

QB-1A

QWICKBUILD®

DECK FRAMING SYSTEM DESIGN & INSTALL GUIDE

**PLEASE READ BEFORE STARTING TO ENSURE EFFICIENCIES
+ CORRECT INSTALLATION TO PROTECT YOUR WARRANTY**

ENGINEERING

ALL INFORMATION IN THIS GUIDE RELATES TO STANDARD RESIDENTIAL ENGINEERING REQUIREMENTS: 2.0 kPa UDL/1.8 kN POINT LOAD. INSTALLATIONS FOR COMMERCIAL USE MAY REQUIRE DIFFERENT JOIST/BEARER SPAN AND CONNECTION DETAILS. PLEASE NOTE THIS IS THE RESPONSIBILITY OF THE INSTALLER/SPECIFIER TO ENSURE THE CORRECT SPANS & CONNECTION DETAILS ARE USED.

FOR FURTHER ASSISTANCE ON YOUR PROJECT SCOPE AND DESIGN REQUIREMENTS, PLEASE CONTACT OUTDURE'S TECHNICAL TEAM. DOWNLOAD COMMERCIAL CONSTRUCTION DETAILS FROM OUTDURE'S RESOURCE SECTION.

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JOIST & BEARER SPAN & CANTILEVER TABLES

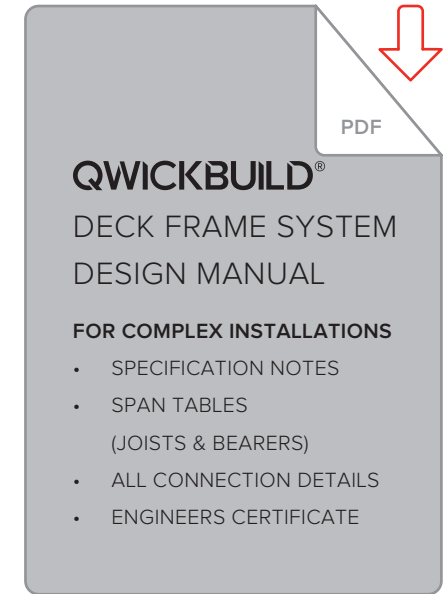
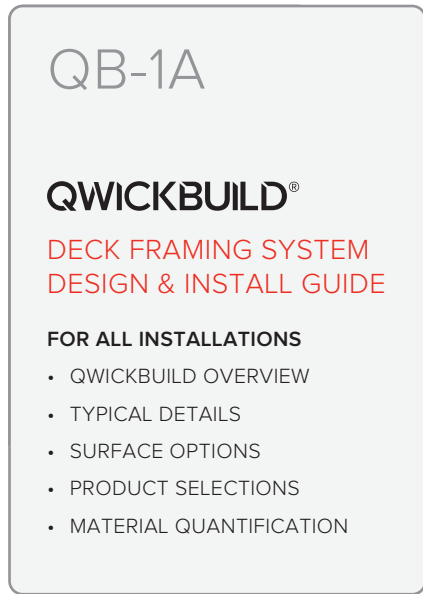
- RESIDENTIAL & COMMERCIAL CLASS A, A/B, C2, C3

LEGAL INFORMATION

- DISCLAIMER & SUPPLEMENTARY DOCUMENTATION
- IMPORTANT DESIGN INFORMATION

DIRECTORY OF QWICKBUILD DESIGN & INSTALLATION GUIDES

A. IN ADDITION TO THIS QB-1A DOCUMENT, PLEASE SELECT RELEVANT OUTDURE QWICKBUILD GUIDE/S:

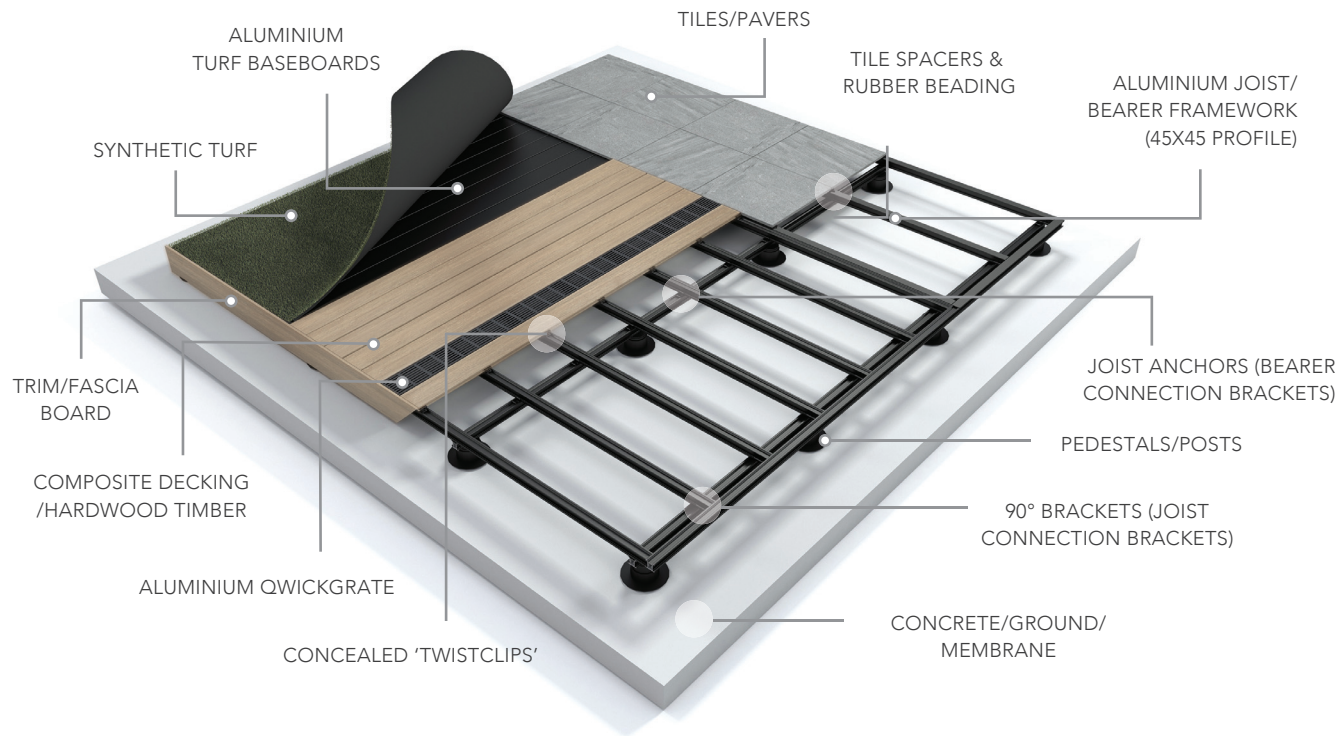


B. IN ADDITION TO THE QWICKBUILD GUIDE/S PLEASE SELECT THE RELEVANT OUTDURE SURFACE INSTALL GUIDE/S:



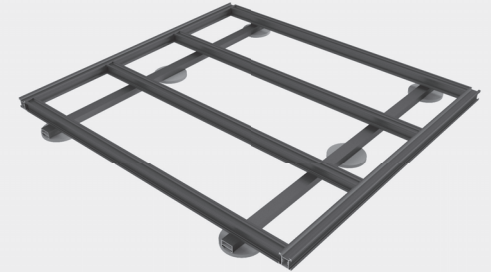
OUTDURE'S QWICKBUILD SYSTEM OVERVIEW

SHOWING A FRAME CONSTRUCTED WITH THE 45X45 PROFILE



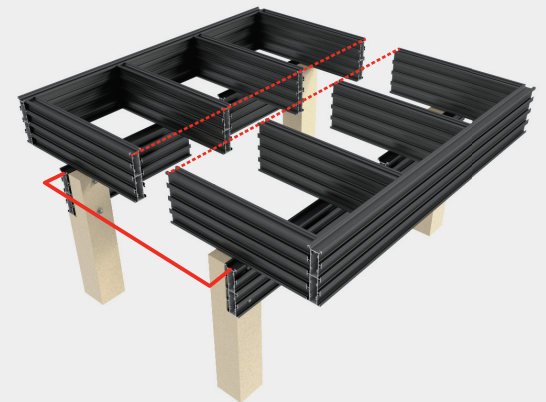
EXAMPLES OF QWICKBUILD FRAME OPTIONS FOR LOW HEIGHT TO ELEVATED DECK HEIGHTS

- 45X45MM PROFILE AS BEARER (SPAN 1200MM)
- 3MM SHIM + ADD ANY OUTDURE SURFACE (23MM):
- = 71MM FINISHED DECK HEIGHT



- 45X45MM PROFILE AS JOIST (SPAN 1200MM)
- 28X45MM PROFILE AS BEARER (SPAN 600MM)
- + ADD ANY OUTDURE SURFACE (23MM):
- = 96MM FINISHED DECK HEIGHT

- 90X45 PROFILE AS JOIST (SPAN 2300MM)
- 90X45 PROFILE AS BEARER (SPAN 1450MM)
- + HEIGHT ADJUSTABLE PEDESTALS TO SUIT



- 180X45 PROFILE AS JOIST (SPAN 4400MM)
- 180X45 PROFILE AS BEARER (SPAN 1950MM)
- + POSTS TO SUIT HEIGHT

QWICKBUILD SURFACE OPTIONS

1X SYSTEM: 4X SURFACE OPTIONS

COMPOSITE DECKING

HARDWOOD DECKING

A COMBINATION

STRUCTURAL TILES

SYNTHETIC TURF

QWICKBUILD SUPPORTS

MULTI-SURFACE OPTIONS:

- COMPOSITE DECKING
- HARDWOOD DECKING
- STRUCTURAL TILES
- SYNTHETIC TURF
- A COMBINATION

INSTALL QWICKBUILD OVER MULTIPLE SUBSTRATES:

