

BEST PRACTICE TIPS TO ENSURE A SUCCESSFUL INFINITY INSTALLATION






This summary of critical installation points in no way replaces the full Infinity Installation Guide which is available for download on www.eva-last.com. It is recommended that you download and familiarise yourself with the full Installation Guide.

CRITICAL INSTALLATION POINTS

Substructure:

- Plan your substructure to align with the intended deck layout.
- Ensure the substructure members are appropriately sized for the requisite spans. Ensure the installation thereof is sound and level. Ensure suitable connections are utilised between members and between the substructure and the applicable substrate. Consult an appropriately qualified professional wherever necessary.
- Use appropriate spans. This will depend on regional legislative requirements. Most regions require the satisfaction of both ultimate and serviceability conditions.

The table below summarises the achievable span of various profiles for the conditions outlined above and in Section 4.1. The profiles moment of inertia and elastic section modulus is also captured for convenience. For additional information please refer to the Infinity TDS or email rad@eva-last.com.

Profile details					Maximum span (Metric - mm)					
Profile code	Profile shape	Moment of inertia, Ix (mm4)	Elastic sectional modulus, Sx (mm3)	US approach		Eurocode (and similar) approach				EN 15334
				Ultimate	Serviceability	Residential (2 kPa)		Commercial (4 kPa)		
						Ultimate	Serviceability	Ultimate	Serviceability	
 STGJ02AE	I-Series - Grooved deck board	144 053	10 292	406	406	500	500	450	450	400
 STGJ113	I-Series 113 - Grooved deck board	124 689	8 434	406	406	500	500	400	400	300
 STGJ07AE	I-Series - Wide Grooved Deck Board	132 923	10 426	406	406	500	500	450	450	400
 STGJ131	Solid Grooved Deck Board	136 768	11 893	406	406	500	500	450	450	400
 STGJ02AE	Solid square edge board	189 274	14 903	406	406	500	500	450	450	400

Profile details				Maximum span (Imperial – inches)						
Profile code	Profile shape	Moment of inertia, I _x (mm ⁴)	Elastic sectional modulus, S _x (mm ³)	US approach		Eurocode (and similar) approach				EN 15334
				Ultimate	Serviceability	Residential (2 kPa)		Commercial (4 kPa)		
						Ultimate	Serviceability	Ultimate	Serviceability	
<i>Infinity_z</i> STGJ02AE	I-Series - Grooved deck board	0.35	0.63	16	16	20	20	18	18	16
<i>Infinity_z</i> STGJ113	I-Series 113 - Grooved deck board	0.29	0.52	16	16	20	20	16	16	12
<i>Infinity_z</i> STGJ07AE	I-Series - Wide Grooved Deck Board	0.32	0.64	16	16	20	20	18	18	16
<i>Infinity</i> STGJ131	Solid Grooved Deck Board	0.33	0.73	16	16	20	20	18	18	16
<i>Infinity</i> STGJ02AE	Solid square edge board	0.46	0.91	16	16	20	20	18	18	16

- The information provided herein is purely indicative and all applications should be assessed and/or designed by a competent professional irrespective. See section 4.1 of the Installation Guide for more information.
- Support boards along all cut edges.
- Use double joists at all butts joins so that both board edges are fully supported.
- Use noggins between joists where breaker boards are used. The spans between noggins must not be greater than the maximum centre-to-centre span of Infinity and I-Series.

Fastening:

- Hulk halo (s-series) or Chain Collated Clips must be used when installing Infinity profiles. The manufacturer cannot guarantee a successful install using other decking clip brands which could then affect your warranty.
- Use two fasteners (hidden clips or t op fixings) at every joist.
- Boards wider than 150 mm (5.906”) require three fasteners per joist when top fixed.
- Maintain a clip fastening distance of between 10 mm (0.379”) (minimum) and 20 mm (0.788”) (maximum) from the end of the board.
- When top fixing boards (decking and fascia), ensure a spacing of 30 mm (1.182”) between fasteners and from any board edge.
- Appropriate fasteners must be used when top fixing.
- Do not over-tighten any fasteners. The torque setting of your driver must be less than 30% of the maximum allowable.
- When installing I-Series profiles use an adjustable depth stopping bit or collar to prevent overdriving.

Ripping:

- Use a solid profile when it is necessary to rip a profile.
- I-Series profiles can be ripped but must have a minimum of 2 feet after ripping with a overhang no greater than the foot width.
- Do not rip solid groove boards narrower than 60 mm (2.113") or square edged boards narrower than 90 mm (3.554").

Trim or Fascia:

- Install your trim or fascia beneath the lip of the boarder board.
- Leave a small gap between the trim and deck board for expansion and contraction.
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Expansion:

- Infinity can expand and contract up to similar rates experienced with typical wood-plastic composite materials.
- To allow for an appropriate expansion gap per board, multiply the length of the board (**L**) by 0.04 (0.000022) and by the difference between the installation temperature and the possible maximum temperature of the boards (Change in Temp.):
- Change in board length = **L x 0.04 x Change in Temp.**

Example: Change in board length = $5.45\text{m} \times 0.04 \times (36 - 18) \parallel (18' \times 0.000022 \times (96.8 - 64.4))$

Change in board length = 3.924mm \parallel (0.155")

Expansion gap = $3.924\text{mm} / 2 \parallel (0.270" / 2)$

Expansion gap = 1.962 mm (0.078") (either end of the board)

Please refer to Section 3.5.1 in the full Infinity installation guide for more information on this topic.

