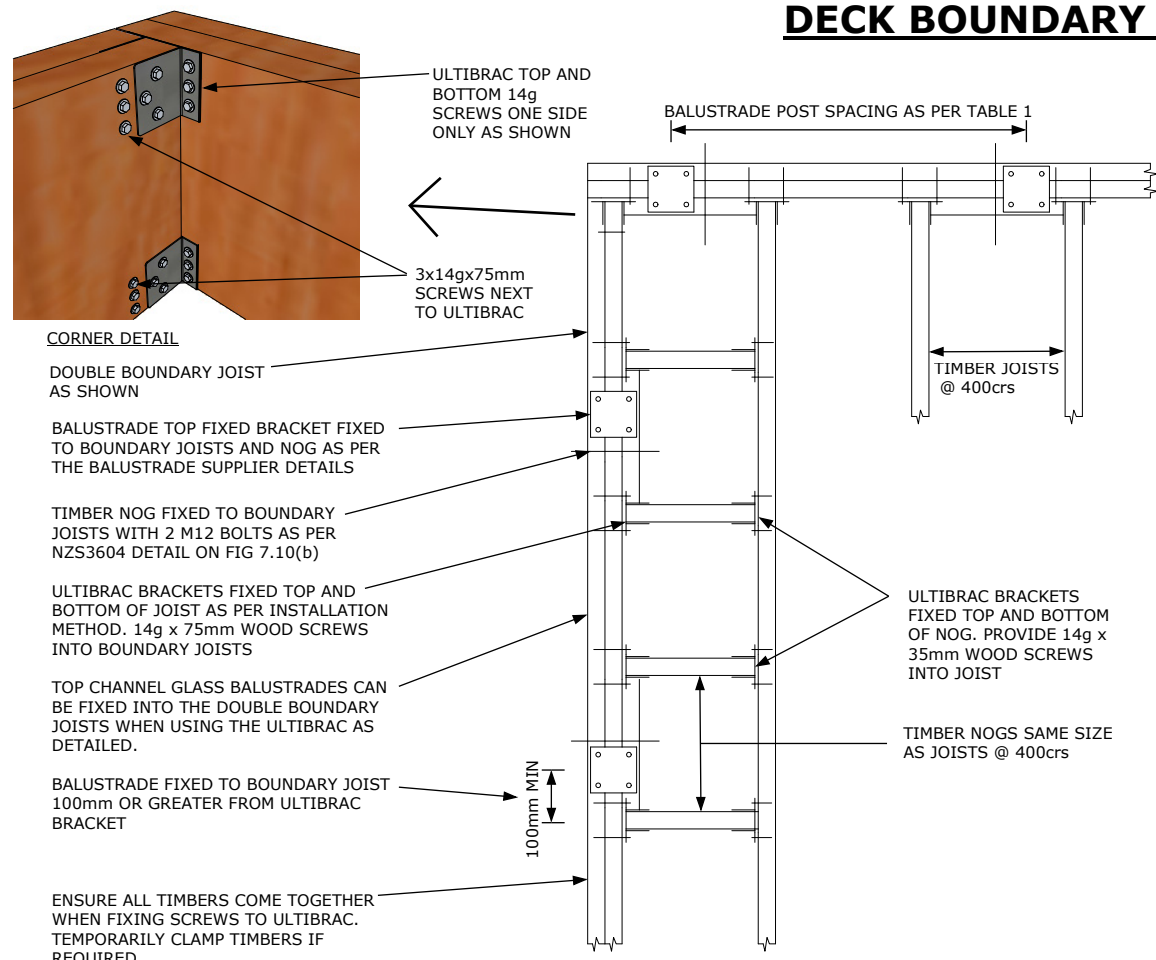
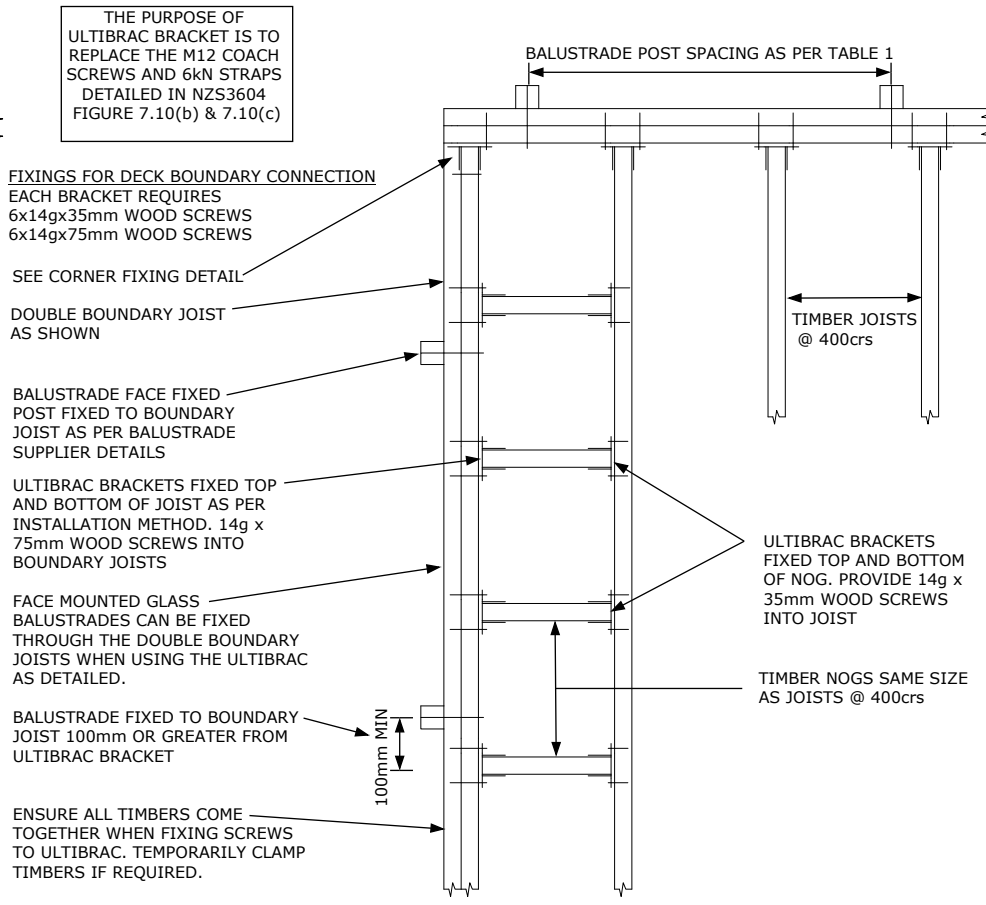


