



Number And Size Of Bolts For Flanged Joints - ASME B16.5

Primary Service Pressure Rating	Bolting	Flange Facing	NOMINAL PIPE SIZE																				
			1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6	8	10	12	14	16	18	20	24	
Class 150	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		1/2	1/2	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	5/8	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Length of Stud Bolts		2-1/4	2-1/2	2-1/2	2-3/4	3-1/4	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2
	Lth Mach Bolts		2	2	2-1/4	2-1/4	2-1/2	2-3/4	3	3	3	3	3	3-1/4	3-1/4	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2
Class 300	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		1/2	5/8	5/8	5/8	3/4	5/8	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Length of Stud Bolts		2-1/2	3	3	3-1/4	3-1/2	4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4	4-1/4
	Lth Mach Bolts		2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	3-1/2	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4
Class 400	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		1/2	5/8	5/8	5/8	3/4	5/8	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Length of Stud Bolts		2-3/4	3-1/4	3-1/4	3-1/2	4	4	4-1/2	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4
	Lth Mach Bolts		2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	3-1/2	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4
Class 600	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		1/2	5/8	5/8	5/8	3/4	5/8	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Length of Stud Bolts		2-3/4	3-1/4	3-1/4	3-1/2	4	4	4-1/2	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4	4-3/4
	Lth Mach Bolts		2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	3-1/2	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4	3-3/4
Class 900	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		3/4	3/4	7/8	7/8	1	7/8	1	7/8	1	7/8	1	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8
	Length of Stud Bolts		4-1/4	4-1/2	4-1/2	5	5-1/2	5-3/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4
	Lth Mach Bolts		4-1/4	4-1/2	4-1/2	5	5-1/2	5-3/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4
Class 1500	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		3/4	3/4	7/8	7/8	1	7/8	1	7/8	1	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8
	Length of Stud Bolts		4-1/4	4-1/2	4-1/2	5	5-1/2	5-3/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4
	Lth Mach Bolts		4-1/4	4-1/2	4-1/2	5	5-1/2	5-3/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4
Class 2500	Number		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Diameter		3/4	3/4	7/8	1	1-1/8	1	1-1/8	1	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8	1-1/8
	Length of Stud Bolts		4-1/2	4-3/4	4-3/4	5	5-1/2	5-3/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4
	Lth Mach Bolts		4-1/4	4-3/4	4-3/4	5	5-1/2	5-3/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4	6-1/4

Stud-Bolt lengths do not include the height of the points. Lengths of studs and bolts, when used with lap joints flanges, are dependent upon the thickness of the lap of the stud end.