- CONCRETE PADS
- EXISTING TILES/PAVERS
- NATURAL GROUND
- WATERPROOFED AREAS

FEATURES & BENEFITS

- MOISTURE-PROOF
- LIGHT-WEIGHT
- STRAIGHT & LEVEL
- VERSATILE
- FAST INSTALL
- DURABLE, CORROSION
RESISTANT MATERIALS
- MINIMAL WASTE

VALUE-ADDED-SERVICES INCLUDE:

- PROJECT SCOPING
- CONCEPT DESIGNS
- CONSTRUCTION DRAWINGS
- ENGINEERING
- PRE-FABRICATION

**RANGE OF JOIST/BEARER PROFILES
ENGINEERED FOR ALL DECK HEIGHTS**

QWICKBUILD JOIST/BEARER PROFILES

RANGE OF QWICKBUILD PROFILES

ENGINEERED FOR DECKS OF ALL HEIGHTS FROM HIGH TO ULTRA LOW

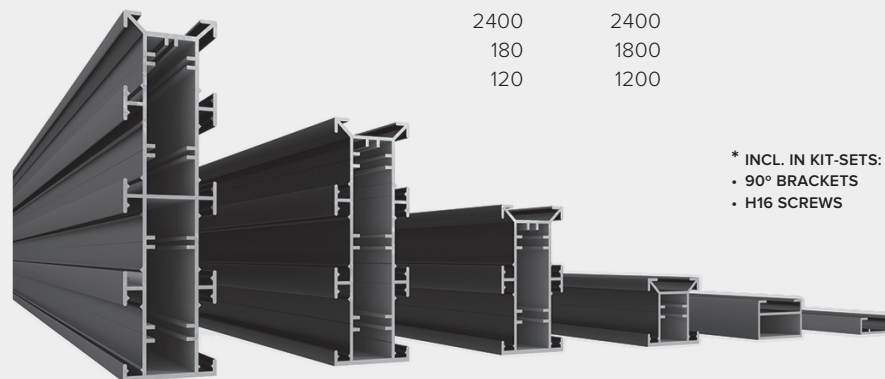
ONE SYSTEM FOR SURFACES DECK + TILES + TURF SIMPLY FLIP THE PROFILE 180° TO SUIT



- USE 'CHANNEL UP' FOR:
- COMPOSITE DECKING
 - TURF BASEBOARDS
 - STRUCTURAL TILES

PROFILES AVAILABLE AS KIT-SET* IN THE FOLLOWING LENGTHS:

PROFILES (MM):	180X45	135X45	90X45	45X45	28X45	13X45
LENGTHS (MM):	5800	5800	5800	5800	5800	5800
			3600	3600		
			3000	3000		
			2400	2400		
			180	1800		
			120	1200		



* INCL. IN KIT-SETS:
• 90° BRACKETS
• H16 SCREWS

PLEASE NOTE: IN NEW ZEALAND ALL PROFILES ARE SUPPLIED IN 5.8M LENGTHS

HARDWOOD DECKING 'FLAT UP'

COMPATIBLE WITH MOST RANGES

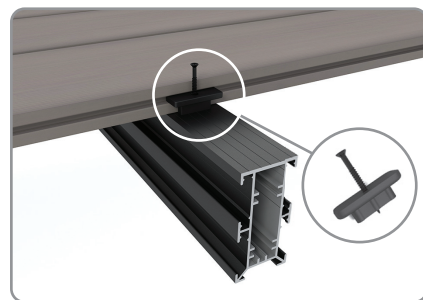
USE WITH 6X OUTDURE SCREWS AVAILABLE TO SUIT



OTHER COMPOSITE DECKING 'FLAT UP'

COMPATIBLE WITH MOST BRANDS WITH

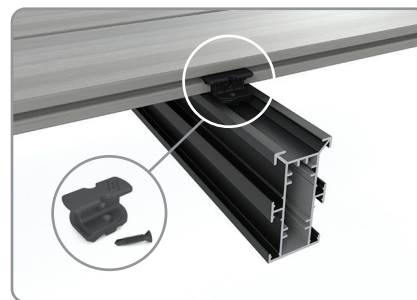
CONCEALED CLIP SUPPLIED BY OTHERS



COMPOSITE DECKING 'CHANNEL UP'

DESIGNED TO FIT OUTDURE DECKING BRANDS & TREX

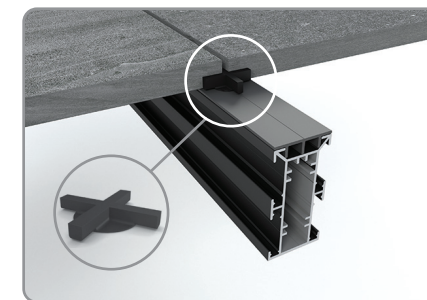
WITH CONCEALED OUTDURE TWISTCLIPS



STRUCTURAL TILES 'CHANNEL UP'

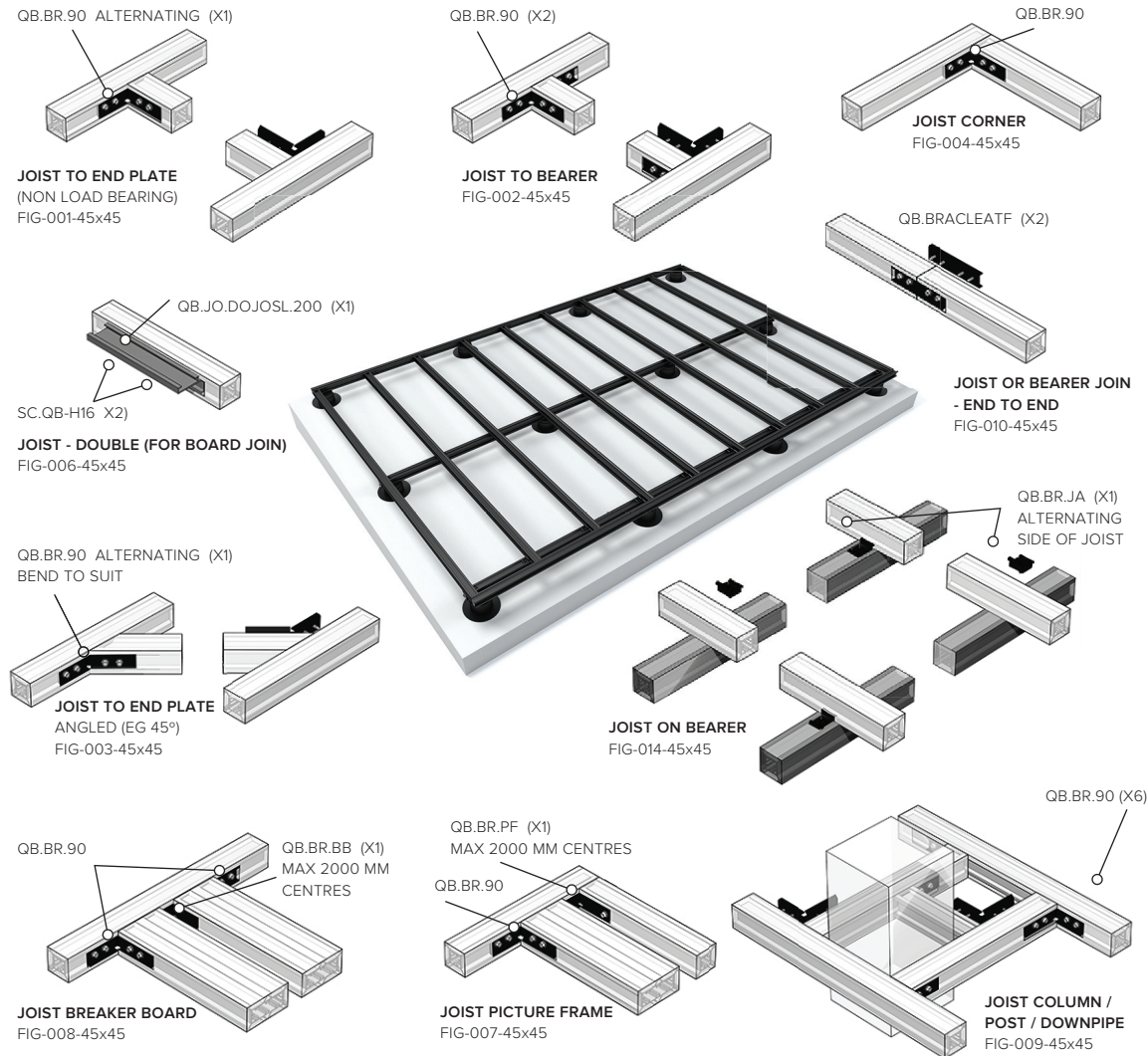
DESIGNED TO FIT OUTDURE TILES & MOST OTHER BRANDS

USE WITH HIDDEN OUTDURE TILE SPACERS & RUBBER BEAD

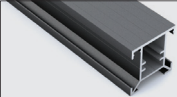


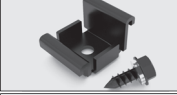



45X45 FRAME COMPONENTS & CONNECTION DETAILS


FOR MORE COMMON CONNECTION DETAILS PLEASE REFER TO THE OUTDURE QWICKBUILD DESIGN MANUAL.
FOR ALL OUTDURE PRODUCT DESCRIPTIONS OF USE PLEASE REFER TO OUTDURE PRODUCT CATALOGUES





TYPICAL QTY'S BASED ON JOIST CENTRES:
(NO WASTAGE INCLUDED)

FRAME COMPONENTS:		400 MM	450 MM	600 MM
	45 JOIST ALL.QB.JO.045X45F	3.3 lm/m ²	3.1 lm/m ²	2.5 lm/m ²
	BEARERS: ALL.QB.JO.045X45F ALL.QB.JO.090X45F ALL.QB.JO.135X45F	1.0 lm/m ²	1.0 lm/m ²	1.0 lm/m ²
	90 BRACKET ALL.QB.BR.90.304.10X	3.0 p/m ²	2.5 p/m ²	2 p/m ²
	JOIST ANCHOR ALL.QB.BR.JA.304.25X	3.6 p/m ²	3.0 p/m ²	2.5 p/m ²
	BRACE CLEAT FLUSH ALL.QB.BR.CLEATF.10X	AS REQUIRED (2X PER END-ON-END CONNECTION)		