# DECK BOUNDARY JOIST INSTALLATION



**TOP FIXED BALUSTRADE POST - ULTIBRAC FIXING**



**FACE FIXED BALUSTRADE POST - ULTIBRAC FIXING**

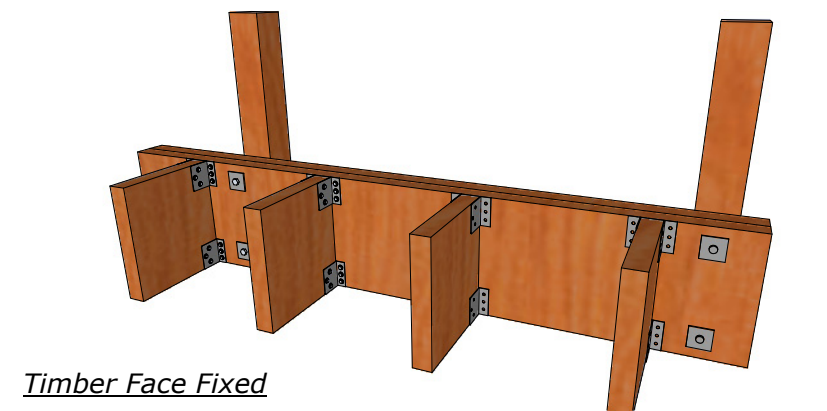
	MAX LIVE LOAD (kPa)	MAX JOIST SPAN (m)
COMMERCIAL FLOOR	5.0	4.0
RESIDENTIAL FLOOR	2.0	9.0

MAX JOIST SPAN IS FOR THE ULTIBRAC CAPACITY ONLY. CHECK JOIST SIZE COMPLIES WITH NZS3604 SPAN TABLES.

