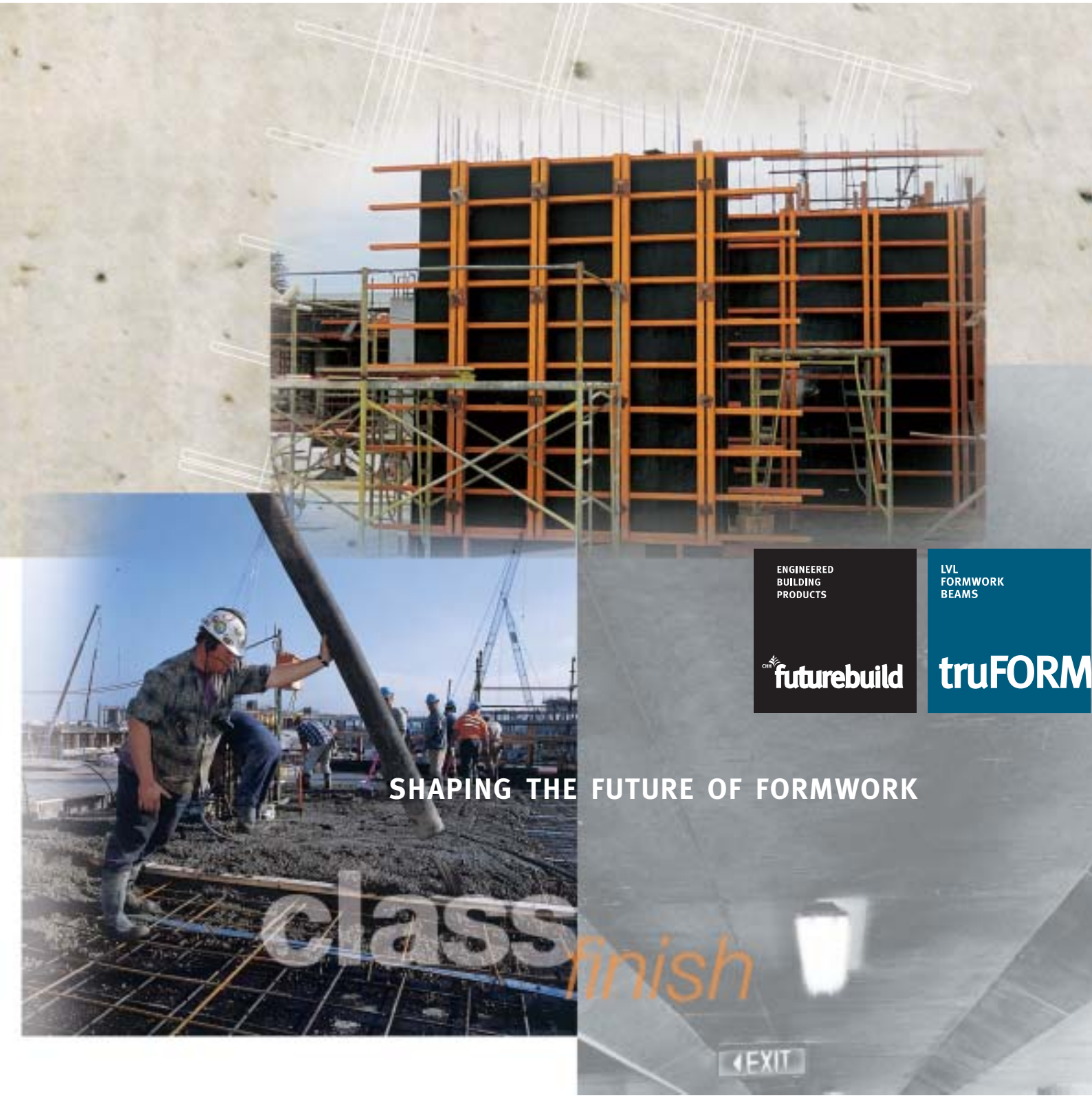

ENGINEERED
BUILDING
PRODUCTS

CHH futurebuild

LVL
FORMWORK
BEAMS

truFORM

SHAPING THE FUTURE OF FORMWORK

class finish

Truform - Description and purpose



Truform® is structural laminated veneer lumber (LVL) intended for use as concrete formwork beams – bearers, joists, walers, soldiers etc.

