

LVL FORMWORK BEAMS & EDGE BOARDS

truFORM® edgeFORM®

ENGINEERED FORMWORK
SOLUTIONS

MARCH 2014

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1.0 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 three sizes, branded truFORM, painted bright orange for moisture protection and ready identification, truFORM represents a substantial improvement over conventional timber and is an easier to use, more convenient alternative to other materials.

1.1 BENEFITS

Strong, 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.

1.2 STANDARDS AND 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 Engineered Wood Products Association of Australasia (EWPAA). The EWPAA 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.



1.3 USE OF PUBLICATION

The tables and other technical data provided in this publication apply only for truFORM (manufactured by Carter Holt Harvey® Woodproducts). 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.

1.4 truFORM® SPECIFICATION

truFORM® is structural LVL manufactured and structurally characterised to the requirements of AS/NZS 4063.2: 2010 section 4. The tabulated data and standard design in this publication have been prepared in accordance with the following Australian Design Standards:

- AS 3610: 1995 Formwork for Concrete
- AS 1720.1: 2010 – Timber Structures using design characteristic values determined in accordance with AS/NZS 4063.2: 2010 section 4.

TABLE 1: DESCRIPTION

Profile		
Veneer	Species	Radiata Pine
	Thickness	3 – 4mm
	Joints Face	Scarf
	Joints Other	Butt/Scarf
Adhesive	Phenolic	
Bond	Type A (Marine) (AS/NZS 2098 & AS 2754)	
Density	580 kg/m ³ approximately	
Finish	Arrises removed – (approx. 3 mm chamfer) painted orange	
Branding	truform, EWPA and JAS-ANZ logos	
Tolerances	Depth	-0 mm, +2 mm
	Thickness	-2 mm, +2 mm
	Spring	<(L/1000)

1.5 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 – 2010 Timber structures,
Part 1; Design methods

TABLE 2: STANDARD truFORM® SECTIONS & MASS

truFORM® Section d x b (mm)	Mass (kg/m)	Standard* Lengths (m)
95 x 47	2.6	5.4, 6.0
95 x 65	3.6	4.8, 6.0
150 x 77	6.7	5.4, 6.0

*Other lengths available on request.

1.6 SOFTWARE SOLUTIONS

CHH Woodproducts now has an APP to aid in the design and specifications of truFORM and gripFORM uses in slab soffits.

Go to <https://play.google.com/store/apps/details?id=com.chh.formsite>



2.0 BEARER AND JOIST TABLES FOR FORMING SLAB SOFFITS

TABLE 3: 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	1.8	1.7	1.5	1.5	1.4	1.3	2.3	2.1	1.9	1.8	1.8	1.6
	95 x 65	2.1	1.9	1.7	1.6	1.6	1.5	2.5	2.3	2.1	2.0	2.0	1.8
	150 x 77	3.4	3.1	2.8	2.7	2.7	2.5	4.3	3.9	3.5	3.4	3.3	3.1
150	95 x 47	1.7	1.6	1.4	1.4	1.4	1.3	2.2	2.0	1.8	1.7	1.7	1.5
	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	1.7
	150 x 77	3.3	3.0	2.7	2.6	2.6	2.4	4.0	3.7	3.4	3.2	3.1	2.9
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	1.4
	95 x 65	1.9	1.7	1.5	1.5	1.4	1.3	2.3	2.1	1.9	1.8	1.8	1.7
	150 x 77	3.1	2.8	2.6	2.5	2.4	2.3	3.8	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	1.3
	95 x 65	1.7	1.6	1.4	1.4	1.3	1.2	2.1	1.9	1.8	1.7	1.7	1.5
	150 x 77	2.9	2.6	2.4	2.3	2.2	2.1	3.6	3.2	2.9	2.8	2.8	2.6
400	95 x 47	1.4	1.3	1.2	1.1	1.1	1.0	1.8	1.6	1.5	1.4	1.3	1.2
	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
	150 x 77	2.7	2.5	2.2	2.1	2.1	2.0	3.3	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	1.2	1.2	1.0
	95 x 65	1.5	1.3	1.2	1.2	1.1	1.1	1.8	1.6	1.5	1.4	1.4	1.2
	150 x 77	2.5	2.2	2.0	1.9	1.9	1.8	3.0	2.8	2.5	2.4	2.3	2.1
1000	95 x 47	1.1	1.0	0.9	0.9	0.9	0.8	1.4	1.2	1.1	1.0	1.0	0.9
	95 x 65	1.3	1.2	1.1	1.0	1.0	0.9	1.96	1.4	1.3	1.2	1.2	1.0
	150 x 77	2.1	1.9	1.8	1.7	1.7	1.5	2.6	2.4	2.1	2.0	1.9	1.7

