



General Information

SLINGS - WHICH TYPE SHOULD BE USED?

From the information in this section users can see the wide variety of possibilities available for sling applications.

The following factors should be considered in making a selection.

1. Load - Mass.
2. Headroom.
3. Frequency of use - life of sling.
4. Type of load - steel, machinery, timber, shipping containers, crates, steel fabricated sections, fragile or items subjected to marring.
5. Cost versus efficiency.
6. Length of sling.
7. Method of slinging.
8. Environment - corrosion, heat etc.
9. Available storage for slings.

Some general observations on the above include:

1. Load - Mass

This is the most obvious consideration when choosing a sling to lift a given load. The user must ensure a sling is chosen that has the appropriate WLL (Working Load Limit) in the intended configuration to lift the load. Refer to the appropriate sling WLL charts in this brochure or in the relevant Australian Standard.

2. Headroom

Where minimum headroom is available, a user should consider:

- Using shorter slings.
- If wire rope slings are used, there is a minimum length allowance in AS 1666 for slings using mechanically swaged eyes.
- Double part grommets may be used.
- Chain slings can be kept to very short lengths.
- Using a lifting beam.
- Increasing the included angle of multiple slings.

3. Frequency of Use - Life of Sling

- This will depend on the number of times a sling is used and the manner in which the sling is used.
- Chain slings provide longer life.
- Nobleflex cable laid or Superflex plaited slings reduce kinking in comparison with conventional wire rope slings.
- Synthetic slings have special value in some chemically hazardous applications and for protection of the load to be lifted.

4. Type of Load

- Chain and conventional wire rope slings are the most appropriate for abrasive surfaces.
- Where a positive choking grip is required Superflex plaited slings, Round slings or Webbing slings are the best choice.
- Where marring of items is a problem, Webbing slings, Round slings or covered Flat Woven Wire slings are most satisfactory.

5. Cost Versus Efficiency

- A wire rope sling is an economical sling per tonne of WLL but after several uses in a choking application wire rope slings develop kinks, which make them more difficult to handle.
- For quick, easy and safe handling, Nobleflex or Superflex slings, Grade T chain slings, Round slings and Webbing slings can save many dollars in time and reduce injury.

6. Length of Sling

- Cost per metre is very relevant in long slings and wire rope is generally the most economical option in these circumstances.

7. Method of Slinging

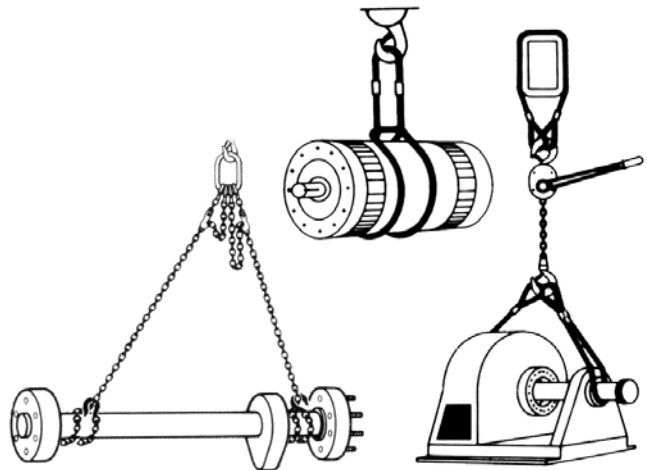
- Where slings are shackled to lifting points in a multi leg application, wire rope and chain slings are the most suitable. Where choking of the load is required Nobleflex or Superflex wire rope slings or synthetic Round and Webbing slings are generally the most efficient, though in special applications where abrasive surfaces are prevalent or in hauling logs Grade T chain slings are much more suitable.
- If shortening of sling legs is required in multi leg applications, Grade T chain slings with grab or shortening hooks are the best option.

8. Environment

- In a corrosive situation ferrule secured flemish eyes should be considered for wire rope slings.
- Aluminium ferrules are not appropriate in some mining areas or alumina refineries.
- Where acids and alkalis are prevalent webbing slings are beneficial. Grade T chain slings will be affected by temperatures above 200° C. Wire rope slings used near heat should have a steel core in the wire rope.

9. Available Storage for Slings

- All slings are best stored vertically so their length and condition can be readily inspected. There is also less chance of water or corrosion damage and mechanical damage. The WLL of each sling can also be readily ascertained.



WARNING

- Slings should always be used in line with good rigging practice and as per the manufacturers recommendations.
- Incorrect sling use could result in a dangerous situation that could cause property damage, serious injury or death.
- Increasing the included angle of multiple leg sling assemblies derates the sling. Therefore higher capacity slings will be required.
- Never use a sling with an included angle in excess of 120 degrees.