Available in five sizes, branded Truform, painted bright orange for moisture protection and ready identification, Truform represents a substantial improvement over conventional timber and an easier to use, more convenient alternative to other materials.

Benefits

Strength for strength, light, straight and more uniform, Truform sections will enhance productivity and reduce forming costs. The consistency and predictable structural performance of Truform will result in improved concrete finish quality.

Quality

Truform is manufactured in a fully quality controlled process to meet the requirements of AS/NZS 4357 for structural LVL. Quality control is independently audited and product quality certified by the Plywood Association of Australia (PAA). The PAA is accredited for Product Certification by the government established Joint Accreditation System of Australia and New Zealand (JAS-ANZ). A high level assurance of quality is an important consideration where safety and reliable performance must be guaranteed.

Use of Publication

The tables and other technical data provided in this publication apply only for Truform (manufactured by futurebuild). No basis whatsoever exists for claims that the data provided for Truform applies equally to lookalike substitution products: Use of the Truform data for substitution products may be unsafe or result in unsatisfactory performance.

Other Applications

For formwork applications, layouts or design criteria other than those included in this publication, software based solutions for Truform are available simply by contacting our technical support service. Contact details at the rear of this publication.

BEARER AND JOIST TABLES FOR FORMING SLAB SOFFITS

JOISTS

CONCRETE SLAB THICKNESS (mm)	TRUFORM SECTION (mm)	JOIST SPACINGS (mm)											
		225	300	400	450	480	600	225	300	400	450	480	600
		MAXIMUM SINGLE SPAN (m)						MAXIMUM MULTIPLE SPAN (m)					
100	95 x 47	1.9	1.7	1.5	1.5	1.4	1.3	2.3	2.1	1.9	1.8	1.8	1.7
	95 x 65	2.1	1.9	1.7	1.7	1.6	1.5	2.6	2.3	2.1	2.0	2.0	1.9
	130 x 65	2.8	2.6	2.4	2.3	2.2	2.1	3.5	3.2	2.9	2.8	2.7	2.5
	130 x 77	3.0	2.7	2.5	2.4	2.3	2.2	3.7	3.4	3.1	3.0	2.9	2.7
	150 x 77	3.5	3.2	2.9	2.8	2.7	2.5	4.3	3.9	3.5	3.4	3.3	3.1
150	95 x 47	1.8	1.6	1.5	1.4	1.4	1.3	2.2	2.0	1.8	1.7	1.7	1.6
	95 x 65	2.0	1.8	1.6	1.6	1.5	1.4	2.4	2.2	2.0	1.9	1.9	1.8
	130 x 65	2.7	2.4	2.2	2.1	2.1	1.9	3.3	3.0	2.7	2.6	2.6	2.4
	130 x 77	2.9	2.6	2.4	2.3	2.2	2.1	3.5	3.2	2.9	2.8	2.7	2.5
	150 x 77	3.3	3.0	2.7	2.6	2.6	2.4	4.1	3.7	3.4	3.2	3.2	2.9

