



合金 螺 栓
STUD BOLTS



多种现货

WIDE RANGE OF STOCK

B7 / 2H B8M / 8M
 L7 / 7 (4) 660 A / B17 B
 B16 / gr.4 UNS S31803
 B8 / 8 UNS S31254

CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF VARIOUS GRADES OF PETROCHEMICAL 3/16" BOLTS TO ASTM STANDARDS WITH EQUIVALENT SPECIFICATIONS

HIGH TEMPERATURE

LOW TEMPERATURE

A 320

A 193 -		B5	B6	B7	B16	B8	B8T	B8T	L7		
CHEMICAL ANALYSIS	Carbon	> 0.10	< 0.15	0.37-0.49	0.36-0.44	< 0.05	< 0.05	< 0.05	0.38-0.45		
	Manganese	< 1.0	< 1.0	0.05-1.10	0.45-0.70	< 2.0	< 2.0	< 2.0	0.75-1.00		
	Phosphorus Max	0.04	0.04	0.04	0.04	0.045	0.045	0.045	0.04		
	Sulfur	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.04		
	Silicon	< 1.0	< 1.0	0.15-0.35	0.15-0.35	< 1.0	< 1.0	< 1.0	0.15-0.35		
	Nickel					8.0-10.5	9.0-12.0	10.0-14.0			
	Chromium	4.0-6.0	11.5-13.5	0.75-1.20	0.08-1.15	16.0-20.0	17.0-19.0	15.0-18.0	0.50-1.10		
	Molybdenum	0.40-0.65		0.15-0.25	0.60-0.85			2.0-3.0	0.15-0.25		
	Vanadium				0.25-0.35						
	Titanium Min						5 x C				
TENSILE REQUIREMENTS	Min Tensile Strength	PSI	100,000	110,000	125,000	125,000	75,000	75,000	75,000	125,000	Test Temperature Min Resilience
		kg/mm ²	70.5	77.5	88	88	53	53	53	88	
	Min Yield Strength	PSI	80,000	85,000	105,000	105,000	30,000	30,000	30,000	105,000	
		kg/mm ²	56.5	60	74	74	21	21	21	74	
	Elongation in 2-in Min Per Cent		16	15	10	16	30	30	30	16	
Reduction of area Min Per Cent		50	50	50	50	50	50	50	50		
EQUIVALENTS	AISI	501	410	4140	-	304	321	316	4140		
	AFNOR	Z 12-CD5	Z 12-CD5	42 CD 4	40CDV4-06	Z6CN 18-09	Z6CNT 18-11	Z6CND 17-11	42 CD 4		
	DIN	-	X 10-CR10	42 Cr Mo 4	-	X5CrNi18-09	X10CrNi18-09	X5CrNi18-10	42 Cr Mo 4		
	B.S.	4882-B5 1506-825	4882-B6 1506-713	4882-B7 1506-821 Gr A	4882-B16 1506-881	4882-B8 1506-801 Gr B	4882-B8T 1506-821 Gr T	4882-B8M 1506-845	4882-L7 1506-812A		

CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF VARIOUS GRADES OF PETROCHEMICAL NUTS TO ASTM STANDARDS WITH EQUIVALENT SPECIFICATIONS

CARBON AND ALLOY STEELS FOR NUTS

ASTM Designation A 194

		2H	3	4	6	7	8	8T	8M	8F
CHEMICAL ANALYSIS	Carbon	> 0.40	> 0.10	0.40-0.50	< 0.15	0.37-0.49	< 0.05	< 0.05	< 0.05	< 0.15
	Manganese		< 1.0	0.70-0.90	< 1.25	0.69-1.10	< 2.0	< 2.0	< 2.0	< 2.0
	Phosphorus Max	0.04	0.04	0.035	0.03	0.04	0.045	0.045	0.045	< 0.20
	Sulfur	< 0.05	< 0.03	< 0.04	> 0.15	< 0.04	< 0.03	< 0.03	< 0.03	0.15-0.35
	Silicon		< 1.0	0.15-0.35	< 1.0	0.15-0.35	< 1.0	< 1.0	< 1.0	< 1.0
	Nickel						8.0-10.5	9.0-12.0	10.0-14.0	5.0-10.0
	Chromium		4.0-5.0		12.0-14.0	0.75-1.20	16.0-20.0	17.0-19.0	15.0-18.0	17.0-19.0
	Molybdenum		0.40-0.65	0.20-0.30		0.15-0.25			2.0-3.0	
	Titanium Min							5 x C		
ROCKWELL HARDNESS		245-352	248-352	248-352	248-352	245-352	125-300	125-300	190-300	128-300
EQUIVALENTS	AISI	-	501	-	416	4142	304	321	316	303
	AFNOR	C 45 J	Z 12 CD 5	-	Z 12 CF 10	42 CD 4	Z6 CN 18-09	Z6 CNT 18-11	Z6 CND 17-11	Z 10 CNF 18-08
	DIN	C 45	-	-	-	42CrMo4	X5CrNi18-09	X10CrNi18-09	X5CrNi18-10	X12CrNi18-08
	B.S.	4882-2H 1506-162	4882-GR3 1506-825	4882-GR4 1506-240	4882-GR6 1506-713	4882-GR7 1506-821 Gr A	4882-GR8 1506-801 Gr B	4882-GR8T 1506-821 Gr T	4882-GR8M 1506-845	4882-GR8F 1506-801 Gr A M

