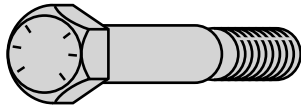


HARDWARE

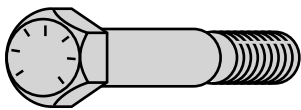
Bolts	338
Nuts	370
Washers	378
Screws	382
Studs	384
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Hex Head Bolts

- Designed with smooth rolled threads for better clamp load, shear resistance and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Inch Bolts
 - Meet or exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
 - Have 20% higher head height than SAE specifications for longer wear life, easier gripping and less slippage.
 - Marked with 6 radial dashes on the bolt head.
- Metric Bolts
 - Meet or exceed ISO Class 10.9 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
 - Marked with 10.9 on the bolt head.
- Bolt Coatings
 - Phosphate and Oil coating provides better clamp loads and torque retention.
 - Zinc Dichromate plating provides better long term corrosion resistance.



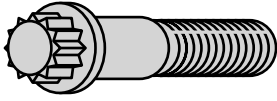
High Strength Hex Head Bolts

- Thread design and steel - similar to HEX Head Bolts.
- Inch Bolts
 - Have 20% higher head height than SAE specifications for longer wear life, easier gripping and less slippage.
 - Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 170,000 psi.
 - Marked with seven radial dashes on the bolt head.
- Metric Bolts
 - Exceed ISO 10.9 specifications for tensile strength and proof load, minimum tensile strength of 170,000 psi.
 - Marked with 11.9 on the bolt head.
- Coatings - similar to HEX Head Bolts.



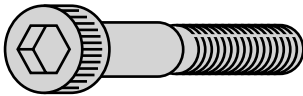
Bolts

12 Point Head Bolts



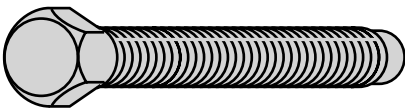
- Designed with smooth rolled threads for better clamp load, shear resistance, and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 170,000 psi.
- For use in restricted clearance applications.

Hex Socket Head Screw Bolts



- Designed with smooth rolled threads for better clamp load, shear resistance, and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 170,000 psi.
- For use in restricted clearance applications.

Hex Head Forcing Bolts

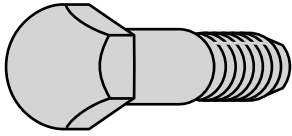


- Designed with smooth rolled threads for better clamp load, shear resistance, and strip resistance.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.



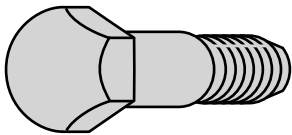
Hardware

Bolts



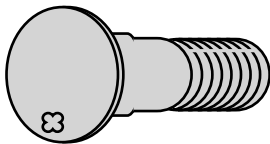
Track Bolts and Split Master Link Bolts

- High dome Hex head for longer wear life and reuseability.
- Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength 170,000 psi.
- Special induction heat treat process provides Rockwell C37-42 hardness.



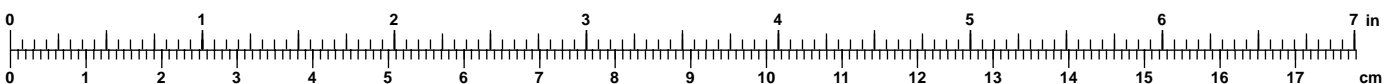
High Strength Track Bolts

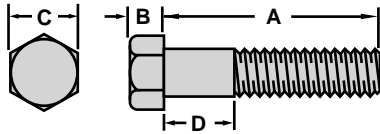
- Similar high dome Hex head as standard Track Bolts.
- Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength 180,000 psi.
- Special induction heat treat process provides Rockwell C39 - 43 hardness.



Cutting Edge Bolts

- Dome shaped head for added strength and wear resistance.
- Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
- Special induction heat treat process provides Rockwell C33 - 39 minimum.