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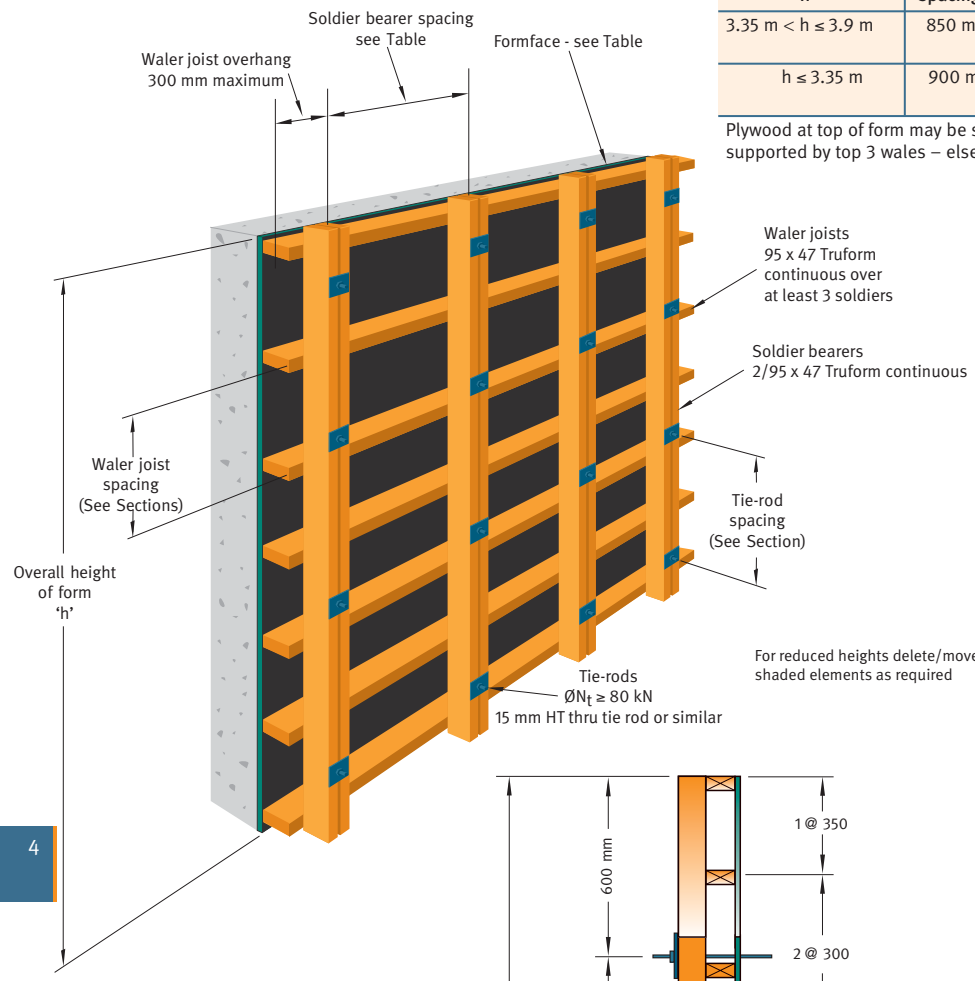
Standard Vertical Forms

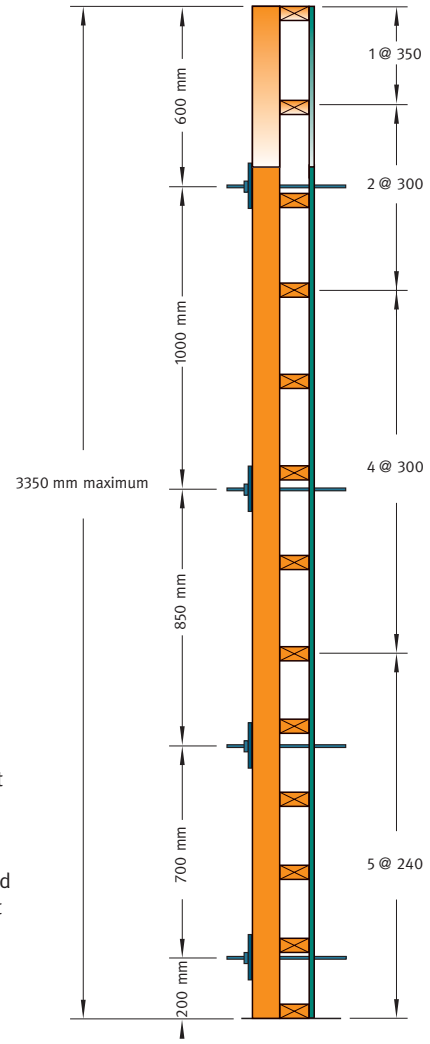
2.8 to 3.9 metres high – Wales supporting formface