RESIDENTIAL BALUSTRADE POST SPACING (m)	BARRIER HEIGHT m	
	INTERNAL	EXTERNAL
1.0	3.0	1.2

**NOTES:**  
 -WHERE THE ULTIBRAC IS USED AS A JOIST HANGER SEE TABLE 2.  
 -IN EXTERIOR ENVIRONMENTS THE ULTIBRAC MATERIAL SHALL BE STAINLESS STEEL 304.  
 -IN INTERIOR AND ENCLOSED ENVIRONMENTS GALVANISED STEEL BRACKETS CAN BE USED.  
 -ULTIBRAC INSTALLATION APPLIES TO BALUSTRADE CONSTRUCTION OF DOMESTIC & RESIDENTIAL BUILDINGS INCLUDING EXTERNAL DECKS & INTERNAL AREAS AND TO OFFICES & WORK AREAS NOT SUSCEPTIBLE TO OVERCROWDING. OCCUPANCIES A, B, C3 & E IN NZS1170.1 TABLE 3.3.  
 -CHECK WITH THE BALUSTRADE SUPPLIER THAT THE CHOSEN JOIST SIZE IS SUITABLE FOR THE BALUSTRADE FIXINGS.

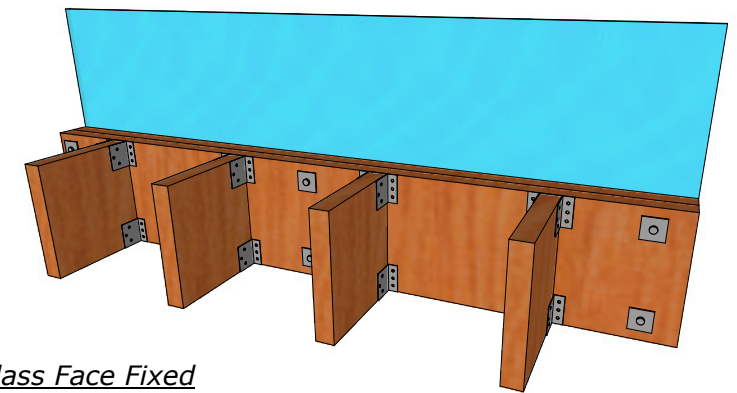
