



Product Data Sheet: Tilt Beam

The Tilt Beam is a lightweight, rigid aluminium beam that is used in conjunction with a Triaxial Tilt Node, NanoPlus or NanoMacro. The beam can be mounted in any orientation and rapidly deployed in single and daisy chained configurations.

Installation of the Tilt Beam can be performed with minimal tools in minutes. Complex bolting and washer arrangements are not required due to the beam's inbuilt bearing and joint system. This allows for thermal expansion and misalignment of the support brackets while still accurately monitoring the structure. The attached tilt node does not require any levelling, further reducing onsite installation time.

Key Features

- Lightweight and durable aluminium and stainless-steel construction.
- Fully wireless; no wiring or electrical connections required.
- Can be installed in any orientation without requiring levelling.
- Low friction, weather resistant bearings that do not require maintenance or lubrication.
- Automatically compensates for thermal expansion and misalignment of support brackets.
- Can be daisy chained to provide movement profiles.

Applications

- Movement monitoring of any structure
- Longitudinal settlement
- Tunnel convergence/divergence
- Lateral displacements



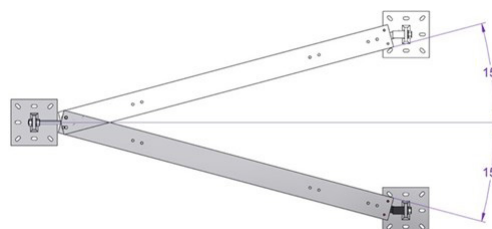
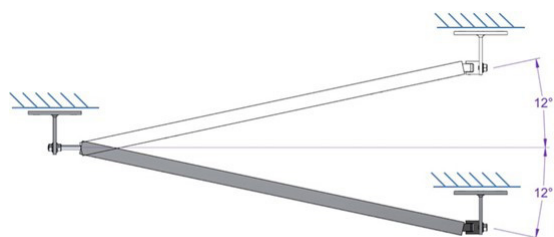
Tilt Beam



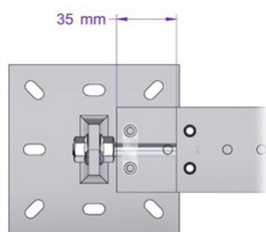
Physical Specifications

Parameter	Value
Beam Dimensions	500 mm, 1000 mm, 2000 mm, 3000 mm (custom lengths available on request)
Support Bracket Dimensions	Base: 100 x 100 mm Height: 75 mm
Total Mass (without node)	2 kg (approx. for 2 m beam)
Material	Aluminium with A2 stainless steel fasteners

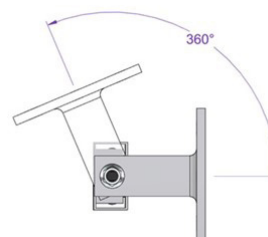
Vertical Range



Expansion Range



Rotational Range





Tilt Beam



Ordering Step 1 - Tilt Beam

Beam length is specified using the part numbers below. The length refers to the distance between the support bracket centres.

Part No.	Description
FF-BK-500	Tilt Beam 500 mm
FF-BK-1000	Tilt Beam 1000 mm
FF-BK-2000	Tilt Beam 2000 mm
FF-BK-3000	Tilt Beam 3000 mm
FF-BK-Cxxxx	Custom Length (xxxx mm) Tilt Beam

Ordering Step 2 - Tilt Beam Chain End Kit

A single end kit is required per beam chain. A single beam counts as a single chain and would require a single end kit. Daisy chained configurations require a single end kit per chain, e.g. a chain of 10 beams would only require one end kit.

Part No.	Description
FF-BE	Tilt Beam Chain End Kit

Ordering Step 3 - Tilt Node

Select the desired tilt node and accompanying mounting bracket. A tilt node is required for each beam.

Node Part No.	Bracket Part No.	Description	Battery Life
FM3N-IX	FF-MP-S360	FlatMesh Triaxial Tilt Node	12-15 years
LR3N-IX	FF-MP-S360	GeoWAN Triaxial Tilt Node	10-12 years
FM3NT-30	FF-BB30	FlatMesh NanoPlus Node	4-5 years
FM3NT-50	FF-S50	FlatMesh NanoMacro Node	12-15 years