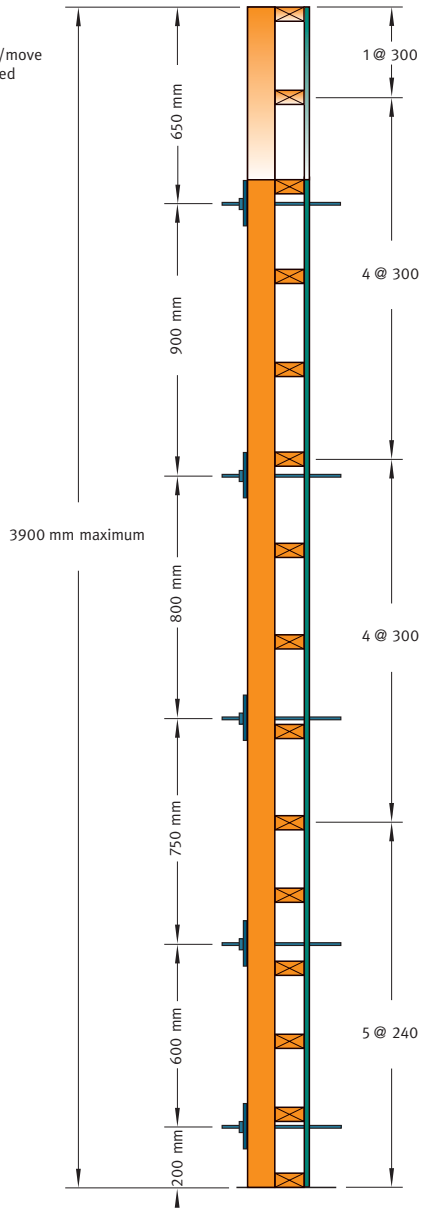
Overall form height 'h'	Soldier bearer spacing	Plywood Construction Code, Stress Grade & orientation
3.35 m < h ≤ 3.9 m	850 mm max.	17-10-7, F14, Face grain horizontal only 17-10-7, F17, Face grain vertical/horizontal
h ≤ 3.35 m	900 mm max.	17-10-7, F11, Face grain horizontal only 17-10-7, F14, Face grain vertical/horizontal

Plywood at top of form may be single span, supported by top 2 wales or 2 span continuous supported by top 3 wales – elsewhere ply must be continuous over 3 or more spans.

For reduced heights delete/move shaded elements as required



Section
Forms 2.8 to 3.35 m High



Section
Forms 3.4 to 3.9 m High

General Notes for Standard Vertical Forms

1. Specifications intended for achievement of Class 3 finish.
2. Designs based upon hydrostatic pressure distribution.
3. Formface specifications assume plywood continuous over 3 or more spans except where noted otherwise.
4. Holes for tie bolts must not be bored through soldier or waler joists.