SUPPORTS:

	PEDESTALS POSTS/STUMPS/PIERS/ GROUND SCREWS	1.2 p/m ² TYP 1X PEP 1.2X1.2M GRID AS REQ'D - DEPENDENT ON BEARER SIZE
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SURFACE COMPONENTS:

	PICTURE FRAME BRACKET ALL.QB.BR.PF.304.10X	IF REQUIRED 1X @1200MM SPACINGS
	BREAKER BOARD BRACKET ALL.QB.BR.BB.304.10X	IF REQUIRED 1X @1200MM SPACINGS

FOR MORE COMMON CONNECTION DETAILS PLEASE REFER TO THE OUTDURE QWICKBUILD DESIGN MANUAL.
FOR ALL OUTDURE PRODUCT DESCRIPTIONS OF USE PLEASE REFER TO OUTDURE PRODUCT CATALOGUES



SUPPORTS:

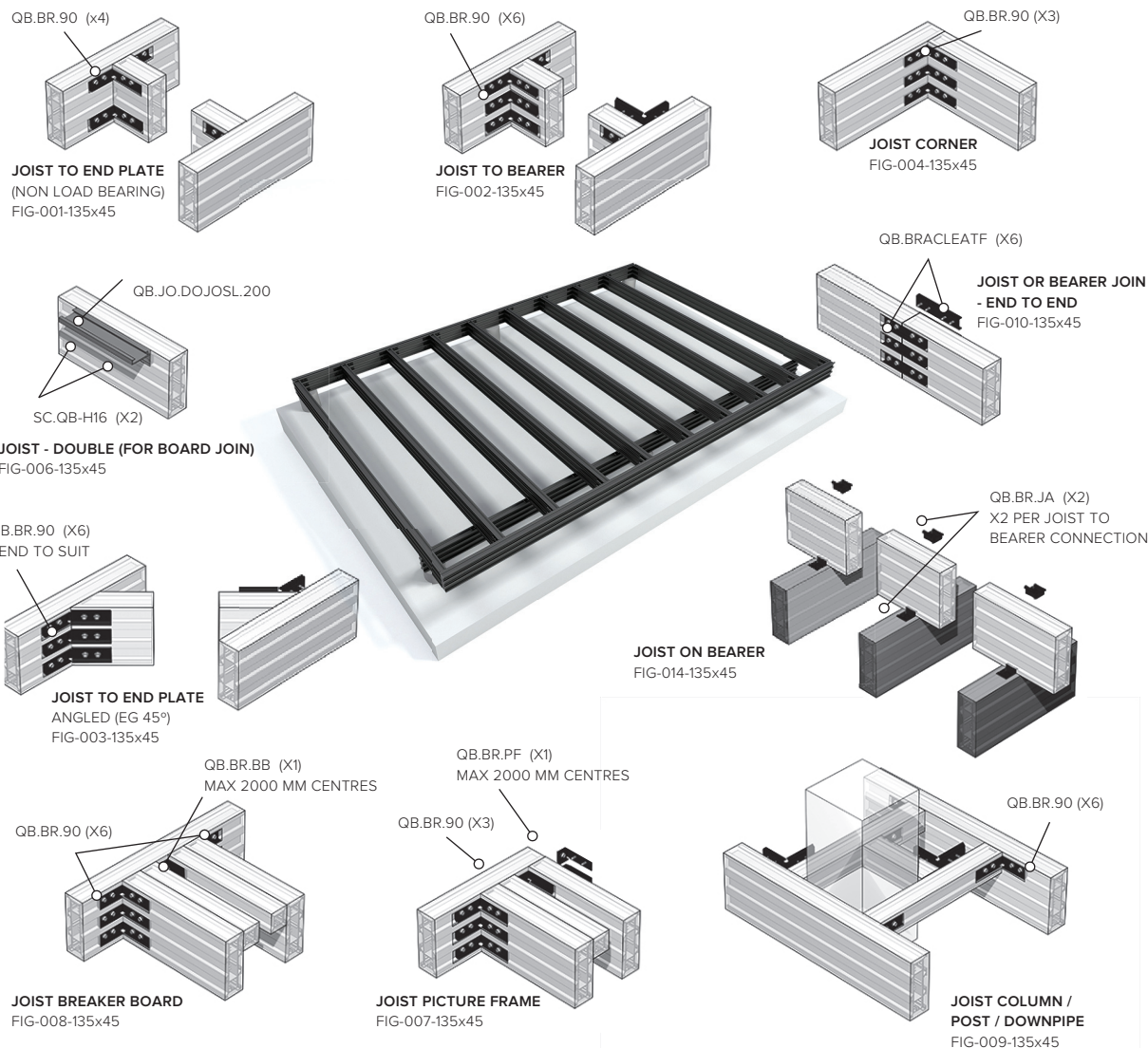
SURFACE COMPONENTS:

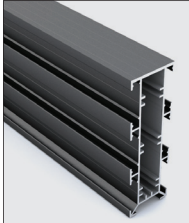


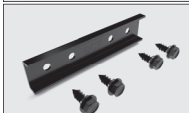
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135X45 FRAME COMPONENTS & CONNECTION DETAILS

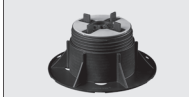
FOR MORE COMMON CONNECTION DETAILS INCLUDING THE 180X45 PROFILE PLEASE REFER TO THE OUTDURE QWICKBUILD DESIGN MANUAL.
FOR ALL OUTDURE PRODUCT DESCRIPTIONS OF USE PLEASE REFER TO OUTDURE PRODUCT CATALOGUES

TYPICAL QTY'S BASED ON JOIST CENTRES:
(NO WASTAGE INCLUDED)





FRAME COMPONENTS:		400 MM	450 MM	600 MM
	135 JOIST ALL.QB.JO.135X45F	3.3 lm/m ²	3.1 lm/m ²	2.5 lm/m ²
	BEARERS: ALL.QB.JO.135X45F ALL.QB.JO.180X45F	0.8 lm/m ² AS REQ'D	0.8 lm/m ² AS REQ'D	0.8 lm/m ² AS REQ'D
	90 BRACKET ALL.QB.BR.90.304.10X	4.3 p/m ²	4.1 p/m ²	3.3 p/m ²
		TYP 3X MIN PER CONNECTION TYP 6X MIN PER LOAD BEARING CONNECTION		
	JOIST ANCHOR ALL.QB.BR.JA.304.25X	7.2 p/m ²	6.0 p/m ²	5.0 p/m ²
		MIN 2X PER JOIST/ BEARER CONNECTION MIN 3X PER JOIST/BEARER CONNECTION ON PERIMETER OF DECK		
	BRACE CLEAT FLUSH ALL.QB.BR.CLEATF.10X	AS REQUIRED 6X PER END-ON-END CONNECTION (3X PER SIDE)		

SUPPORTS:

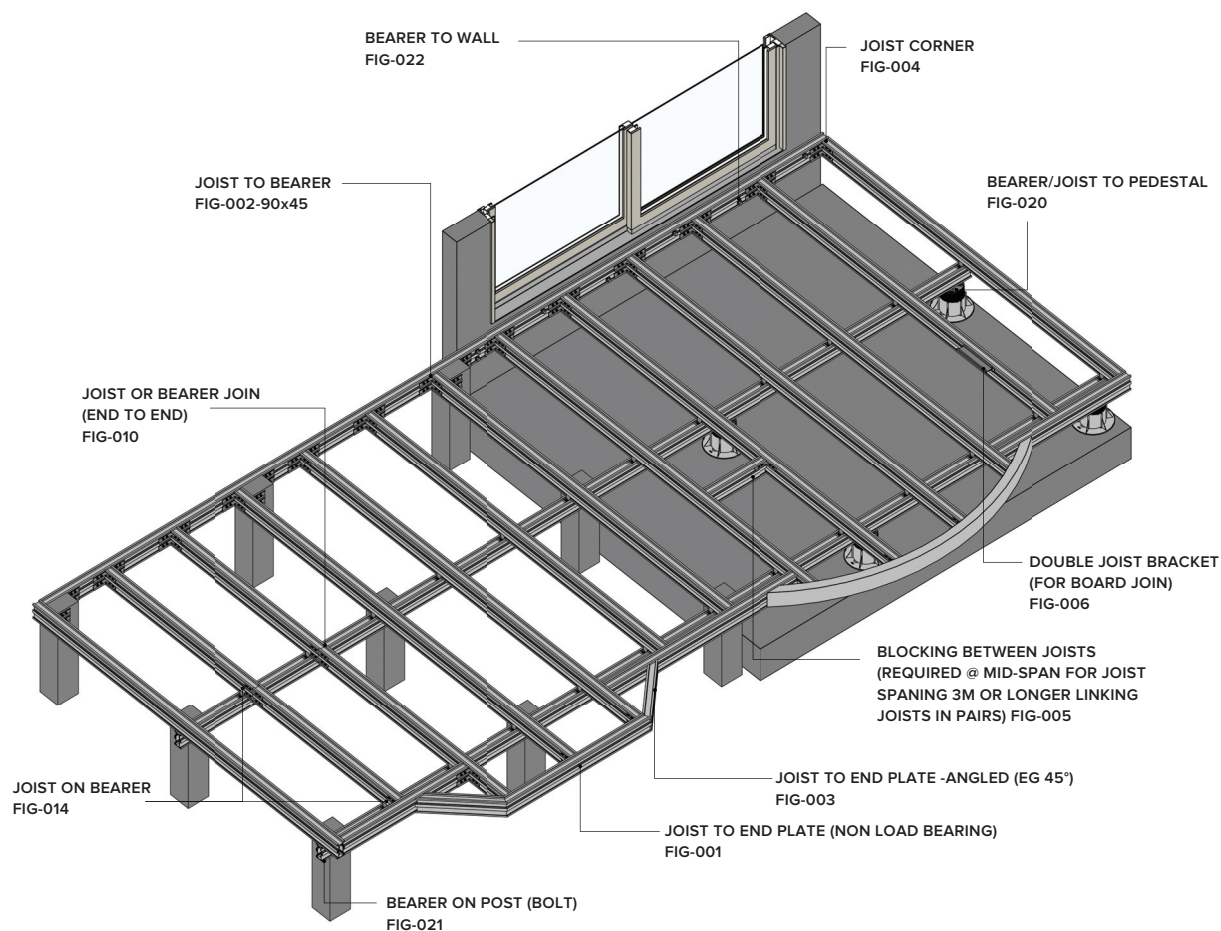
	PEDESTALS POSTS/STUMPS/PIERS/ GROUND SCREWS	AS REQUIRED - DEPENDENT ON BEARER SELECTION
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SURFACE COMPONENTS:

