

CHOOSING THE RIGHT CABLE

Cable Construction

The Cable Connection offers cable in five different diameters for Ultra-tec® Cable Railing System:

1/8", 3/16", 1/4", 5/16", and 3/8".

For cable railings, you want to use a cable that is as rigid as possible and does not stretch. For most applications, we recommend 1x19 construction, type 316 stainless steel strand (cable). Other constructions can be used, such as 7x7 or 7x19, but they are rarely recommended because they are less rigid than 1x19, and have elevated levels of stretch. The breaking strengths for 1x19 construction are also higher than 7x7 and 7x19 (see *Cable Minimum Breaking Strengths* below).

Cable Applications

Cable Dia.	Typical Applications
1/8"	*See note below. Can be used on horizontal railings where there is little or no pedestrian traffic or where railing does not need to meet code requirements (such as where there is little or no drop off). Can be used on vertical railings, which are not as susceptible to heavy shock loads as horizontal railings.
3/16"	Most commonly used diameter for pedestrian railings.
1/4"	Diameters larger than 3/16" can be used where a larger diameter is desirable from a visual/aesthetics standpoint.
5/16"	
3/8"	

**1/8" diameter cable can be vulnerable to failure under shock loads caused by abuse, such as a heavy person applying an out of plane load on a properly tensioned cable. 3/16" and larger cable diameters have significantly higher load ratings than 1/8" and are, therefore, not as susceptible to failure as 1/8".*

Cable Minimum Breaking Strengths

Cable Dia.	Minimum Breaking Strength (Lbs.) For Following Cable Constructions in Type 316 Stainless Steel		
	1x19	7x7	7x19
1/8"	1,780	1,360	1,300
3/16"	4,000	3,300	2,900
1/4"	6,900	5,500	4,900
5/16"	10,600	7,600	7,600
3/8"	14,800	11,700	11,000

NOTE: Ultra-tec® hardware is designed for use in pedestrian guardrailings. For other applications, consult the factory for suitability.

Coated Cable

Any of our standard sizes of cable can be special-ordered with a PVC coating to any standard color. Using coated cable may require special hardware and hole specifications for frame components that differ from those shown in our design guides, boring diagrams, and other publications. PVC coatings have UV inhibitors, but they will deteriorate over time if exposed to sunlight. They also have a tendency to attract dust and dirt which may present a cleaning problem.

The 1x19 construction stainless steel strand (cable) is smooth to the touch and does not fray as easily as some other constructions, so there is no need to coat it for the purpose of creating a smooth, protective surface on the cable.