BEARER AND JOIST TABLES FOR FORMING SLAB SOFFITS continued

JOISTS continued

CONCRETE SLAB THICKNESS (mm)	TRUFORM SECTION (mm)	JOIST SPACINGS (mm)											
		225	300	400	450	480	600	225	300	400	450	480	600
		MAXIMUM SINGLE SPAN (m)						MAXIMUM MULTIPLE SPAN (m)					
200	95 x 47	1.7	1.5	1.4	1.3	1.3	1.2	2.1	1.9	1.7	1.6	1.6	1.5
	95 x 65	1.9	1.7	1.5	1.5	1.5	1.4	2.3	2.1	1.9	1.8	1.8	1.7
	130 x 65	2.6	2.3	2.1	2.0	2.0	1.9	3.2	2.9	2.6	2.5	2.5	2.3
	130 x 77	2.7	2.5	2.2	2.2	2.1	2.0	3.4	3.0	2.8	2.7	2.6	2.4
	150 x 77	3.1	2.8	2.6	2.5	2.4	2.3	3.9	3.5	3.2	3.1	3.0	2.8
300	95 x 47	1.5	1.4	1.3	1.2	1.2	1.1	1.9	1.7	1.6	1.5	1.5	1.4
	95 x 65	1.7	1.6	1.4	1.4	1.3	1.3	2.1	1.9	1.8	1.7	1.7	1.5
	130 x 65	2.4	2.2	2.0	1.9	1.8	1.7	2.9	2.7	2.4	2.3	2.3	2.1
	130 x 77	2.5	2.3	2.1	2.0	2.0	1.8	3.1	2.8	2.6	2.5	2.4	2.2
	150 x 77	2.9	2.6	2.4	2.3	2.3	2.1	3.6	3.2	3.0	2.8	2.8	2.6
400	95 x 47	1.5	1.3	1.2	1.2	1.1	1.0	1.8	1.6	1.5	1.4	1.4	1.3
	95 x 65	1.6	1.5	1.3	1.3	1.3	1.2	2.0	1.8	1.7	1.6	1.6	1.4
	130 x 65	2.2	2.0	1.9	1.8	1.7	1.6	2.7	2.5	2.3	2.2	2.1	2.0
	130 x 77	2.4	2.1	2.0	1.9	1.8	1.7	2.9	2.6	2.4	2.3	2.3	2.1
	150 x 77	2.7	2.5	2.2	2.2	2.1	2.0	3.4	3.0	2.8	2.7	2.6	2.4
600	95 x 47	1.3	1.2	1.1	1.0	1.0	1.0	1.6	1.5	1.3	1.3	1.3	1.2
	95 x 65	1.5	1.3	1.2	1.2	1.1	1.1	1.8	1.7	1.5	1.4	1.4	1.3
	130 x 65	2.0	1.8	1.7	1.6	1.6	1.5	2.5	2.3	2.1	2.0	1.9	1.8
	130 x 77	2.1	1.9	1.8	1.7	1.7	1.5	2.6	2.4	2.2	2.1	2.0	1.9
	150 x 77	2.5	2.2	2.0	2.0	1.9	1.8	3.0	2.8	2.5	2.4	2.4	2.2
1000	95 x 47	1.1	1.0	0.9	0.9	0.9	0.8	1.4	1.3	1.2	1.1	1.1	1.0
	95 x 65	1.3	1.2	1.1	1.0	1.0	0.9	1.6	1.4	1.3	1.2	1.2	1.1
	130 x 65	1.8	1.6	1.4	1.4	1.4	1.3	2.2	2.0	1.8	1.7	1.7	1.6
	130 x 77	1.9	1.7	1.5	1.5	1.4	1.3	2.3	2.1	1.9	1.8	1.8	1.8
	150 x 77	2.1	1.9	1.8	1.7	1.7	1.5	2.6	2.4	2.2	2.1	2.0	1.9

