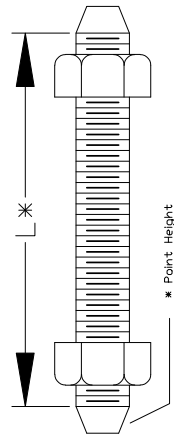
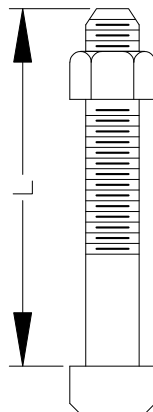


**BOLT & STUD DIMENSIONS FOR AMERICAN STANDARD FLANGES**



**STUD BOLT WITH NUTS**



**MACHINE BOLT WITH NUT**

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

**Length of Bolts (L)** is shown in millimeters rounded to the nearest 5 mm. \*Stud Bolt lengths (L) **do not** include the height of point. Machine Bolt lengths (L) include the height of point. **The length shown includes the height of the Raised Face in all cases.**

To suit Flange Sizes 15mm to 600mm to ANSI B16.5 (BS.1560) and sizes 750mm & 900mm to BS.3293  
 NOMINAL SIZES SHOWN ARE SAA METRIC (mm) & ANSI (ins) NOMINAL SIZE

Nominal Flange Size	Class 150			Class 300			Class 600			Class 900			Class 1500			Class 2500			Nominal Flange Size				
	No. Bolts	Dia Bolts ins	Stud Bolts mm	Mach Bolts mm	Dia Bolts ins	No. Bolts	Stud Bolts mm	Mach Bolts mm	L mm	No. Bolts	Dia Bolts ins	Stud Bolts mm	L mm	No. Bolts	Dia Bolts ins	Stud Bolts mm	L mm	No. Bolts	Dia Bolts ins	Stud Bolts mm	L mm	ins	mm
15	4	1/2	60	45	1/2	4	65	55	80	4	3/4	80	105	4	3/4	105	125	4	3/4	125	150	15	150
20	4	1/2	65	50	5/8	4	75	60	90	4	5/8	90	115	4	5/8	115	125	4	5/8	125	150	20	150
25	4	1/2	65	55	5/8	4	80	65	90	4	5/8	90	125	4	7/8	125	140	4	7/8	140	150	25	150
32	4	1/2	70	55	5/8	4	80	65	100	4	5/8	100	125	4	7/8	125	150	4	1	150	150	32	150
40	4	1/2	70	60	5/8	4	90	75	105	4	5/8	105	140	4	1	140	170	4	1 1/8	170	170	40	170
50	4	5/8	80	65	5/8	8	90	75	105	8	3/4	105	145	8	7/8	145	175	8	1	175	175	50	175
65	4	5/8	90	75	5/8	8	100	85	120	8	3/4	120	160	8	1	160	195	8	1 1/8	195	195	65	195
80	4	5/8	90	75	5/8	8	110	90	125	8	3/4	125	170	8	1 1/8	170	200	8	1 1/4	200	200	80	200
90	8	5/8	90	75	5/8	8	110	95	140	8	7/8	140	180	8	1 1/4	180	220	8	1 1/4	220	220	90	220
100	8	5/8	90	75	5/8	8	110	95	145	8	7/8	145	195	8	1 1/4	195	255	8	1 1/2	255	255	100	255
125	8	3/4	90	80	3/4	8	120	100	165	8	1	165	250	8	1 1/2	250	300	8	1 1/2	300	300	125	300
150	8	3/4	100	85	3/4	12	125	105	170	12	1 1/8	170	260	12	1 3/8	260	345	12	1 3/8	345	345	150	345
200	8	3/4	110	90	7/8	12	140	110	195	12	1 1/8	195	290	12	1 5/8	290	380	12	2	380	380	200	380
250	12	7/8	115	95	1	16	155	130	215	16	1 1/4	215	335	12	2 1/8	335	435	12	2 1/2	435	435	250	435
300	12	7/8	120	100	1 1/8	16	170	145	220	20	1 1/4	220	375	12	2 3/4	375	485	12	2 3/4	485	485	300	485
350	12	1	130	110	1 1/2	20	175	150	235	20	1 3/8	235	405	16	3	405	540	16	3	540	540	350	540
400	16	1	135	115	1 1/2	20	190	160	255	20	1 3/8	255	445	16	3 1/2	445	600	16	3 1/2	600	600	400	600
450	16	1 1/8	150	125	1 1/4	24	195	170	275	20	1 3/8	275	495	16	4	495	650	16	4	650	650	450	650
500	20	1 1/8	160	135	1 1/4	24	205	180	290	20	1 3/8	290	435	16	4 1/2	435	600	16	4 1/2	600	600	500	600
600	20	1 1/4	175	145	1 1/2	24	230	195	330	20	1 3/4	330	435	16	5 1/2	435	600	16	5 1/2	600	600	600	600
750	28	1 1/4	190	160	1 3/4	28	290	250	355	28	2	355	400	16	6 1/2	400	750	16	6 1/2	750	750	750	750
900	32	1 1/2	215	180	2	32	325	280	400	28	2 1/2	400	400	16	7 1/2	400	900	16	7 1/2	900	900	900	900

**NOTE:** Raised face height of 1.6mm for Class 150 and 300 and 6.4mm for Class 600, 900, 1500 and 2500 is included in dimension L (Bolt Length).

## AMERICAN STANDARD FLANGES

### TEMPERATURE / PRESSURE RATINGS

Carbon Steel Pipe Flanges to ANSI B16.5 (BS1560)  
 Forgings to ASTM A105 - Prolonged use above 427 deg C is not recommended  
 Forgings to ASTM A350 - LF2 - Not for use above 343 deg C  
 Forgings to ASTM A181 Grade 11 for Class 150 & 300 only

TEMPERATURE °C	MAXIMUM WORKING PRESSURE IN kPa BY CLASSES (For the approximate P.S.I. divide by 7)						
	PN 20 150	PN 50 300	PN 100 600	PN 150 900	PN 250 1500	PN 420 2500	
- 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	

Flanges above 600NPS are not included in ANSI B16.5 and the

Class designations in these large diameters DO NOT IMPLY  
 specific temperature / pressure ratings.

Inch/Metric Bolting interchangeable for A.N.S.I. 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