	PICTURE FRAME BRACKET ALL.QB.BR.PF.304.10X	IF REQUIRED 1X @ JOISTS ENDS PLUS 1X @1200MM SPACINGS
	BREAKER BOARD BRACKET ALL.QB.BR.BB.304.10X	IF REQUIRED 1X @ JOISTS ENDS PLUS 1X @1200MM SPACINGS

QWICKBUILD COMMON CONNECTIONS OVERVIEW

FOR ALL OF THESE COMMON CONNECTION DETAILS PLEASE REFER TO THE OUTDURE QWICKBUILD DESIGN MANUAL.



QWICKBUILD EXTERIOR FLOORING SYSTEM

PROVIDES STRONG, DURABLE, STABLE STRUCTURES TO SUPPORT DECKING BOARDS, TILES, TURF OR A COMBINATION OF SURFACES

Joists support the surfaces, and bearers support the joists. The bearers are supported by posts (piers) or adjustable height pedestals (deck jacks). QwickBuild is designed for installations over natural ground, concrete pads, existing pavers and waterproof membranes. The system allows for the construction of support structures ranging from ultra-low height through to raised deck structures 3m+.

All profiles are interchangeable, for example a 90x45 can be used with a 45x45. You can even use a profile on an existing timber sub-frame as a joist. Please refer to the Outdure Product Catalogues for all system components.

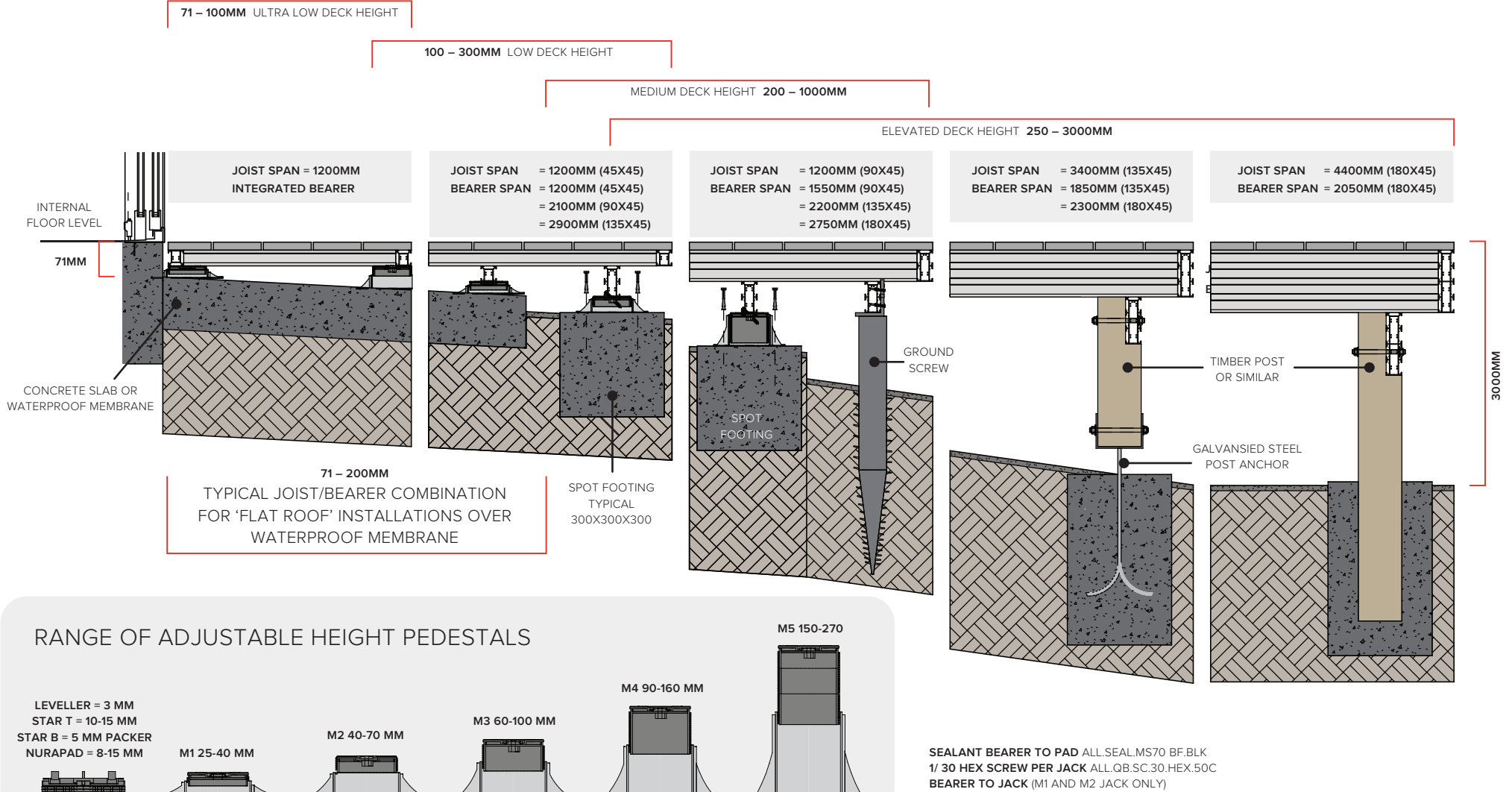
KEY SOLUTIONS/BENEFITS FOR SPECIFICATION

- Compliant low-risk solution: The system is designed to 'float' on a membrane without penetrating and compromising it
- Easily enables a flush finish between exterior surfaces and internal/external floor levels
- Durable and light-weight: Made from 6063-T6 structural aluminium + 304 SS / PP components/fixings
- Multi-surface integration: Select from Outdure's ranges of decking, tiles, turf or independent 'non-Outdure' surface options including hardwood timber
- Multi-height capabilities from ultra low profiles to long-span profiles engineered for raised decks
- Engineered solution: residential and commercial use
- One warranty and one system for the structure and surfaces reduces the number of trades required on a project
- Design service: Concepts through to custom construction drawings, incl. details: steps, ramps, planter boxes, benches
- Easy supply/install options: kit-set, materials cut-to-length, made-to-measure pre-fab. modular frames
- Access solution: Add QwickGrates for ventilation and access to drains and services

DECK HEIGHTS

JOIST & BEARER COMBINATIONS

THE 'DECK HEIGHT' IS MEASURED FROM THE TOP OF THE SUBSTRATE TO THE TOP OF THE FINISHED DECK LEVEL (FDL)
PLEASE REFER TO SPAN TABLES (RESIDENTIAL & COMMERCIAL) & CANTILEVERS AT END OF THIS DOCUMENT