BEARERS

CONCRETE SLAB THICKNESS (mm)	TRUFORM SECTION (mm)	BEARER SPACINGS (mm)											
		900	1200	1500	1800	2100	2400	900	1200	1500	1800	2100	2400
		MAXIMUM SINGLE SPAN (m)						MAXIMUM MULTIPLE SPAN (m)					
100	95 x 65	1.3	1.2	1.1	1.0	1.0	0.9	1.6	1.5	1.4	1.3	1.2	1.1
	130 x 65	1.8	1.6	1.5	1.4	1.4	1.3	2.2	2.0	1.9	1.7	1.6	1.5
	130 x 77	1.9	1.7	1.6	1.5	1.4	1.4	2.3	2.1	2.0	1.9	1.7	1.6
	150 x 77	2.2	2.0	1.9	1.7	1.7	1.6	2.7	2.5	2.3	2.2	2.0	1.9
150	95 x 65	1.2	1.1	1.0	1.0	0.9	0.9	1.5	1.4	1.3	1.2	1.1	1.0
	130 x 65	1.7	1.5	1.4	1.3	1.3	1.2	2.1	2.0	1.8	1.6	1.5	1.4
	130 x 77	1.8	1.6	1.5	1.4	1.4	1.3	2.2	2.0	1.9	1.7	1.6	1.5
	150 x 77	2.1	1.9	1.8	1.6	1.6	1.5	2.6	2.3	2.2	2.0	1.9	1.7
200	130 x 65	1.6	1.5	1.4	1.3	1.2	1.2	2.0	1.8	1.7	1.5	1.4	1.3
	130 x 77	1.7	1.6	1.4	1.4	1.3	1.2	2.1	1.9	1.8	1.6	1.5	1.4
	150 x 77	2.0	1.8	1.7	1.6	1.5	1.4	2.4	2.2	2.1	1.9	1.8	1.6
300	130 x 65	1.5	1.4	1.3	1.2	1.1	1.1	1.8	1.7	1.5	1.4	1.3	1.2
	130 x 77	1.6	1.4	1.3	1.3	1.2	1.1	2.0	1.8	1.6	1.5	1.4	1.3
	150 x 77	1.8	1.7	1.5	1.5	1.4	1.3	2.3	2.0	1.9	1.7	1.6	1.5
400	130 x 65	1.4	1.3	1.2	1.1	1.1	1.0	1.7	1.5	1.4	1.3	1.2	1.1
	130 x 77	1.5	1.4	1.3	1.2	1.1	1.1	1.8	1.7	1.5	1.4	1.3	1.2
	150 x 77	1.7	1.6	1.4	1.4	1.3	1.2	2.1	1.9	1.7	1.6	1.5	1.4
600	130 x 65	1.3	1.2	1.1	1.0	1.0	0.9	1.6	1.3	1.2	1.1	1.0	1.0
	130 x 77	1.3	1.2	1.1	1.1	1.0	1.0	1.7	1.5	1.3	1.2	1.1	1.0
	150 x 77	1.6	1.4	1.3	1.2	1.2	1.1	1.9	1.7	1.5	1.4	1.3	1.2
1000	130 x 65	1.1	1.0	0.9	0.9	0.8	0.8	1.3	1.1	1.0	0.9	0.8	0.8
	130 x 77	1.2	1.1	1.0	0.9	0.9	0.8	1.4	1.2	1.1	1.0	0.9	0.9
	150 x 77	1.4	1.2	1.1	1.1	1.0	1.0	1.6	1.4	1.3	1.1	1.1	1.0

1. Design for the bearer and joist tables presented above includes a 4 kPa allowance for stacked materials in accordance with AS 3610. Where the stacked material load is reduced in accordance with AS 3610, then spans used may be larger than those given above - refer formwork designer.
2. In the preparation of the above tables, deflections were limited to the greater of span/270 or 3 mm. Finish quality is however also dependant upon combinations of sheeting, joist, bearer and support deformations and upon the accuracy of alignment in set-up. The use of the tables should not therefore be interpreted to necessarily guarantee the achievement of a Class 3 finish.
3. For multiple spans, the design has assumed, (a) the most conservative of two or three span use, (b) all spans equally loaded, and (c) all spans equal.
5. Truform used in accordance with the above tables need not be provided with intermediate lateral restraint.
6. Span values may be interpolated for intermediate slab thicknesses.

