

Installation Guide For Mid / Elevated Height Decks



Mid Height:
301 - 1200mm



Elevated:
From 1200mm

Important:

Please read before starting for efficient and correct installation.

Engineering:

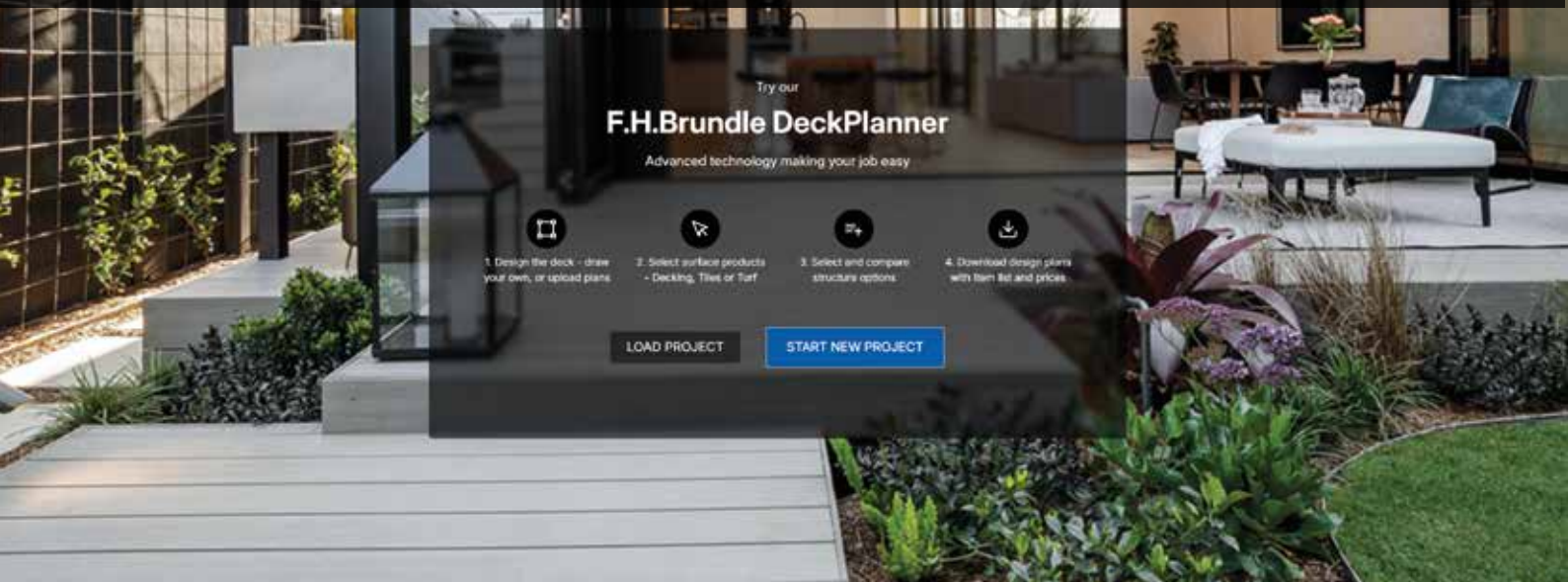
The information in this guide is for standard residential loadings. Commercial use installations may require different connection details, joists and beam spans.

Note:

It is the responsibility of the installer and specifier to ensure correct spans and connection details.

What's In This Guide?

- F.H.Brundle DeckPlanner (design, price and planner overview)
- QwickBuild® advantages and overview
- Joist and beam common connections
- QwickBuild® installation steps



Design

Simply enter your project information online to get started on your deck design

Configure

Compare surface layouts and frame + support options, all calculated to deck height, and substrate

Review

Refine your deck design, review your pricing and select your preferred option

Download

Confirm your order details to receive your itemised material list, custom plans, and installation guides

The easy-to-use online tool simplifies the process, removing any guesswork. It's ideal for everyone, from professional contractors to homeowners. No training required or software to download.

Easily compare the material quantities required, surface options include tiles for deck areas, timber decking, and most composite board brands. Substructure options include Outdure's QwickBuild® aluminium framing system or traditional subframes.



Design

Simply enter your project information and get started on your deck design, or have our team do it for you.



Configure

Compare surface layouts and frame + support options, all calculated to deck height and substrate.



Review

Refine your deck design, review your pricing and, select your preferred option.



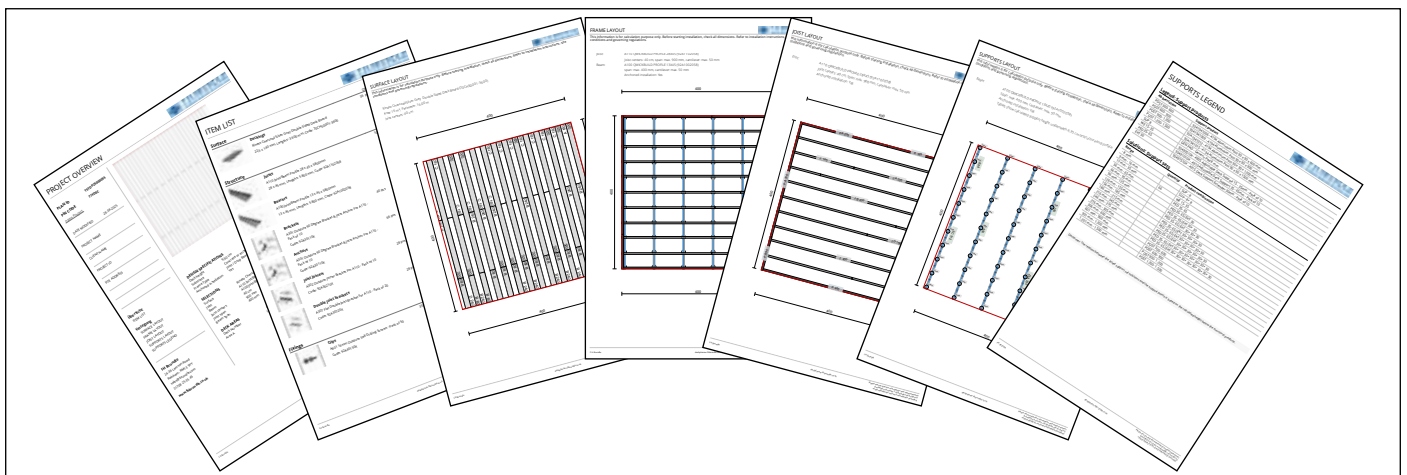
Download

Confirm your order details to receive your customised project information pack.