Hex Head Bolts / Inch / Coarse Thread UNC / Phosphate & Oil Coated

THREAD SIZE (in - TPI)	A BOLT LENGTH (in)	B HEAD HEIGHT (in)	C HEAD WIDTH (in)	D GRIP LENGTH (in)	PART NUMBER
1/4-20	3/8	0.19	0.44	0.06	0S-1613
	1/2	0.19	0.44	0.06	0S-1614
	5/8	0.19	0.44	0.13	2A-0762
	3/4	0.19	0.44	0.13	0S-1615
	7/8	0.19	0.44	0.13	4F-7957
	1	0.19	0.44	0.13	0S-1616
	1 1/8	0.19	0.44	0.37	9F-6580
	1 1/4	0.19	0.44	0.13	7B-2742
	1 3/8	0.19	0.44	0.63	2A-5546
	1 1/2	0.19	0.44	0.25	9F-7022
	1 5/8	0.19	0.44	0.87	7B-8167
	1 3/4	0.19	0.44	1.00	1B-2713
	2	0.19	0.44	1.13	8B-2377
	2 1/4	0.19	0.44	1.37	1D-4533
	2 1/2	0.19	0.44	1.75	1B-2714
	2 3/4	0.19	0.44	2.00	2A-4781
	3	0.19	0.44	2.00	4B-9365
	3 1/4	0.19	0.44	2.50	8F-8178
	3 1/2	0.19	0.44	2.75	3B-8695
	3 3/4	0.19	0.44	3.00	8F-6302
4	0.19	0.44	3.25	8S-4710	
4 1/2	0.19	0.44	3.75	8S-4711	
4 3/4	0.19	0.44	4.00	4L-3776	
5	0.19	0.44	4.25	1B-2716	
5 1/2	0.19	0.44	4.50	1B-2717	
6	0.19	0.44	5.25	1B-2718	
6 1/2	0.19	0.44	5.50	4N-1761	
Nut				9S-8750	
Washer				5P-0537	
5/16-18	1/2	0.24	0.50	0.06	1C-0569
	5/8	0.24	0.50	0.13	2H-3755
	3/4	0.24	0.50	0.13	0S-1617
	7/8	0.24	0.50	0.13	2B-2695
	1	0.24	0.50	0.13	0S-1618
	1 1/8	0.24	0.50	0.25	4B-3388
	1 1/4	0.24	0.50	0.37	1B-7182
	1 3/8	0.24	0.50	0.50	1B-2790
	1 1/2	0.24	0.50	0.09	1A-9579

THREAD SIZE (in - TPI)	A BOLT LENGTH (in)	B HEAD HEIGHT (in)	C HEAD WIDTH (in)	D GRIP LENGTH (in)	PART NUMBER
5/16-18	1 5/8	0.24	0.50	0.75	1H-5514
	1 3/4	0.24	0.50	0.87	1B-9575
	2	0.24	0.50	1.13	2B-2694
	2 1/4	0.24	0.50	1.37	1D-4538
	2 1/2	0.24	0.50	1.63	1D-4539
	2 3/4	0.24	0.50	1.87	1D-4540
	3	0.24	0.50	2.13	1D-4541
	3 1/4	0.24	0.50	2.25	1F-5842
	3 1/2	0.24	0.50	2.63	1F-4111
	3 3/4	0.24	0.50	2.75	4B-0831
	4	0.24	0.50	3.00	4B-3903
	4 1/4	0.24	0.50	3.37	8H-8769
	4 1/2	0.24	0.50	3.63	3H-5932
	4 3/4	0.24	0.50	3.87	3H-3243
	5	0.24	0.50	4.13	1F-6296
	5 1/2	0.24	0.50	4.63	5L-1761
	5 3/4	0.24	0.50	4.87	8M-1865
	6	0.24	0.50	5.13	5P-0059
	6 1/2	0.24	0.50	5.37	4F-3508
	Nut				5S-0003
Washer				9M-1974	
3/8-16	1/2	0.29	0.56	0.09	4F-4879
	5/8	0.29	0.56	0.09	0T-0102
	3/4	0.29	0.56	0.13	0S-0509
	7/8	0.29	0.56	0.13	0L-1351
	1	0.29	0.56	0.13	0S-1594
	1 1/8	0.29	0.56	0.31	1A-2029
	1 1/4	0.29	0.56	0.25	0S-1588
	1 3/8	0.29	0.56	0.37	3B-1915
	1 1/2	0.29	0.56	0.37	0S-1591
	1 5/8	0.29	0.56	0.87	2A-4639
	1 3/4	0.29	0.56	0.75	0S-1571
	1 7/8	0.29	0.56	1.06	1C-2251
	2	0.29	0.56	1.00	0S-1590
	2 1/4	0.29	0.56	1.25	0L-2070
	2 1/2	0.29	0.56	1.50	0L-1143
2 3/4	0.29	0.56	1.75	0T-0573	
3	0.29	0.56	2.00	0S-1619	

* High strength bolt.

