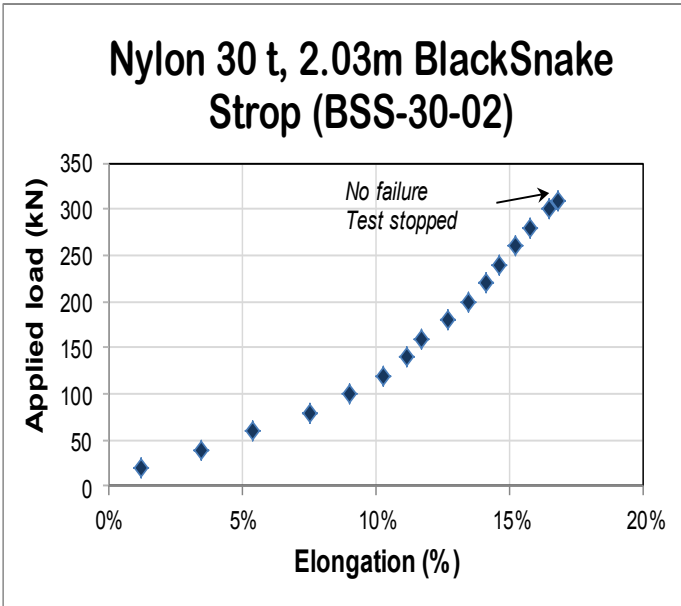


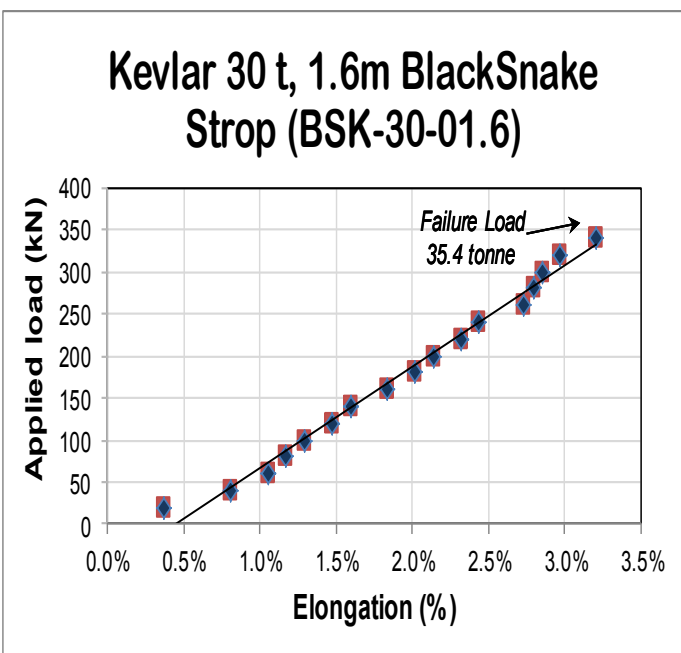


## Nylon Recovery Strop Applied load vs Elongation (%)



- ◆ This graph shows actual results for a 30tonne Black Snake Nylon Recovery Strop. A pre-load of 5kN was applied
- ◆ Smooth stretch up to 20% typical elongation is achieved by the Nylon 6.6 fibres and rubber casing combination
- ◆ It is typical for the Nylon recovery strop to stretch more at low applied loads before assuming a linear gradient as displayed on the graph
- ◆ Nylon 6.6 load bearing fibres are arranged as an endless parallel lay configuration around steel eyes/thimbles and wrapped in a protective rubber outer casing
- ◆ Nylon Black Snake recovery strops reduce shock loading when towing
- ◆ Vehicle recovery can be assisted using a 'snatch' or 'potential energy→kinetic energy' type of recovery
- ◆ Failure of the Nylon Recovery Strop from overloading can result in considerable re-coil. Nylon fibres separate at one eye and bury deep into the rubber casing which acts as a dampening mass (dead-weight)

## Kevlar® Recovery Strop Applied load vs Elongation (%)



- ◆ This graph shows actual test results for a 30t Black Snake Kevlar Recovery Strop. A pre-load of 5kN was applied
- ◆ Very low stretch up to 4% typical elongation is achieved by the Kevlar® fibres and rubber casing combination
- ◆ The linear gradient on the graph is typical for Kevlar® recovery strops longer than 0.5metres
- ◆ Kevlar® Type29 load bearing fibres are arranged in an endless parallel lay configuration around steel eyes/thimbles which are wrapped in a protective rubber outer casing
- ◆ Shock loading of a Kevlar Black Snake recovery strop and associated couplings/attachments can occur due to the low elongation of the Kevlar fibres and should be avoided where possible
- ◆ No 'snatch' type of recovery should be attempted when using a Kevlar Recovery Strop
- ◆ Failure of the Recovery Strop from overloading result in minimal re-coil. The Kevlar fibres break at one eye and bury deep into the rubber casing which acts as a dampening mass (dead-weight)

Break strength is the applied load at which the recovery strop fails

Applied load vs Elongation (%) curves vary for different sized recovery strops and for different eye combinations

Note: Applied Load of 294kN is roughly 30,000kgf. We describe a 30t Break strength Recovery strop as failing above this applied load.

The protective outer casing is an industrial NR/BR abrasion resistant rubber vulcanized around the eyes and load bearing fibres.