TABLE 4: BEARERS

Concrete Slab Thickness (mm)	truFORM® Section (mm)	Joist 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	1.4	1.2	1.1	1.0	1.0
	150 x 77	2.2	2.0	1.8	1.7	1.6	1.6	2.6	2.2	2.0	1.8	1.7	1.6
150	95 x 65	1.2	1.1	1.0	1.0	0.9	0.8	1.5	1.3	1.2	1.1	1.0	0.9
	150 x 77	2.1	1.9	1.7	1.6	1.6	1.5	2.4	2.1	1.9	1.7	1.6	1.5
200	150 x 77	2.0	1.8	1.7	1.6	1.5	1.4	2.3	2.0	1.8	1.6	1.5	1.4
300	150 x 77	1.8	1.7	1.5	1.5	1.4	1.3	2.1	1.8	1.6	1.5	1.4	1.3
400	150 x 77	1.7	1.6	1.4	1.4	1.3	1.2	1.9	1.7	1.5	1.4	1.3	1.2
600	150 x 77	1.5	1.4	1.3	1.2	1.1	1.0	1.7	1.5	1.3	1.2	1.1	1.0
1000	150 x 77	1.3	1.2	1.1	1.0	0.9	0.9	1.4	1.2	1.1	1.0	0.9	0.8

Notes for Joist & Bearer Span Tables

- 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.
- 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 (refer AS 3610).
- 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.
- truFORM® used in accordance with the above tables need not be provided with intermediate lateral restraint.
- Span values may be interpolated for intermediate slab thicknesses.

3.0 STANDARD VERTICAL FORMS

Figure 1: Up to 18 Metres High - Soldiers Supporting Formface

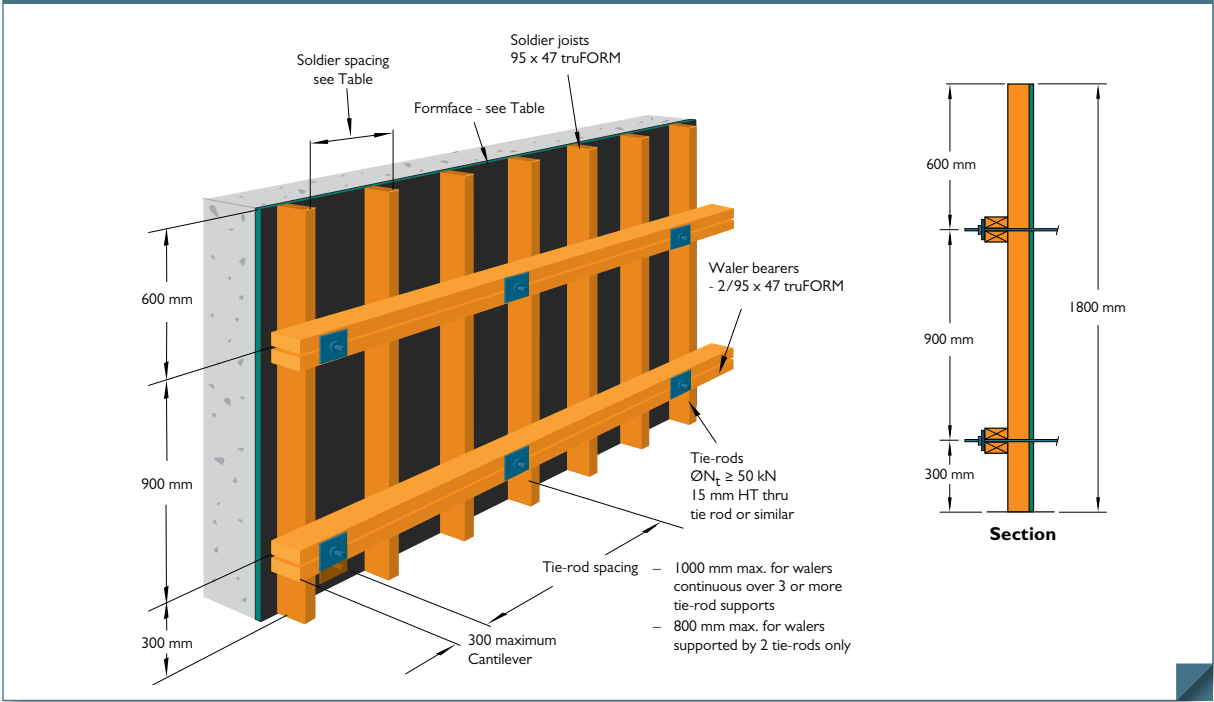


TABLE 5: PLYWOOD FORMFACE SPECIFICATION

Construction	Face Grain Orientation	Soldier Spacings		
		300	400	450
17-10-7	Horizontal or vertical	F11	F17	F27
17-16-7	Horizontal only	F14	-	-

