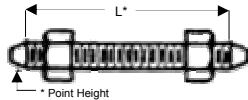




## BOLT & STUD DIMENSIONS FOR ANSI FLANGES

To suit R.F. Flange sizes DN15 to 600 to ANSI B16.5 (BS 1560) and DN 750 & 900 to BS 3293



STUD BOLTS WITH NUTS



MACHINE BOLT WITH NUTS

**Diameter of Bolts** is shown in inches. For nominal diameters 1" and smaller, threads are U.N.C.; nominal diameters 1-1/8" and larger threads are 8 U.N. (8 T.P.I.).

**Length of Bolts (L)** is shown in millimetres rounded to the nearest 5mm. Stud Bolt lengths (L\*) do not include the height of points. Machine Bolt lengths (L) include the height of point.

**The length shown includes the height of the Raised Face in all cases.**

NOMINAL SIZE		CLASS 150				CLASS 300				CLASS 600			CLASS 900			CLASS 1500			CLASS 2500			
		No. Bolts	Dia. Bolts inch	L		No. Bolts	Dia. Bolts inch	L		No. Bolts	Dia. Bolts inch	Stud Bolts mm	No. Bolts	Dia. Bolts inch	Stud Bolts mm	No. Bolts	Dia. Bolts inch	Stud Bolts mm	No. Bolts	Dia. Bolts inch	Stud Bolts mm	
				Stud Bolts mm	Mach. Bolts mm			Stud Bolts mm	Mach. Bolts mm													
DN	NPS																					
15	1/2	4	1/2	60	45	4	1/2	65	55	4	1/2	80	4	3/4	105	4	3/4	105	4	3/4	125	
20	3/4	4	1/2	65	50	4	5/8	75	60	4	5/8	90	4	3/4	115	4	3/4	115	4	3/4	125	
25	1	4	1/2	65	55	4	5/8	80	65	4	5/8	90	4	7/8	125	4	7/8	125	4	7/8	140	
32	1 1/4	4	1/2	70	55	4	5/8	80	65	4	5/8	100	4	7/8	125	4	7/8	125	4	1	150	
40	1 1/2	4	1/2	70	60	4	3/4	90	75	4	3/4	105	4	1	140	4	1	140	4	1-1/8	170	
50	2	4	5/8	80	65	8	5/8	90	75	8	5/8	105	8	7/8	145	8	7/8	145	8	1	175	
65	2 1/2	4	5/8	90	75	8	3/4	100	85	8	3/4	120	8	1	160	8	1	160	8	1-1/8	195	
80	3	4	5/8	90	75	8	3/4	110	90	8	3/4	125	8	7/8	145	8	1-1/8	180	8	1-1/4	220	
90	3 1/2	8	5/8	90	75	8	3/4	110	95	8	7/8	140	-	-	-	-	-	-	-	-	-	
100	4	8	5/8	90	75	8	3/4	110	95	8	7/8	145	8	1-1/8	170	8	1-1/4	195	8	1-1/2	255	
125	5	8	3/4	90	80	8	3/4	120	100	8	1	165	8	1-1/4	190	8	1-1/2	250	8	1-3/4	300	
150	6	8	3/4	100	85	12	3/4	125	105	12	1	170	12	1-1/8	195	12	1-3/8	260	8	2	345	
200	8	8	3/4	110	90	12	7/8	140	110	12	1-1/8	195	12	1-3/8	220	12	1-5/8	290	12	2	380	
250	10	12	7/8	115	95	16	1	155	130	16	1-1/4	215	16	1-3/8	235	12	1-7/8	335	12	2-1/2	485	
300	12	12	7/8	120	100	16	1-1/8	170	145	20	1-1/4	220	20	1-3/8	255	16	2	375	12	2-3/4	540	
350	14	12	1	130	110	20	1-1/8	175	150	20	1-3/8	235	20	1-1/2	275	16	2-1/4	405				
400	16	16	1	135	115	20	1-1/4	190	160	20	1-1/2	255	20	1-5/8	285	16	2-1/2	445				
450	18	16	1-1/8	150	125	24	1-1/4	195	170	20	1-5/8	275	20	1-7/8	325	16	2-3/4	495				
500	20	20	1-1/8	160	135	24	1-1/4	205	180	24	1-5/8	290	20	2	345	16	3	540				
600	24	20	1-1/4	175	145	24	1-1/2	230	195	24	1-7/8	330	20	2-1/2	435	16	3-1/2	615				
750	30	28	1-1/4	190	160	28	1-3/4	290	250	28	2	355	Class 900, 1500 & 2500 - Not listed in BS 3293									
900	36	32	1-1/2	215	180	32	2	325	280	28	2-1/2	400										

**Raised Face** height of 2mm for Class 150 & 300 and 7mm for Class 600, 900, 1500 & 2500 are included in dimension L (Bolt Length).

TEMPERATURE / PRESSURE RATINGS								
CARBON STEEL PIPE FLANGES TO ANSI B16.5 (BS 1560) FORGINGS TO ASTM A105 - Not recommended for prolonged use above 427 °C FORGINGS TO ASTM A350 - LF2 - Not to be used above 343 °C								
TABLE G								
TEMPERATURE IN °C	MAXIMUM WORKING PRESSURE IN kPa BY PN (Pressure Numbers) (FOR APPROXIMATE PSI DIVIDE BY 7)							
	PN20	PN50	PN100	PN150	PN250	PN420		
-29 to 38	1960	5110	10210	15320	25530	42550		
50	1920	5010	10020	15020	25040	41730		
100	1770	4640	9280	13910	23190	38650		
150	1580	4520	9050	13570	22610	37690		
200	1400	4380	8760	13150	21910	36520		
250	1210	4170	8340	12520	20860	34770		
300	1020	3870	7750	11620	19370	32280		
350	840	3700	7390	11090	18480	30800		
375	740	3650	7290	10940	18230	30390		
400	650	3450	6900	10350	17250	28750		
425	560	2880	5750	8630	14380	23960		
450	470	2000	4010	6010	10020	16690		
475	370	1350	2710	4060	6770	11290		
500	280	880	1760	2640	4400	7330		
525	190	520	1040	1550	2590	4320		
540	130	330	650	980	1630	2720		

Inch/Metric Bolting interchangeable for ANSI B16.5 flanges as below	
FOR	USE
1/2"	M14
5/8"	M18
3/4"	M20
7/8"	M24
1"	M27
1-1/8"	M30
1-1/4"	M33
1-3/8"	M36
1-1/2"	M39
1-5/8"	M42
1-3/4"	M45
1-7/8"	M48
2"	M52
2-1/4"	M56
2-1/2"	M64
2-3/4"	M72

FLANGE ABOVE DN 600 ARE NOT INCLUDED IN ANSI B16.5 AND THE CLASS DESIGNATIONS IN THESE LARGE DIAMETERS **DO NOT IMPLY** SPECIFIC TEMPERATURE/PRESSURE RATINGS