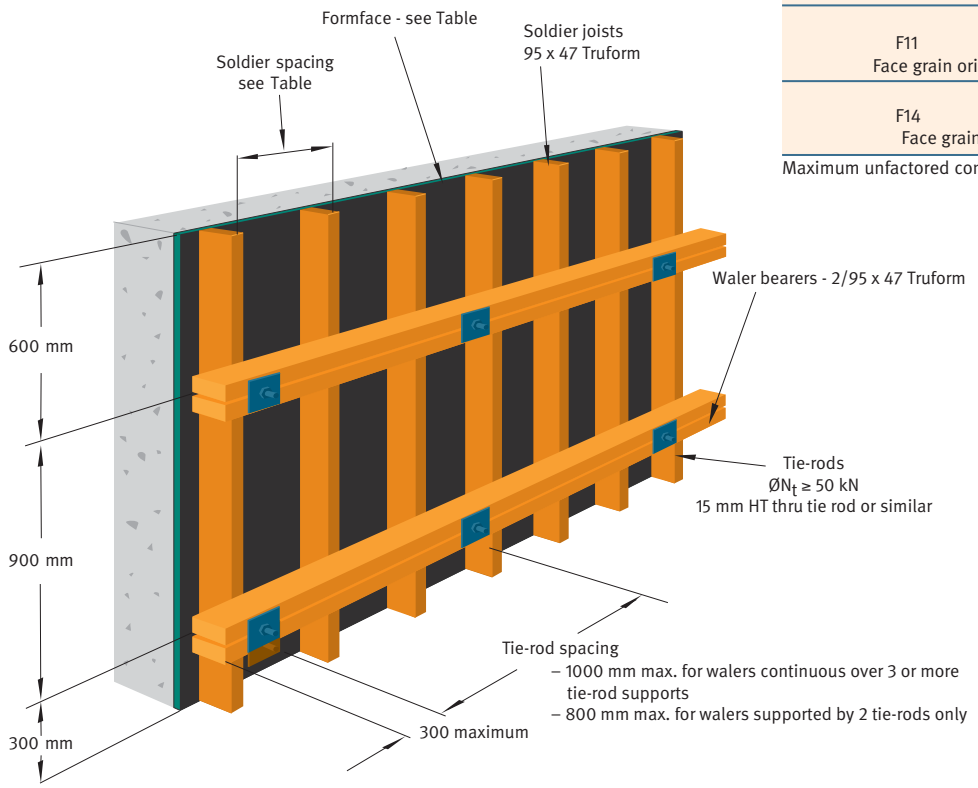
Standard Vertical Forms

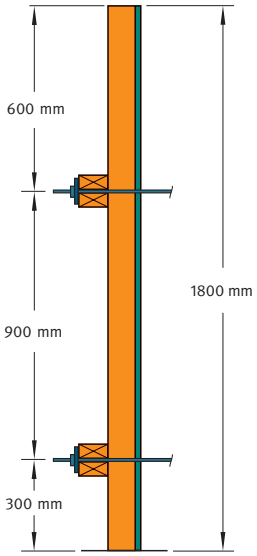
Up to 1.8 metres high – Soldiers supporting formface

FORMFACE SPECIFICATION (for 1.8 m high form)

SOLDIER SPACINGS		
300	400	450
Plywood Construction, Stress Grade & Sheet orientation		
17-10-7		
F11	F17	F27
Face grain orientated horizontally or vertically		
17-16-7		
F14	NS	NS
Face grain orientated horizontally only		

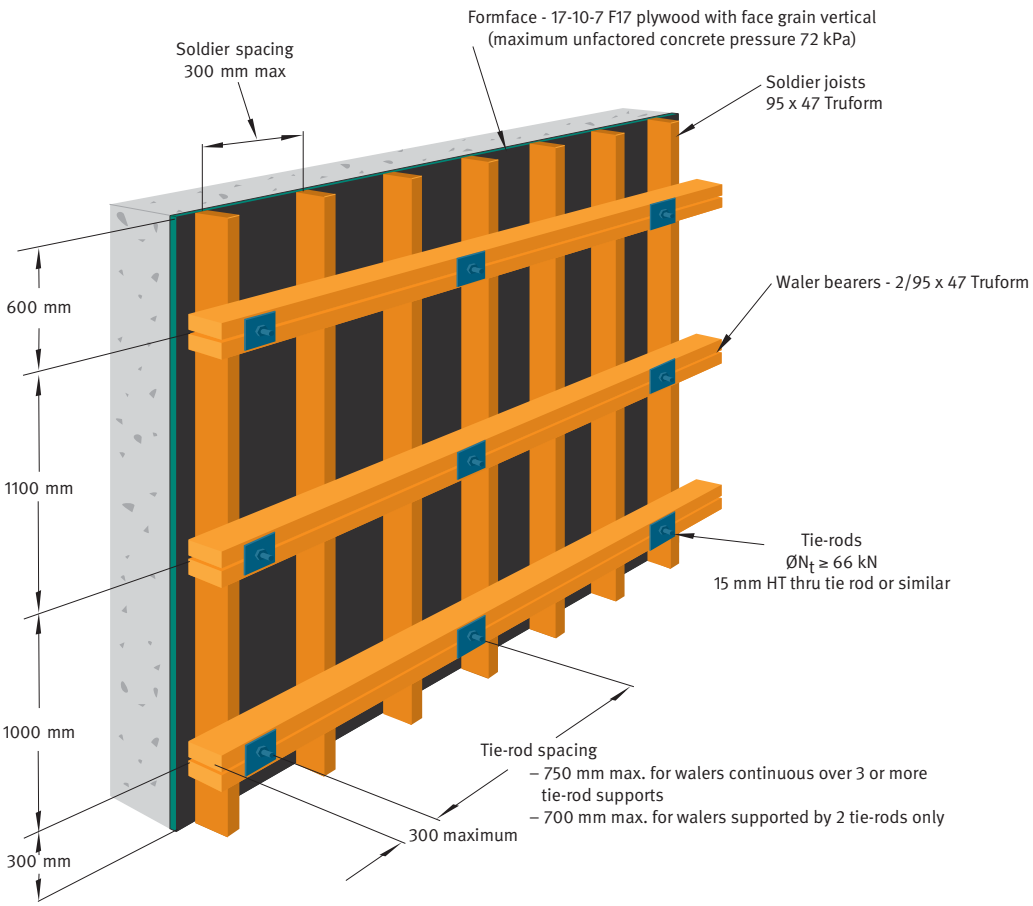
Maximum unfactored concrete pressure 43 kPa