Maximum unfactored concrete pressure 43 kPa

Figure 2: Up to 3.0 Metres High – Soldiers Supporting Formface

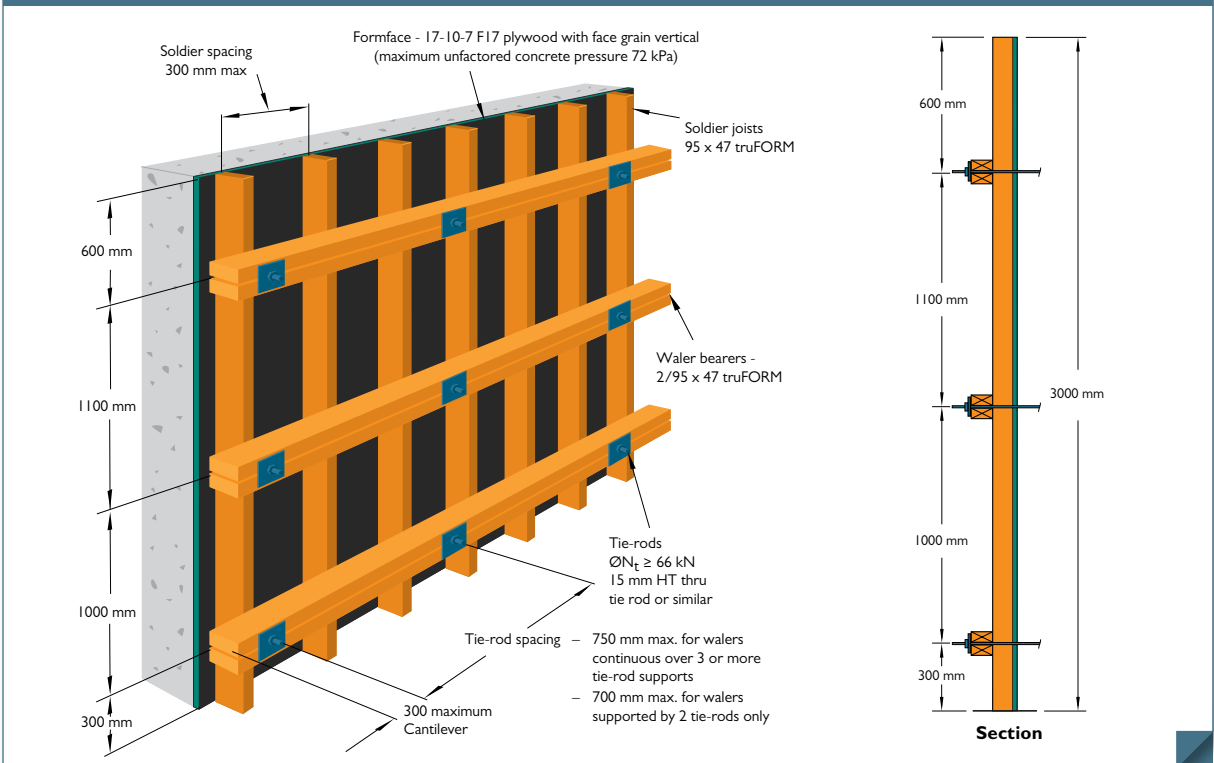


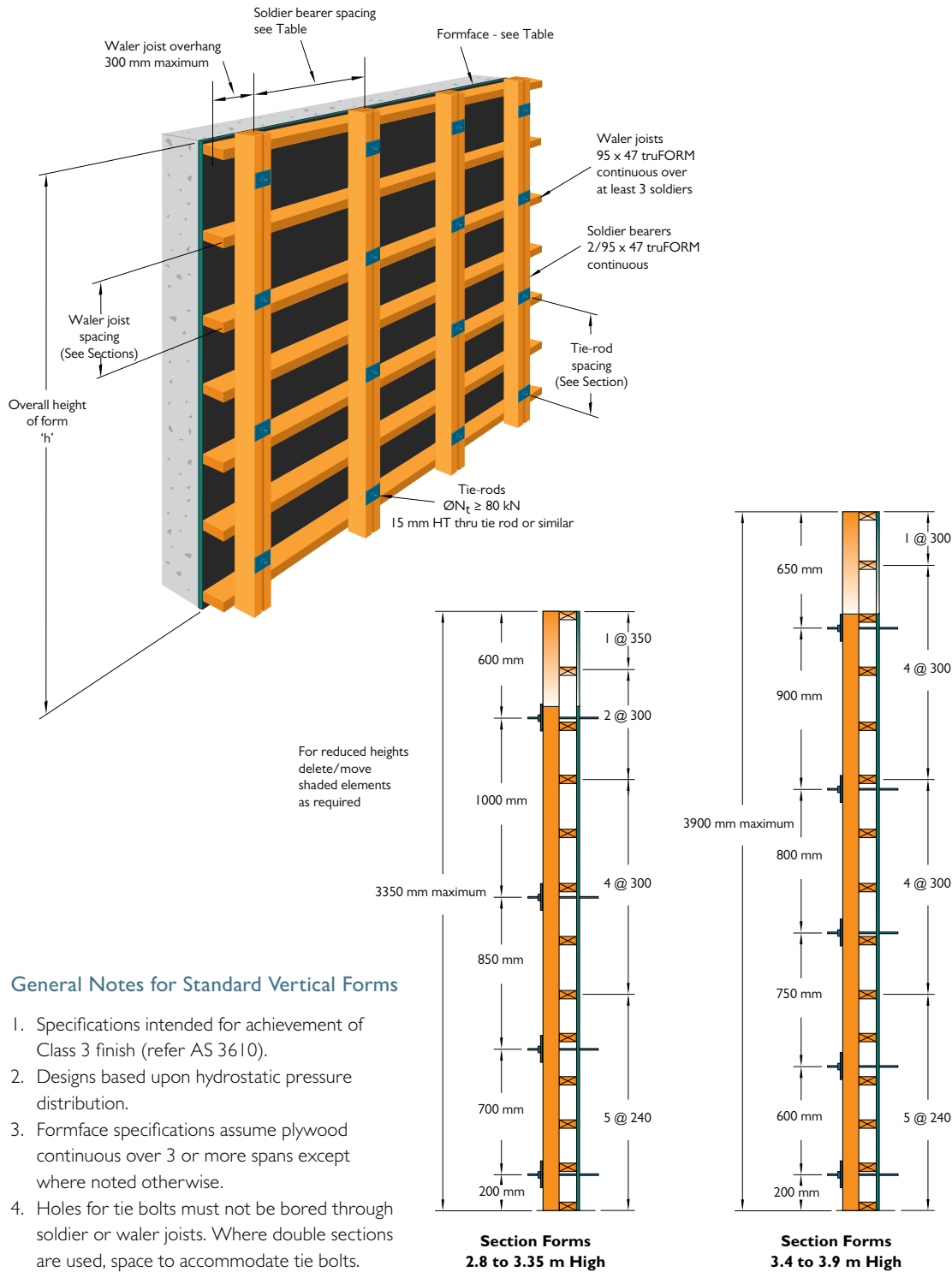


TABLE 6: 2.8 TO 3.9 METRES HIGH – WALERS SUPPORTING FORMFACE

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 walers or 2 span continuous supported by top 3 walers – elsewhere ply must be continuous over 3 or more spans.

Figure 3: 2.8 to 3.9 Metres High – Walers Supporting Formface



General Notes for Standard Vertical Forms

1. Specifications intended for achievement of Class 3 finish (refer AS 3610).
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. Where double sections are used, space to accommodate tie bolts.

4.0 edgeFORM® – DESCRIPTION AND PURPOSE

edgeFORM® by Carter Holt Harvey® Woodproducts is Laminated Veneer Lumber (LVL) specially prepared for use in concrete formwork applications as edgeboards. edgeform is arried and painted red for moisture protection and ready identification. edgeFORM is light, straight and more uniform than traditional alternatives.



TABLE 7: edgeFORM® SIZES

edgeFORM® sizes (mm)		
150 x 36	200 x 36	240 x 36

Stocked length 6.0m, other lengths available by request.



Manufactured to the requirement of AS/NZS 4357 and properties evaluated in accordance with AS/NZS 4063.2: 2010 section 4. Structural Laminated Veneer Lumber: Product certified by the Engineered Wood Product Association of Australasia – your guarantee of performance.



NOTES

The logo for 'the futurebuild range' features a stylized tree icon to the left of the text. 'the' is in a smaller, lowercase font above 'futurebuild', which is in a larger, bold, lowercase font. 'range' is in a smaller, lowercase font below 'futurebuild'.

the
futurebuild®
range

The logo for Carter Holt Harvey Woodproducts New Zealand features a stylized tree icon to the left of the text. 'CarterHoltHarvey' is in a large, bold, sans-serif font, and 'Woodproducts New Zealand' is in a smaller, sans-serif font below it.

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