

2024 PRODUCT CATALOGUE

New Zealand



vaico

SEISMIC AND
SUSPENSION

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About the Company

Vaico (the parent company of V.LOCK Global) was founded in 2006 as a family business. We educated and changed the New Zealand industry after the 2010–2011 Christchurch earthquakes, providing seismic engineering design and code compliance for non-structural building services in over 2500 projects. Around the time of the Covid 19 pandemic, we received an overwhelming response from the market, demanding a more cost-effective solution for seismic bracing and suspension of building services. V.LOCK has put the power back into the contractors hands, allowing them to use engineers of their choice to bring them the best market rate and fastest turnaround for design and sign off.

About the V.LOCK product

The V.LOCK product was born out of adversity, and developed and refined with basic first principles at the forefront of development. V.LOCK was developed by one of our staff members with basic tools and patience, bringing about a product that is user friendly and cost effective.

Because of this simplicity, the V.LOCK product in some cases has reduced the cost to half the market rate (when compared to competing products/solutions). This simplicity has also translated into a highly effective yet basic manufacturing process, allowing the V.LOCK product to be produced in high volume anywhere in the world to our exacting standards, all while reducing down-time, freight and importing issues.

Now with distributors and merchants worldwide V.LOCK has been a huge success. V.LOCK has a Registered Design and has been granted Patent No. 2021107288, with other Patents Pending.

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Historical Projects

Over 2,500 projects completed and over 100 of those are Importance Level 4 Buildings.



Christchurch Justice & Emergency Services Precinct

Estimated Cost: \$300+ Million

Total Area: 42,000 square meters

Vaico undertook the seismic design, supply, installation and sign off of Mechanical, Electrical, Plumbing services, including supplemental structural steel engineering and vibration isolation of services.

BNZ Harbour Quay Wellington Retrofit

Estimated Cost: \$1 Million

Total Area: 20,500 square meters

Damaged on 21 July 2013 by the Seddon earthquake. Vaico field mapped, designed/ supplied material and oversaw the installation of seismic bracing for the Mechanical, Plumbing, Electrical and Fire services to bring it back to NZS 4219:2009 seismic compliance.



Christchurch Polytechnic Institute of Technology

Damaged in the ongoing Christchurch earthquakes. Vaico field mapped, designed, supplied and oversaw the installation of seismic bracing for Mechanical, Plumbing, Electrical and Fire services to bring it back to NZS 41219:2009 seismic compliance.





