How to choose the right wire rope?

First Step: Breaking Load

The first thing to consider is the load that the wire rope will be subjected to. This is typically the weight of the item.

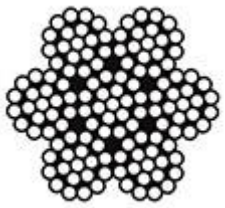
Once this is determined we then have to apply a factor of safety. Usually we work to a factor of safety of 6:1 of the minimum breaking load (MBL) of the wire rope itself.

Second Step: Type of Construction

This very much depends on your application.

Here are the 3 most common options:

7x19 wire rope



If you are using a wire rope in a pulley installation such as a lifting rig then you will want a mixture of strength and high flexibilty.

Typically a 7x19 construction wire rope is recommended due to it's flexibility.

7x7 wire rope

For many applications 7x7 construction wire rope is a popular choice as it has a medium strength and medium flexibilty.

It's a great choice for wire balustrades, wire trellis systems, suspension, canopy supports, catenary wires, security cables and more.

1x19 wire rope

1x19 wire rope is very stiff so can't cope with kinks or bends. Although it has less stretch than other constructions.

This type of wire rope is used in yacht and sail boat rigging, architectural structural projects and in commercial balustrades such as footbridges.

Third Step: Choice of Material

The choice of the material composition of the wire rope depends on the service life, the environment it will be placed and also cost