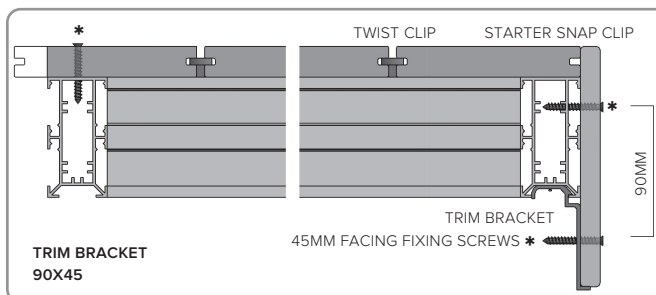
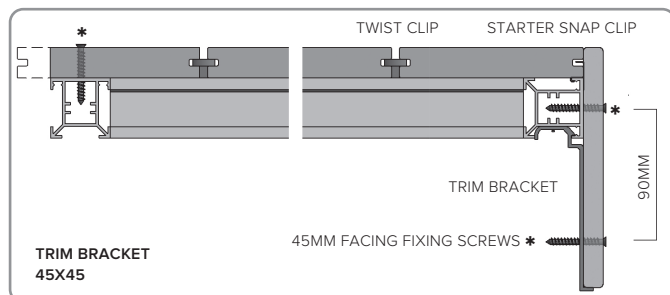
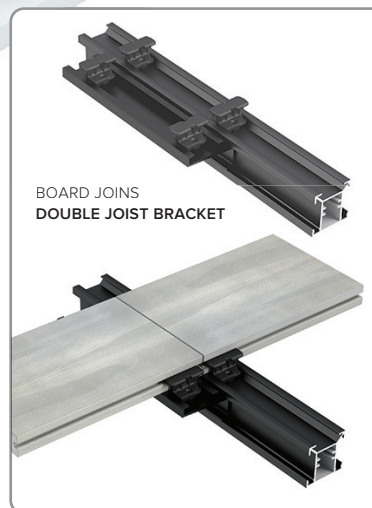
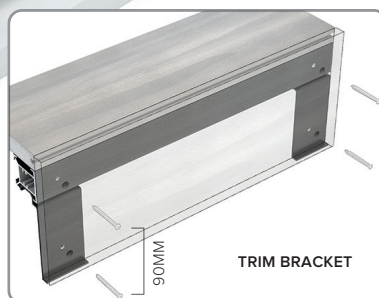
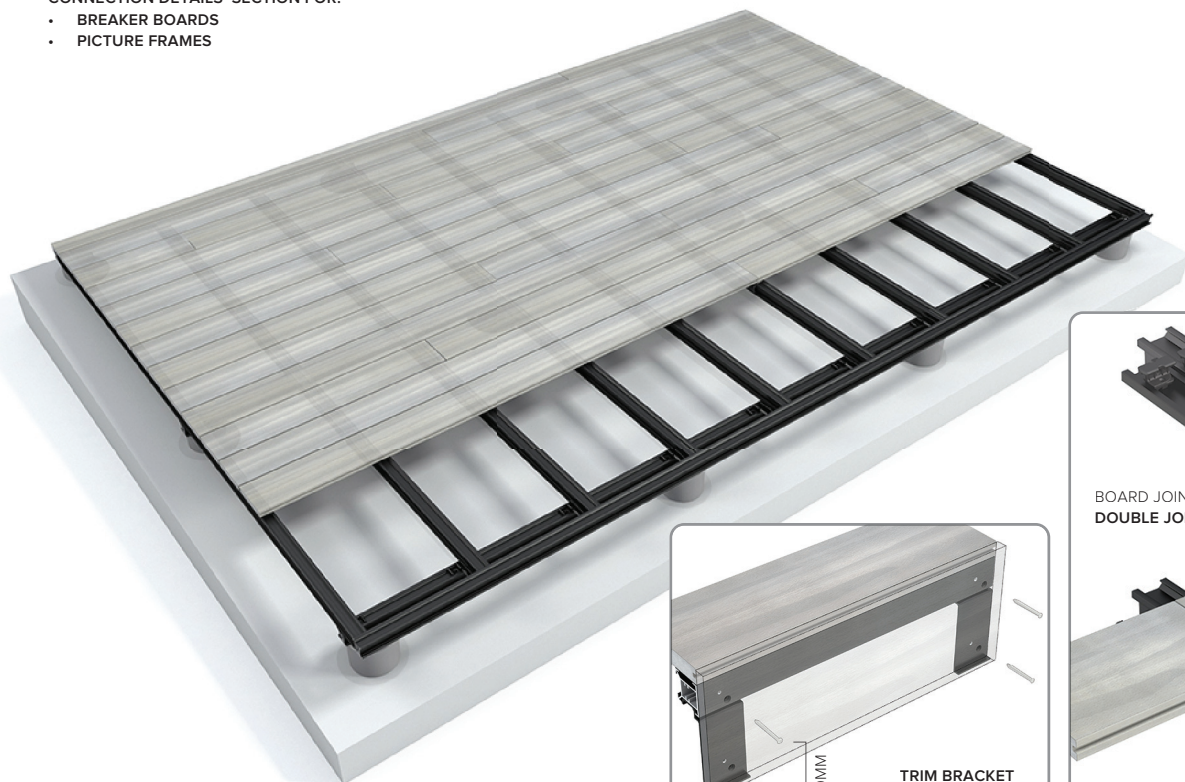


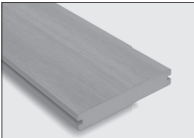

QWICKBUILD & COMPOSITE DECKING




COMPONENTS REQUIRED FOR INSTALLING COMPOSITE DECKING ON QWICKBUILD DECK FRAME SYSTEM

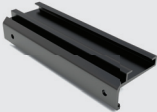

PLEASE REFER TO 'FRAME COMPONENTS AND CONNECTION DETAILS' SECTION FOR:

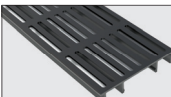
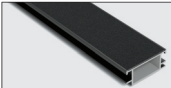
- BREAKER BOARDS
- PICTURE FRAMES



SURFACE FINISH:		TYPICAL QTY'S REQ'D: (NO WASTAGE INCLUDED)
	DECKING BOARD 138X23	7.0 lm/m2
	TRIM BOARD 180X15	AS REQUIRED

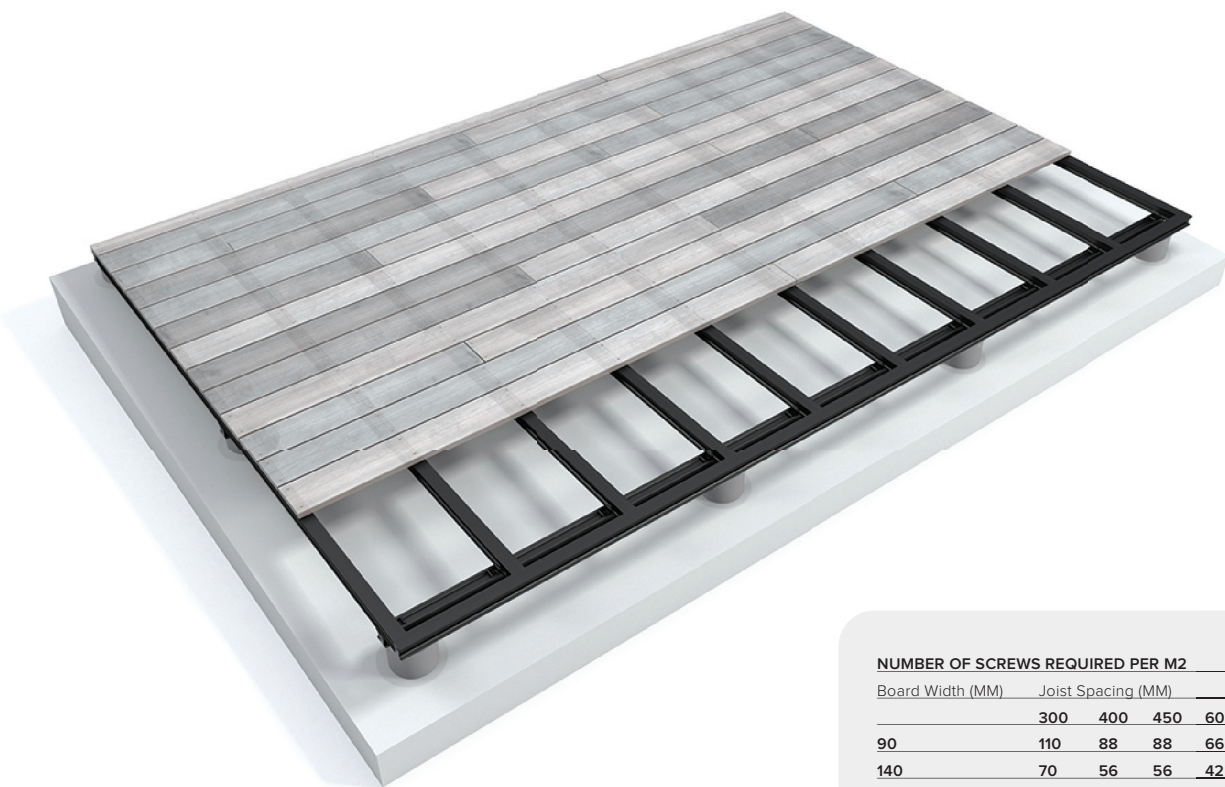
SURFACE COMPONENTS:		
	QWICKCLIP TWIST ALL.QB.QC.T06.23.50X (EXPANSION AND CONTRACTION PINNING SCREWS INCLUDED)	20 p/m2
	STARTER SNAP CLIP ALL.QB.QC.SNAP.RD25X	AS REQUIRED 1X @400MM CENTRES ON STARTING BOARD RECOMMEND 1X BOX MIN.
	45MM FACING FIXING SCREW DECKING BOARDS TRIM BOARDS ALL.SC.QB-F45	AS REQUIRED RECOMMEND 1X BOX MIN. (2X @ 400MM CENTRES FOR TRIM BOARD)

FRAME COMPONENTS FOR COMPOSITE:		
	DOUBLE-JOIST BRACKET ALL.QB.JO.DJB	2.7 p/m2 TYP 1X PER END BOARD JOIN FOR 2.8M BOARD
	TRIM BRACKET ALL.QB.BR.TRIM180-90.1X ALL.QB.BR.TRIM180-45.1X	AS REQUIRED 1X @ 400MM CENTRES

OPTIONAL ITEMS:		
	ACCESS VENTILATION GRATES ALL.QB.QG.138X23X2.8S	IF REQUIRED REF. SURFACE INSTALL GUIDE
	ANTI-SLIP STRIP ALL.QB.AS.054x23.M	IF REQUIRED REF. SURFACE INSTALL GUIDE

QWICKBUILD & HARDWOOD DECKING

COMPONENTS REQUIRED FOR INSTALLING HARDWOOD DECKING ON QWICKBUILD DECK FRAME SYSTEM



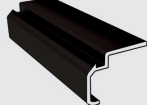
NUMBER OF SCREWS REQUIRED PER M2				
Board Width (MM)	Joist Spacing (MM)			
	300	400	450	600
90	110	88	88	66
140	70	56	56	42

SURFACE COMPONENTS:

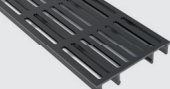
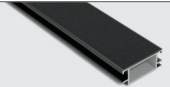
TYPICAL QTY'S REQ'D:
(NO WASTAGE INCLUDED)