Seismic

V.LOCK **Retrofit Hook End**

V.LOCK **45° Angle Bracket End**

V.LOCK **45° Retrofit Angle Bracket End**

V.LOCK Retrofit Hook End

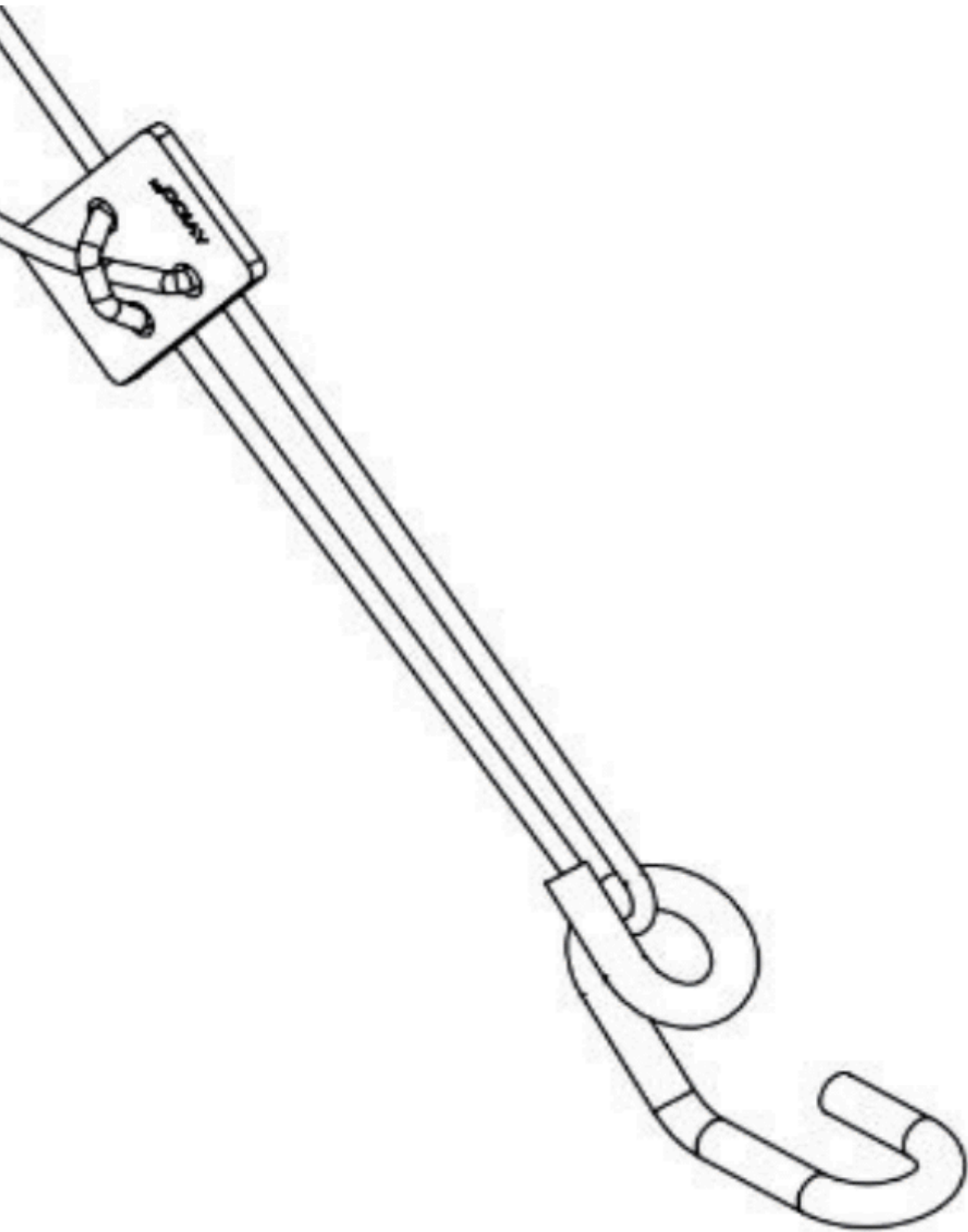
Zinc Plated

V.LOCK Retrofit Hook End – 3mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31H	V.LOCK brace, 3mm x 1m with retrofit hook brackets	\$15.50	10	480kg
V32H	V.LOCK brace, 3mm x 2m with retrofit hook brackets	\$17.50	10	480kg
V33H	V.LOCK brace, 3mm x 3m with retrofit hook brackets	\$19.80	10	480kg
V34H	V.LOCK brace, 3mm x 4m with retrofit hook brackets	\$25.70	10	480kg
V36H	V.LOCK brace, 3mm x 6m with retrofit hook brackets	\$30.40	4	480kg
V310H	V.LOCK brace, 3mm x 10m with retrofit hook brackets	\$50.50	4	480kg

V.LOCK Retrofit Hook End – 5mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V51H	V.LOCK brace, 5mm x 1m with retrofit hook brackets	\$24.20	2	635kg
V52H	V.LOCK brace, 5mm x 2m with retrofit hook brackets	\$29.10	2	635kg
V53H	V.LOCK brace, 5mm x 3m with retrofit hook brackets	\$35.90	2	635kg
V54H	V.LOCK brace, 5mm x 4m with retrofit hook brackets	\$41.80	2	635kg
V56H	V.LOCK brace, 5mm x 6m with retrofit hook brackets	\$53.20	2	635kg
V510H	V.LOCK brace, 5mm x 10m with retrofit hook brackets	\$77.00	2	635kg



Special lengths available on request. Call for pricing.

V.LOCK 45° Angle Bracket End **Zinc Plated**

V.LOCK 45° Angle Bracket End - 3mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31AB45	V.LOCK brace, 3mm x 1m with 45° angle brackets	\$17.90	4	485kg
V32AB45	V.LOCK brace, 3mm x 2m with 45° angle brackets	\$20.20	4	485kg
V33AB45	V.LOCK brace, 3mm x 3m with 45° angle brackets	\$24.20	4	485kg
V34AB45	V.LOCK brace, 3mm x 4m with 45° angle brackets	\$27.60	4	485kg
V36AB45	V.LOCK brace, 3mm x 6m with 45° angle brackets	\$33.60	4	485kg
V310AB45	V.LOCK brace, 3mm x 10m with 45° angle brackets	\$52.40	2	485kg

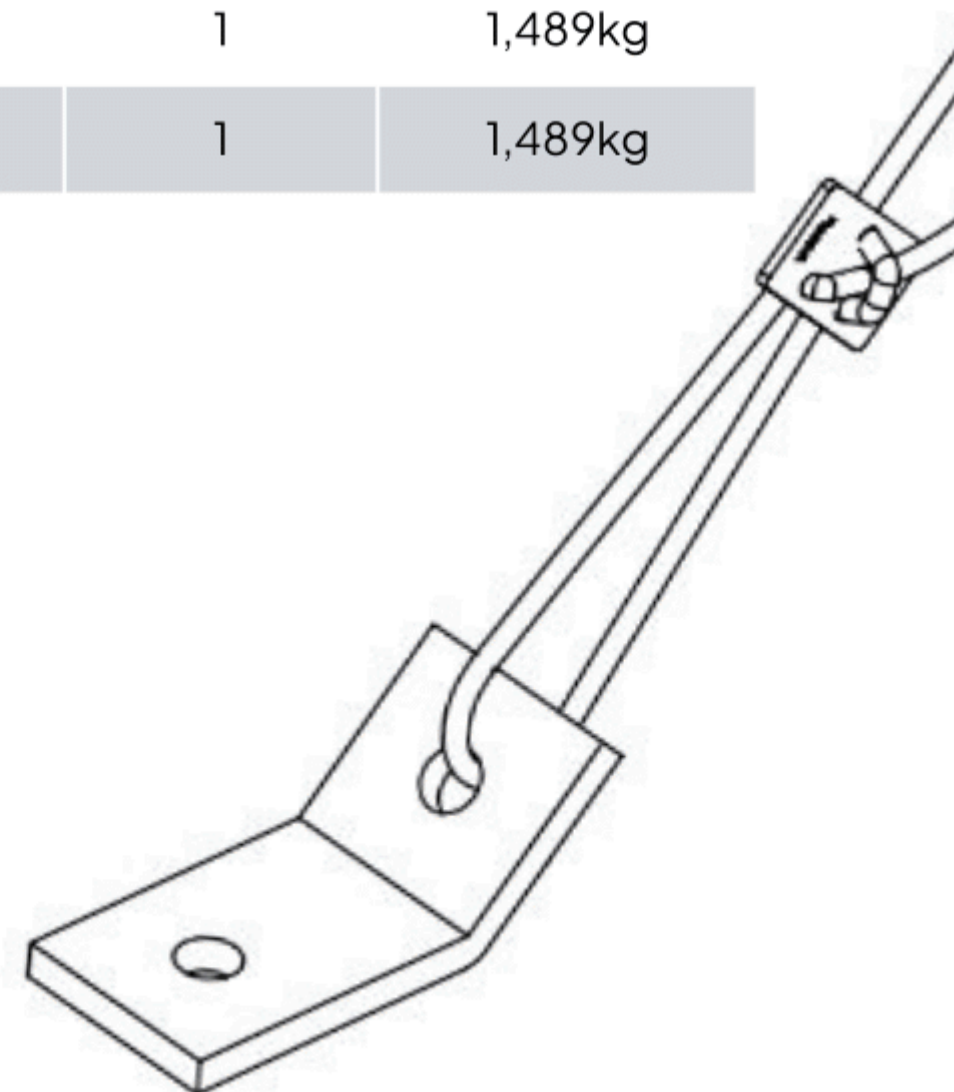
V.LOCK 45° Angle Bracket End - 5mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V51AB45	V.LOCK brace, 5mm x 1m with 45° angle brackets	\$32.60	4	1,046kg
V52AB45	V.LOCK brace, 5mm x 2m with 45° angle brackets	\$37.70	4	1,046kg
V53AB45	V.LOCK brace, 5mm x 3m with 45° angle brackets	\$43.40	4	1,046kg
V54AB45	V.LOCK brace, 5mm x 4m with 45° angle brackets	\$49.00	2	1,046kg
V56AB45	V.LOCK brace, 5mm x 6m with 45° angle brackets	\$60.10	2	1,046kg
V510AB45	V.LOCK brace, 5mm x 10m with 45° angle brackets	\$83.70	2	1,046kg