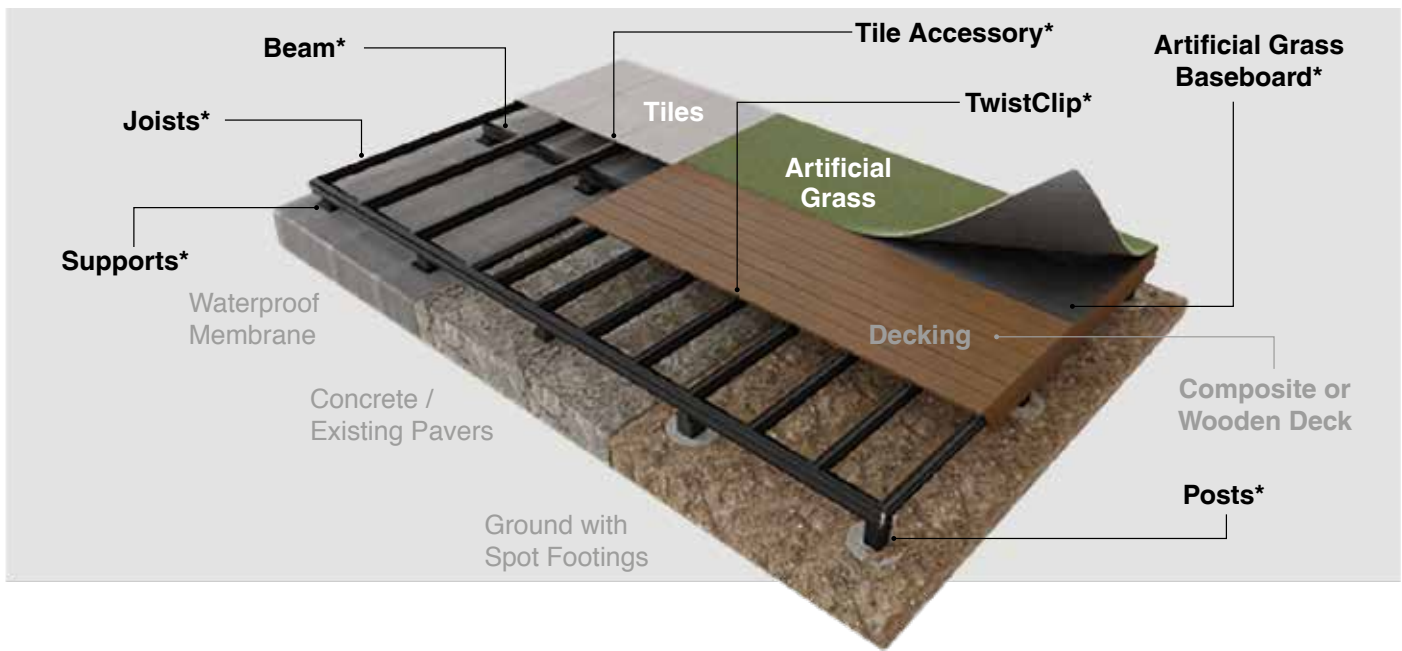
Your customised project information pack includes:

Shopping list:	Itemised list and prices of all materials required
Design:	Easy-to-follow layout for your chosen deck surface
Engineering:	Structure layouts for joists, beams, and supports
Installation guide:	Step-by-step overview
Product information:	Step-by-step overview