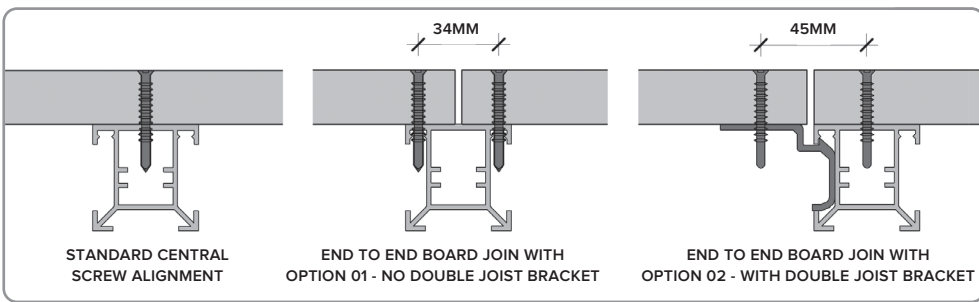
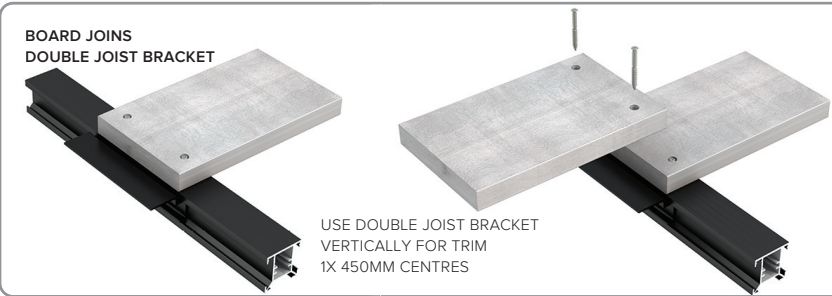
	36MM SCREW 7/9/12 MM (HEAD) ALL.SC.QB-C36-7/9/12	FOR 19-25MM BOARD THICKNESS
	45MM SCREW 7/9/12 MM (HEAD) ALL.SC.QB-C45-7/9/12	FOR 25-32MM BOARD THICKNESS

FRAME COMPONENTS FOR HARDWOOD:

	DOUBLE-JOIST BRACKET ALL.QB.JO.DJB.FL	1X END TO END BOARD JOIN TYPICALLY 2.7 p/m2 1X @ 450MM CENTRES FOR VERTICAL TRIM
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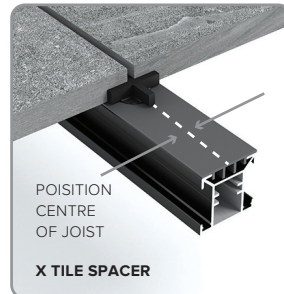
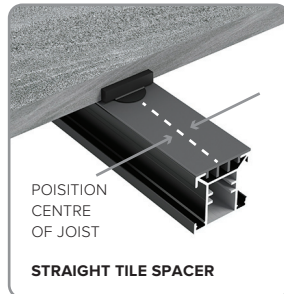
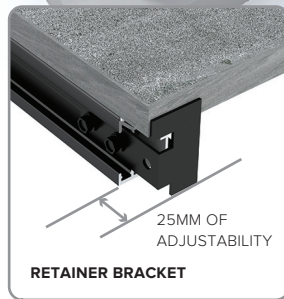
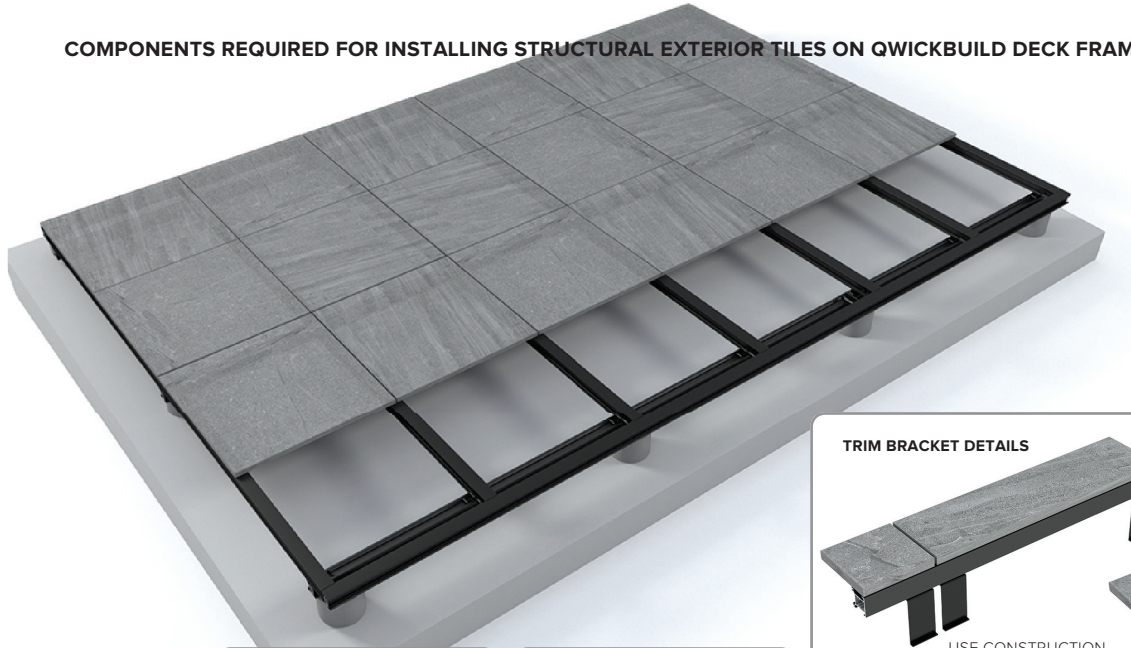
OPTIONAL ITEMS:

	ACCESS VENTILATION GRATES ALL.QB.QG.138X23X2.8S	IF REQUIRED REF. SURFACE INSTALL GUIDE
	ANTI-SLIP STRIP ALL.QB.AS.054x23.M	IF REQUIRED REF. SURFACE INSTALL GUIDE

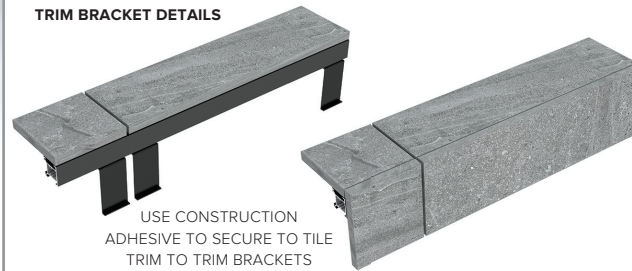


QWICKBUILD & EXTERIOR TILES

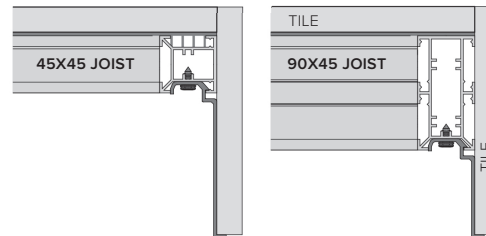
COMPONENTS REQUIRED FOR INSTALLING STRUCTURAL EXTERIOR TILES ON QWICKBUILD DECK FRAME SYSTEM



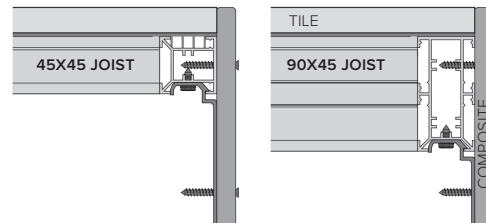
TRIM BRACKET DETAILS



TILE DECK WITH TILE TRIM:



TILE DECK WITH COMPOSITE TRIM:



TYPICAL QTY'S REQ'D (NO WASTAGE INCLUDED)

SURFACE FINISH:	600 MM	300 MM
STRUCTURAL TILES	2.77 TILES p/m2	

SURFACE COMPONENTS:

	TILE RUBBER BEAD ALL.QB.TI.RUBBEAD.LM	REQUIRED ON ALL JOISTS 1 X 1m PER JOIST 1m
	TILE RETAINER SNAP CLIP ALL.QB.TI.RET.SN.25X	2 X PER PERIMETER TILE
	TILE RETAINER BRACKET ALL.QB.TI.RET.BR.25X	2 X PER JOIST END 1 X EVERY 5th TILE
	CROSS SPACER ALL.QB.TI.SPX5MM.25X	AS REQUIRED 1 X EVERY TILE CORNER (SHARED)
	STRAIGHT TILE SPACER ALL.QB.TI.SPS5MM.25X	AS REQUIRED 1 X PERIMETER TILE

FRAME COMPONENT SPECIFIC TO TILES:

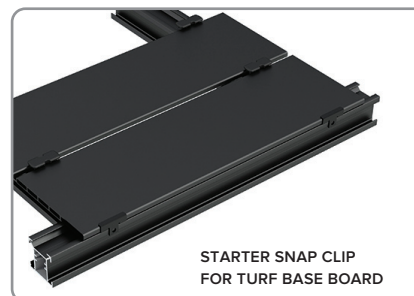
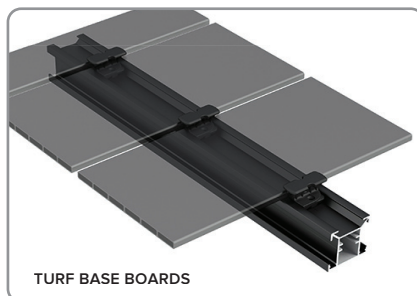
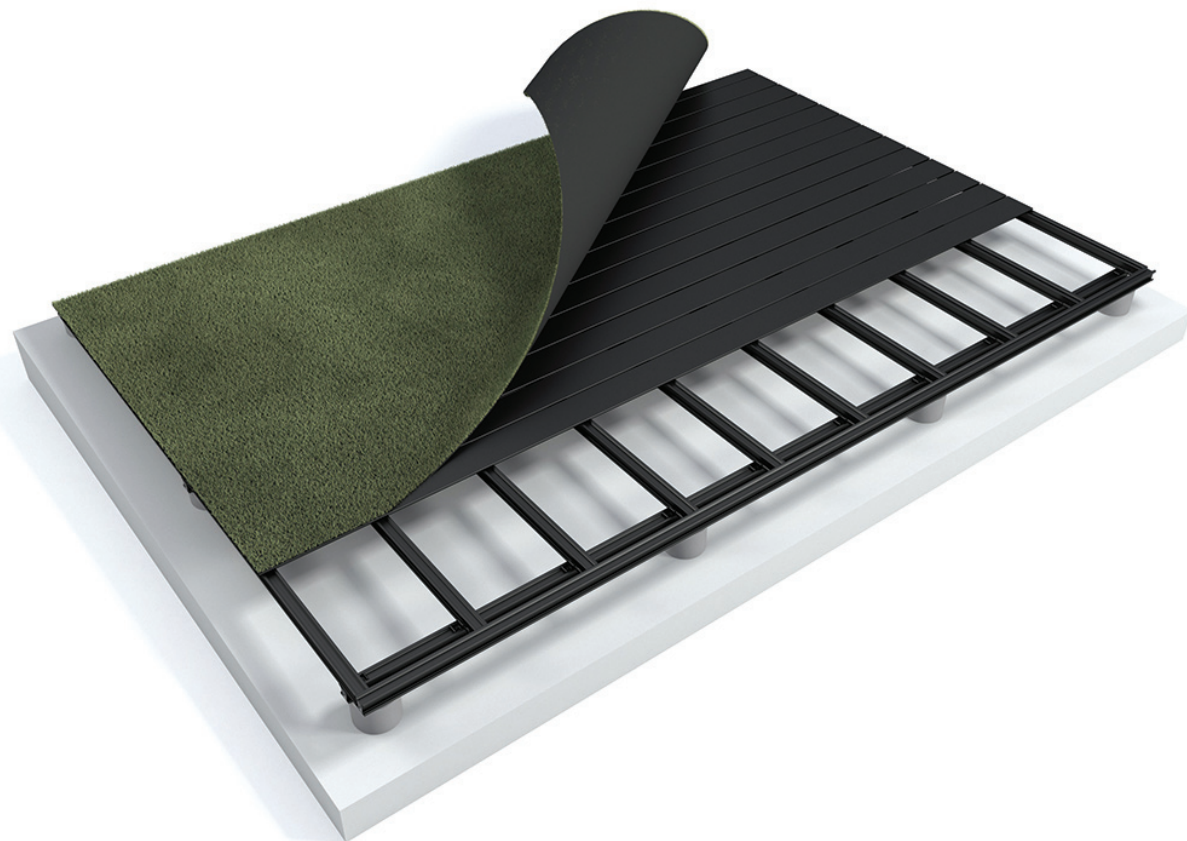
	TRIM BRACKET ALL.QB.BR.TRIM180-90.1X ALL.QB.BR.TRIM180-45.1X	2 X PER PERIMETER TILE
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OPTIONAL ITEMS:

	ACCESS VENTILATION GRATE KIT ALL.QB.QG.138X23X2.8S (INCL. SNAMOUNTS)	IF REQUIRED REF. SURFACE INSTALL GUIDE
	ANTI-SLIP STRIP ALL.QB.AS.054x23.M (REQUIRES HALF TWIST CLIPS FOR INSTALLATION)	IF REQUIRED REF. SURFACE INSTALL GUIDE

QWICKBUILD & SYNTHETIC TURF

COMPONENTS REQUIRED FOR INSTALLING SYNTHETIC TURF / ARTIFICIAL GRASS ON QWICKBUILD DECK FRAME SYSTEM



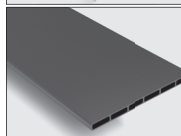




SURFACE FINISH:

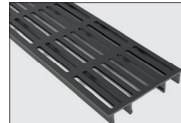
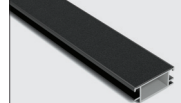
TYPICAL QTY'S REQ'D
@400MM JOIST CENTRES
(NO WASTAGE INCLUDED)

SYNTHETIC TURF	1 m2
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SURFACE COMPONENTS:

	QWICKCLIP TWIST TURF ALL.QB.QC.T06T.23.50X	20 p / m2
	STARTER SNAP CLIP ALL.QB.QC.SNAP.RD25X	AS REQUIRED
	QWICKBUILD TURF BASEBOARDS ALL.QB.QF.138X08X2.8	7 lm / m2
	F20MM FLAT HEAD SCREW ALL.SC.QB-F20	@150 MM CENTRES
	F30MM FLAT HEAD SCREW ALL.SC.QB-F30	AS REQUIRED

OPTIONAL ITEMS:

	ACCESS VENTILATION GRATE KIT ALL.QB.QG.138X23X2.8S (INCL. SNAPMOUNTS)	IF REQUIRED REF. SURFACE INSTALL GUIDE
	ANTI-SLIP STRIP ALL.QB.AS.054x23.M (REQUIRES TWISTCLIPS FOR INSTALLATION)	IF REQUIRED REF. SURFACE INSTALL GUIDE

RESIDENTIAL QWICKBUILD SPAN & CANTILEVER TABLES

IMPORTANT: FOR COMMERCIAL REQUIREMENTS PLEASE REFER TO QQB-IG PAGE 16 & 17

DESIGN PARAMETERS

- Tiles floor (0.5 kPa) considered
- Maximum joist spacing is @600mm crs
- Result was rounded to nearest 5mm
- Maximum deflection allowed at the overhang free-end for both joist and bearer is 5mm
- Point Load (PL) area = Load spread over 2 joists
- Uniform Distributed Load (UDL) area = is per meter and calculated by pressure divided by centres

2kPa 1.8kN /// Standard Residential / Domestic decks (CLASS A)

Light occupancy (2 to 3 people per square meter). Point loadings less than 180kgs.

JOIST PROFILE JOIST SPAN		BEARER PROFILE BEARER SPAN						MAX JOIST CANTILEVER		MAX BEARER CANTILEVER					
PROFILE	SPAN	13x45	28x45	45x45	90x45	135x45	180x45	Non-Anchored*	Anchored**	Non-Anchored*	Anchored**				
											28x45	45x45	90x45	135x45	180x45
13x45	450/600*	450/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28x45	600	450/600*	600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45x45	1200	N/A	600	1200	2000	2900	3650	100	235	100	185	185	330	455	550
90x45	2300	N/A	N/A	900	1450	2100	2650	100	375	100	N/A	150	330	455	550
135x45	3400	N/A	N/A	N/A	1200	1750	2200	100	525	100	N/A	N/A	300	450	540
180x45	4400	N/A	N/A	N/A	N/A	1550	1950	100	630	100	N/A	N/A	N/A	445	535

* For 13 & 28mm profile supporting 600x600 tiles, max joist centres 600mm, max joist span 600mm, max bearer span 600mm ie: all corners of tiles supported. or 2x sides of the tiles supported

* For 13mm profile supporting decking boards, max joist centres 450mm, max joist span is 450mm, max bearer span is 450mm

* For 28mm profile supporting decking boards, max joist centres 450mm, max Joist span is 600mm, max bearer span is 600mm

4.0kPa UDL, 1.8kN PL /// Domestic and Residential (CLASS A/B)

Balconies and roof decks used for domestic floor type activities. Designed for relatively high occupancy but low point loading (no heavy objects such as large planters, spa pools etc).

JOIST PROFILE JOIST SPAN		BEARER PROFILE BEARER SPAN						MAX JOIST CANTILEVER		MAX BEARER CANTILEVER					
PROFILE	SPAN	13x45	28x45	45x45	90x45	135x45	180x45	Non-Anchored*	Anchored**	Non-Anchored*	Anchored**				
											28x45	45x45	90x45	135x45	180x45
13x45	450/600*	450/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28x45	600	450/600*	400/600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45x45	1200	N/A	500	900	1500	2200	2100	100	215	100	165	165	360	490	600
90x45	2100	N/A	N/A	700	1150	1650	1650	100	360	100	N/A	140	315	490	590
135x45	3050	N/A	N/A	N/A	900	1300	2200	100	500	100	N/A	N/A	290	505	605
180x45	3850	N/A	N/A	N/A	N/A	1150	1500	100	610	100	N/A	N/A	N/A	470	590

* For 13 & 28mm profile supporting 600x600 tiles, max joist centres 600mm, max joist span 600mm, max bearer span 600mm ie: all corners of tiles supported. or 2x sides of the tiles supported

* For 13mm profile supporting decking boards, max joist centres 450mm, max joist span is 450mm, max bearer span is 450mm

* For 28mm profile supporting decking boards, max joist centres 450mm, max Joist span is 600mm, max bearer span is 600mm

P01 OF **COMMERCIAL** QWICKBUILD SPAN & CANTILEVER TABLES

IMPORTANT: FOR RESIDENTIAL REQUIREMENTS PLEASE REFER TO QQB-IG PAGE 15, FOR COMMERCIAL CLASS C3 PLEASE REFER TO QQB-IG PAGE 17

DESIGN PARAMETERS

- Tiles floor (0.5 kPa) considered
- Maximum joist spacing is @600mm crs
- Result was rounded to nearest 5mm
- Maximum deflection allowed at the overhang free-end for both joist and bearer is 5mm
- Point Load (PL) area = Load spread over 2 joists
- Uniform Distributed Load (UDL) area = is per meter and calculated by pressure divided by centres

3.0kPa UDL, 2.7kN PL /// Institutional Assembly Areas – Not Public (CLASS C2)

Educational facilities such as schools and universities with fixed seats. Mid density occupancy with higher point loadings for fixed seating.

JOIST PROFILE JOIST SPAN		BEARER PROFILE BEARER SPAN						MAX JOIST CANTILEVER		MAX BEARER CANTILEVER					
PROFILE	SPAN	13x45	28x45	45x45	90x45	135x45	180x45	Non-Anchored*	Anchored**	Non-Anchored*	Anchored**				
											28x45	45x45	90x45	135x45	180x45
13x45	450/600*	450/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28x45	600	450/600*	600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45x45	1200	N/A	600	1050	1700	2450	3100	100	185	100	145	145	325	465	565
90x45	2300	N/A	N/A	750	1250	1800	2300	100	330	100	N/A	125	290	460	550
135x45	3400	N/A	N/A	N/A	1000	1500	1900	100	465	100	N/A	N/A	260	455	545
180x45	4300	N/A	N/A	N/A	N/A	1300	1700	100	570	100	N/A	N/A	N/A	425	540

* For 13 & 28mm profile supporting 600x600 tiles, max joist centres 600mm, max joist span 600mm, max bearer span 600mm ie: all corners of tiles supported. or 2x sides of the tiles supported

* For 13mm profile supporting decking boards, max joist centres 450mm, max joist span is 450mm, max bearer span is 450mm

* For 28mm profile supporting decking boards, max joist centres 450mm, max Joist span is 600mm, max bearer span is 600mm

4.0kPa UDL, 1.8kN PL /// Domestic and Residential (CLASS A/B)

Balconies and roof decks used for domestic floor type activities. Designed for relatively high occupancy but low point loading (no heavy objects such as large planters, spa pools etc).

