

Flange Tables



Nominal Size 15mm ($1/2$ in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	80	55	4	M10	11	40	2	12
PN 10	95	65	4	M12	14	45	2	16
PN 16	95	65	4	M12	14	45	2	16
PN 25	95	65	4	M12	14	45	2	16
PN 40	95	65	4	M12	14	45	2	16
ANSI								
Class 125/150	$3\frac{1}{2}$ (89)	$2\frac{3}{8}$ (60)	4	$\frac{1}{2}$ (13)	$\frac{5}{8}$ (16)	$1\frac{3}{8}$ (35)	$\frac{1}{16}$ (2)	$\frac{7}{16}$ (11)
Class 300	$3\frac{3}{4}$ (95)	$2\frac{5}{8}$ (67)	4	$\frac{1}{2}$ (13)	$\frac{5}{8}$ (16)	$1\frac{3}{8}$ (35)	$\frac{1}{16}$ (2)	$\frac{1}{2}$ (13)
BS 10								
Table D	$3\frac{3}{4}$ (95)	$2\frac{5}{8}$ (67)	4	$\frac{1}{2}$ (13)	$\frac{9}{16}$ (14)	-	-	$\frac{3}{8}$ (10)
Table E	$3\frac{3}{4}$ (95)	$2\frac{5}{8}$ (67)	4	$\frac{1}{2}$ (13)	$\frac{9}{16}$ (14)	-	-	$\frac{3}{8}$ (10)

Nominal Size 20mm ($3/4$ in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	90	65	4	M10	11	50	2	14
PN 10	105	75	4	M12	14	58	2	18
PN 16	105	75	4	M12	14	58	2	18
PN 25	105	75	4	M12	14	58	2	18
PN 40	105	75	4	M12	14	58	2	18
ANSI								
Class 125/150	$3\frac{7}{8}$ (98)	$2\frac{3}{4}$ (70)	4	$\frac{1}{2}$ (13)	$\frac{5}{8}$ (16)	$1\frac{11}{16}$ (43)	$\frac{1}{16}$ (2)	$\frac{9}{16}$ (14)
Class 300	$4\frac{5}{8}$ (117)	$3\frac{1}{4}$ (83)	4	$\frac{5}{8}$ (16)	$\frac{3}{4}$ (19)	$1\frac{11}{16}$ (43)	$\frac{1}{16}$ (2)	$\frac{5}{8}$ (16)
BS 10								
Table D	4 (102)	$2\frac{7}{8}$ (73)	4	$\frac{1}{2}$ (13)	$\frac{9}{16}$ (14)	-	-	$\frac{3}{8}$ (10)
Table E	4 (102)	$2\frac{7}{8}$ (73)	4	$\frac{1}{2}$ (13)	$\frac{9}{16}$ (14)	-	-	$\frac{3}{8}$ (10)

Nominal Size 25mm (1 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	100	75	4	M10	11	60	2	14
PN 10	115	85	4	M12	14	68	2	18
PN 16	115	85	4	M12	14	68	2	18
PN 25	115	85	4	M12	14	68	2	18
PN 40	115	85	4	M12	14	68	2	18
ANSI								
Class 125/150	$4\frac{1}{4}$ (114)	$3\frac{1}{8}$ (79)	4	$\frac{1}{2}$ (13)	$\frac{5}{8}$ (16)	2 (51)	$\frac{1}{16}$ (2)	$\frac{7}{16}$ (11)
Class 300	$4\frac{7}{8}$ (124)	$3\frac{1}{2}$ (89)	4	$\frac{5}{8}$ (16)	$\frac{3}{4}$ (19)	2 (51)	$\frac{1}{16}$ (2)	$\frac{11}{16}$ (17)
BS 10								
Table D	$4\frac{1}{2}$ (114)	$3\frac{1}{4}$ (83)	4	$\frac{1}{2}$ (13)	$\frac{9}{16}$ (14)	-	-	$\frac{3}{8}$ (10)
Table E	$4\frac{1}{2}$ (114)	$3\frac{1}{4}$ (83)	4	$\frac{1}{2}$ (13)	$\frac{9}{16}$ (14)	-	-	$\frac{3}{8}$ (10)