V.LOCK 45° Angle Bracket End - 6mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V61AB45	V.LOCK brace, 6mm x 1m with 45° angle brackets	\$38.70	2	1,489kg
V62AB45	V.LOCK brace, 6mm x 2m with 45° angle brackets	\$44.30	2	1,489kg
V63AB45	V.LOCK brace, 6mm x 3m with 45° angle brackets	\$53.80	2	1,489kg
V64AB45	V.LOCK brace, 6mm x 4m with 45° angle brackets	\$61.20	2	1,489kg
V66AB45	V.LOCK brace, 6mm x 6m with 45° angle brackets	\$75.80	1	1,489kg
V610AB45	V.LOCK brace, 6mm x 10m with 45° angle brackets	\$106.20	1	1,489kg

Special lengths available on request. Call for pricing.



V.LOCK 45° Angle Bracket End

Hot Dip Galvanised

V.LOCK 45° Angle Bracket End – 3mm

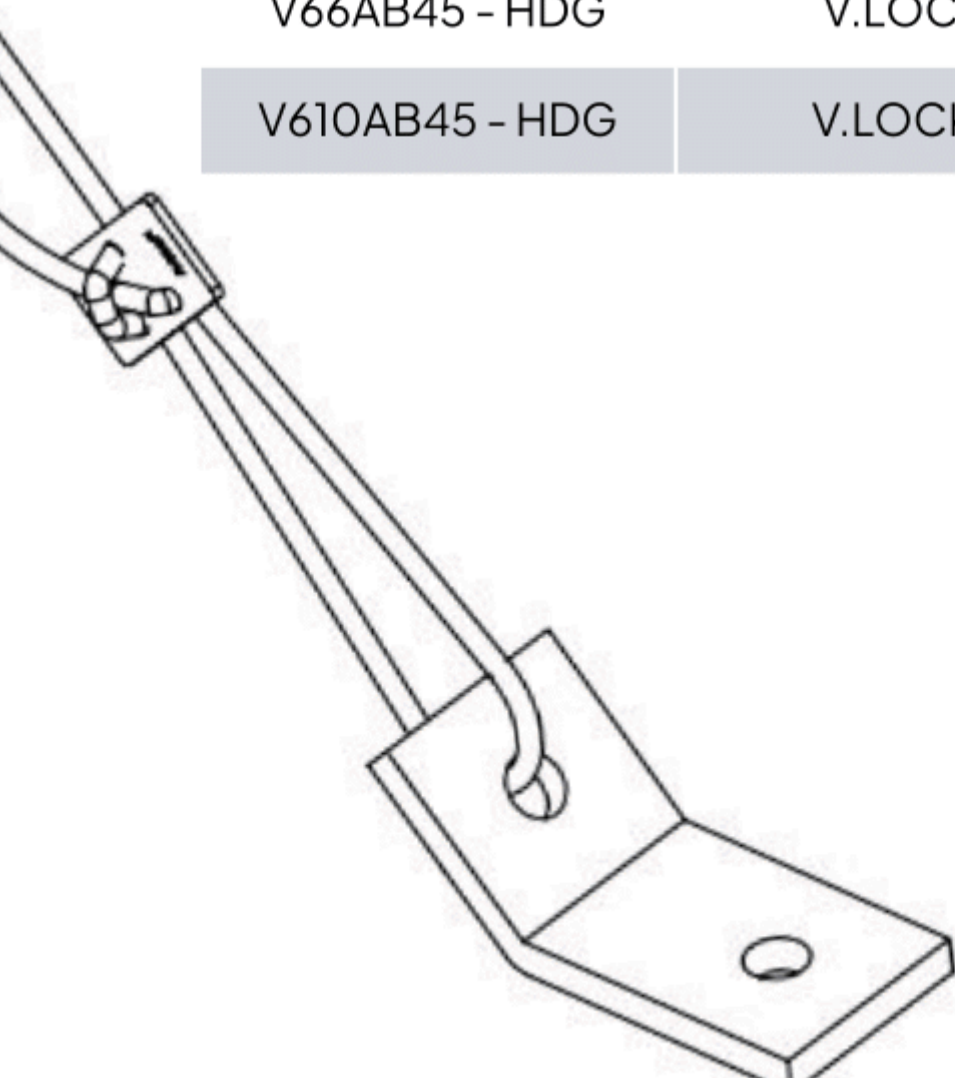
Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31AB45 – HDG	V.LOCK brace, 3mm x 1m with 45° angle brackets	\$21.50	4	485kg
V32AB45 – HDG	V.LOCK brace, 3mm x 2m with 45° angle brackets	\$24.10	4	485kg
V33AB45 – HDG	V.LOCK brace, 3mm x 3m with 45° angle brackets	\$28.30	4	485kg
V34AB45 – HDG	V.LOCK brace, 3mm x 4m with 45° angle brackets	\$32.90	4	485kg
V36AB45 – HDG	V.LOCK brace, 3mm x 6m with 45° angle brackets	\$38.00	4	485kg
V310AB45 – HDG	V.LOCK brace, 3mm x 10m with 45° angle brackets	\$57.80	2	485kg

V.LOCK 45° Angle Bracket End – 5mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V51AB45 – HDG	V.LOCK brace, 5mm x 1m with 45° angle brackets	\$36.00	4	1,046kg
V52AB45 – HDG	V.LOCK brace, 5mm x 2m with 45° angle brackets	\$41.30	4	1,046kg
V53AB45 – HDG	V.LOCK brace, 5mm x 3m with 45° angle brackets	\$48.40	4	1,046kg
V54AB45 – HDG	V.LOCK brace, 5mm x 4m with 45° angle brackets	\$54.30	2	1,046kg
V56AB45 – HDG	V.LOCK brace, 5mm x 6m with 45° angle brackets	\$64.90	2	1,046kg
V510AB45 – HDG	V.LOCK brace, 5mm x 10m with 45° angle brackets	\$88.00	2	1,046kg