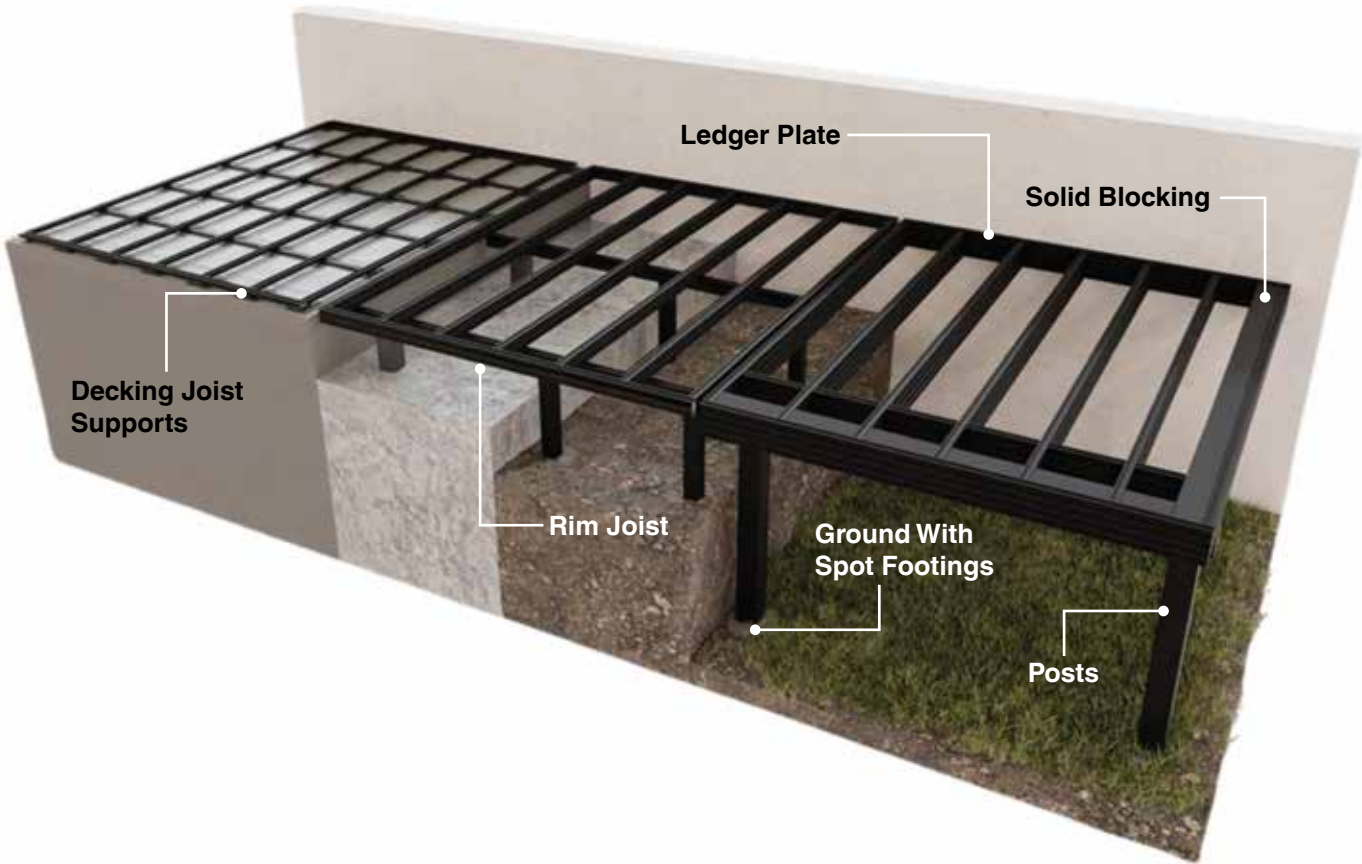
**QR CODE
HERE?**



One System For All Surfaces

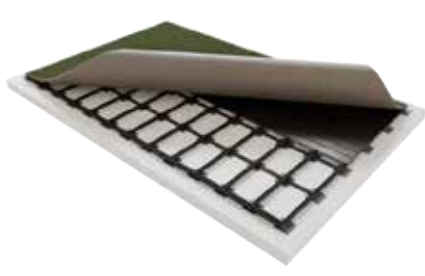


Modular	Easy to install components, configurable to suit all decks
All Surfaces	Supports timber decking, aluminium decking, composite decking, tiles, and artificial grass
All Heights	A range of joist-beam profiles for ultra-low to elevated decks
All Substrates	Build your deck over concrete, pavers, waterproof membrane, and natural ground
All Projects	Ideal for all specifications from simple residential to complex commercial decks
Optimised	Leading design and quantification tech for framing, supports, and chosen deck surface
Balustrading	Components are engineered for simplified integration of handrailing & balustrade



General deck structure heights (top of substrate to the top of joist)

Low Height:
Under 300mm
Profiles: A100, A110 & A120



Low Height:
Under 300mm
Code: 92A1002058
Code: 92A1102058
Code: 92A1202058

Mid Height:
301 - 1200mm
Profiles: A120, A130 & A140



Mid Height:
301 - 1200mm
Code: 92A1202058
Code: 92A1302058
Code: 92A1402058

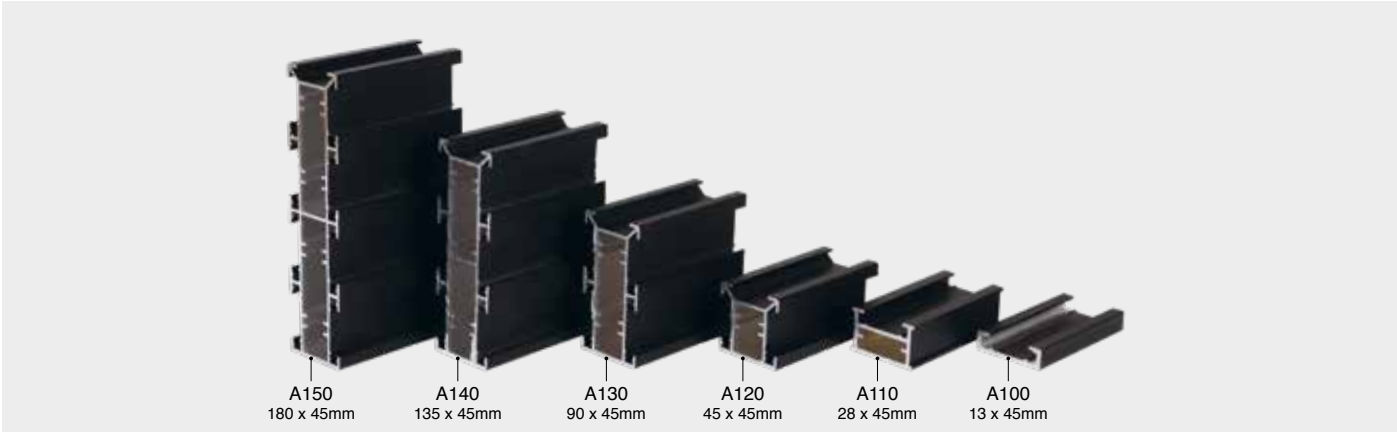
Elevated:
From 1200mm
Profiles: A130, A140 & A150



Elevated:
From 1200mm
Code: 92A1302058
Code: 92A1402058
Code: 92A1502058

Add approximately 23mm (1 inch) for the deck surface (check exact dimensions with supplier).
Composite, tiles and artificial grass + baseboards can be used for all deck heights. Hardwood for structures over 100mm (4 inches) high.

5.8m Lengths For All Deck Heights



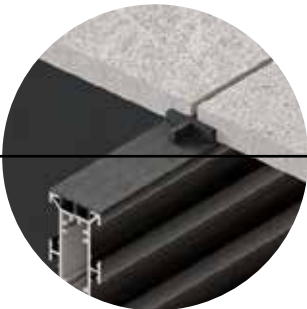
The profiles have greater spans than traditional framing, resulting in fewer footings required for raised decks. QwickBuild® is an engineered solution: up to 5.0kPa UDL, 4.5kN PL with long-span, high-load capacity and minimises site preparation (digging, levelling, etc). It is a fast, cost-effective way to upgrade alfresco spaces by covering up old pavers or concrete pads with minimal site preparation. Made from Aluminium 6063-T6, Powder Coated Black.

