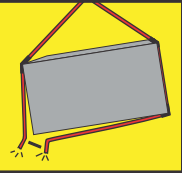


WARNING!

Damaged or misused sling protection can result in damage or sling failure. Inspect before each use. Inspect for cuts, tears or damage that may prevent protection of the sling. Ensure protection is the correct size and type to protect the sling. Protect sleeve and sling from slipping or sliding across load edge. **Death or Injury can occur from improper use, maintenance and/or inspection. Wear pads may not prevent cutting or other sling damage. To avoid severe personal injury or death, keep all personnel clear of loads about to be lifted and suspended loads.**



Slings
Web Slings
Round Slings
Synthetic Chain Slings
Wire Rope Slings
Chain Slings
Shackles & Turnbuckles
Hooks & Links
Lifting Points
Hoists & Blocks
Lifting Devices
Pipe & Hose Restraints
Tie Down Assemblies
Tie Down Accessories
Towing & Recovery
Rope & Cordage

The Importance of Sling Protection

Sling protection products are designed to aid in the protection of lifting slings during a lifting application. One of the most common cause of failure of slings, both during use and during inspection is cutting and damage from abrasive or jagged surfaces. Sling protection can help reduce this problem by acting as a buffer between the sling and the load. When used with steel slings, they can help protect both the sling and the load from damage. There are two main applications with regards to sling protection, abrasion protection and cut protection. Wear pads such as Cordura or ballistic nylon are often used in the eye of the sling or any part of the sling that may come in contact with the load. Cut protection and corner protection such the as the LiftGuard sling protectors and Spanset Secutex sleeves should be used whenever the sling is going around a narrow radius or "sharp" edges or corners.

Definition: "Sharp" Edge

In addition to external factors, such as temperature or mechanical stress, "sharp edges" still represent one of the main causes of damage to the lifting gear itself and are therefore a frequent cause of accidents. The most damages on sharp or rough edges occur by moving the load transversely to the lifting gear. If the edge is "sharp", it can, in the worst case, cut through the lifting gear. If the load moves to the side, a cutting motion occurs at the edge. Being comparable with the blade of a knife, the edge can cut through unprotected lifting gear.



A sharp edge already exists if the edge radius "r" is smaller than the thickness of the material "d" of the lifting gear. If the edge radius is under 2 mm, experts already consider this a "razor-sharp edge". The definition of "sharp edges" was originally devised for wire rope attachments, but was not adapted to the development of round slings. This problem was examined by **SpanSet®** in cooperation with the trade association and DEKRA in an extensive series of tests.

THE DIFFERENT VERSIONS OF A SHARP EDGE:

Sharp edge: Edge radius

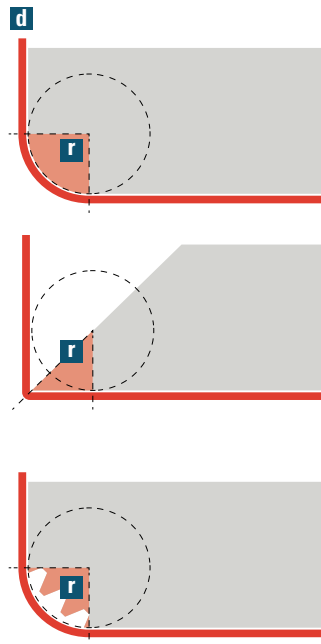
If the edge radius "r" is smaller than the thickness of the flat sling/round sling "d", the edge is considered "sharp". Lateral movements or surface pressure can already be enough to sever the lifting gear

Sharp edge: Edge Angle

In addition to loads with rectangular edges, there are goods with deviating shapes. These include loads with protruding edges and with sharp or jagged outer contours, such as cogwheels, turbine blades etc. These edges cannot be determined by the general rule.

Sharp edge: Edge shape

The shape and surface finish of the edges have a significant impact on the durability of the lifting gear. Very rough surfaces, such as those of a prefabricated concrete component, can very quickly damage textile lifting gear or a wire rope.



Tools for measuring radii

In order to assess the sharp edge, "tools" are required. The following tools can be used to determine radii: radius gauge **1**, vernier caliper **2**, folding ruler.