V.LOCK 45° Angle Bracket End – 6mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V61AB45 – HDG	V.LOCK brace, 6mm x 1m with 45° angle brackets	\$43.00	2	1,489kg
V62AB45 – HDG	V.LOCK brace, 6mm x 2m with 45° angle brackets	\$48.90	2	1,489kg
V63AB45 – HDG	V.LOCK brace, 6mm x 3m with 45° angle brackets	\$57.80	2	1,489kg
V64AB45 – HDG	V.LOCK brace, 6mm x 4m with 45° angle brackets	\$67.50	2	1,489kg
V66AB45 – HDG	V.LOCK brace, 6mm x 6m with 45° angle brackets	\$86.80	1	1,489kg
V610AB45 – HDG	V.LOCK brace, 6mm x 10m with 45° angle brackets	\$110.30	1	1,489kg



Special lengths available on request. Call for pricing.

V.LOCK 45° Angle Bracket End

Stainless Steel 316

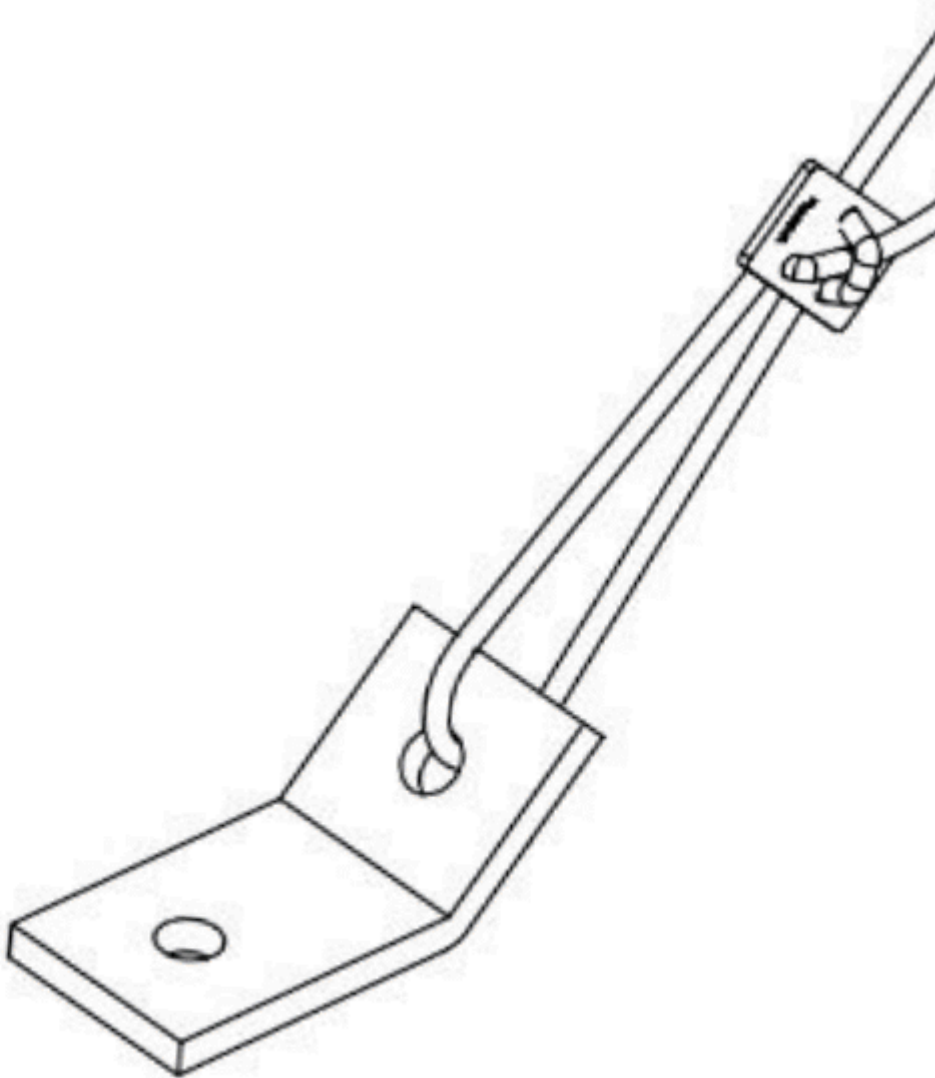
Seismic

V.LOCK 45° Angle Bracket End - 3mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31AB45 - SS316	V.LOCK brace, 3mm x 1m with 45° angle brackets	\$41.80	4	380kg
V32AB45 - SS316	V.LOCK brace, 3mm x 2m with 45° angle brackets	\$46.00	4	380kg
V33AB45 - SS316	V.LOCK brace, 3mm x 3m with 45° angle brackets	\$50.30	4	380kg
V34AB45 - SS316	V.LOCK brace, 3mm x 4m with 45° angle brackets	\$58.10	4	380kg
V36AB45 - SS316	V.LOCK brace, 3mm x 6m with 45° angle brackets	\$66.60	4	380kg
V310AB45 - SS316	V.LOCK brace, 3mm x 10m with 45° angle brackets	\$94.20	2	380kg

V.LOCK 45° Angle Bracket End - 5mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V51AB45 - SS316	V.LOCK brace, 5mm x 1m with 45° angle brackets	\$54.90	4	850kg
V52AB45 - SS316	V.LOCK brace, 5mm x 2m with 45° angle brackets	\$62.00	4	850kg
V53AB45 - SS316	V.LOCK brace, 5mm x 3m with 45° angle brackets	\$69.00	4	850kg
V54AB45 - SS316	V.LOCK brace, 5mm x 4m with 45° angle brackets	\$79.70	2	850kg
V56AB45 - SS316	V.LOCK brace, 5mm x 6m with 45° angle brackets	\$93.80	2	850kg
V510AB45 - SS316	V.LOCK brace, 5mm x 10m with 45° angle brackets	\$132.80	2	850kg



Special lengths available on request. Call for pricing.

