



2900 Commonwealth Ave NE
 Warren, OH 44483
 800-FX-STRUT (800-397-8788)
 Fax 330-372-3666
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12-inch FS-9319 and FS-9401 Design Loads

@ 5" Edge Distance / 3" End Distance* Using a (2) bolt connection – 3-1/2" apart			
Safety Factor	3	Safety Factor	2-1/2
Pull-out	6250#	Pull-out	7500#
Shear	6170#	Shear	7400#
Fc	4000 psi	Fc	4000 psi
Edge Distance	5"	Edge Distance	5"
@ 2-3/4" Edge Distance / 1" End Distance* Using a (2) bolt connection – 3-1/2" apart			
Safety Factor	3	Safety Factor	2-1/2
Pull-out	6000#	Pull-out	7200#
Shear	2350#	Shear	2820#
Fc	3000 psi	Fc	3000 psi
Edge Distance	2-3/4"	Edge Distance	2-3/4"
Allowable Single Bolt Loads (AAMA TIR-A9)			
Size	Grade	Tension (lb)	Shear (lb)
1/2"	5	6811	3580
5/8"	ASTM A 307	6136	3068
5/8"	5	12149	6259
Allowable Single Channel Nut / Channel Lip Loads (S.F. = 3.0)			
Size	Tension (lb)		Shear (lb)
1/2"-M	4000		3580
5/8"	4000		5225



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Allowable 2-Bolt Channel Nut / Channel Lip Loads (S.F. = 3.0) Using a (2) bolt connection – 3-1/2” apart			
Size	Tension (lb)		Shear (lb)
1/2”-M	6250		7160
5/8”	6250		7950
Allowable Single Channel Nut Slip Loads (S.F. = 3.0)			
Size	Grade	Torque (ft-lb)	Slip Load (lb)
1/2”-M	5	75	1550
5/8”	ASTM A 307	100	1600
5/8”	5	150	1800
Allowable 2-Bolt Channel Nut Slip Loads (S.F. = 3.0) Using a (2) bolt connection – 3-1/2” apart			
Size	Grade	Torque (ft-lb)	Slip Load (lb)
1/2”-M	5	75	2640
5/8”	ASTM A 307	100	2820
5/8”	5	150	3000

* End distance is the required distance from the end of the insert channel to the corner of the slab.