Joist Span for Tile and Decking - Residential /// 2kPa UDL, 1.8kN PL /// Domestic Decks
Light occupancy (2 to 3 people per square metre), Point loadings less than 180kg

Joist Profile / Span			Beam Profile / Span								Max Joist Cantilever	
	Profile	Span	13 x 45	28 x 45	45 x 45	90 x 45	135 x 45	2 / 135 x 45	180 x 45	2 / 180 x 45	Non Anchored	Anchored
A100	13 x 45	400	400	900	N/A	N/A	N/A	N/A	N/A	N/A	50	50
A110	28 x 45	900	400	900	1200	N/A	N/A	N/A	N/A	N/A	50	50
A120	45 x 45	1200	400	900	1200	2200	3500	4400	4250	5750	100	275
A130	90 x 45	2250	N/A	N/A	950	1800	2800	3500	3600	4650	100	520
A140	135 x 45	3050	N/A	N/A	N/A	1200	1850	2400	2350	3150	100	810
A150	180 x 45	3850	N/A	N/A	N/A	N/A	1650	2200	2100	2900	100	1055

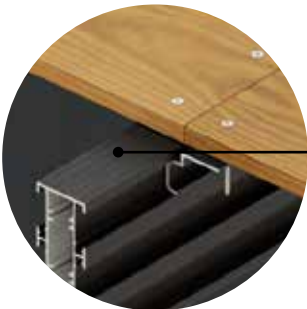
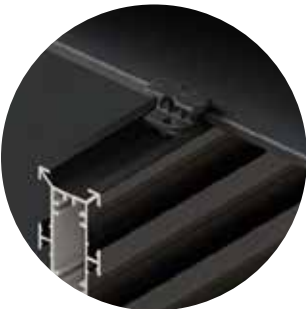
For more information and to see commercial span details, visit www.fhbrundle.co.uk

One System For All Surfaces



Channel edge of joist up for:

- Decking boards with a side groove to fit TwistClips
- Tiles stabilised with QwickBuild® tile accessories
- Artificial grass on QwickBuild® aluminium baseboards
- Exterior tiles fixed with QwickBuild® tile accessories
- QwickGrates and Anti-Slip strips with snap mount integration



Flat edge of joist up for:

- Top fixing composite decking, aluminium decking with fixing screws
- Outdoor system is compatible with all brands of deck boards

Code: 92A20110X


Joist To End Plate
(non load bearing)

Code: 92A20110X

Joist To Flush Beam

Code: 92A20110X


Joist Or Beam Corner



A120 - 45 x 45mm

Code: 92A20520X

Joist Double
(for board join)



Code: 92A20210X

Joist / Beam Join End-to-End

Code: 92A20325X

Joist On Drop Beam
(alternating sides of joist)

Code: 92A1202058

Joist Breaker Board - Ladder Frame

Code: 92A1202058


Joist Picture Frame - Ladder Frame

Code: 92A20110X

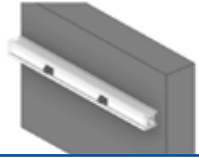
Joist Column / Post / Downpipe

Beam Structure Types


Single Beam
Standard beam layout




Ledger Beam
A horizontal support beam attached to a structure's wall to support the ends of joists



Flush Beam
A beam level with the joists

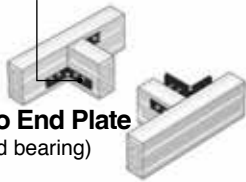


Drop Beam
A beam installed below deck joists for added support



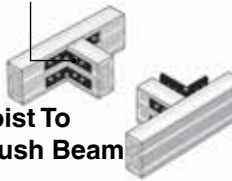
Code: 92A20110X

Joist To End Plate
(non load bearing)




Code: 92A20110X


Joist To Flush Beam



Code: 92A20110X

Joist Or Beam Corner







A130 - 90 x 45mm

Code: 92A20520X

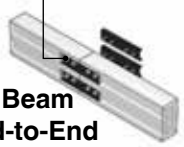
Joist Double
(for board join)






Code: 92A20210X

Joist / Beam Join End-to-End



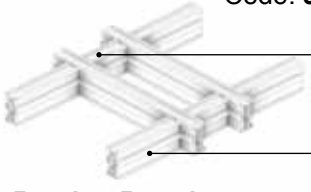
Code: 92A20325X

Joist On Drop Beam
(alternating sides of joist)



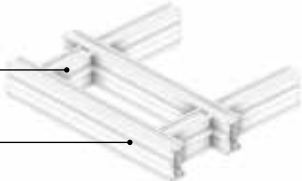
Code: 92A1302058

Joist Breaker Board - Ladder Frame



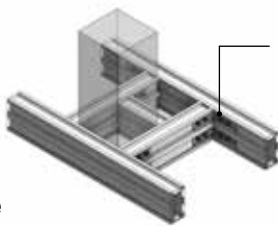
Code: 92A1302058

Joist Picture Frame - Ladder Frame




Code: 92A20110X

Joist Column / Post / Downpipe

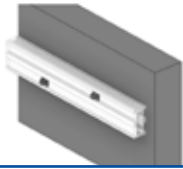


Beam Structure Types

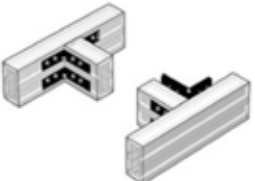
Single Beam
Standard beam layout




Ledger Beam
A horizontal support beam attached to a structure's wall to support the ends of joists