V.LOCK 45° Retrofit Angle Bracket End

V.LOCK 45° Retrofit Angle Bracket End – 3mm **Zinc Plated**

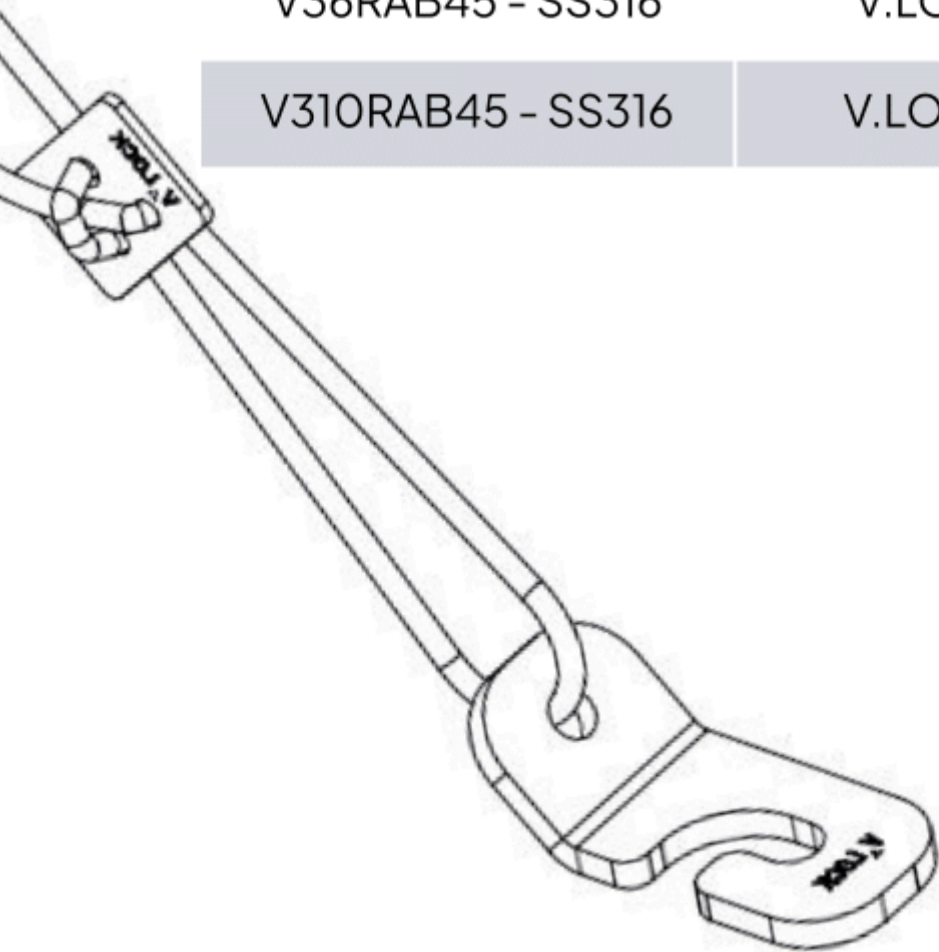
Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31RAB45	V.LOCK brace, 3mm x 1m with 45° retrofit angle brackets	\$19.10	4	485kg
V32RAB45	V.LOCK brace, 3mm x 2m with 45° retrofit angle brackets	\$21.20	4	485kg
V33RAB45	V.LOCK brace, 3mm x 3m with 45° retrofit angle brackets	\$24.80	4	485kg
V34RAB45	V.LOCK brace, 3mm x 4m with 45° retrofit angle brackets	\$27.80	4	485kg
V36RAB45	V.LOCK brace, 3mm x 6m with 45° retrofit angle brackets	\$33.20	4	485kg
V310RAB45	V.LOCK brace, 3mm x 10m with 45° retrofit angle brackets	\$50.10	2	485kg

V.LOCK 45° Retrofit Angle Bracket End – 3mm **Hot Dip Galvanised**

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31RAB45 - HDG	V.LOCK brace, 3mm x 1m with 45° retrofit angle brackets	\$22.50	4	485kg
V32RAB45 - HDG	V.LOCK brace, 3mm x 2m with 45° retrofit angle brackets	\$24.80	4	485kg
V33RAB45 - HDG	V.LOCK brace, 3mm x 3m with 45° retrofit angle brackets	\$28.70	4	485kg
V34RAB45 - HDG	V.LOCK brace, 3mm x 4m with 45° retrofit angle brackets	\$32.90	4	485kg
V36RAB45 - HDG	V.LOCK brace, 3mm x 6m with 45° retrofit angle brackets	\$37.40	4	485kg
V310RAB45 -HDG	V.LOCK brace, 3mm x 10m with 45° retrofit angle brackets	\$55.30	2	485kg

V.LOCK 45° Retrofit Angle Bracket End – 3mm **Stainless Steel 316**

Product Code	Product Description	Price (each)	Pack Qty	Rating (ULS)
V31RAB45 - SS316	V.LOCK brace, 3mm x 1m with 45° retrofit angle brackets	\$41.30	4	310kg
V32RAB45 - SS316	V.LOCK brace, 3mm x 2m with 45° retrofit angle brackets	\$45.20	4	310kg
V33RAB45 - SS316	V.LOCK brace, 3mm x 3m with 45° retrofit angle brackets	\$49.00	4	310kg
V34RAB45 - SS316	V.LOCK brace, 3mm x 4m with 45°retrofit angle brackets	\$56.00	4	310kg
V36RAB45 - SS316	V.LOCK brace, 3mm x 6m with 45° retrofit angle brackets	\$63.60	4	310kg
V310RAB45 - SS316	V.LOCK brace, 3mm x 10m with 45° retrofit angle brackets	\$88.50	2	310kg



Special lengths available on request. Call for pricing.

