

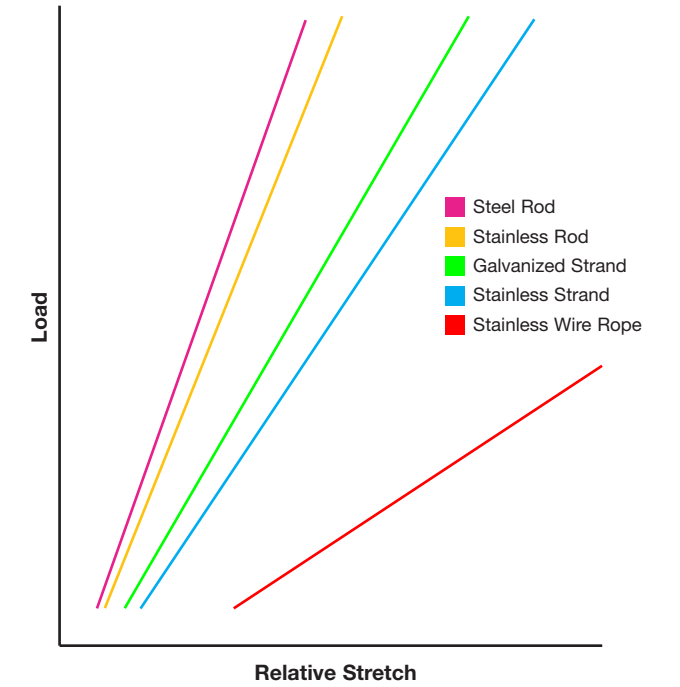
TriPyramid LCW Stainless Steel				TriPyramid Medium Strength Stainless				TriPyramid High Strength Stainless				TriPyramid Steel Tie Rods			
Diameter inch mm	Product Number	Breaking Strength kips kN	Yield Strength kips kN	Product Number	Breaking Strength kips kN	Yield Strength kips kN	Product Number	Breaking Strength kips kN	Yield Strength kips kN	Product Number	Breaking Strength kips kN	Yield Strength kips kN	Diameter inch mm		
0.172 4.4				A22-0188	3.8 16.9	3.0 13.3	A03-0172	4.7 20.9	3.7 16.5				0.172 4.4		
0.188 4.8							A03-0198	6.3 28.0	5.0 22.4				0.188 4.8		
0.198 5.0				A22-0225	5.5 24.5	4.4 19.6	A03-0225	8.2 36.5	6.5 29.1				0.198 5.0		
0.225 5.7	A35-0250	3.1 13.8	1.8 8.0	A22-0250	6.8 30.2	5.4 24.0	A03-0250	10.3 45.8	8.2 36.7				0.225 5.7		
0.250 6.4							A03-0281	12.5 55.6	10.0 44.5				0.250 6.4		
0.281 7.1				A22-0330	11.9 52.9	9.4 41.8	A03-0330	17.5 77.8	14.0 62.3				0.281 7.1		
0.330 8.4	A35-0375	7.5 33.4	4.4 19.6	A22-0375	15.4 68.5	12.1 53.8	A03-0375	22.5 100.1	18.0 80.1				0.330 8.4		
0.375 9.5				A22-0437	20.0 89.0	16.5 73.4	A03-0437	30.0 133.4	24.0 106.8				0.375 9.5		
0.437 11.1										A70-012	11.4 50.8	8.6 38.3	0.437 11.1		
0.472 12.0													0.472 12.0		
0.500 12.7	A35-0500	13.6 60.5	8.0 35.6	A22-0500	27.5 122.3	21.6 96.1	A03-0500	36.0 160.1	28.8 128.1				0.500 12.7		
0.562 14.3							A03-0562	46.0 204.6	36.8 163.7				0.562 14.3		
0.625 15.9	A35-0625	21.8 97	12.8 56.9	A22-0625	42.0 186.8	33.0 146.8				A70-016	21.3 94.6	16.0 71.3	0.625 15.9		
0.660 16.8							A03-0660	59.0 262.4	47.2 210.0				0.660 16.8		
0.705 17.9							A03-0705	76.0 338.1	60.8 270.5				0.705 17.9		
0.750 19.1	A35-0750	31.7 141.0	18.6 82.7	A25-0750	50.0 222.4	39.0 173.5							0.750 19.1		
0.768 19.5							A03-0768	90.0 400.3	72.0 320.3				0.768 19.5		
0.787 20.0										A70-020	33.2 147.8	25.1 111.5	0.787 20.0		
0.875 22.2				A25-0875	68.5 304.7	53.5 238.0	A03-0875	117.0 520.4	93.6 416.4				0.875 22.2		
0.945 24.0										A70-024	47.8 212.8	36.1 160.5	0.945 24.0		
1.000 25.4	A35-1000	53.0 235.8	26.5 117.9	A25-1000	81.8 363.9	63.6 282.9	A03-1000	150.0 667.2	120.0 533.8				1.000 25.4		
1.066 27.1							A03-1066	170.0 756.2	136.0 605.0				1.066 27.1		
1.125 28.6				A25-1125	103.0 458.2	80.0 355.9	A03-1125	190.0 845.2	152.0 676.1				1.125 28.6		
1.181 30.0							A03-1191	217.0 965.3	173.6 772.2				1.181 30.0		
1.250 31.8	A35-1250	80.0 355.9	40.0 177.9	A25-1250	130.8 581.8	101.7 452.4				A70-030	76.2 338.7	57.4 255.4	1.250 31.8		
1.313 33.4							A03-1313	260.0 1,157	208.0 925.2				1.313 33.4		
1.375 34.9				A25-1375	166.5 740.6	129.5 576.0							1.375 34.9		
1.417 36.0										A70-036	111.0 493.7	83.7 372.3	1.417 36.0		
1.500 38.1	A35-1500	111.9 497.8	44.8 199.1	A25-1500	201.0 894.1	156.5 696.1	A03-1500	320.0 1,423	256.0 1,139				1.500 38.1		
1.654 42.0										A70-042	152.4 677.9	114.9 511.2	1.654 42.0		
1.750 44.5				A25-1750	281.0 1,250	218.5 971.9							1.750 44.5		
1.890 48.0										A70-048	200.3 891.1	151.1 672.0	1.890 48.0		
2.000 50.8				A25-2000	374.0 1,664	290.9 1,294							2.000 50.8		
2.047 52.0										A70-052	239.2 1,064	180.4 782.4	2.047 52.0		
2.250 57.2				A25-2250	480.2 2,136	373.5 1,661				A70-056	276.2 1,229	208.3 926.5	2.250 57.2		
2.362 60.0										A70-060	321.6 1,430	242.5 1,079	2.362 60.0		
2.500 63.5				A25-2500	599.6 2,667	466.4 2,075				A70-064	364.2 1,620	274.7 1,222	2.500 63.5		
2.750 69.9				A25-2750	732.0 3,256	569.6 2,534				A70-070	443.3 1,972	334.3 1,487	2.750 69.9		
3.000 76.2				A25-3000	878.0 3,906	683.1 3,039							3.000 76.2		
3.150 80.0										A70-080	592.3 2,634	446.6 1,987	3.150 80.0		
3.500 88.9				A25-3500	1,210 5,382	941.1 4,186							3.500 88.9		
3.543 90.0										A70-090	762.8 3,393	575.2 2,559	3.543 90.0		
4.000 101.6				A25-4000	1,594 7,090	1,240 5,517				A70-100	954.8 4,247	720.0 3,203	4.000 101.6		

