

FORM

SHORE

Propping and Formwork Guide for Pre-Cast Construction 2024



www.formshore.co.nz



Call us on 050 836 7674,
or send an email to hire@formshore.co.nz

Pre-Cast Solutions

Panel Propping

Propping for Structural Steel

Shoreloading

Formwork

Design and Support



Panel Propping

Panel Propping

FormShore's panel propping systems cover a range of load capacities. We can supply the optimal equipment for each project.

Choose from:

1. FormShore Push-Pull
2. FormShore Shisham
3. FormShore Soldier

FormShore Push-Pull

Our Push-Pull props come in 5 different sizes, spanning from 1 to 5m. Push-Pull props are ideally suited to single height panels, structural steel and precast column alignment. They are also useful for propping panel to panel in lift shaft or limited space situations.

Shisham

FormShore Shisham is a simple but highly effective one-piece box section style prop suitable for tilt panel projects such as light industrial warehouses. The single fixing point top and bottom make installation quick and easy.



FormShore Push-Pull and Shisham Props Working Load Limit Table - Compression

PROP TYPE	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)
Formshore Push-Pull No. 1																
1.0m - 1.7m	1.0	57.9	1.1	54.6	1.2	51.5	1.3	48.5	1.4	45.8	1.5	43.2	1.6	40.7	1.7	38.4
Formshore Push-Pull No. 2																
1.7m - 2.5m	1.7	38.4	1.8	36.2	1.9	34.3	2.0	32.4	2.1	30.6	2.2	28.9	2.3	27.4	2.5	24.6
Formshore Push-Pull No. 3																
2.5m - 3.2m	2.5	47.4	2.6	45.3	2.7	43.4	2.8	41.5	2.9	39.7	3.0	38.0	3.1	36.4	3.2	34.9
Formshore Push-Pull No. 4																
3.2m - 3.9m	3.2	34.9	3.3	33.4	3.4	32.1	3.5	30.7	3.6	29.5	3.7	28.3	3.8	27.1	3.9	26.1
Formshore Push-Pull No. 5																
3.9m - 4.5m	3.9	26.1	4.0	25.1	4.1	24.1	4.2	23.1	4.3	22.3	4.4	21.4	4.5	20.6		
Formshore Shisham Standard																
4.4m - 7.0m	Closed	35.0	Intermediate	30.0	Middle	20.0	Intermediate	15.5	Full Extension	11.4						
Formshore Shisham Special																
5.7m - 9.4m	Closed	25.0	Intermediate	22.0	Middle	11.5	Intermediate	8.5	Full Extension	5.5						

Working Load Limit Table - Tension

PROP TYPE	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)	Length (m)	WLL (kN)
Formshore Push-Pull No. 1																
1.0m - 1.7m	1.0	71.8	1.1	69.9	1.2	68.0	1.3	66.3	1.4	64.6	1.5	63.1	1.6	61.5	1.7	60.1
Formshore Push-Pull No. 2																
1.7m - 2.5m	1.7	60.1	1.8	58.8	1.9	57.5	2.0	56.2	2.1	55.1	2.2	53.9	2.3	52.8	2.5	50.7
Formshore Push-Pull No. 3																
2.5m - 3.2m	2.5	81.7	2.6	80.3	2.7	79.0	2.8	77.7	2.9	76.5	3.0	75.3	3.1	74.1	3.2	73.0
Formshore Push-Pull No. 4																
3.2m - 3.9m	3.2	73.0	3.3	71.9	3.4	70.8	3.5	69.8	3.6	68.8	3.7	67.8	3.8	66.8	3.9	65.9
Formshore Push-Pull No. 5																
3.9m - 4.5m	3.9	65.9	4.0	65.0	4.1	64.1	4.2	63.3	4.3	62.5	4.4	61.6	4.5	60.8		

Formshore Push-Pull prop WLL rated to Australian Standard AS3610
 Formshore Shisham Braces tested and rated to Australian Standard AS3850-2015
 Contact Formshore Head Office for additional propping information & design criteria.