Suspension

ZedFast

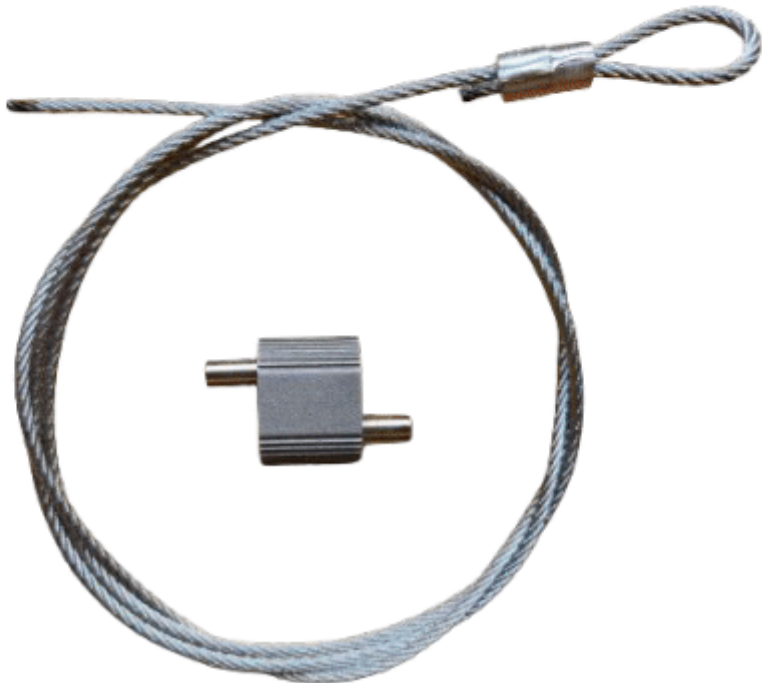
Delta

SuperReel

ZedFast

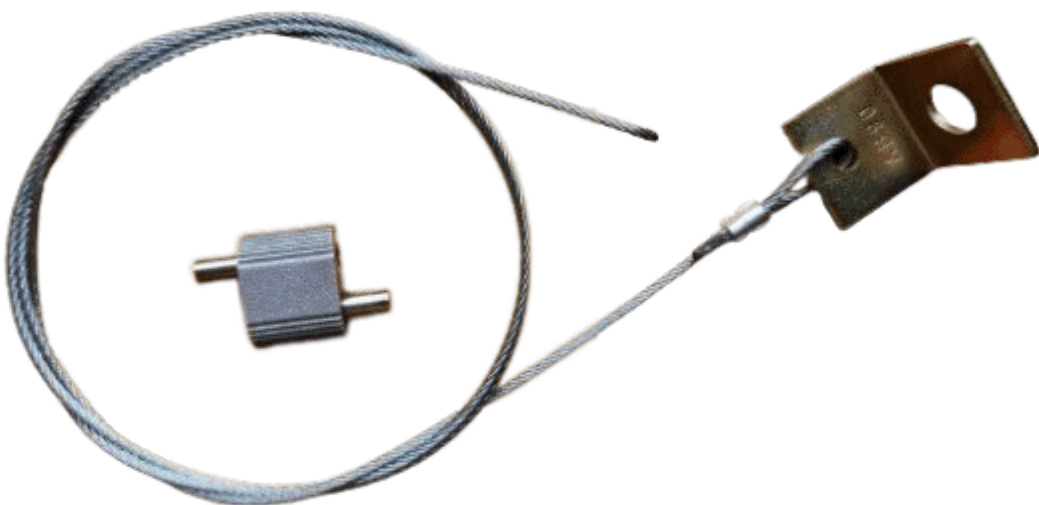
ZedFast Loop End - 2mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (5:1)
Z21L	ZedFast suspension hanger, 2mm x 1m with loop end	\$10.20	10	56kg
Z22L	ZedFast suspension hanger, 2mm x 2m with loop end	\$13.30	10	56kg
Z23L	ZedFast suspension hanger, 2mm x 3m with loop end	\$15.90	10	56kg
Z24L	ZedFast suspension hanger, 2mm x 4m with loop end	\$19.30	10	56kg
Z26L	ZedFast suspension hanger, 2mm x 6m with loop end	\$23.90	4	56kg
Z210L	ZedFast suspension hanger, 2mm x 10m with loop end	\$36.00	4	56kg



ZedFast 90° Angle Bracket End - 2mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (5:1)
Z21AB90	ZedFast suspension hanger, 2mm x 1m with 90° angle bracket	\$11.20	10	56kg
Z22AB90	ZedFast suspension hanger, 2mm x 2m with 90° angle bracket	\$14.30	10	56kg
Z23AB90	ZedFast suspension hanger, 2mm x 3m with 90° angle bracket	\$16.90	10	56kg
Z24AB90	ZedFast suspension hanger, 2mm x 4m with 90° angle bracket	\$20.30	10	56kg
Z26AB90	ZedFast suspension hanger, 2mm x 6m with 90° angle bracket	\$24.90	4	56kg
Z210AB90	ZedFast suspension hanger, 2mm x 10m with 90° angle bracket	\$37.00	4	56kg



Special lengths available on request. Call for pricing.

Delta

Delta Loop End – 2mm

Product Code	Product Description	Price (each)	Pack Qty
DE20	Delta 2mm galvanised expansion pack, 20 suspension points	\$145.40	1

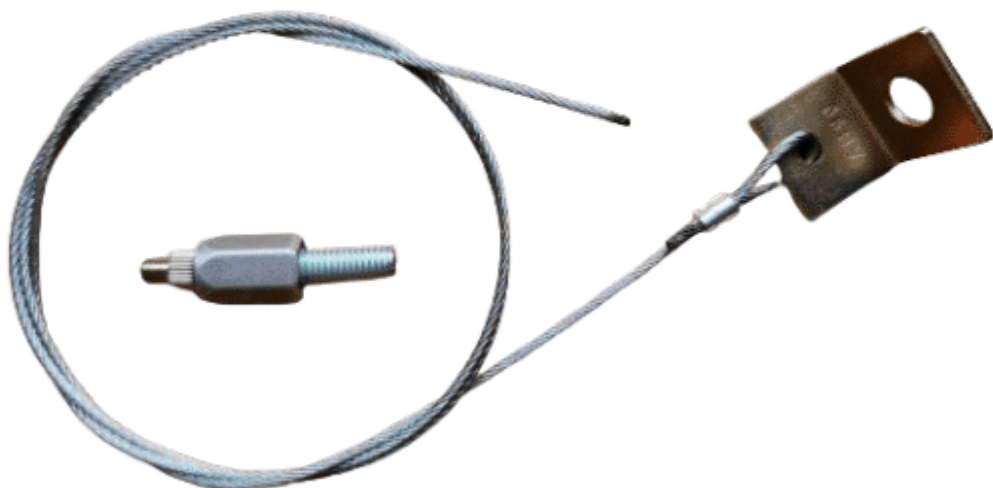
Delta Loop End – 2mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (5:1)
D21L	Delta suspension hanger, 2mm x 1m with loop end	\$10.80	10	56kg
D22L	Delta suspension hanger, 2mm x 2m with loop end	\$13.90	10	56kg
D23L	Delta suspension hanger, 2mm x 3m with loop end	\$16.50	10	56kg
D24L	Delta suspension hanger, 2mm x 4m with loop end	\$19.90	10	56kg
D26L	Delta suspension hanger, 2mm x 6m with loop end	\$24.50	4	56kg
D210L	Delta suspension hanger, 2mm x 10m with loop end	\$36.60	4	56kg