Flange Tables



Nominal Size 32mm (1 1/4in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	120	90	4	M12	14	70	2	14
PN 10	140	100	4	M16	18	78	2	18
PN 16	140	100	4	M16	18	78	2	18
PN 25	140	100	4	M16	18	78	2	18
PN 40	140	100	4	M16	18	78	2	18
ANSI								
Class 125/150	4 5/8 (117)	3 1/2 (89)	4	1/2 (13)	2 1/2 (64)	5/8 (16)	1/16 (2)	1/2 (13)
Class 300	5 1/4 (133)	3 7/8 (98)	4	5/8 (16)	2 1/2 (64)	3/4 (19)	1/16 (2)	3/4 (19)
BS 10								
Table D	4 3/4 (121)	3 7/16 (87)	4	1/2 (13)	9/16 (14)			5/8 (16)
Table E	4 3/4 (121)	3 7/16 (87)	4	1/2 (13)	9/16 (14)			5/8 (16)

Nominal Size 40mm (1 1/2in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	130	100	4	M12	14	80	2	14
PN 10	150	110	4	M16	18	88	2	18
PN 16	150	110	4	M16	18	88	2	18
PN 25	150	110	4	M16	18	88	2	18
PN 40	150	110	4	M16	18	88	2	18
ANSI								
Class 125/150	5 (127)	3 7/8 (98)	4	1/2 (13)	5/8 (16)	2 7/8 (73)	1/16 (2)	9/16 (14)
Class 300	6 1/8 (156)	4 1/2 (114)	4	3/4 (19)	7/8 (22)	2 7/8 (73)	1/16 (2)	13/16 (21)
BS 10								
Table D	5 1/4 (133)	3 7/8 (98)	4	1/2 (13)	9/16 (14)			1/2 (13)
Table E	5 1/4 (133)	3 7/8 (98)	4	1/2 (13)	9/16 (14)			1/2 (13)

Nominal Size 50mm (2in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	140	110	4	M12	14	90	2	14
PN 10	165	125	4	M16	18	102	2	18
PN 16	165	125	4	M16	18	102	2	18
PN 25	165	125	4	M16	18	102	2	20
PN 40	165	125	4	M16	18	102	2	20
ANSI								
Class 125/150	6 (152)	4 3/4 (121)	4	5/8 (16)	3/4 (19)	3 5/8 (92)	1/16 (2)	5/8 (16)
Class 300	6 1/2 (165)	5 (127)	8	5/8 (16)	3/4 (19)	3 5/8 (92)	1/16 (2)	7/8 (22)
BS 10								
Table D	6 (152)	4 1/2 (114)	4	5/8 (16)	11/16 (17)	-	-	9/16 (14)
Table E	6 (152)	4 1/2 (114)	4	5/8 (16)	11/16 (17)	-	-	9/16 (14)

Flange Tables



Nominal Size 65mm (2 1/2in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	160	130	4	M12	14	110	3	14
PN 10	185	145	4	M16	18	122	3	18
PN 16	185	145	4	M16	18	122	3	18
PN 25	185	145	8	M16	18	122	3	22
PN 40	185	145	8	M16	18	122	3	22
ANSI								
Class 125/150	7 (178)	5 1/2 (140)	4	5/8 (16)	3/4 (19)	4 1/8 (105)	1/16 (2)	11/16 (17)
Class 300	7 1/2 (191)	5 7/8 (149)	8	3/4 (19)	7/8 (22)	4 1/8 (105)	1/16 (2)	1 (25)
BS 10								
Table D	6 1/2 (165)	5 (127)	4	5/8 (16)	11/16 (17)			9/16 (14)
Table E	6 1/2 (165)	5 (127)	4	5/8 (16)	11/16 (17)			9/16 (14)

Nominal Size 80mm (3in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	190	150	4	M16	18	128	2	16
PN 10	200	160	8	M16	18	138	2	20
PN 16	200	160	8	M16	18	138	2	20
PN 25	200	160	8	M16	18	138	2	24
PN 40	200	160	8	M16	18	138	2	24
ANSI								
Class 125/150	7 1/2 (191)	6 (152)	4	5/8 (16)	3/4 (19)	5 (127)	1/16 (2)	3/4 (19)
Class 300	8 1/4 (210)	6 5/8 (168)	8	3/4 (19)	7/8 (22)	5 (127)	1/16 (2)	1 1/8 (29)
BS 10								
Table D	7 1/4 (184)	5 3/4 (146)	4	5/8 (16)	11/16 (17)			9/16 (14)
Table E	7 1/4 (184)	5 3/4 (146)	4	5/8 (16)	11/16 (17)			9/16 (14)