# SUITABLE FOR ALL BALUSTRADE TYPES



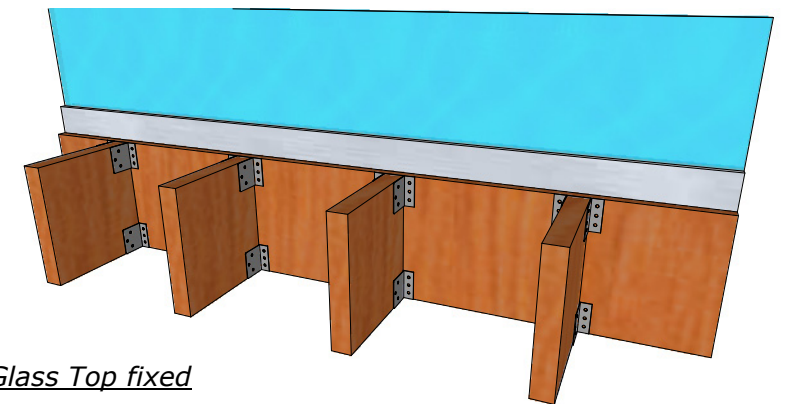
*Timber Face Fixed*



*Metal Top fixed*



*Glass Face Fixed*

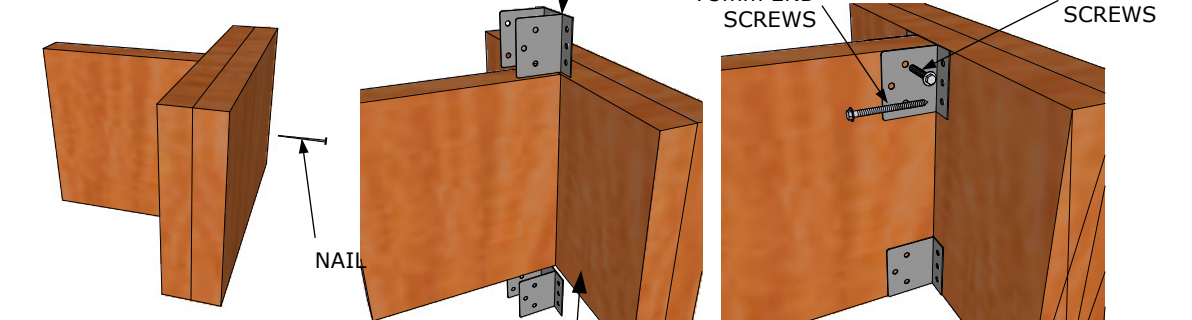


*Glass Top fixed*

## INSTALLATION METHODS

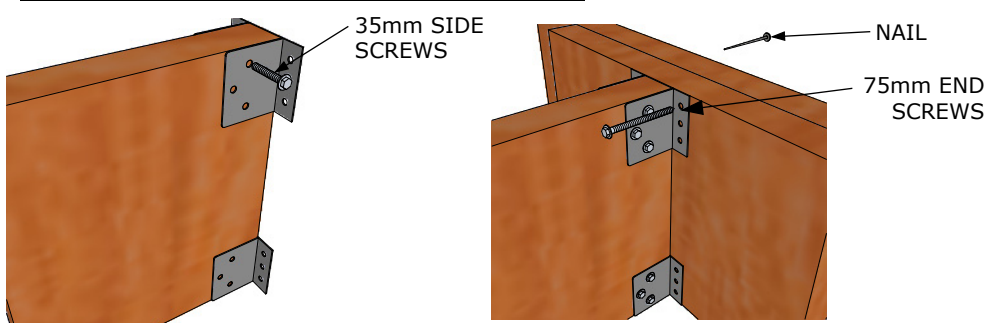
THERE ARE 3 WAYS TO INSTALL THE ULTIBRAC DEPENDING ON THE TIMBER JOINT. CONNECTIONS BELOW ARE FOR A DECK BOUNDARY JOIST. THE METHODS ARE THE SAME FOR ALL TIMBER CONNECTIONS.

### 1. FIX ULTIBRAC AFTER



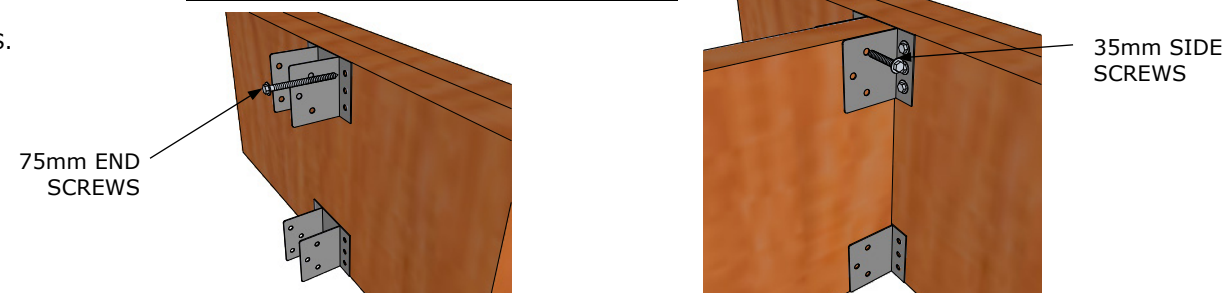
- i) TEMPORARILY NAIL TIMBERS TOGETHER. KEEP NAILS CLEAR OF BRACKETS.
- ii) SLOT BRACKETS BETWEEN TIMBER JOIN AND TAP INTO PLACE
- iii) FIX ALL 14gx35mm SIDE SCREWS FIRST THEN 14gx75mm END SCREWS.

