



TECTONUS
RESILIENT SEISMIC SOLUTIONS

SEISMIC TANK ANCHORS

Earthquake Protection for
Liquid Storage Tanks



INTRODUCTION & DESIGN GUIDE



DFFD-RSFD TANK ANCHORS

Seismic Protection for Storage Tanks

Tectonus makes seismic tank anchors that attach to the foot of the tank, making it seismically compliant and saving on material costs by lowering the seismic demand, and ensuring you won't lose your tank and its contents in an earthquake event.

Save money on build costs

Compared to traditional tank anchors, Tectonus devices lower seismic demand which can save on build costs:

- Reduce concrete foundation thickness by up to 35%
- Reduce tank thickness by up to 3mm or 1/8 inch

Material savings typically outweigh the additional cost of the anchors, making it a cost positive investment.

Save money if there's an earthquake

Tectonus tank anchors are designed to absorb the energy impact of an earthquake.

- Protect your tanks
- Protect your people
- Protect your product
- Protect your profits

Unlike other tank anchors, Tectonus anchors do not yield or break, meaning there is nothing to repair or replace, and they keep on protecting you through aftershocks.

DFFD

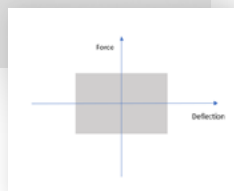
low to medium aspect ratio tanks

Suited to lower aspect ratio tanks where the tank has sufficient mass to recentre itself.

100kN capacity with Overstrength Factor of 1.15

Installation

- Mechanical attachment
- Can be done offsite



RSFD

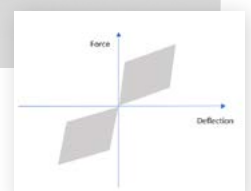
medium to high aspect ratio tanks

Suited to high aspect ratio tanks where recentering force needs to come from the tank anchors themselves.

150kN capacity with Overstrength Factor of 1.25

Installation

- Welding
- Typically done on site



CASE STUDY — YEALANDS WINERY, BLENHEIM

- Yealands, a New Zealand winery with annual production of 1.6 million cases of wine
- 10 x 175kL tanks (10m x 4.7m)
- >30% reduction on the seismic load demand, compared to conventional systems
- 15% reduction in overall project cost through savings in the tank and foundation thickness
- Enabled the client to negotiate insurance terms, without shortening of the tanks to meet the insurers' original demand



WHO IS TECTONUS?

Tectonus are experts in earthquake engineering, trusted to protect hospitals, high-rise apartments, airports, and storage tanks. We've manufactured, tested and delivered over 1,000 seismic devices which are installed on projects all over New Zealand, and Canada.





Specialists in seismic engineering, we are driven to set a higher standard for earthquake resilience. Let's work together to make our cities and communities safer.

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