FormShore Soldier Props

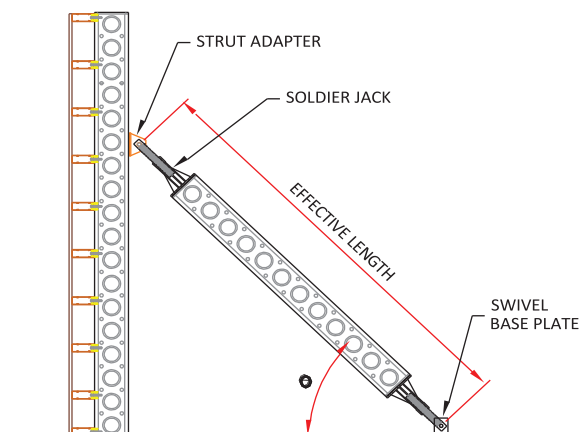
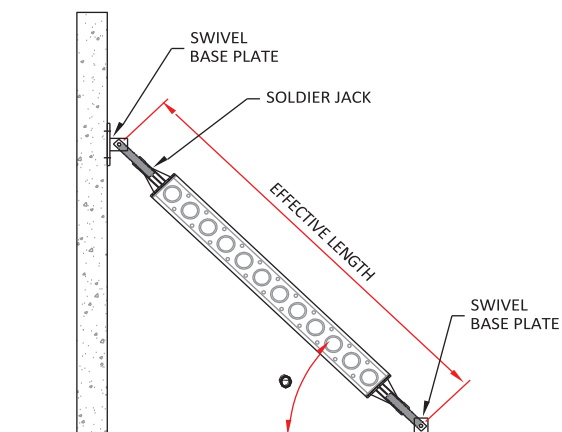
FormShore Soldier props are the next step up in capacity and are typically used for panels greater than 6 meters tall, or where a high wind or seismic load is expected. Soldier props can also be used in vertical and horizontal applications.

FormShore Soldier Props Allowable Axial Compression Loads

The Formshore Soldier Beam has different sectional properties about its two main axes because of its cross-sectional shape.

Table 1 below shows the maximum working loads for a range of effective strut lengths and angles when the Soldier Beam is subjected to axial compression.

Combine a Strut Adaptor and Swivel Base Plate with Soldier Prop for supporting vertical formwork. Use Swivel Base Plates at both ends of Soldier Props for supporting vertical precast or tilt slab panels.



FormShore Soldier Props

Maximum Working Loads Table - Compression Capacity

Table 1: Compression Capacity

Effective Length (m)	Horizontal Pinned	Angle of Soldier Prop (Θ)							Vertical Pinned
		10°	20°	30°	40°	45°	50°	60°	
Working Load Limit (kN)									
Up to 4.8	83	83	83	83	83	83	83	83	83
5.4	72	72	72	72	72	73	73	74	76
5.7	67	67	67	67	67	68	68	69	71
6.0	62	62	62	62	63	63	63	64	67
6.3	58	58	58	58	59	59	59	60	63
6.6	54	54	54	54	55	55	55	56	59
6.9	50	50	50	51	51	51	52	52	56
7.2	47	47	47	47	48	48	48	49	52
7.5	44	44	44	44	45	45	45	46	49
7.8	41	41	41	41	42	42	42	43	47
8.1	38	38	38	39	39	39	40	41	44
8.4	36	36	36	36	36	37	37	38	42
8.7	33	33	33	34	34	35	35	36	40
9.0	31	31	31	32	32	32	33	34	38
9.3	29	29	29	30	30	30	31	32	36
9.6	27	27	27	28	28	28	29	30	34

FormShore Soldier Props

Maximum Working Loads Table - Compression Capacity

Table 2: Tensile Capacity

Effective Length (m)	Horizontal Pinned	Angle of Soldier Prop (Θ)							Vertical Pinned
		10°	20°	30°	40°	45°	50°	60°	
Working Load Limit (kN)									
Up to 6.0	83 (79)	83 (80)	83	83	83	83	83	83	83 (79)

(xx) Maximum prop load in tension when using strut adaptors.