Delta 90° Angle Bracket End – 2mm

Product Code	Product Description	Price (each)	Pack Qty	Rating (5:1)
D21AB90	Delta suspension hanger, 2mm x 1m with 90° angle bracket	\$11.80	10	56kg
D22AB90	Delta suspension hanger, 2mm x 2m with 90° angle bracket	\$14.90	10	56kg
D23AB90	Delta suspension hanger, 2mm x 3m with 90° angle bracket	\$17.50	10	56kg
D24AB90	Delta suspension hanger, 2mm x 4m with 90° angle bracket	\$20.90	10	56kg
D26AB90	Delta suspension hanger, 2mm x 6m with 90° angle bracket	\$25.50	4	56kg
D210AB90	Delta suspension hanger, 2mm x 10m with 90° angle bracket	\$37.60	4	56kg



Special lengths available on request. Call for pricing.

SuperReel

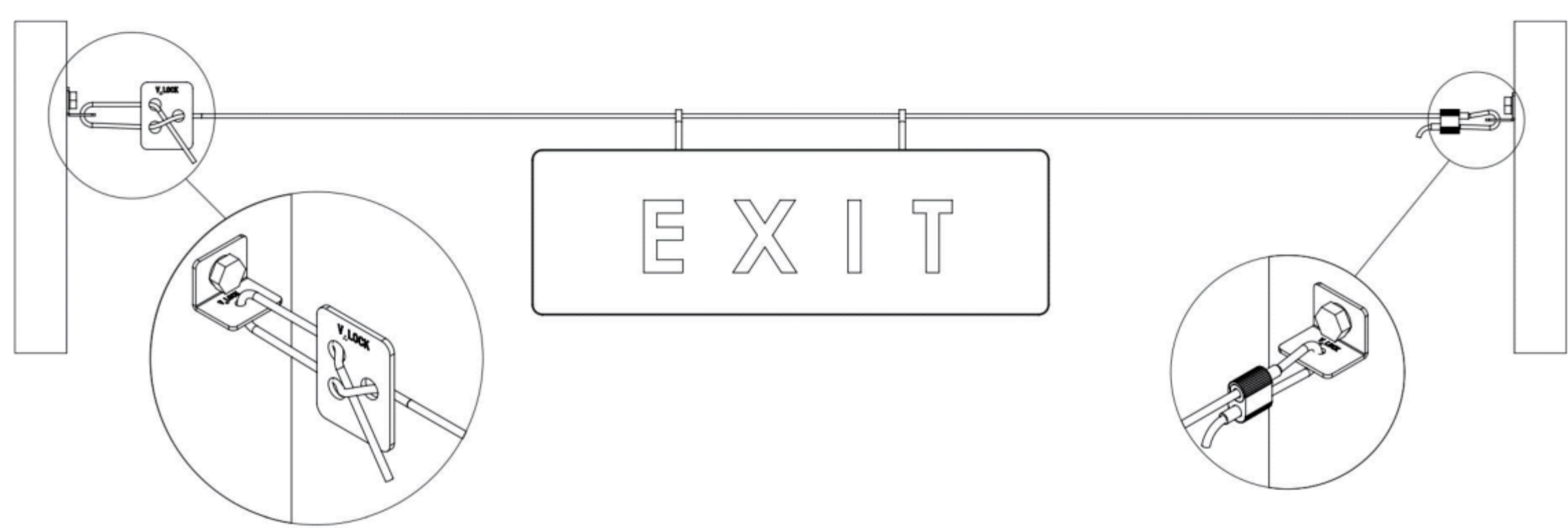
SuperReel - 2mm

Suspension

Product Code	Product Description	Price (each)	Rating (5:1)
S100	SuperReel 2mm galvanised 100m, 10 locations	\$178.40	56kg
S250	SuperReel 2mm galvanised 250m, 30 locations	\$445.60	56kg
S500	SuperReel 2mm galvanised 500m, 50 locations	\$748.30	56kg
SE25	SuperReel 2mm galvanised expansion pack, 25 locations	\$224.70	56kg
SW100	SuperReel 2mm galvanised wire reel, 100m	\$98.40	56kg
SW250	SuperReel 2mm galvanised wire reel, 250m	\$225.80	56kg
SW500	SuperReel 2mm galvanised wire reel, 500m	\$438.20	56kg
SW1000	SuperReel 2mm galvanised wire reel, 1,000m	\$905.50	56kg

SuperReel Kit

Inclusions		S100	S250	S500	SE25
2mm Galvanised wire	meters	100	250	500	-
AB90 angle brackets	units	20	60	100	50
V.LOCK plates	units	10	30	50	25
ZedFast tensioners	units	10	30	50	25



Special lengths available on request. Call for pricing.

Testing

Typical failure points in seismic bracing can compromise building safety during an earthquake. At Vaico, we invest heavily in required testing to identify and address these failures, all of which follow standards from AS/NZS 1170.0, NZS 4219, and ASHRAE 171. Testing results show the need for enhanced performance, durability, and reliability, providing our customers with seismic bracing solutions they can trust—quality, efficient, and cost-effective.