Nominal Size 100mm (4in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	210	170	4	M16	18	148	2	16
PN 10	220	180	8	M16	18	158	2	20
PN16	220	180	8	M16	18	158	2	20
PN 25	235	190	8	M20	22	162	2	24
PN 40	235	190	8	M20	22	162	2	24
ANSI								
Class 125/150	9 (229)	7 1/2 (191)	8	5/8 (16)	3/4 (19)	6 3/16 (157)	1/16 (2)	15/16 (24)
Class 300	10 (254)	7 7/8 (200)	8	3/4 (19)	7/8 (22)	6 3/16 (157)	1/16 (2)	1 1/4 (32)
BS 10								
Table D	8 1/2 (216)	7 (178)	4	5/8 (16)	11/16 (17)			11/16 (17)
Table E	8 1/2 (216)	7 (178)	8	5/8 (16)	11/16 (17)			11/16 (17)

Flange Tables



Nominal Size 125mm (5in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	240	200	8	M16	18	178	2	18
PN 10	250	210	8	M16	18	188	2	22
PN 16	250	210	8	M16	18	188	2	22
PN 25	270	220	8	M24	26	188	2	26
PN 40	270	220	8	M24	26	188	2	26
ANSI								
Class 125/150	10 (254)	8 ¹ / ₂ (216)	8	³ / ₄ (19)	⁷ / ₈ (22)	7 ⁵ / ₁₆ (186)	¹ / ₁₆ (2)	¹⁵ / ₁₆ (24)
Class 300	11 (279)	9 ¹ / ₄ (235)	8	³ / ₄ (19)	⁷ / ₈ (22)	7 ⁵ / ₁₆ (186)	¹ / ₁₆ (2)	1 ³ / ₈ (35)
BS 10								
Table D	10 (254)	8 ¹ / ₄ (210)	8	⁵ / ₈ (16)	¹¹ / ₁₆ (17)			¹¹ / ₁₆ (17)
Table E	10 (254)	8 ¹ / ₄ (210)	8	⁵ / ₈ (16)	¹¹ / ₁₆ (17)			¹¹ / ₁₆ (17)

Nominal Size 150mm (6in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	265	225	8	M16	18	202	2	18
PN 10	285	240	8	M20	22	212	2	22
PN 16	285	240	8	M20	22	212	2	22
PN 25	300	250	8	M24	26	218	2	28
PN 40	300	250	8	M24	26	218	2	28
ANSI								
Class 125/150	11 (279)	9 ¹ / ₂ (241)	8	³ / ₄ (19)	⁷ / ₈ (22)	8 ¹ / ₂ (216)	¹ / ₁₆ (2)	1 (25)
Class 300	12 ¹ / ₂ (318)	10 ⁵ / ₈ (270)	12	³ / ₄ (19)	⁷ / ₈ (22)	8 ¹ / ₂ (216)	¹ / ₁₆ (2)	1 ⁷ / ₁₆ (37)
BS 10								
Table D	11 (279)	9 ¹ / ₄ (235)	8	⁵ / ₈ (16)	¹¹ / ₁₆ (17)			¹¹ / ₁₆ (17)
Table E	11 (279)	9 ¹ / ₄ (235)	8	³ / ₄ (19)	⁷ / ₈ (22)			¹¹ / ₁₆ (17)

Nominal Size 200 mm (8 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	320	280	8	M16	18	258	2	20
PN 10	340	295	8	M20	22	268	2	24
PN 16	340	295	12	M20	22	268	2	24
PN 25	360	310	12	M24	26	278	2	30
PN 40	375	320	12	M27	30	285	2	34
ANSI								
Class 125/150	13 ¹ / ₂ (343)	11 ³ / ₄ (298)	8	³ / ₄ (19)	⁷ / ₈ (22)	10 ⁵ / ₈ (270)	¹ / ₁₆ (2)	1 ¹ / ₈ (29)
Class 300	15 (381)	13 (330)	12	⁷ / ₈ (22)	1 (25)	10 ⁵ / ₈ (270)	¹ / ₁₆ (2)	1 ⁵ / ₈ (41)
BS 10								
Table D	13 ¹ / ₄ (337)	11 ¹ / ₂ (292)	8	⁵ / ₈ (16)	¹¹ / ₁₆ (17)			³ / ₄ (19)
Table E	13 ¹ / ₄ (337)	11 ¹ / ₂ (292)	8	³ / ₄ (19)	⁷ / ₈ (22)			³ / ₄ (19)

