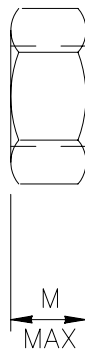


DESIGNATOR	ANSI SIZE	D	M	S
FBX16b	5/8-11 [M16x2]	5/8 [16]	39/64 [17.1]	1-1/16 [27.0]
FBX20b	3/4-10 [M20x2.5]	3/4 [20]	47/64 [20.7]	1-1/4 [34.0]
FBX22b	7/8-9 [M22x2.5]	7/8 [22]	55/64 [23.6]	1-7/16 [36.0]
FBX24b	1-8 [M24x3]	1 [24]	63/64 [24.2]	1-5/8 [41.0]
FBX27b	1-1/8-7 [M27x3]	1-1/8 [27]	1-7/64 [27.6]	1-13/16 [46.0]
FBX30b	1-1/4-7 [M30x3.5]	1-1/4 [30]	1-7/32 [30.7]	2 [50.0]
FBX36b	1-3/8-6 [M36x4]	1-3/8 [36]	1-11/32 [36.6]	2-3/16 [60.0]



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# HIGH-STRENGTH STRUCTURAL HEX BOLT & NUT

FBX16b-36b

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## SPECIFICATIONS

High-strength structural hex bolts shall conform to the requirements of AASHTO M 164 (ASTM A 325) [AASHTO M 164M (ASTM A 325M)] and shall be manufactured according to the geometric specifications included in ANSI B18.2.1 [ANSI B18.2.3.7M]. Threads shall conform to ANSI B1.1 [ANSI B1.13M] for Class 2A [6g] tolerances. Material for zinc-coated bolts shall conform to AASHTO M 164 (ASTM A 325) [AASHTO M 164M (ASTM A 325M)] for Type 1 bolts, with a tensile strength of 120 ksi [800 MPa] and yield strength of 100 ksi [660 MPa], and shall bear the head identification marking “A 325” [“8S” and “A 325M”]. Material for corrosion-resistant bolts shall conform to AASHTO M 164 (ASTM A 325) [AASHTO M 164M (ASTM A 325M)] Type 3 and shall bear the head identification mark “A 325” [“8S3” and “A 325M”].

High-strength structural nuts shall be manufactured according to AASHTO M 291 (ASTM A 563) [AASHTO M 291M (ASTM A 563M)] using the geometry of ANSI B18.2.2 [ANSI B18.2.4.6M Style 1] for heavy hex nuts. Threads shall conform to ANSI B1.1 Class 2B [ANSI B1.13M Class 6h]. Zinc-coated nuts shall conform to the requirements of AASHTO M 291 (ASTM A 563) Grade DH [AASHTO M 291M (ASTM A 563M) Class 10S] and shall bear the identification mark “DH” [“10S”]. Corrosion-resistant nuts shall conform to the requirements of AASHTO M 291 (ASTM A 563) Grade C3 [AASHTO M 291M (ASTM A 563M) Class 8S3] and shall be marked with three circumferential marks and “3” [“8S3” only for metric nuts].

Zinc-coated bolts and nuts shall be treated according to either AASHTO M 232 (ASTM A 153/A 153M) for Class C or AASHTO M 298 (ASTM B 695) for Class 50.

Designator	Stress Area of Threaded Bolt Shank (in <sup>2</sup> [mm <sup>2</sup> ])	Min. Bolt Tensile Strength (kips [kN])
FBX16b	0.226 [157.0]	27.1 [130.0]
FBX20b	0.334 [245.0]	40.1 [203.0]
FBX22b	0.462 [303.0]	55.5 [251.0]
FBX24b	0.606 [353.0]	72.7 [293.0]
FBX27b	0.763 [459.0]	80.1 [381.0]
FBX30b	0.969 [561.0]	101.7 [466.0]
FBX36b	1.155 [817.0]	121.3 [678.0]

Dimensional tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including its appearance and accepted manufacturing practices.

## INTENDED USE

These bolts and nuts are used in various barrier designs.

## HIGH-STRENGTH STRUCTURAL HEX BOLT & NUT

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