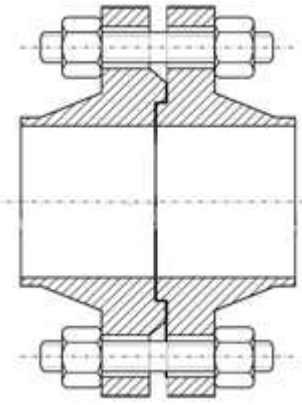
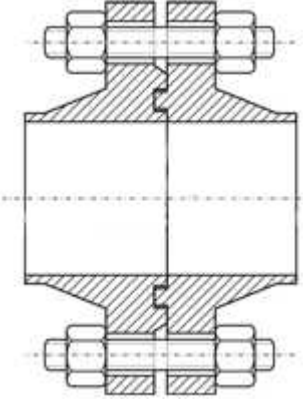
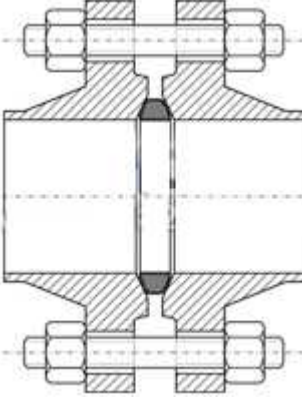
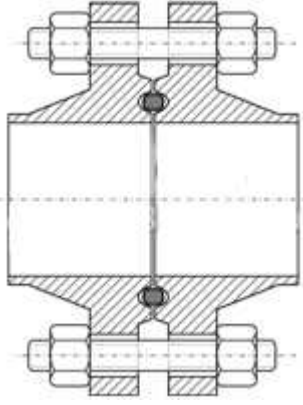
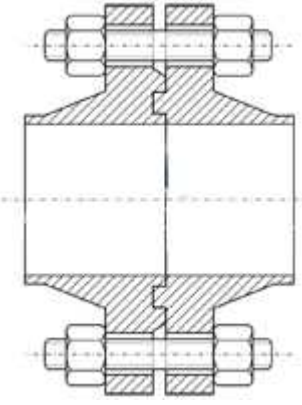


( )  
 DN: 1/2 – 60  
 Class: 150 – 2500 (ANSI B 16.5); 75 – 900, 900 lbs 26 – 48  
 (ANSI B 16.47)

( ) (Long Weld Neck Flanges)

counter flange, companion flange, mating flange),

12815-80.

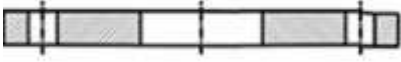
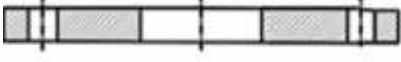
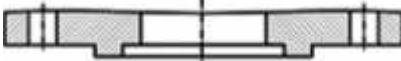

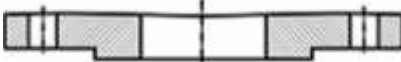


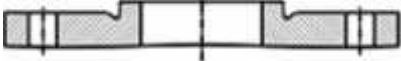
<p><b>.3.</b> 80</p>  <p>1</p> <p>12815-</p> <p>(</p> <p>2,5 )</p>	<p><b>.4.</b></p>  <p>2</p> <p>3 —</p> <p>12815-80 (</p> <p>(</p> <p>(</p> <p>)</p>
<p><b>.5.</b></p>  <p>4</p> <p>5 —</p> <p>12815-80 (</p> <p>(</p> <p>(</p> <p>)</p>	<p><b>.6.</b></p>  <p>6</p> <p>12815-80 (</p> <p>P 6.3 — 100 , T -</p> <p>50 +510 °C</p> <p>)</p>
<p><b>.7.</b></p>  <p>7</p>	<p><b>.8.</b></p>  <p>8 —</p> <p>(</p>

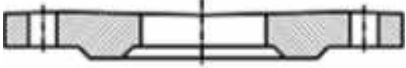
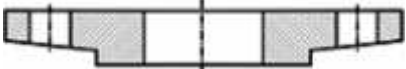
12815-80 ( P 6.3 - 16.0 , T -70 +600°C)	), 9 — ( )	12815-80 ( P 0,1 20,0 , T -200 +200°C)
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28759.4-90 26-842-73.

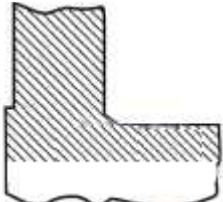
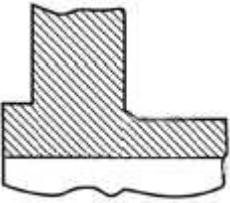
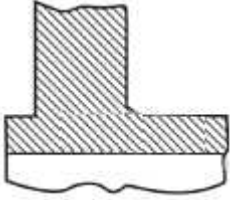
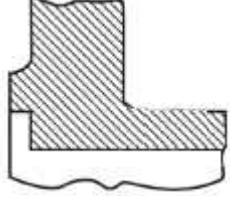
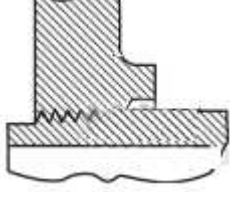
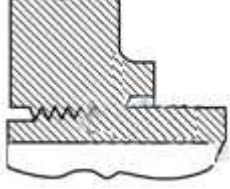
DIN, EN  
DIN EN 1092-1  
(flange facing types),  
EN 1092-1  
PN  
Ra=3,2...12,5 , PN Ra=0,8...3,2 ( ).