Hardware

Hex Head Bolts / Inch / Coarse Thread UNC / Phosphate & Oil Coated

THREAD SIZE (in - TPI)	A BOLT LENGTH (in)	B HEAD HEIGHT (in)	C HEAD WIDTH (in)	D GRIP LENGTH (in)	PART NUMBER
3/8-16	3 1/4	0.29	0.56	2.25	0L-1352
	3 1/2	0.29	0.56	2.50	0T-0065
	3 3/4	0.29	0.56	2.50	0S-1608
	4	0.29	0.56	3.00	8S-9191
	4 1/4	0.29	0.56	3.25	0T-0055
	4 1/2	0.29	0.56	3.25	1A-5964
	4 3/4	0.29	0.56	3.75	1A-5183
	5	0.29	0.56	4.00	5B-9603
	5 1/4	0.29	0.56	4.25	5B-2638
	5 1/2	0.29	0.56	4.50	5F-4899
	5 3/4	0.29	0.56	4.75	7F-3425
	6	0.29	0.56	4.87	1D-4706
	6 1/4	0.29	0.56	4.75	8F-8544
	6 1/2	0.29	0.56	5.25	4F-0411
	7	0.29	0.56	5.75	9F-8999
	7 1/2	0.29	0.56	6.25	6B-1557
	8	0.29	0.56	6.75	8F-6350
	8 1/2	0.29	0.56	7.25	9F-2773
	9	0.29	0.56	7.75	5F-6044
	9 1/2	0.29	0.56	8.25	4H-3283
	11	0.29	0.56	9.75	5P-1415
	12	0.29	0.56	11.00	7M-1202
	Nut				9S-8752
Washer				5M-2894	
7/16-14	3/4	0.34	0.69	0.19	5P-0060
	7/8	0.34	0.69	0.13	3L-0526
	1	0.34	0.69	0.13	0T-0318
	1 1/8	0.34	0.69	0.13	4F-8965
	1 1/4	0.34	0.69	0.13	0T-0320
	1 3/8	0.34	0.69	0.25	3H-5368
	1 1/2	0.34	0.69	0.37	0T-0772
	1 3/4	0.34	0.69	0.63	0T-0768
	2	0.34	0.69	0.87	0T-0319
	2 1/4	0.34	0.69	1.13	1D-4707
	2 1/2	0.34	0.69	1.37	1D-4703
	2 3/4	0.34	0.69	1.63	1D-4556
	3	0.34	0.69	1.87	4F-5192
	3 1/4	0.34	0.69	2.13	3B-8428
	3 1/2	0.34	0.69	2.37	7F-8698
	3 3/4	0.34	0.69	2.63	9F-2491
	4	0.34	0.69	2.87	4F-7226

THREAD SIZE (in - TPI)	A BOLT LENGTH (in)	B HEAD HEIGHT (in)	C HEAD WIDTH (in)	D GRIP LENGTH (in)	PART NUMBER	
7/16-14	4 1/4	0.34	0.69	3.13	2J-5907	
	4 1/2	0.34	0.69	3.25	4B-7220	
	4 3/4	0.34	0.69	3.63	7H-3472	
	5	0.34	0.69	3.75	5B-5059	
	5 1/2	0.34	0.69	4.37	8F-4197	
	6	0.34	0.69	4.87	8F-6419	
	6 1/2	0.34	0.69	5.13	3L-0742	
	7	0.34	0.69	5.63	7H-7209	
	7 1/2	0.34	0.69	6.13	2L-7442	
	8	0.34	0.69	6.62	4L-7925	
	9	0.34	0.69	7.63	4L-7926	
	11	0.34	0.69	9.63	3L-4317	
	Nut				3S-1546	
	Washer				5P-8244	
	1/2-13	1/2	0.39	0.75	0.06	1K-6705
		3/4	0.39	0.75	0.13	0S-1620
		7/8	0.39	0.75	0.28	2H-3855
		1	0.39	0.75	0.13	0S-1621
		1 1/8	0.39	0.75	0.13	6H-1717
1 1/4		0.39	0.75	0.31	0S-1595	
1 3/8		0.39	0.75	0.44	7B-3235	
1 1/2		0.39	0.75	0.25	0S-1585	
1 3/4		0.39	0.75	0.44	0S-1587	
2		0.39	0.75	0.75	1A-1460	
2 1/4		0.39	0.75	1.00	9X-8873	
2 1/4		0.39	0.75	1.00	2B-0947*	
2 1/2		0.39	0.75	1.25	9S-1366	
2 3/4		0.39	0.75	1.50	1A-5822	
3		0.39	0.75	1.75	9X-8874	
3		0.39	0.75	1.75	0L-1329*	
3 1/4		0.39	0.75	2.00	0V-0375	
3 1/2		0.39	0.75	2.25	9X-8875	
3 1/2		0.39	0.75	2.25	1D-4566*	
3 3/4		0.39	0.75	2.50	1B-2886	
4		0.39	0.75	2.75	0S-1573	
4 1/4	0.39	0.75	3.00	1D-4569		
4 1/2	0.39	0.75	3.25	8S-9089		
4 3/4	0.39	0.75	3.50	9X-8876		
4 3/4	0.39	0.75	3.50	2B-2006*		
5	0.39	0.75	3.75	9X-8877		
5	0.39	0.75	3.75	2H-6488*		

* High strength bolt.