



Working Load & Safety Factors

The cable stockings and hose restraints on this website display an approximate breaking strength. The approximate breaking strength of a Wire Aid product is based on an average calculation of actual data from laboratory destruction tests carried out by an independent NATA accredited assessor on a calibrated test bed. The actual testing is performed with new restraints or cable stockings that are subjected to a straight longitudinal tensile load (a straight-line pull) applied at a uniform rate. This breaking strength test is commonly referred to as the Ultimate Tensile Test (UTS). Normal manufacturing and test factors can produce a variation + or – 20% in the approximate breaking strength values listed.

Because Wire Aid hose restraints and cable stockings have a broad application adequate safety factors must be used to establish a safe working load. The ratio of the listed approximate breaking strength to the normal working load is the safety factor. As an example, a safety factor of five (5) would then mean the working load is established by dividing the listed approximate breaking strength by five (5), or it can be stated that the working load is 1/5th of the listed approximate breaking strength.

It is impossible to set a safety factor suitable for all cases as operating conditions are never the same. The load, the speed, the acceleration, the diameter, number of objects gripped, surface of object being gripped, and the attachments used – all of these should be considered, together with the effects of abrasion, corrosion, prior use, or abuse, etc. The user/engineer must consider all the variables of the specific application, as well as possible accident consequences, before selecting the safety factor to be applied. Where the conditions of the application are not well defined or where risk of personnel or property damage is high, a greater safety factor should be utilised.