JOIST PROFILE JOIST SPAN		BEARER PROFILE BEARER SPAN						MAX JOIST CANTILEVER		MAX BEARER CANTILEVER					
PROFILE	SPAN	13x45	28x45	45x45	90x45	135x45	180x45	Non-Anchored*	Anchored**	Non-Anchored*	Anchored**				
											28x45	45x45	90x45	135x45	180x45
13x45	450/600*	450/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28x45	600	450/600*	400/600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45x45	1200	N/A	500	900	1500	2200	2100	100	215	100	165	165	360	490	600
90x45	2100	N/A	N/A	700	1150	1650	1650	100	360	100	N/A	140	315	490	590
135x45	3050	N/A	N/A	N/A	900	1300	2200	100	500	100	N/A	N/A	290	505	605
180x45	3850	N/A	N/A	N/A	N/A	1150	1500	100	610	100	N/A	N/A	N/A	470	590

* For 13 & 28mm profile supporting 600x600 tiles, max joist centres 600mm, max joist span 600mm, max bearer span 600mm ie: all corners of tiles supported. or 2x sides of the tiles supported

* For 13mm profile supporting decking boards, max joist centres 450mm, max joist span is 450mm, max bearer span is 450mm

* For 28mm profile supporting decking boards, max joist centres 450mm, max Joist span is 600mm, max bearer span is 600mm

P2 OF COMMERCIAL QWICKBUILD SPAN & CANTILEVER TABLES

IMPORTANT: FOR RESIDENTIAL REQUIREMENTS PLEASE REFER TO OQB-IG PAGE 15, FOR COMMERCIAL CLASS C2 PLEASE REFER TO OQB-IG PAGE 16

DESIGN PARAMETERS

- Tiles floor (0.5 kPa) considered
- Maximum joist spacing is @600mm crs
- Result was rounded to nearest 5mm
- Maximum deflection allowed at the overhang free-end for both joist and bearer is 5mm
- Point Load (PL) area = Load spread over 2 joists
- Uniform Distributed Load (UDL) area = is per meter and calculated by pressure divided by centres

4.0kPa UDL, 4.5kN PL /// Public Areas Without Obstacles for Moving People (CLASS C3)

Corridors, walkways, concourses, podium decks not subject to wheeled vehicles.

JOIST PROFILE JOIST SPAN		BEARER PROFILE BEARER SPAN						MAX JOIST CANTILEVER		MAX BEARER CANTILEVER					
PROFILE	SPAN	13x45	28x45	45x45	90x45	135x45	180x45	Non-Anchored*	Anchored**	Non-Anchored*	Anchored**				
											28x45	45x45	90x45	135x45	180x45
13x45	300/600*	400/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28x45	550	400/600*	400/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45x45	1150	N/A	400	900	1500	2200	2750	100	125	100	105	105	300	475	490
90x45	2100	N/A	N/A	700	1100	1600	2000	100	300	100	N/A	95	245	460	565
135x45	3050	N/A	N/A	N/A	900	1300	1650	100	435	100	N/A	N/A	225	420	570
180x45	3850	N/A	N/A	N/A	N/A	1150	1450	100	540	100	N/A	N/A	N/A	390	530

* For 13 & 28mm profile supporting 600x600 tiles, max joist centres 600mm, max joist span 600mm, max bearer span 600mm ie: all corners of tiles supported. or 2x sides of the tiles supported

* For 13mm profile supporting decking boards, max joist centres 450mm, max joist span is 450mm, max bearer span is 450mm

* For 28mm profile supporting decking boards, max joist centres 450mm, max Joist span is 600mm, max bearer span is 600mm

5.0kPa UDL, 4.5kN PL /// Public Areas Without Obstacles for Moving People (CLASS C3)

Corridors, walkways, concourses, podium decks, subject to light wheeled vehicles, trolleys etc.

JOIST PROFILE JOIST SPAN		BEARER PROFILE BEARER SPAN						MAX JOIST CANTILEVER		MAX BEARER CANTILEVER					
PROFILE	SPAN	13x45	28x45	45x45	90x45	135x45	180x45	Non-Anchored*	Anchored**	Non-Anchored*	Anchored**				
											28x45	45x45	90x45	135x45	180x45
13x45	300/600*	450/600*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28x45	550	450/600*	400/600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
45x45	1150	N/A	400	850	1350	2000	2500	100	120	100	100	100	275	460	565
90x45	1950	N/A	N/A	600	1000	1450	1850	100	300	100	N/A	100	245	470	585
135x45	2750	N/A	N/A	N/A	800	1200	1500	100	450	100	N/A	N/A	230	425	585
180x45	3500	N/A	N/A	N/A	N/A	1050	1350	100	550	100	N/A	N/A	N/A	400	530

* For 13 & 28mm profile supporting 600x600 tiles, max joist centres 600mm, max joist span 600mm, max bearer span 600mm ie: all corners of tiles supported. or 2x sides of the tiles supported

* For 13mm profile supporting decking boards, max joist centres 450mm, max joist span is 450mm, max bearer span is 450mm

* For 28mm profile supporting decking boards, max joist centres 450mm, max Joist span is 600mm, max bearer span is 600mm

LEGAL INFORMATION

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THE USE OF THIS DOCUMENT IS SUBJECT TO THE FOLLOWING TERMS & CONDITIONS: THIS INSTALLATION GUIDE IS PROVIDED TO SUMMARISE THE BASIC INFORMATION & PRINCIPLES OF INSTALLATION REQUIRED FOR CONSTRUCTION OF QWICKBUILD DECK FRAME STRUCTURES. USERS OF THIS DOCUMENT SHALL RELY SOLELY ON THE PROFESSIONAL JUDGEMENT & SKILL OF INSTALLERS IN DETERMINING THE APPROPRIATENESS OF USING OR REFERRING TO THIS DOCUMENT & TO SATISFY THEMSELVES AS THE ACCURACY OF THE DATA IT CONTAINS. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH OUTDURE'S INSTALLATION GUIDELINES OR LOCAL BUILDING CODE, NATIONAL STANDARDS, STATUTORY REGULATIONS, LOCAL AUTHORITY REQUIREMENTS, WHICH TAKE PRECEDENCE OVER ANY DETAILS IN THIS DOCUMENT. USERS ACKNOWLEDGE THAT OUTDURE IS NOT LIABLE IN ANY RESPECT OF ANY PARTICULAR USE OR APPLICATION OF THE MATERIAL PROVIDED. PLEASE CONTACT OUTDURE FOR FURTHER CLARIFICATION.

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INSTALLATION VIDEOS www.outdure.com/installation-videos

IMPORTANT DESIGN INFO.

ENGINEERING

ALL INFORMATION IN THIS GUIDE RELATES TO STANDARD RESIDENTIAL ENGINEERING SPECIFICATIONS: 2.0 kPa UDL/1.8 kN POINT LOAD. INSTALLATIONS FOR COMMERCIAL USE MAY REQUIRE DIFFERENT JOIST/BEARER SPAN & CONNECTION DETAILS. PLEASE NOTE THIS IS THE RESPONSIBILITY OF THE INSTALLER/SPECIFIER TO ENSURE THE CORRECT SPANS & CONSTRUCTION DETAILS ARE USED. ALL DETAILS ARE AVAILABLE IN THE QWICKBUILD DESIGN MANUAL.

RAILINGS

THE OUTDURE QWICKBUILD IS SYSTEM IS DESIGNED TO SUPPORT COMMON RAILING SYSTEMS, INCLUDING TOP MOUNTED, THROUGH MOUNTED OR SIDE MOUNTED RAILING DESIGNS. ADDITIONAL JOIST & BLOCKING MEMBERS & CONNECTION DETAILS ARE REQUIRED TO PROVIDE THE ADDITIONAL STRENGTH FOR THE RAILING. THESE CONSTRUCTION DETAILS ARE AVAILABLE FOR DOWNLOAD.

www.outdure.com/resources

RAILINGS CAN ONLY BE ATTACHED TO 90X45, 135x45 OR 180x45 JOIST PROFILES. IT IS CRITICAL TO SELECT THE CORRECT JOIST PROFILES PRIOR TO DESIGNING THE STRUCTURE & ORDERING MATERIALS. IT IS RECOMMENDED TO DESIGN STRUCTURES USING 135X45 OR 180X45 JOIST PROFILES AS THE CONSTRUCTION DETAILS ARE VERY SIMPLE.

DO NOT ATTACH RAILING TO A FLOATING DECK STRUCTURE. THE DECK STRUCTURE MUST BE ANCHORED TO THE SUBSTRATE OR SUPPORTING STRUCTURE.

CANTILEVERS

JOISTS MAY CANTILEVER WHEN THE DECK STRUCTURE IS ANCHORED TO THE SUBSTRATE OR SUPPORTING STRUCTURE. PLEASE REFER TO SPAN TABLES FOR CANTILEVERS & TO DETERMINE REQUIRED BACKSPAN FOR CANTILEVERS.

WATERPROOF MEMBRANES

WHEN CREATING ANY STRUCTURE OVER A WATERPROOF MEMBRANE, IT IS THE SOLE RESPONSIBILITY OF THE INSTALLER TO ENSURE THE MEMBRANE MANUFACTURERS WARRANTY REMAINS VALID. OUTDURE RECOMMENDS ACCESS TO GUTTERS & DRAINS IS MAINTAINED BY USE OF OUTDURE'S REMOVABLE QWICKGRATES OR ACCESS HATCHES. OUTDURE ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR COVERING GUTTERS & DRAINS THAT MAY OR MAY NOT NEED TO BE ACCESSED, INSPECTED OR MAINTAINED.