Rod and Cable Mechanical Properties

Different rod and cable materials and different cable constructions offer widely differing mechanical properties, visual effects, and inherent costs. The tables and graph on these pages give strength and stiffness information on the variety of rod and cable choices that TriPyramid offers.

See the fitting tables for assemblies which correspond to the various rod and cable sizes and materials. Order by full assembly, that is, rod or cable, plus the fittings for both ends.

Rod and Cable Stretch Characteristics

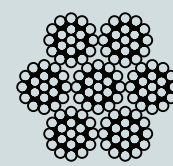


Typical Mechanical Properties		Elastic Modulus (E)		Ultimate Strength	
		ksi (x10 ³)	GPa	ksi	MPa
Solid Rods	Steel Rod, Grade 460	30	207	90	621
	High Strength Stainless Rod	26	179	200	1379
	Medium Strength Stainless Rod	26	179	140	965
	LCW Stainless Rod	26	179	100	690
Cables	Galvanized Strand	18	124	153	1055
	Full Locked Galvanized	19.5	134	176	1214
	Stainless Steel Strand	15	103	132	910
	Galvanized Wire Rope	12	83	117	807
	Stainless Wire Rope	7	48	117	807

Note: Based on actual rod diameter and nominal cable diameter

Wire Rope

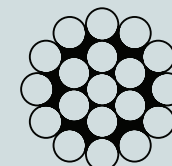
Flexible cable is commonly known as wire rope, or, in some cases, aircraft cable. Common varieties are also called 7x19 or 6x19 IWRC. It is not typically used for static, tension load-carrying structural members because, for a given strength, it is larger in diameter and lower in stiffness than structural strand or solid rods. However, in cases where relatively high stretch is desired, giving a springy effect to the member, wire rope may be the appropriate choice. Stainless steel wire ropes are also used for decorative applications where the finer stainless wires that make up the cable may give a more pleasing appearance.