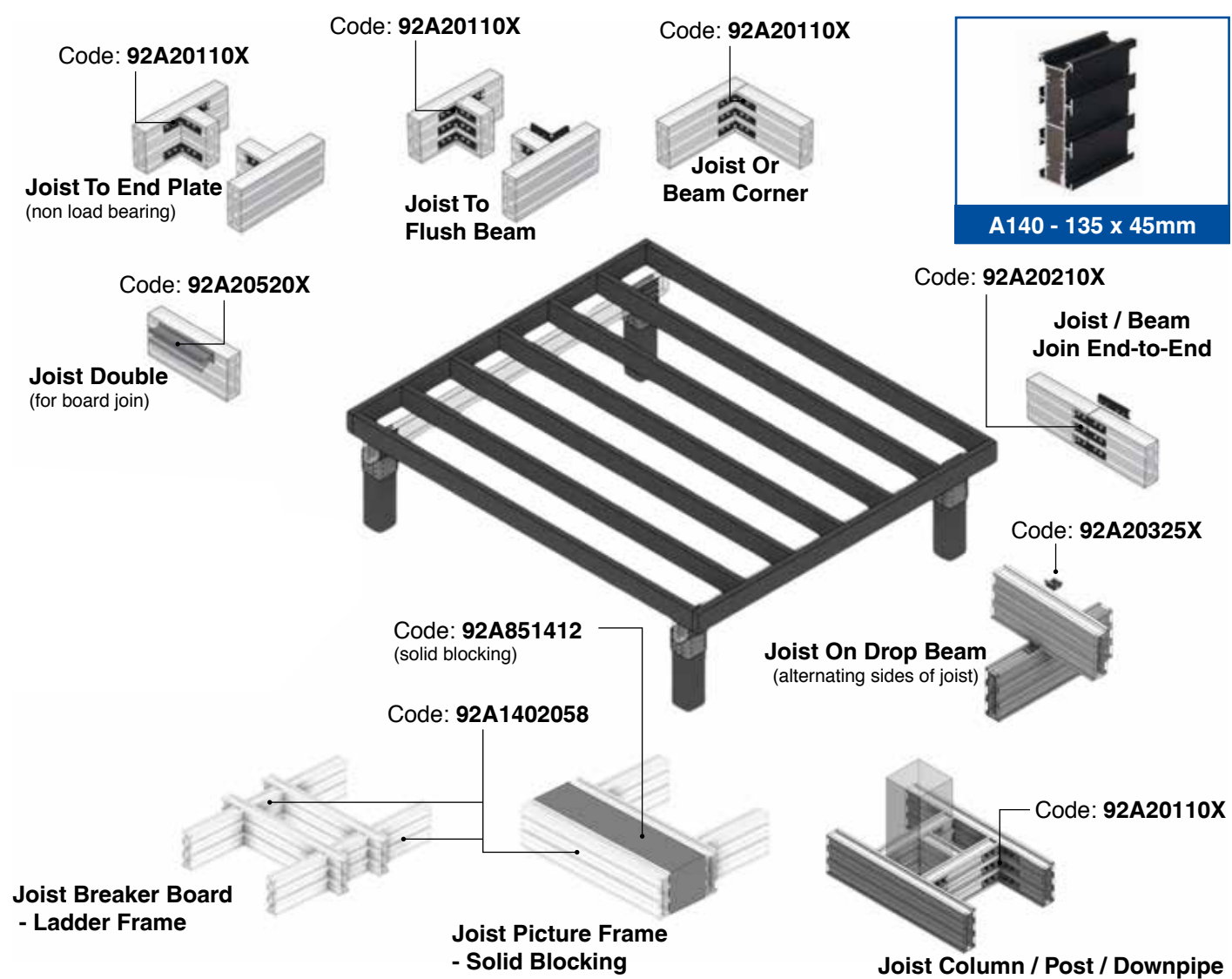


Flush Beam
A beam level with the joists



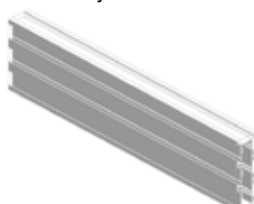
Drop Beam
A beam installed below deck joists for added support






Beam Structure Types

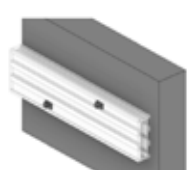
Single Beam
Standard beam layout



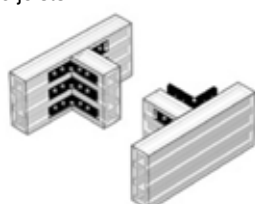
Double Beam
Standard beam layout




Ledger Beam
A horizontal support beam attached to a structure's wall to support the ends of joists



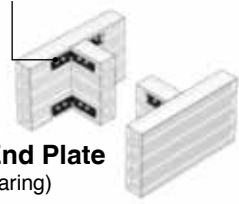
Flush Beam
A beam level with the joists



Drop Beam
A beam installed below deck joists for added support

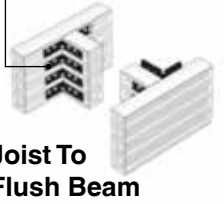


Code: **92A20110X**



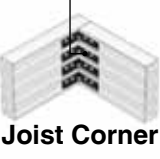
Joist To End Plate
(non load bearing)

Code: **92A20110X**




Joist To Flush Beam

Code: **92A20110X**

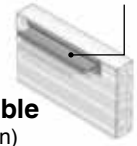


Joist Corner



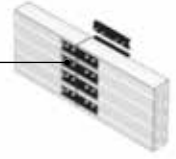
A130 - 180 x 45mm

Code: **92A20520X**




Joist Double
(for board join)

Code: **92A20210X**



Joist / Beam Join End-to-End

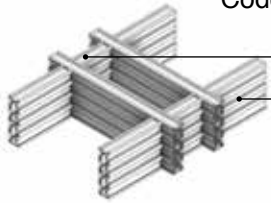
Code: **92A20325X**



Joist On Drop Beam
(alternating sides of joist)

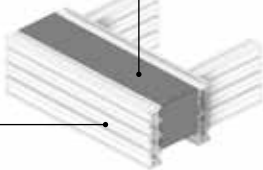
Code: **92A851412**
(solid blocking)