This information conforms to AS3610 & AS4100.

Structural Steel

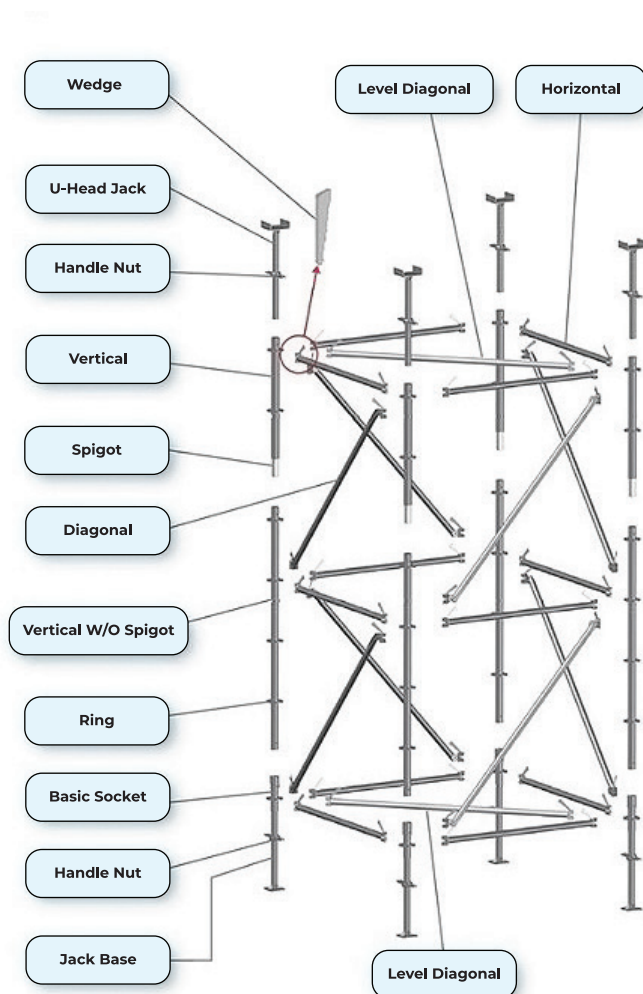
Use our propping systems to support and align structural steel during construction. Specialised attachment brackets can be supplied to suit your project.

Shoreloading

FormShore 80

The FormShore 80 propping system is a ring lock system with leg loads of up to 80kN. By interchanging the ledger and diagonal components, the capacity of the propping system can be changed.

The ring lock and wedge assembly system means towers can be assembled quickly with the strike of a hammer. Our 2m standards and up to 1.8m bay sizes minimise the number of ledgers and braces required for simple mid-span support. The individual components break down into single legs for easy transport and storage. These features make the FormShore 80 propping system the most efficient on the market.



Typical applications for FormShore 80 are:

- Midspan propping for new concrete floors, including rib and timber or comflor
- Shoring for in-situ beams, mezzanine floors, decks
- Temporary support for precast beams
- Support for door openings in precast panels
- Support for floors during demolition

Cluster Props

By grouping FormShore 80 standards into clusters, we can increase the capacity of our props yet still install by hand.

Installation

FormShore is a part of NZS Group and, through its related companies, can provide full installation of propping, scaffolding and fall protection systems anywhere in New Zealand.

The ringlock system will be familiar to all scaffolders and the installation plans are easy to follow. FormShore offers an installation guide and video.



Formwork

FormShore's formwork systems work hand in hand with our propping and shoreloading to complete your concrete structure. FormShore can design and supply formwork for the following:

- Panel stitch joints
- In-situ floors
- In-situ beams and columns

FormShore AluFix

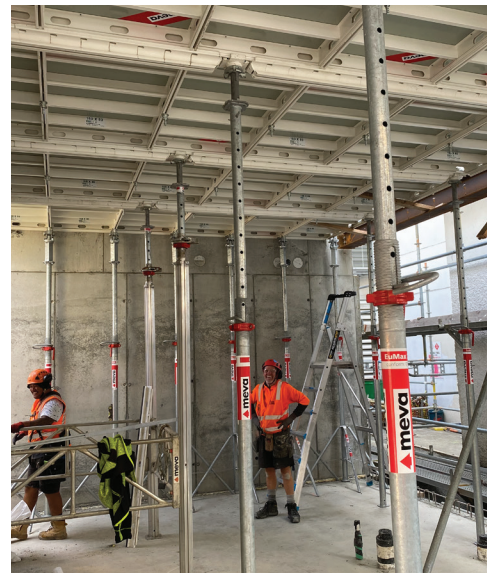
The AluFix formwork panels are a hand-set lightweight panel for concrete pressures of up to 55 kPa. They are easy to handle and assemble, no crane is required. The Alkus formface gives a great finish, pour after pour. AluFix can also be used for off-site pre-casting.

FormShore MevaDec

Pour your upper concrete slabs, mezzanine floors or cantilevered balconies using the FormShore MevaDec system. Using a simple prop and beam structure the MevaDec panels slide into place to form the soffit formwork. Steel fixers and concrete placers work on a flat stable platform protected by the FormShore advance guardrail system. The resulting flat ceiling can be left exposed, and makes the installation of partitions, sound and fire proofing easy.

FormShore Multiform

FormShore's conventional system enables complex forms and high concrete pressures to be accommodated.

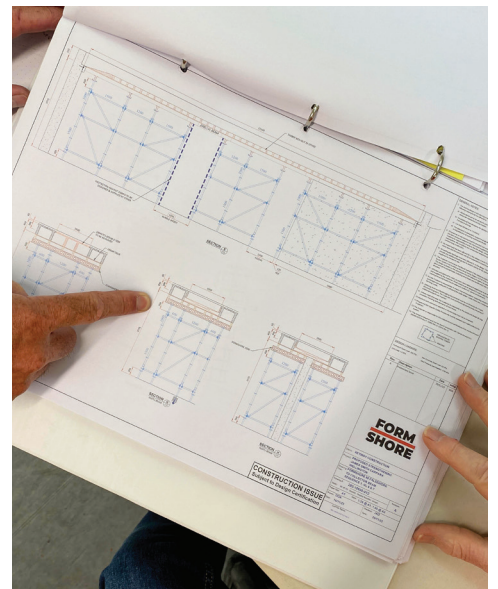
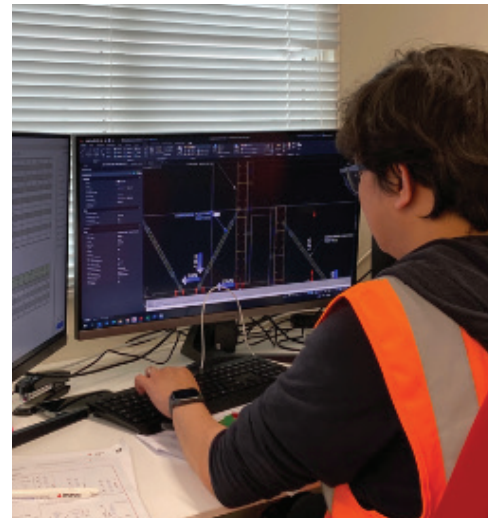


Design & Support

FormShore's engineering and design team will work with you to design a practical solution that suits your site, and your labour force. Our designs are easy to follow with fully detailed drawings tailored to your project.

FormShore's website contains a designer portal for access to our technical data sheets and CAD blocks. FormShore can review client designs on request.

Our Commercial Managers are committed to the success of your project. We are available to advise on installation and where possible will visit site to assist with the correct installation of our systems.



Contact Details

National Manager

Peter Greig

peter@formshore.co.nz

021 185 9118

Auckland Formwork

Technical Sales

Hentie van der Merwe

hentie@formshore.co.nz

021 474 492

North Island Commercial Manager

Johann Krige

johann@formshore.co.nz

021 224 7436

South Island Commercial Manager

Jesse Anderson

jesse@formshore.co.nz

021 985 972

www.formshore.co.nz



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or send an email to hire@formshore.co.nz

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