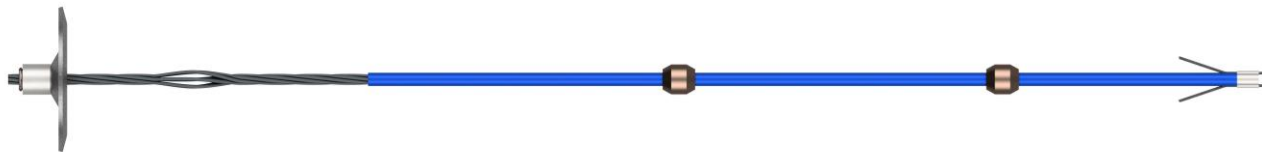


## Dynamic Yielding Cable Bolts



### DESCRIPTION

Normet Dynamic Yielding Cable anchors are engineered 15.2 mm plain strand cable anchors featuring mechanically yielding ferrules that anchor into the encapsulating resin or grout and allow precision-controlled yield to occur at the selected yield load. The yielding mechanism allows the anchor to tolerate significant deformation without loss of confinement as well as the dissipation of dynamic energy during seismic events. The system is ideal for long-anchor application in openings and large rock masses with high stresses prone to seismicity and squeezing conditions.

### CONFIGURATION AND FUNCTIONALITY

Normet Dynamic Yielding Cables are divided into three major sections:

- › Distal (Yielding) End
- › Debonded Section
- › Proximal (Anchor) End

#### YIELDING END

- › Multiple yielding ferrules are swaged onto the distal end of the cable. These acts as anchor points - remaining stationary within the resin or grout column.
- › The mechanism of yield is the extrusion of the cable through the yielding ferrule.
- › The displacement capacity is determined by the length of the cable extruding past the distal end of the yielding ferrule.
- › Yield load is customisable and is controlled by varying the swage pressure of the yielding ferrule during fabrication.
- › The yielding mechanism allows the cable to tolerate large deformations in the rock mass without the cable snapping or exhibiting tensile confinement.

#### DEBONDED SECTION

- › The debonded section is the area between the yielding and anchor ends, consisting of the cable bolt coated with a sleeve.
- › The grout or resin bonds with the sleeve, keeping the cable free to slide within the sleeve.

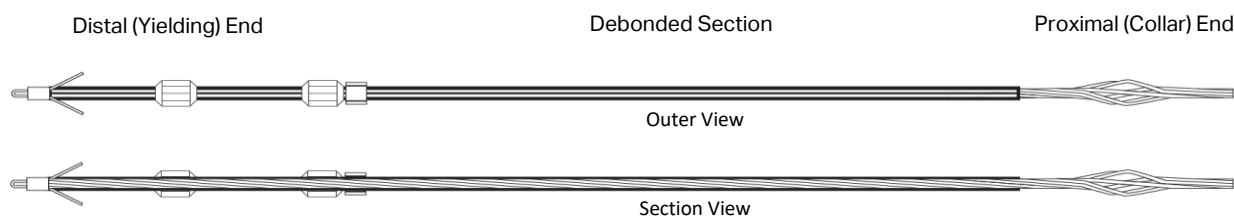
#### COLLAR END

- › The collar end is composed of an un-sleeved length of cable with a bulbed anchor placed 1.0 m from the end of the cable bolt.
- › The bulbed anchor reduces the load transfer to the faceplate and prevents premature rupture of the barrel/wedge and faceplate interface by anchoring to the grout.
- › The bulbed anchor also acts as an arrestor, preventing the ejection of cable bolt into the excavation should the yielding ferrules ever exceed their maximum deformation capacity.
- › The un-sleeved section of the cable at the anchor end allows re-enforcement of the skin of the excavation and load transfer into the rock mass.

Yield limits can be engineered or customised per order to suit specific ground conditions.

#### YIELDING PROCESS

- › Cable undergoes elastic behaviour until a pre-set, engineered yield load is reached.
- › Upon reaching the pre-determined yield load, the cable starts extruding through the yielding ferrules.
- › The cable displaces at a near-constant yield load until the engineered maximum displacement stroke is reached.



# Normet Dynamic Yielding Cables

**normet**

ROCK REINFORCEMENT

TECHNICAL DATA SHEET

Dynamic Yielding Cable Bolts

## TECHNICAL SPECIFICATIONS

Parameter	15.2 mm Yielding Cables
Engineered Yield Force Capacity	*150 - 220 kN
Ultimate Displacement Capacity	**300 - 400 mm
Typical Energy Absorption Capacity	***24.6 kJ at 275 mm displacement

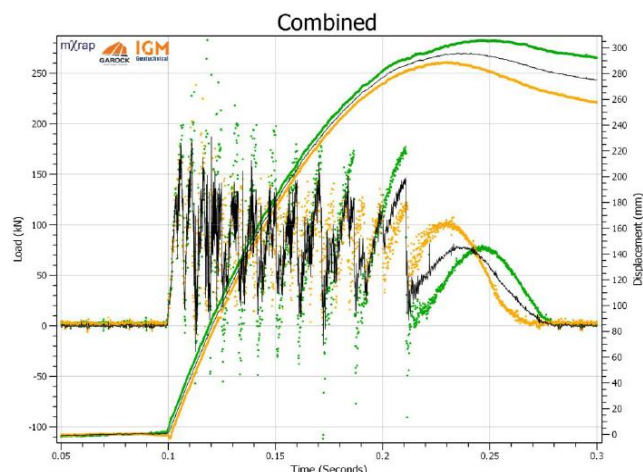
\* Yielding force is factory set and adjustable within the specified range

\*\* Displacement capacity is factory set and adjustable within the specified range

\*\*\*Based on test results from the Normet Dynamic Impact Tester

## DYNAMIC IMPACT TEST RESULT

Normet Dynamic Impact Test Rig @ Wangara, Perth. WA  
(Max drop mass: 1956 kg, Max drop height: 2.2 m, Max. impact Energy: 50 kJ)



Test Results for 4 Samples:

(1956 kg weight with a drop height of 1.07 m, calculated impact velocity of 4.58 m/s and Estimated input energy of ~26 kJ)

- › Average Yield Load: 180 kN
- › Average Deformation: 275 mm
- › Average Absorbed Energy: 24.6 kJ
- › Other packaging quantities are available on request

## KEY BENEFITS

- › This system is ideal for cable bolt applications where seismicity or large rock mass deformation is a concern.
- › The yield load is configurable to suit specific ground conditions.
- › Ultimate displacement typically range from 300-400 mm. Larger capacities may be specified.
- › The collar set-up may include a barrel and wedge, domed or flat faceplate.
- › Can be customized to suit customer requirements.
- › Can be installed and tensioned with standard cable bolt equipment.

## PACKAGING

- › Individual pre-cut cables are supplied in bundles of 50
- › Pre-cut lengths up to 8.2 m, longer or custom lengths available on request.
- › Supplied coiled, strapped and wrapped on pallets
- › Other packaging quantities are available on request

Whilst any information and/or specification contained herein is to the best of our knowledge, true and accurate, we always recommend that a trial be carried out to confirm suitability of the product. Please note regional climatic conditions may cause a variation in the performance of the product. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives, agents or distributors. The information in this data sheet is effective from the date shown and supersedes all previous data. Please check with your local Normet office to confirm that this is current issue.

Normet Dynamic Yielding Cables V3WW – 2025.08.08

[www.normet.com](http://www.normet.com)