Code: **92A1502058**



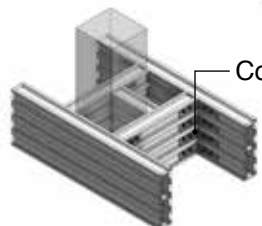
Joist Breaker Board - Ladder Frame

Code: **92A851412**
(solid blocking)



Joist Picture Frame - Solid Blocking


Code: **92A20110X**




Joist Column / Post / Downpipe

Beam Structure Types


Single Beam
Standard beam layout



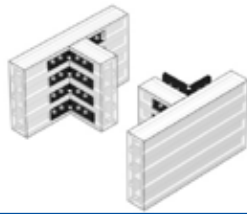
Double Beam
Standard beam layout




Ledger Beam
A horizontal support beam attached to a structure's wall to support the ends of joists



Flush Beam
A beam level with the joists



Drop Beam
A beam installed below deck joists for added support





Low Deck Heights

Based on the project information you have provided, DeckPlanner generates a customised plan for your specific site. Please also refer to these steps for installing a generic QwickBuild® project.

Tools Required



DRILL



CLAMP




SAW HORSES




SILVER PEN




MALLET



LEVEL TOOL



MEASURING TAPE



METAL CUTTING SAW



SQUARE

SAFETY EQUIPMENT REQUIRED*



SAFETY GOGGLES




EAR PROTECTION



SAFETY GLOVES



CLOSE-TOED SHOES



BROOM



FIRST AID KIT

*SUGGESTED BUT NOT LIMITED TO

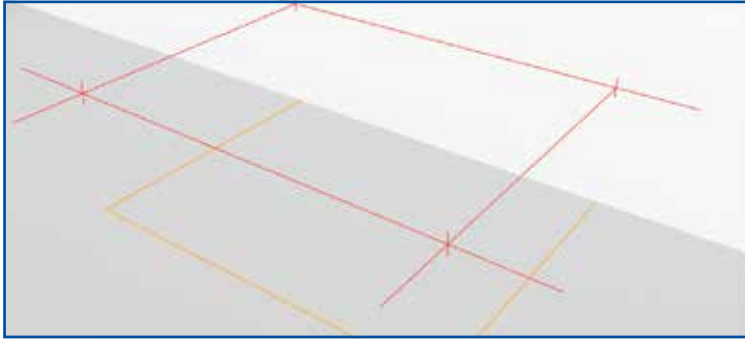
Preparation & Pre-Start Checks

- Ensure the site is clean, level, and free from debris
- Confirm the subfloor or ground is structurally sound and suitable for the framing system.
- Read all installation information
- Review structure design layout

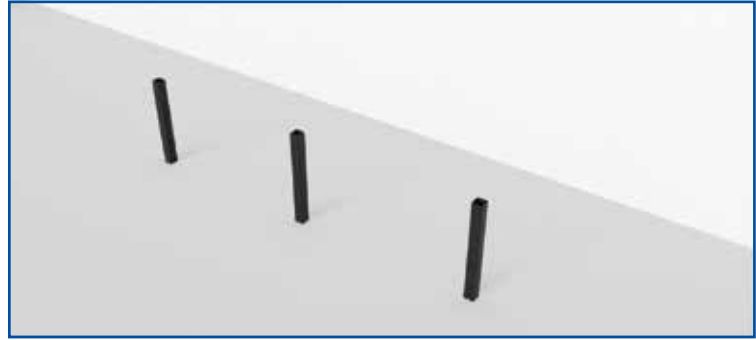
STEP-BY-STEP INSTALLATION OVERVIEW



Step 1 - Set out



Step 2 - Decking joist supports / posts



Step 3 - Ledger



Step 4 - Beam



Step 5 - Joist

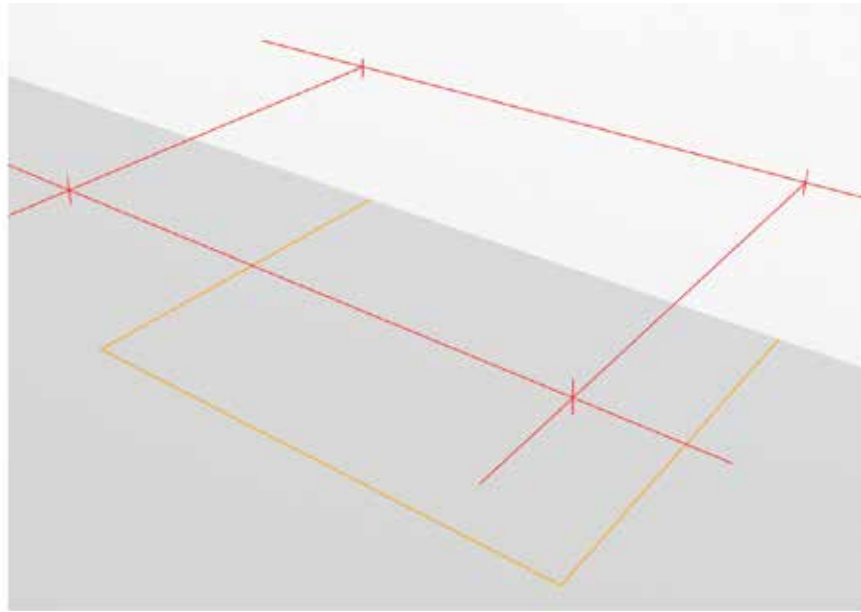


Step 6 - Bracing / Blocking

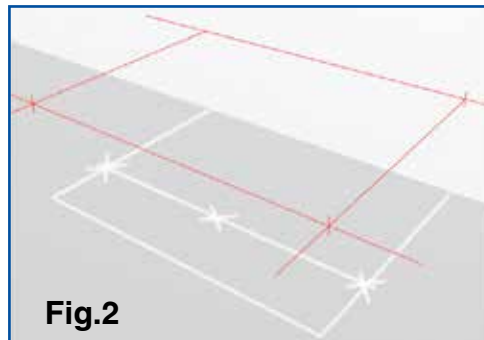


Step 7 - Solid Blocking

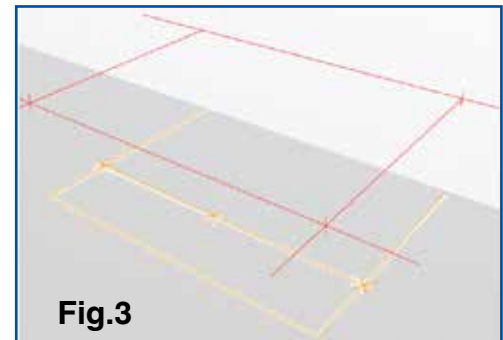




1. Use a chalk/string line or laser line to mark the outer edges of the structure on the ground or subfloor. Ensure all corners are set as 90 degree angles.