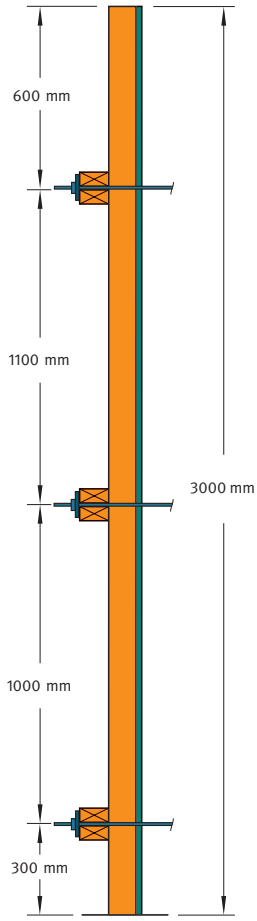




SECTION

Up to 3.0 metres high – Soldiers supporting formface





SECTION

TRUFORM SPECIFICATION

Truform is structural LVL manufactured and structurally characterised to the requirements of AS/NZS 4357.

Veneer

Species	Radiata Pine	
Grade	D	AS/NZS 2269
Thickness	3mm	
Joints	3 outer plies are scarf jointed, inner plies are butt/scarf Jointed	

Adhesive Phenolic

Bond Type A (Marine) AS/NZS 2098 & AS 2754

Density 580 kg/m^3 approximately

Finish Arris's removed – (approx. 3 mm chamfer) painted orange

Branding Truform
PAA and JAS-ANZ logos

Tolerances

Depth	-0 mm, +2 mm
Thickness	-2 mm, +2 mm
Length	-0, +10 mm
Spring	< (L/1000)

STANDARDS AND QUALITY

Product Certified by the Plywood Association of Australasia (PAA) for conformity with AS/NZS 4357. The PAA is accredited for Product Certification by the government established Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

PRODUCT CERTIFIED tested STRUCTURAL paa plywood Laminated Veneer Lumber to AS/NZS4357 JAS-ANZ

Structural Design

The tabular data and standard designs provided in this publication have been prepared in accordance with the following Australian design Standards;
AS 3610 – 1990 Formwork for concrete
AS 1720.1 – 1997 Timber structures, Part 1; Design methods
Using structural design properties determined in accordance with,
AS/NZS 4357 Structural laminated veneer lumber.

Standard Truform Sections & Mass

Truform Section d x b mm	Mass kg/m
95 x 47	2.6
95 x 65	3.6
130 x 77	5.8
150 x 77	6.7

Readily available in standard lengths (m) 3.6, 4.2, 4.8, 5.4 & 6.0.
Other lengths available on request.

Available From:

22 Prospect Street
PO Box 425
Box Hill Victoria 3128
Australia

Sales Enquiries
Freecall 1800 284 792
Facsimile (08) 8739 7313

Technical Enquiries – Timberbuilt Pty Ltd
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