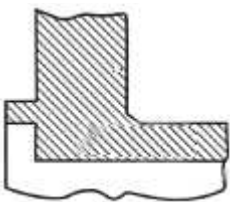
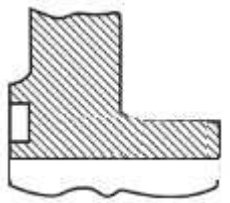

**DIN EN 1092-1(flange facings types)**

	DIN 2526		EN 1092-1
	(Standard)	(Type)	
Without facing (  )	DIN 2641/2642 DIN 2655/2656 DIN 2673 DIN 2527 DIN 2573/2576	Type A  Type B	Type A
Facing (  )	DIN 2630, 2631, 2632, 2633, 2634, 2635	Type C Type D	Type B1 ( PN 2,5 — PN 40)
	DIN 2636	Type E	Type B2( PN 63 — PN 100)
Tongue (  )	DIN 2512 (PN 10 — PN 160)	Type F	Type C
Groove (  )	DIN 2512 (PN 10 — PN 160)	Type N	Type D
Male (  ) « »	DIN 2513 (PN 10 — PN 100)	Type V13	Type E
Female (  ) « »	DIN 2513 (PN 10 — PN 100)	Type R13	Type F
O-Ring (  )	DIN 2514 (PN 10 — PN 40)	Type R14	Type G
	DIN 2514 (PN 10 — PN 40)	Type V14	Type H

O-Ring Groove ( )			
 Lense shaped joint( )	DIN 2696 (PN 63 — PN 400)	Type L	—
 Diaphragm weld gasket( )	DIN 2695 (PN 63 — PN 400)	Type M	—

ANSI, ASME, API  
API 6A  
R oval, R octagonal, RX) API 6BX ( API 6B ( BX).  
**ANSI/ASME B 16.5-1996(flange facings)**

Raised Face Flange ( )		Class 150, 300 (PN 20 — 50)
Male Flange ( , « »)	 	Class 400 (PN 68) Class 300 (PN 50)
Female Flange ( , « »)		Class 300 (PN 50)
Small Male Flange ( )		Class 150 (PN 20)
Small Female Flange ( )		Class 150 (PN 20)

Tongue Flange ( )		Class 300 (PN 50)
Groove Flange ( )		Class 300 (PN 50)
Ring Joint Flange (RJ)( )		ASME B16.5 Flanges Class 150 (PN 20) API 6B Flanges (Type R ring joint: oval, octagonal) Class 5000 — 10000 (PN 345 — 690)
		API 6B Flanges (Type RX ring joint) Class 5000 — 10000 (PN 345 — 690)
		API 6BX Flanges (Type BX ring joint) Class 5000 — 20000 (PN 345 — 1380)

( ), : ( ;  
- , 250-300 / <sup>2</sup>; ;  
, ;  
, ( ) ;  
ANSI, ASME, API, DIN, EN: Ring Joint Gaskets RX, BX, R Octagonal, R Oval,

- 20 — 20 ;
- 3, 20 (ASTM A 105 Gr1, A 106 GrA, B, A 659 CS Type 1020, A 794 CS Type 1020, EN 1.1151, AISI 1020, DIN C22E) — 09 2 (ASTM A 516-65, A 561 Gr70, A 516-55, A 516-60)( ) -
- 10 11 23 3 — ;
- 15 5 ( : A 193 Grade B5, A 182 Grade F5) — ;
- 13 . ;
- 10 17 13 2 (UNS S31635, AISI 318, 316H, 316Ti, DIN EN X10CrNiMoNb18-12, 1.4583, 1.4571, X10CrNiMoTi18-12, X10CrNiMoTi18-10, X6CrNiMoTi17-12-2) — ;
- 08 18 10 (AISI 321, UNS S32100, DIN EN 1.4878, 1.4541, X6CrNiTi18-10, X12CrNiTi18-9, X10CrNiTi18-9) — ;
- 10 17 13 3 (UNS S31635, DIN X10CrNiMoTi18-12, 1.4573, GX3CrNiMoCuN24-6-5, AISI 316Ti) — ;
- 10 11 23 3 — ;
- 12 18 10 (AISI 321) — ,

-196 +600 °

- 06 28 (DIN 1.4563, UNS N08028) —
- 14 17 2 (AISI 431, DIN X20CrNi72, X22CrNi17) —
- 20 13 (AISI 420, ASTM A 580 420, A 276 420) —

200 3000 ( , Dn 3000) 7 .

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- ( ).