KEY
 > min
 < max

DIMENSIONS OF STUD-BOLTS FOR ASA FLANGES RAISED FACE WELD NECK (R.F.W.N.)

Nominal diameter of flange	150 LBS			300 LBS			600 LBS			900 LBS			1500 LBS		
	No.	diam of Stud	Length	No.	diam of Stud	Length	No.	diam of Stud	Length	No.	diam of Stud	Length	No.	diam of Stud	Length
½"	4	½"	2½"	4	½"	2¾"	4	½"	3¼"	4	¾"	4½"	4	¾"	4½"
¾"	4	½"	2¾"	4	¾"	3¼"	4	¾"	3¼"	4	¾"	4¾"	4	¾"	4¾"
1"	4	½"	2¾"	4	¾"	3¼"	4	¾"	3¼"	4	¾"	5¼"	4	¾"	5¼"
1¼"	4	½"	3"	4	¾"	3½"	4	¾"	4"	4	¾"	5¼"	4	¾"	5¼"
1½"	4	½"	3"	4	¾"	3¾"	4	¾"	4½"	4	1"	6"	4	1"	6"
2"	4	¾"	3½"	8	¾"	3¾"	8	¾"	4½"	8	¾"	6"	8	¾"	6"
2½"	4	¾"	3¾"	8	¾"	4¼"	8	¾"	5"	8	1"	6¾"	8	1"	6¾"
3"	4	¾"	3¾"	8	¾"	4½"	8	¾"	5¼"	8	¾"	6"	8	1½"	7½"
3½"	8	¾"	3¾"	8	¾"	4½"	8	¾"	5¼"						
4"	8	¾"	3¾"	8	¾"	4¾"	8	¾"	6"	8	1½"	7¼"	8	1¼"	8¼"
5"	8	¾"	4"	8	¾"	5"	8	1"	7"	8	1¼"	8"	8	1½"	10¼"
6"	8	¾"	4¼"	12	¾"	5"	12	1"	7¼"	12	1½"	8"	12	1½"	10¾"
8"	8	¾"	4½"	12	¾"	5¾"	12	1½"	8"	12	1½"	9¼"	12	1½"	12"
10"	12	¾"	5"	16	1"	6¾"	16	1¼"	9"	16	1½"	¾"	12	1½"	14"
12"	12	¾"	5"	16	1½"	7¼"	20	1¼"	9¼"	20	1½"	10½"	16	2"	15½"
14"	12	1"	5¾"	20	1½"	7½"	20	1½"	9¾"	20	1½"	11¼"	16	2¼"	16¾"
16"	16	1"	5¾"	20	1¼"	8"	20	1½"	10½"	20	1½"	11¾"	16	2½"	18½"
18"	16	1½"	6¼"	24	1¼"	8¼"	20	1½"	11¼"	20	1½"	13½"	16	2¾"	20¼"
20"	20	1½"	6¾"	24	1¼"	8¾"	24	1½"	12"	20	2"	14½"	16	3"	22¼"
22"	20	1¼"	7¼"	24	1¼"	9½"	24	1¾"	12¾"						
24"	20	1¼"	7½"	24	1½"	9¾"	24	1¾"	13½"	20	2½"	18"	16	3½"	25¼"
26"	24	1¼"	7¾"	28	1½"	10¾"	28	1¾"	14"						
30"	28	1¼"	8"	28	1¾"	12"	28	2"	15"						
34"	32	1½"	8¾"	28	1¾"	13"	28	2¼"	16"						
36"	32	1½"	9"	32	2"	13¾"	28	2½"	16¾"						
42"	36	1½"	9½"	36	2"	14¾"	28	2¾"	18½"						

DIMENSIONS OF STUD-BOLTS FOR ASA FLANGES
RING TYPE JOINT (R.T.J.)