### 2. FIX ULTIBRAC TO THE JOIST FIRST



- i) FIX BRACKETS TO THE JOIST WITH ALL 14gx35mm SCREWS
- ii) NAIL BOUNDARY JOIST TIMBER TO JOIST, FIX ALL 14gx75mm SCREWS INTO BOUNDARY JOIST

### 3. FIX ULTIBRAC TO BEAM FIRST



- i) FIX BRACKETS TO THE BEAM WITH ALL 14gx75mm SCREWS
- ii) FIX JOIST TO BRACKET WITH ALL 14gx35mm SIDE SCREWS



BRANZ Appraised  
Appraisal No.907 [2016]



**ULTIBRAC IS THE NEW VERSION OF THE JOIST GRIPPA BRACKET. IT PROVIDES THE SAME FIXING AS THE JOIST GRIPPA BUT IS MUCH EASIER TO INSTALL WITH NO NAILS OR TOP FLANGE OVER THE JOISTS. THE ULTIBRAC CAN ALSO BE USED AS A GENERAL PURPOSE FIXING BRACKET FOR BEAMS, JOISTS, TRUSS'S, RAFTERS, STUDS AND MORE.**

**ULTIBRAC®**  
**ONE BRACKET, MULTI PURPOSE**  
 DECK JOIST INSTALLATION SPECIFICATION  
 JULY 2022 - VERSION 2.0

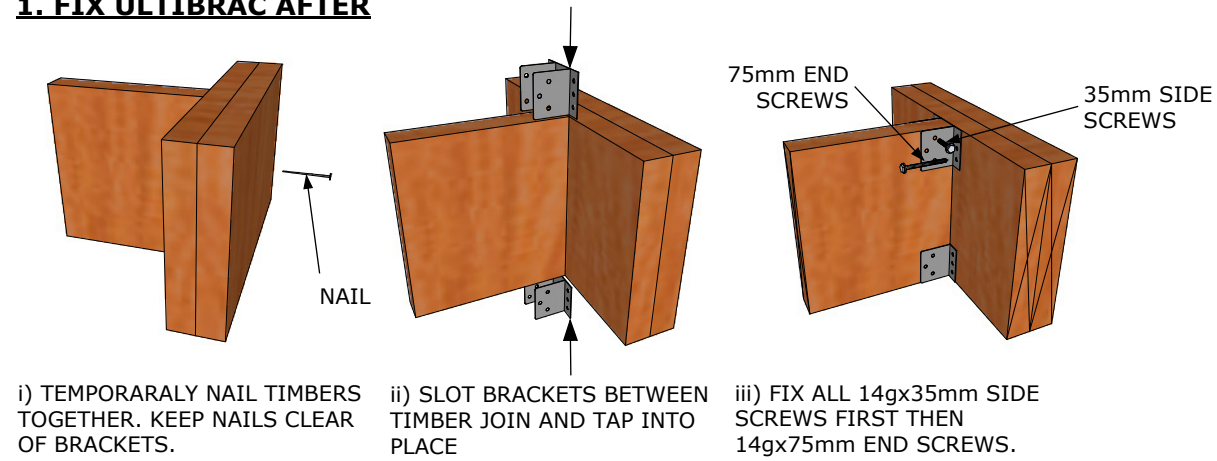
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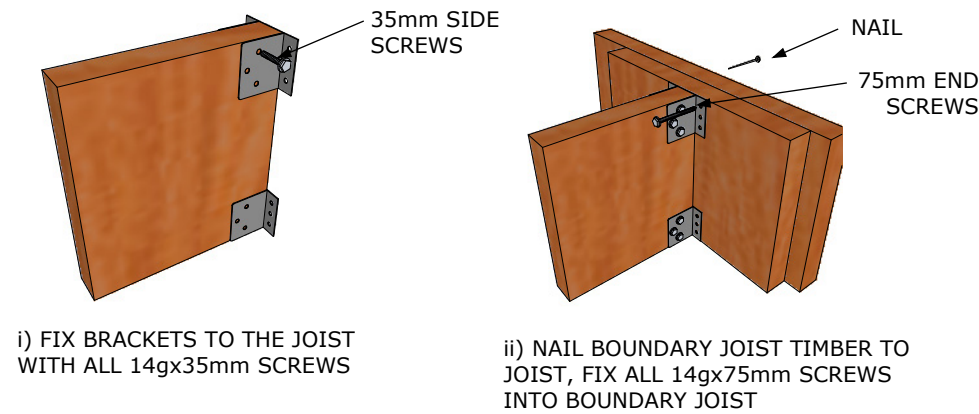
# INSTALLATION METHODS

THERE ARE 3 WAYS TO INSTALL THE ULTIBRAC DEPENDING ON THE TIMBER JOINT. CONNECTIONS BELOW ARE FOR A DECK BOUNDARY JOIST. THE METHODS ARE THE SAME FOR ALL TIMBER CONNECTIONS.