- Use the same method to estimate maximum gap size (when boards are fully contracted) to ensure this is suitable for the project.
- Where the expected temperature range is high consider using lighter coloured deck boards to reduce the required expansion gap.
- To further reduce the expansion gap, boards can be cut to shorter lengths.
- Breaker boards must be used between boards that are installed end-to-end to assist in controlling expansion and contraction.
- Use boarder boards around the perimeter of an installation to further assist in controlling expansion and contraction.
- Do not use grooved decking boards for stairs, breakers and/or boarder boards, only use square edge boards.
- If the expansion and contraction is not managed appropriately, the warranty may be affected.



Before installing, please ensure you have downloaded the latest installation guide by scanning this code.

Infinity profile family

Below is a summary of profiles available in the Infinity material technology. Please refer to www.eva-last.com for profiles available to your regions.

Profile ID	Application type	Board width (mm) (inch)	Thickness (mm) (inch)	Mass per meter (kg/m) (lb/ft)	Cover width (1) (mm) (inch)	Coverage (2) (m/m²) (ft/ft²)	Coverage mass (3) (kg/m²) (lb/ft²)
<i>Infinity</i> STGJ06AE	I-Series - Grooved deck board	136.0 (5.355)	23.0 (0.905)	2.7 (1.81)	142.0 (5.591)	7.0 (2.133)	19.4 (3.94)
<i>Infinity</i> STGJ07AE	I-Series - Wide Grooved Deck Board	173.4 (6.827)	23.0 (0.905)	3.4 (2.29)	179.4 (7.063)	5.6 (1.707)	19.2 (3.93)
<i>Infinity</i> STGJ131	Solid Grooved Deck Board	136.0 (5.355)	23.0 (0.905)	3.9 (2.62)	142.0 (5.591)	7.0 (2.133)	27.6 (5.65)
<i>Infinity</i> STGJ132	Solid starter board - Single sided starter	173.4 (6.827)	23.0 (0.905)	4.0 (2.69)	142.0 (5.591)	7.0 (2.133)	28.1 (5.76)
<i>Infinity</i> STGJ02AE	I-Series - Grooved deck board	136.0 (5.355)	25.4 (1.000)	3.0 (2.01)	142.0 (5.591)	7.0 (2.133)	20.8 (4.26)
<i>Infinity</i> STGJ03AE	I-Series - Square edge deck board	136.0 (5.355)	25.4 (1.000)	2.9 (1.95)	142.0 (5.591)	7.0 (2.133)	20.2 (4.14)
<i>Infinity</i> STGJ04AE	I-Series - Starter grooved board	136.0 (5.355)	25.4 (1.000)	2.8 (1.88)	142.0 (5.591)	7.0 (2.281)	19.4 (3.97)
<i>Infinity</i> STGJ113	I-Series 113 - Grooved deck board	134.1 (5.280)	25.4 (1.000)	2.4 (1.61)	140.1 (5.516)	7.5 (2.286)	17.9 (3.67)
<i>Infinity</i> STGJ04XX	Solid grooved deck board	140.0 (5.512)	23.0 (0.905)	4.5 (3.02)	146.0 (5.749)	6.8 (2.073)	30.5 (6.25)
<i>Infinity</i> STGJ02AEN	Solid square edge board	140.0 (5.512)	25.5 (1.000)	4.4 (2.96)	146.0 (5.749)	6.8 (2.073)	30.3 (6.21)
<i>Infinity</i> STGJ30	Solid square edge deck board	140.0 (5.512)	23.0 (0.905)	3.9 (2.62)	146.0 (5.749)	6.8 (2.073)	26.6 (5.45)
<i>Infinity</i> STGJ0.5	Solid square edge deck board	140.0 (5.512)	25.4 (1.000)	4.0 (2.69)	146.0 (5.749)	6.8 (2.073)	27.5 (5.63)
<i>Infinity</i> STGJ20X	Square edge stair board	325.0 (12.796)	30.0 (1.182)	12.2 (8.19)	325.0 (12.796)	3.0 (0.914)	36.8 (7.54)
<i>Infinity</i> STGJ14	Fascia board	150.0 (5.906)	12.0 (0.473)	2.3 (1.55)	156.0 (6.142)	6.4 (1.951)	14.7 (3.01)
<i>Infinity</i> STGJ40	Fascia board	184.0 (7.245)	16.5 (0.650)	3.8 (2.55)	190.0 (7.481)	5.3 (1.615)	20.0 (4.09)
<i>Infinity</i> STGJ41	Fascia board	304.3 (11.981)	18.0 (0.709)	6.8 (4.57)	310.3 (12.217)	3.2 (0.975)	22.0 (4.51)
<i>Infinity</i> STGJ77	Screen board	70.0 (2.756)	16.0 (0.630)	1.4 (0.94)	76.0 (2.993)	13.2 (4.023)	18.4 (3.77)
<i>Infinity</i> STGJ58	Joist	35.0 (1.378)	35.0 (1.378)	1.3 (0.87)	N/A	N/A	N/A

(1) Coverage width = Board width + an assumed typical gap of 6 mm (0.237").

(2) Coverage = 1000/Coverage width.

(3) Coverage mass = Coverage x mass per meter.