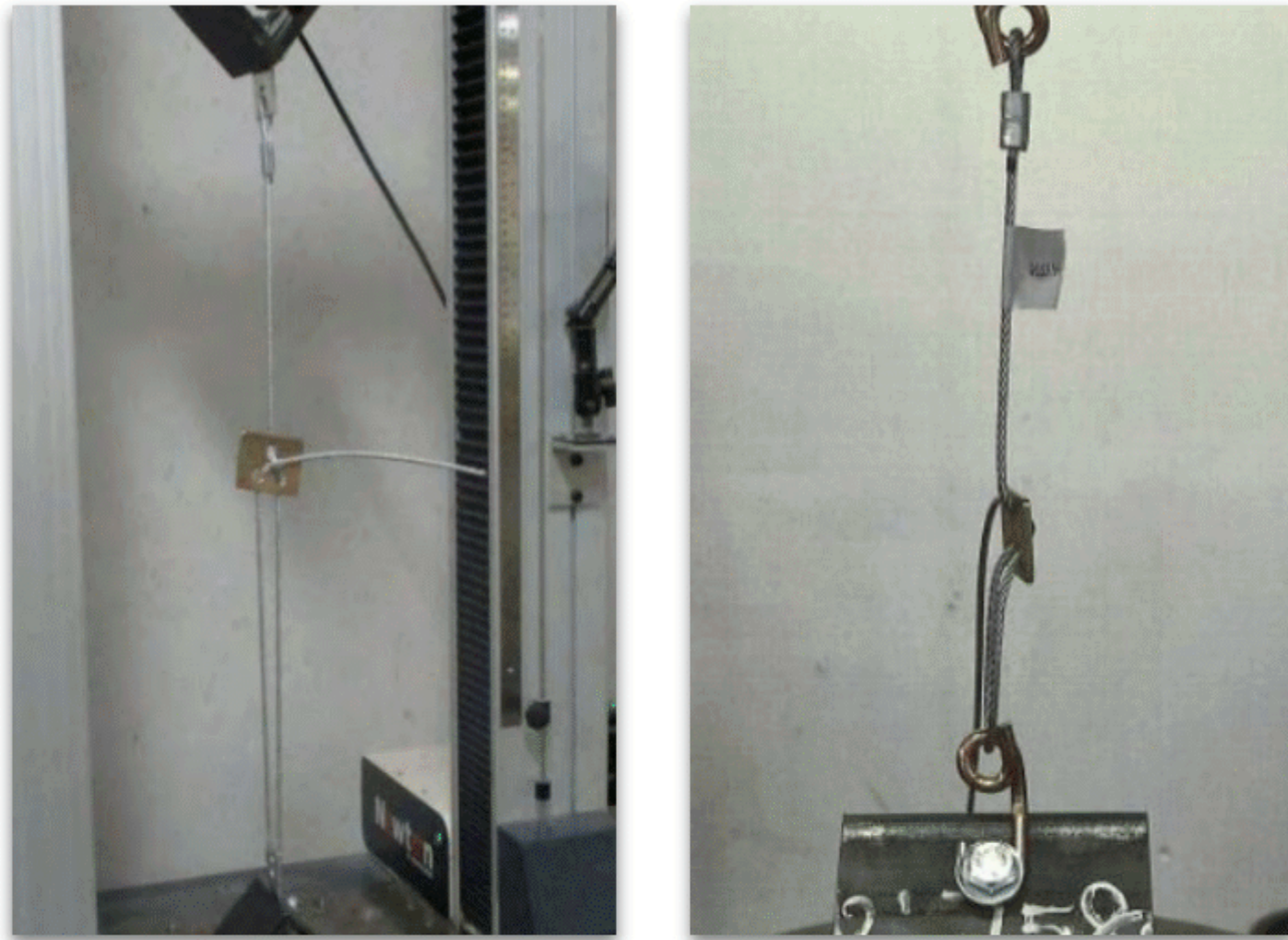


Figure 1. Testing Setup

AS/NZS 1170.0: Structural Design Actions – General Principles

AS/NZS 1170.0 provides general principles for the determination of design actions on structures. It sets the foundation for understanding how seismic forces should be considered in the design process.

NZS 4219: Seismic Performance of Engineering Systems in Buildings

NZS 4219 provides specific requirements for the design, installation, and testing of engineering systems and services to ensure their seismic performance.

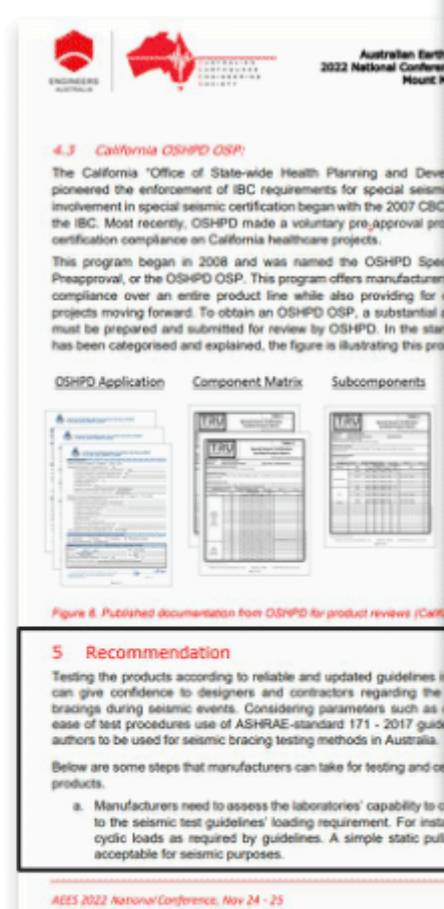


Figure 2. Typical Failure



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ASHRAE 171:2017 Method Of Testing For Rating Seismic And Wind Restraints



5 Recommendation

Testing the products according to reliable and updated guidelines is a great investment that can give confidence to designers and contractors regarding the performance of seismic bracings during seismic events. Considering parameters such as comprehensiveness, and ease of test procedures use of ASHRAE-standard 171 - 2017 guideline is recommended by authors to be used for seismic bracing testing methods in Australia.

Below are some steps that manufacturers can take for testing and certifying seismic restraints products.

- Manufacturers need to assess the laboratories' capability to conduct the test according to the seismic test guidelines' loading requirement. For instance, if a lab can impose cyclic loads as required by guidelines. A simple static pull/push load might not be acceptable for seismic purposes.

State-of-the-Art Review on verification tests for seismic bracing products of non-structural components, Peter Sharif & Arash Nazari Rad, 2022 - presented at Australian Earthquake Engineering Society, 2022 National Conference.



vaico SEISMIC AND
SUSPENSION

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