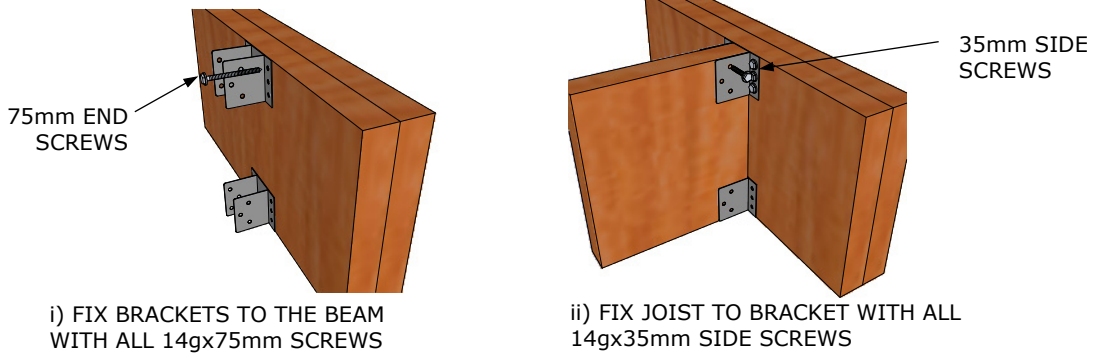
## 1. FIX ULTIBRAC AFTER



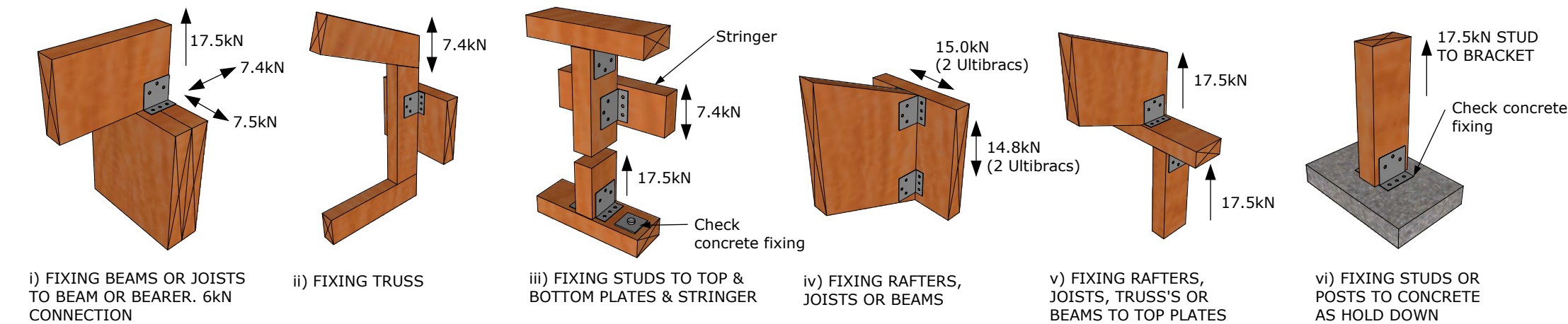
## 2. FIX ULTIBRAC TO THE JOIST FIRST



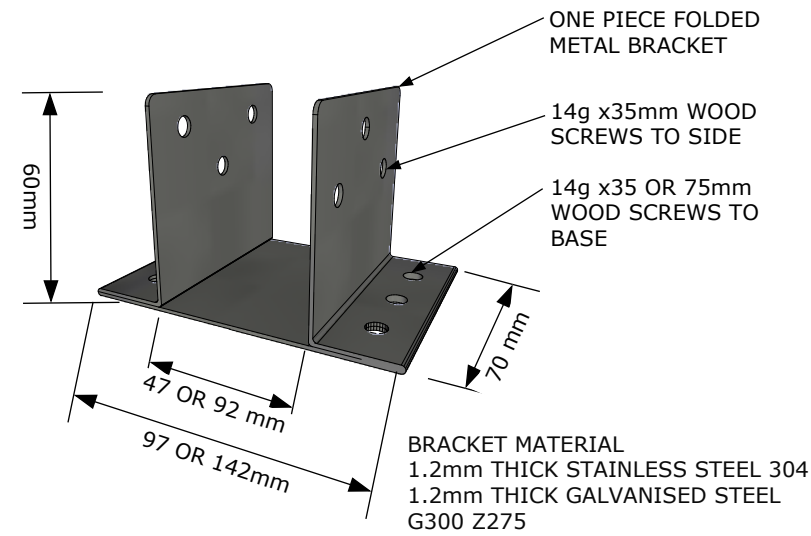
## 3. FIX ULTIBRAC TO BEAM FIRST



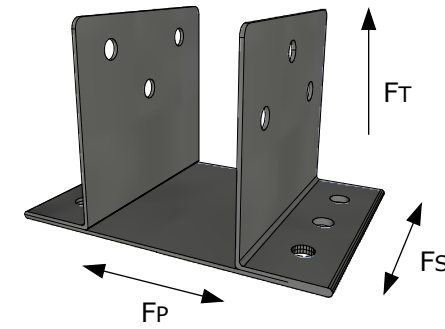
**ULTIBRAC CONNECTION TYPES** FIXINGS AS PER 1, 2 & 3 ABOVE. ALL HOLES FILLED WITH 14gx35mm WOOD SCREWS



# ULTIBRAC DETAILS



# ULTIBRAC LOAD DATA



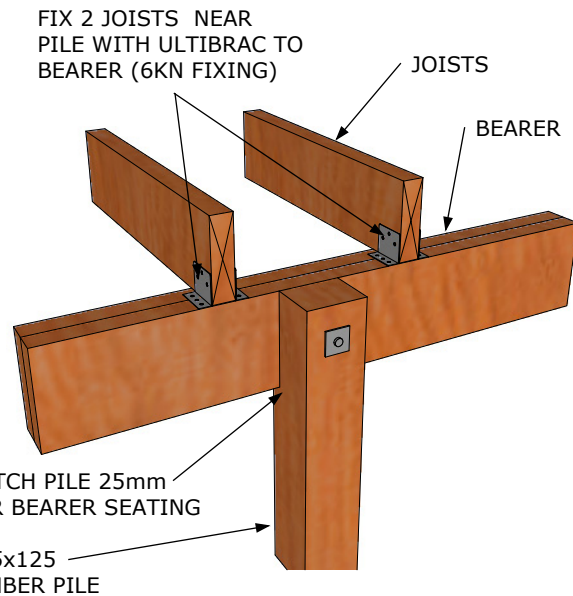
NOTE: TENSION AND SHEAR TEST RESULTS ARE FOR ALL HOLES FILLED WITH 14g x 35mm LONG SELF DRILLING WOOD SCREWS. TESTING COMPLETED BY SGS AND BRANZ

### FOR DESIGNERS AND ARCHITECTS.

THESE VALUES ARE DESIGN CAPACITIES THAT CAN BE USED AS AN 'ALTERNATIVE FIXINGS' UNDER NZS3604.  
SHEAR  $F_s = 7.4kN$   
SHEAR  $F_p = 7.5kN$   
TENSION  $F_t = 17.5kN$