2. Mark according to the provided deck plan, the centre of the desired footing locations.



3. Double check all measurements to ensure accuracy.



QwickBuild® Post Components

A194



A120

Beam to post bracket A



A120

Beam to post bracket B

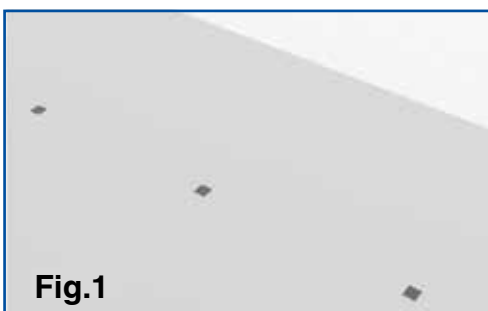


Fig.1

1. Prepare ground ready to insert posts to be concreted in making sure they are level/plumb.



Fig.2

2. Concrete posts in place and once secure, mark your finished deck level, minus the joist, beam, and surface height. Make sure they are level for your deck height by referring to the height of the ledger plate.



Fig.3

3. Cut posts using a cutting saw to the desired height marked above, ensuring that all posts are level.

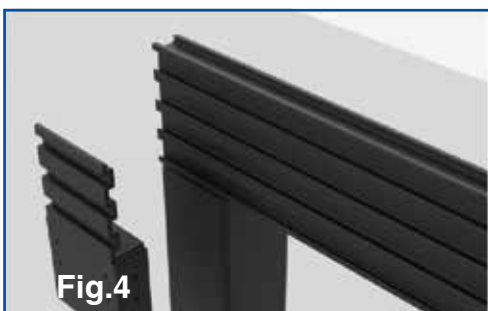


Fig.4

4. Install A210 bracket on top of the post in preparation for the beams.

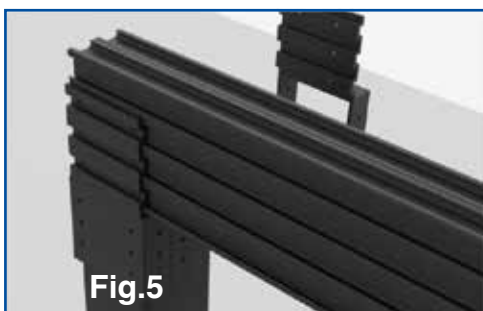
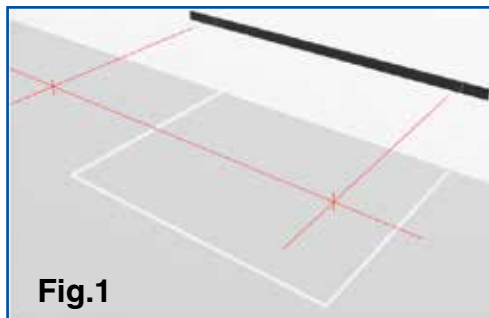


Fig.5

5. Once beam has been installed, secure A211 bracket to the other side of the post, so the beam has been secured from either side. Repeat this process for all posts.

Please note:

We recommend drilling a 5mm hole at the bottom of each post to allow any excess water to drain through.



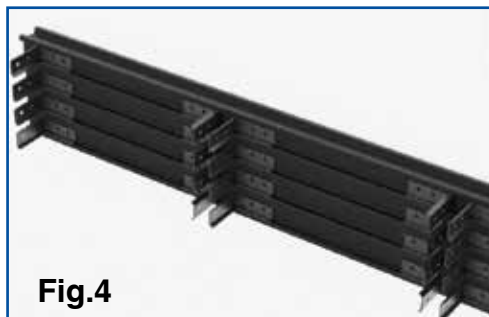
1. Cut the ribbon/ledger plate to the desired measurement. Refer to the deck plans or shop drawings provided.



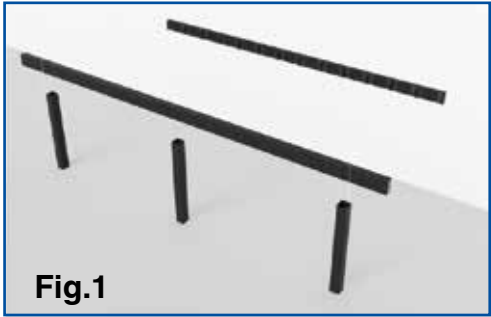
2. Pre-drill at alternating heights the cut profile to suit your connection fittings.



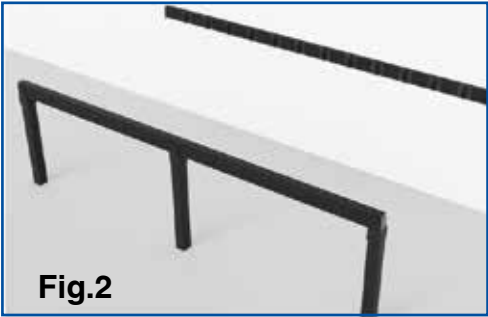
3. Connect the ribbon/ledger plate to the building structure at the desired height, using fixings approved by your local engineer.