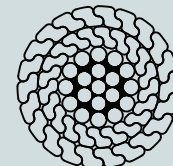
Wire Rope

Structural Strand

Structural strand is the cable construction most commonly used in structural applications. It offers the best combination of strength and stiffness for static structures. As cables get larger in diameter, the number of strands increases. Typically cables up to 3/4" (19 mm) diameter have 19 strands (called 1x19), while cables 2" (50 mm) might have 91 strands (called 1x91). A variation for larger galvanized cables is "full locked cable". These cables have their outer strands drawn in a "Z" shape so that they interlock and form a smoother outside layer of strands. The interlocking strands also yield a denser cross section and therefore a higher effective elastic modulus.



1 x 19



Full Locked

Diameter inch mm	Stainless Steel Structural Cables				Stainless Steel Wire Rope		Galvanized Structural Cables				Galvanized Wire Rope			
	Standard Type 316		High Strength 316		Type 316		Standard Strand (ASTM A586)		Full Locked		ASTM A603		ASTM A603	
	Product Number	Breaking Strength kips kN	Product Number	Breaking Strength kips kN	Product Number	Breaking Strength kips kN	Product Number	Breaking Strength kips kN	Product Number	Breaking Strength kips kN	Product Number	Breaking Strength kips kN	Product Number	Breaking Strength kips kN
0.250 6.4	AS10-0250	7 31			AS15-0250	6 27							AS25-0375	13 58
0.375 9.5	AS10-0375	15 67			AS15-0375	12 53				AS20-0500	30 133		AS25-0500	23 102
0.500 12.7	AS10-0500	26 116			AS15-0500	23 102		AS20-0625	48 214				AS25-0625	36 160
0.625 15.9	AS10-0625	41 182			AS15-0625	35 156		AS20-0750	68 302				AS25-0750	52 231
0.750 19.1	AS10-0750	48 214			AS15-0750	50 222								
0.787 20.0			AS11-0787	67 298						AS22-0787	83 368			0.787 20.0
0.875 22.2	AS10-0875	64 235	AS11-0875	80 356	AS15-0875	67 298	AS20-0875	92 409	AS22-0875	100 445	AS25-0875	70 311	0.875 22.2	
1.000 25.4	AS10-1000	89 396			AS15-1000	85 375	AS20-1000	122 543			AS25-1000	91 405	1.000 25.4	
1.024 26.0			AS11-1024	112 498						AS22-1024	140 621			1.024 26.0
1.125 28.6	AS10-1125	116 516	AS11-1125	129 574	AS15-1125	106 472	AS20-1125	156 694	AS22-1125	174 773	AS25-1125	116 516	1.125 28.6	
1.181 30.0			AS11-1181	149 663					AS22-1181	193 858			1.181 30.0	
1.250 31.8	AS10-1250	139 618	AS11-1250	169 752	AS15-1250	129 574	AS20-1250	192 854	AS22-1250	219 976	AS25-1250	144 641	1.250 31.8	
1.375 34.9							AS20-1375	232 1,032			AS25-1375	176 783	1.375 34.9	
1.417 36.0			AS11-1417	214 952					AS22-1417	277 1,230			1.417 36.0	
1.500 38.1							AS20-1500	276 1,228	AS22-1500	310 1,380	AS25-1500	208 925	1.500 38.1	
1.575 40.0									AS22-1575	342 1,520			1.575 40.0	
1.625 41.3							AS20-1625	324 1,441			AS25-1625	246 1,094	1.625 41.3	
1.750 44.5							AS20-1750	376 1,673	AS22-1750	450 2,000	AS25-1750	286 1,272	1.750 44.5	
1.875 47.6							AS20-1875	432 1,922	AS22-1875	510 2,270	AS25-1875	328 1,459	1.875 47.6	
2.000 50.8							AS20-2000	490 2,180	AS22-2000	585 2,600	AS25-2000	372 1,655	2.000 50.8	
2.250 57.2							AS20-2250	620 2,758	AS22-2250	728 3,240	AS25-2250	470 2,091	2.250 57.2	
2.500 63.5							AS20-2500	752 3,345	AS22-2500	919 4,090	AS25-2500	576 2,562	2.500 63.5	
2.750 69.9							AS20-2750	904 4,021	AS22-2750	1,099 4,890	AS25-2750	694 3,087	2.750 69.9	
3.000 76.2							AS20-3000	1,076 4,786	AS22-3000	1,297 5,770	AS25-3000	824 3,665	3.000 76.2	
3.150 80.0									AS22-3150	1,437 6,390			3.150 80.0	
3.500 88.9							AS20-3500	1,448 6,441	AS22-3500	1,778 7,910	AS25-3500	1,110 4,938	3.500 88.9	
3.740 95.0									AS22-3740	2,048 9,110			3.740 95.0	
4.000 101.6							AS20-4000	1,850 8,229	AS22-4000	2,271 10,100	AS25-4000	1,460 6,494	4.000 101.6	