Nominal diameter of flange	150 LBS			300 LBS			600 LBS			900 LBS			1500 LBS		
	No.	diam of Stud	Length	No.	diam of Stud	Length	No.	diam of Stud	Length	No.	diam of Stud	Length	No.	diam of Stud	Length
½"				4	½"	3 ½"	4	½"	3 ½"	4	¾"	4 ½"	4	¾"	4 ½"
¾"				4	⅝"	3 ¾"	4	⅝"	3 ¾"	4	¾"	4 ¾"	4	¾"	4 ¾"
1"	4	½"	3 ½"	4	⅝"	4"	4	⅝"	4"	4	⅞"	5 ½"	4	⅞"	5 ½"
1 ¼"	4	½"	3 ½"	4	⅝"	4"	4	⅝"	4 ¼"	4	⅞"	5 ½"	4	⅞"	5 ½"
1 ½"	4	½"	3 ¾"	4	¾"	4 ½"	4	¾"	4 ½"	4	1"	6"	4	1"	6"
2"	4	⅝"	4"	8	⅝"	4 ½"	8	⅝"	4 ¾"	8	⅞"	6 ¼"	8	⅞"	6 ¼"
2 ½"	4	⅝"	4 ¼"	8	¾"	5"	8	¾"	5 ¼"	8	1"	7"	8	1"	7"
3"	4	⅝"	4 ½"	8	¾"	5 ¼"	8	¾"	5 ½"	8	⅞"	6 ¼"	8	1 ⅛"	7 ¾"
3 ½"	8	⅝"	4 ½"	8	¾"	5 ½"	8	⅞"	6"	8	1 ½"	7 ½"			
4"	8	⅝"	4 ½"	8	¾"	5 ½"	8	⅞"	6 ¼"	8	1 ½"	7 ½"	8	1 ¼"	8 ½"
5"	8	¾"	4 ¾"	8	¾"	5 ¾"	8	1"	7 ¼"	8	1 ¼"	8 ¼"	8	1 ½"	10 ½"
6"	8	¾"	4 ¾"	12	¾"	6"	12	1"	7 ½"	12	1 ½"	8 ¼"	12	1 ¾"	11 ¼"
8"	8	¾"	5"	12	⅞"	6 ½"	12	1 ⅛"	8 ¼"	12	1 ⅝"	9 ½"	12	1 ⅝"	12 ½"
10"	12	⅞"	5 ½"	16	1"	7 ½"	16	¼"	9 ½"	16	1 ⅝"	10"	12	1 ⅝"	14 ½"
12"	12	⅞"	5 ¾"	16	1 ⅛"	8"	20	1 ¼"	9 ½"	20	1 ⅝"	10 ¾"	16	2"	16 ¼"
14"	12	1"	6 ¼"	20	1 ⅛"	8 ¼"	20	1 ⅝"	10"	20	1 ½"	11 ¾"	16	2 ¼"	17 ¾"
16"	16	1"	6 ½"	20	1 ¼"	8 ¾"	20	1 ⅝"	10 ¾"	20	1 ⅝"	12 ¼"	16	2 ½"	19 ½"
18"	16	1 ⅛"	7"	24	1 ¼"	9"	20	1 ⅝"	11 ¼"	20	1 ⅝"	14"	16	2 ¾"	21 ¼"
20"	20	1 ⅛"	7 ¼"	24	1 ¼"	9 ½"	24	1 ⅝"	12 ¼"	20	2"	15"	16	3"	23 ½"
22"	20	1 ¼"	8"	24	1 ½"	10 ½"	24	1 ¾"	13 ½"						
24"	20	1 ¼"	8"	24	1 ½"	10 ¾"	24	1 ⅞"	14"	20	2 ½"	19"	16	3 ½"	26 ½"
26"	24	1 ¼"	8 ½"	28	1 ⅝"	11 ¾"	28	1 ⅞"	14 ¾"						
30"	28	1 ¼"	8 ¾"	28	1 ¾"	13 ¼"	28	2"	15 ½"						
34"	32	1 ½"	9 ¾"	28	1 ⅞"	14 ¼"	28	2 ¼"	16 ¾"						
36"	32	1 ½"	10"	32	2"	15"	28	2 ½"	17 ½"						
42"	36	1 ½"	10 ½"	36	2"	16"	28	2 ¾"	19 ½"						