Flange Tables



Nominal Size 250 mm (10 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	375	335	12	M16	18	312	2	22
PN 10	395	350	12	M20	22	320	2	26
PN 16	405	355	12	M24	26	320	2	26
PN 25	425	370	12	M27	30	335	2	32
PN 40	450	385	12	M30	33	345	2	38
ANSI								
Class 125/150	16 (406)	14 ¹ / ₄ (362)	12	⁷ / ₈ (22)	1 (25)	12 ³ / ₄ (324)	¹ / ₁₆ (2)	1 ³ / ₁₆ (30)
Class 300	17 ¹ / ₂ (445)	15 ¹ / ₄ (387)	16	1 (25) -	1 ¹ / ₈ (29)	12 ³ / ₄ (324)	¹ / ₁₆ (2)	1 ⁷ / ₈ (41)
BS 10								
Table D		14 (356)	8	³ / ₄ (19)	⁷ / ₈ (22)			³ / ₄ (19)
Table E		14 (356)	12	³ / ₄ (19)	⁷ / ₈ (22)			⁷ / ₈ (22)

Nominal Size 300 mm (12 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	440	395	12	M20	22	365	2	22
PN 10	445	400	12	M20	22	370	2	26
PN 16	460	410	12	M24	26	378	2	28
PN 25	485	430	16	M27	30	395	2	34
PN 40	515	450	16	M30	33	410	2	42
ANSI								
Class 125/150	19 (483)	17 (432)	12	⁷ / ₈ (22)	1 (25)	15 (381)	¹ / ₁₆ (2)	1 ¹ / ₄ (32)
Class 300	20 ¹ / ₂ (521)	17 ³ / ₄ (451)	16	1 ¹ / ₈ (29)	1 ¹ / ₄ (32)	15 (381)	¹ / ₁₆ (2)	2 (51)
BS 10								
Table D	18 (457)	16 (406)	12	³ / ₄ (19)	⁷ / ₈ (22)			⁷ / ₈ (22)
Table E	18 (457)	16 (406)	12	⁷ / ₈ (22)	1 (25)			1 (25)

Nominal Size 350 mm (14 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	490	445	12	M20	22	415	2	22
PN 10	505	460	16	M20	22	430	2	26
PN 16	520	470	16	M24	26	438	2	30
PN 25	555	490	16	M30	33	450	2	38
PN 40	580	510	16	M33	36	465	2	46
ANSI								
Class 125/150	21 (533)	18 ³ / ₄ (476)	12	1 (25)	1 ¹ / ₈ (29)	16 ¹ / ₄ (413)	¹ / ₁₆ (2)	1 ³ / ₈ (35)
Class 300	23 (584)	20 ¹ / ₄ (514)	20	1 ¹ / ₈ (29)	1 ¹ / ₄ (32)	16 ¹ / ₄ (413)	¹ / ₁₆ (2)	2 ¹ / ₈ (54)
BS 10								
Table D	20 ³ / ₄ (527)	18 ¹ / ₂ (470)	12	⁷ / ₈ (22)	1 (25)	-	-	1 (25)
Table E	20 ³ / ₄ (527)	18 ¹ / ₂ (470)	12	⁷ / ₈ (22)	1 (25)	-	-	1 (25)

Flange Tables



Nominal Size 400 mm (16in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	540	495	16	M20	22	465	2	22
PN 10	565	515	16	M24	26	482	2	26
PN 16	580	525	16	M27	30	490	2	32
PN25	620	550	16	M33	36	505	2	40
PN 40	660	585	16	M36	39	535	2	50
ANSI								
Class 125/150	23 ¹ / ₂ (597)	21 ¹ / ₄ (540)	16	1 (25)	1 ¹ / ₈ (29)	18 ¹ / ₂ (470)	1 ¹ / ₁₆ (2)	1 ⁷ / ₁₆ (37)
Class 300	25 ¹ / ₂ (648)	22 ¹ / ₂ (572)	20	1 ¹ / ₄ (32)	1 ³ / ₈ (35)	18 ¹ / ₂ (470)	1 ¹ / ₁₆ (2)	2 ¹ / ₄ (57)
BS 10								
Table D	22 ³ / ₄ (578)	20 ¹ / ₂ (521)	12	7 ⁷ / ₈ (22)	1 (25)	-	-	1 (25)
Table E	22 ³ / ₄ (578)	20 ¹ / ₂ (521)	12	7 ⁷ / ₈ (22)	1 (25)	-	-	1 (25)