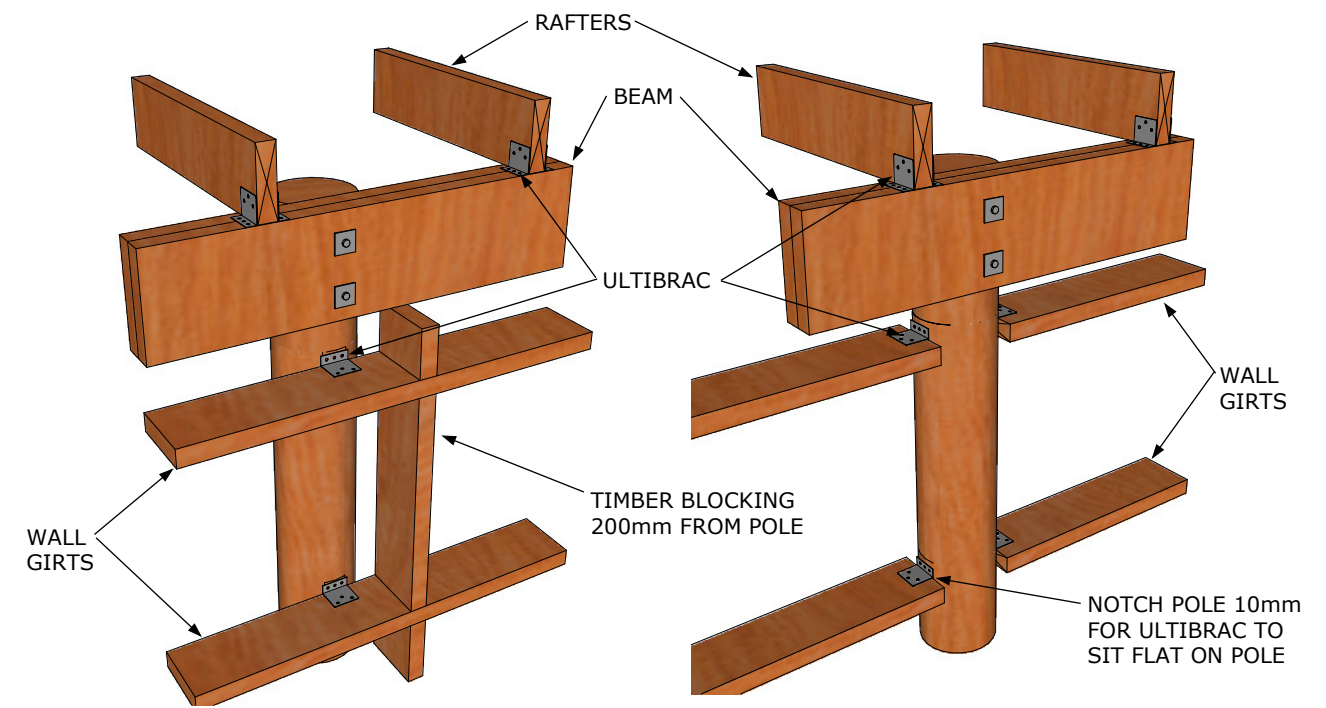
### FOR ENGINEERS.

THESE VALUES ARE CHARACTERISTIC LOAD VALUES THAT CAN BE USED IN CONJUNCTION WITH NZS3603 TO CALCULATE DESIGN CAPACITIES.  
SHEAR  $F_s = 8.8kN$   
SHEAR  $F_p = 8.9kN$   
TENSION  $F_t = 18.6kN$



### NZS3604 12kN PILE CONNECTION

ANCHOR PILE OR BRACED PILE AS PER NZS3604 FIG 6.6 AND 6.10. ULTIBRAC PROVIDES 6kN FIXING BETWEEN JOISTS AND BEARER. ALL DETAILS AS PER NZS3604.  
ULTIBRAC 12kN FIXING PACK CONTENTS:  
- ALL STAINLESS STEEL 304 GRADE  
- 2xULTIBRAC  
- 24x14gx35mm TYPE 17 WOOD SCREWS  
- M12x260mm LONG THREADED ROD, 2x50x50x3mm WASHERS, 2 NUTS



### GIRTS OUTSIDE POLE

### GIRTS IN BETWEEN POLE

### TIMBER POLE SHED CONSTRUCTION

- WALL GIRTS FIXED TO THE TIMBER POLES USING ULTIBRAC
- RAFTERS FIXED TO ROOF BEAM WITH ULTIBRAC

**ULTIBRAC<sup>®</sup>**  
**ONE BRACKET, MULTI PURPOSE**  
GENERAL PURPOSE INSTALLATION SPECIFICATION  
JULY 2022 - VERSION 2.0

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