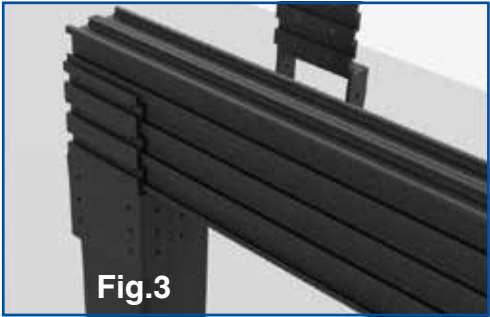
4. Joists to ledger connection detail will look similar to this detail depending on what joist will be used.



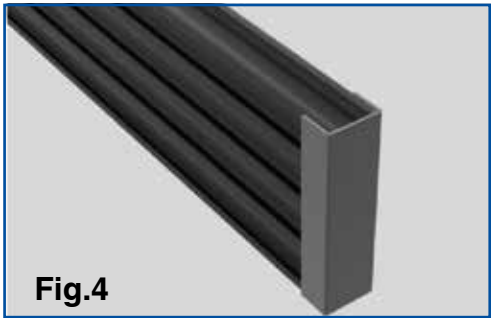
1. Mark and cut beams to the desired length using a cutting saw.



2. Place beams onto 'beam to post' bracket ensuring position of beams is in the correct location.



3. Use A210 and A211 brackets to secure beam to post and repeat for all post to beam connections.



4. Attach A220 end cap on all open ended beams if applicable.

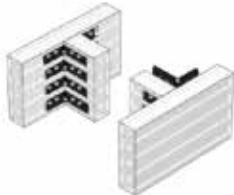
Single Beam
Standard beam layout



Double Beam
A double beam is 2 beams secured together for extra strength



Flush Beam
A flush beam is a beam level with the joists on a deck



Drop Beam
A drop beam is a beam installed below the deck joists for added support





Fig.1

1. Use a tape measure and silver pen to mark along flush beam and ledger plate joist positions. Be sure to follow the correct joist centres for your selected surface.

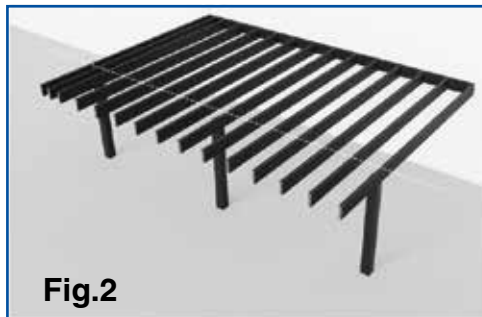


Fig.2

2. Follow the DeckPlanner 'Cut Joists' file to the correct length, using an aluminium cutting saw. Repeat this for all joists required, making sure to confirm that all on site measurements and surface manufacture specs are the same as the deck plans.



Fig.3

3. Place joists in between beams using A201 brackets to connect to joists with ribbon/ledger plate using the supplied fixings. Refer to frame components and common connections for specific details.

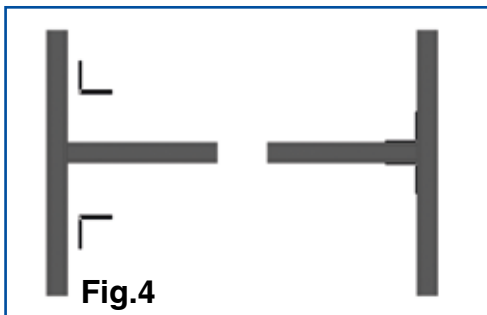


Fig.4

4. Lift joists into location sliding A201 brackets into joists for temporary hold while you screw all brackets.



Fig.5

5. Finally ensure all components are fully secure as per connection requirements.

Drop Beam

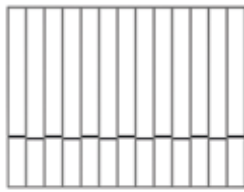
A drop beam is a beam installed below the deck joists for added support



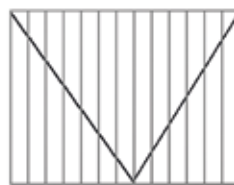


Engineering or local building surveyor to advise requirements

Joist Blocking



Lateral Bracing



Haunch Bracing



Bracing / Blocking Types

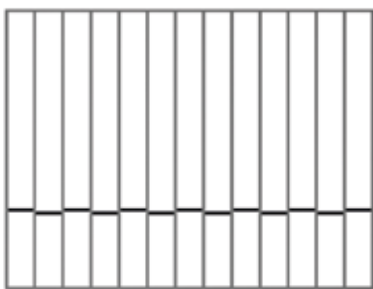


Fig.1

1. Mark out position / location according to requirements set by local building surveyor or licensed engineer. Typically this is over the beam alternating either side of centre.



Fig.2

2. Cut the blocking to fit between the joists.



Fig.3

3. Preload A201 brackets into the cut profiles and install into deck structure.

STEP 7 - HANDRAIL/RAILING BLOCKING

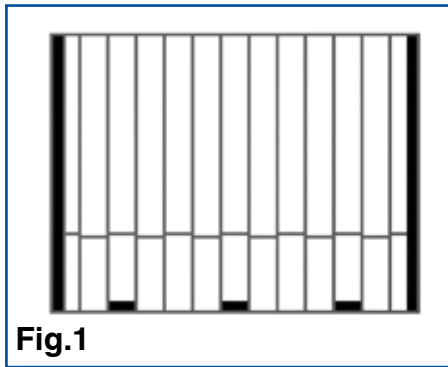


Fig.1

1. Determine where solid blocking will be required. Refer to SD850 for engineered detailed QwickBuild® solid blocking options.



Fig.2

2. Cut solid blocking using a circular saw to required length, repeating the process for all required blocking.



Fig.3

3. Pre-drill frame using a 6mm drill bit according to corresponding standard detail. Use the provided A404 screws to fix the solid blocking to the joists ensuring the blocking is flush with the top of the joists.

Whilst every effort has been made to ensure the accuracy of the information supplied. F.H. Brundle cannot be held responsible for any errors or omissions. This product must only be employed for its original intended use. Any other use is wrong and potentially dangerous. Installation must be carried out in full compliance with current regulations. F.H. Brundle cannot be held liable for any damages resulting from wrongful, erroneous or negligent use.