Nominal Size 450 mm (18 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	595	550	16	M20	22	520	2	22
PN 10	615	565	20	M24	26	532	2	28
PN 16	640	585	20	M27	30	550	2	40
PN 25	670	600	20	M33	36	555	2	46
PN 40	685	610	20	M36	39	560	2	57
ANSI								
Class 125/150	25 (635)	22 ³ / ₄ (578)	16	1 ¹ / ₈ (29)	1 ¹ / ₄ (32)	21 (533)	1 ¹ / ₁₆ (2)	1 ⁹ / ₁₆ (40)
Class 300	28 (711)	24 ³ / ₄ (629)	24	1 ¹ / ₄ (32)	1 ³ / ₈ (35)	21 (533)	1 ¹ / ₁₆ (2)	2 ³ / ₈ (60)
BS 10								
Table D	25 ¹ / ₄ (641)	23 (584)	12	7 ⁷ / ₈ (22)	1 (25)	-	-	1 ¹ / ₈ (29)
Table E	25 ¹ / ₄ (641)	23 (584)	16	7 ⁷ / ₈ (22)	1 (25)	-	-	1 ¹ / ₈ (29)

Nominal Size 500 mm (20 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of rasied face	Height of raised face	Thickness of flange
PN 6	645	600	20	M20	22	570	2	24
PN 10	670	620	20	M24	26	585	2	48
PN 16	715	650	20	M30	33	610	2	44
PN 25	730	660	20	M33	36	615	2	48
PN 40	755	670	20	M39	42	615	2	57
ANSI								
Class 125/150	27 ¹ / ₂ (699)	25 (635)	20	1 ¹ / ₈ (29)	1 ¹ / ₄ (32)	23 (584)	1 ¹ / ₁₆ (2)	1 ¹¹ / ₁₆ (43)
Class 300	30 ¹ / ₂ (775)	27 (686)	24	1 ¹ / ₄ (32)	1 ³ / ₈ (35)	23 (584)	1 ¹ / ₁₆ (2)	2 ¹ / ₂ (64)
BS 10								
Table D	27 ³ / ₄ (705)	25 ¹ / ₄ (641)	16	7 ⁷ / ₈ (22)	1 (25)	-	-	1 ¹ / ₄ (32)
Table E	27 ³ / ₄ (705)	25 ¹ / ₄ (641)	16	7 ⁷ / ₈ (22)	1 (25)	-	-	1 ¹ / ₄ (32)

Flange Tables



Nominal Size 600 mm (24 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of raised face	Height of raised face	Thickness of flange
PN 6	755	705	20	M24	26	670	2	30
PN 10	780	725	20	M27	30	685	2	34
PN 16	840	770	20	M33	36	725	2	54
PN 25	845	770	20	M36	39	720	2	58
PN 40	890	890	20	M45	48	735	2	72
ANSI								
Class 125/150	32 (813)	29 ¹ / ₂ (749)	20	1 ¹ / ₄ (32)	1 ³ / ₈ (35)	27 ¹ / ₄ (692)	1 ¹ / ₁₆ (2)	1 ⁷ / ₈ (48)
Class 300	36 (914)	32 (813)	24	1 ¹ / ₂ (38)	1 ⁵ / ₈ (41)	27 ¹ / ₄ (692)	1 ¹ / ₁₆ (2)	2 ³ / ₄ (70)
BS 10								
Table D	32 ¹ / ₂ (826)	29 ³ / ₄ (756)	16	1 (25)	1 ¹ / ₈ (29)			1 ³ / ₈ (35)
Table E	32 ¹ / ₂ (826)	29 ³ / ₄ (756)	16	1 ¹ / ₈ (29)	1 ¹ / ₄ (32)			1 ¹ / ₂ (38)