

## **DOUBLE TEE FLOORING**

Double Tee flooring units consist of two pre-stressed ribs and a connecting top slab. The depth of the Double Tee can vary from 200 to 550mm. The connecting slab or flange is 2400mm wide x 50mm thick. Double Tees are ideally suited for larger spanning floors with a wide variety of services suspended from the flooring system.

Double Tees can easily accommodate large floor voids/ penetrations through the slab region. The cast in-situ topping is a min 75mm thick.

### **SOUND TRANSMISSION**

A major practical benefit of a concrete floor is its ability to reduce noise transmission

### **FIRE RESISTANCE RATING**

2400mm wide unit = 90min fire resistance rating. Increased fire ratings can be achieved with specific design.

### **MATERIALS**

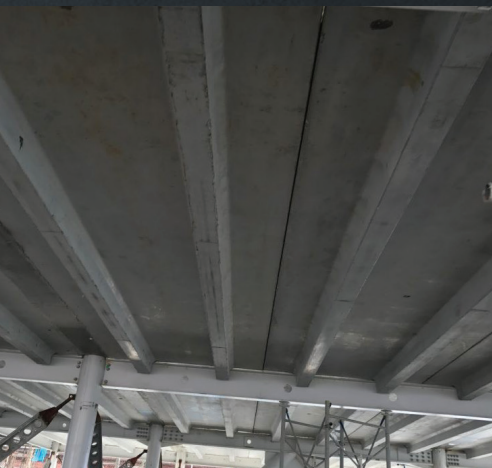
Double Tee strength = 45 MPa at 28 days

Topping strength = 25 MPa at 28 days

For further advice on flooring systems or technical information please contact Ultimate Engineered Concrete. Our experienced and qualified staff will be happy to discuss your flooring design.



**[SEE OUR WEBSITE FOR MORE INFORMATION](#)**



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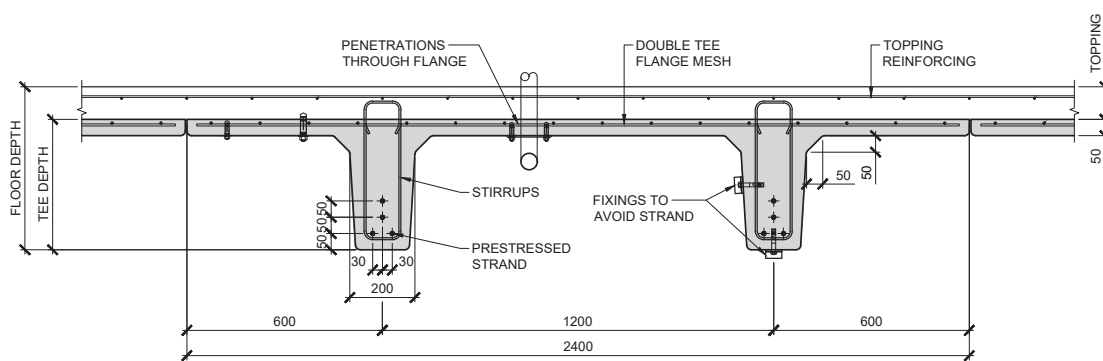


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SPAN (M) - 2.4m wide TT, 75mm Topping															
TT Depth (mm)	O/A Floor Depth	2400 wide mass, kg/m	5	6	7	8	9	10	11	12	13	14	15	16	17
200	275	865	16.3	10.2	6.5	4.1									
250	325	912		16.0	10.7	7.2	5.0	3.8							
300	375	957			15.9	11.2	8.3	6.1	4.5						
350	425	1002				15.2	11.1	8.3	6.1	4.5					
400	525	1044					15.0	11.3	8.7	6.6	4.9	3.6			
450	575	1085					18.1	12.9	9.9	7.7	5.9	4.5	3.3		
500	575	1123						17.4	13.1	10.3	8.1	6.4	5.0	3.8	
550	625	1161							14.9	11.7	9.1	7.2	5.7	4.4	3.5

\* Short term live load factor = 0.7

\* Max live load is based on Tees being in an internal environment = A1



**DOUBLE TEE TYPICAL SECTION**

## HANDLING AND STORAGE

Double Tees will arrive at site with strand lifting eyes suitable for standard chain hooks, no need for specialized lifting clutches such as Reids products.

Should you need to store Double Tees on site prior to installation, dunnage should be placed as close as possible to the lifter locations and in a straight vertical line if storing multiple units high.

## PENETRATIONS AND FIXINGS

CCANZ Information Bulletin IB95 – ‘Drilling, Cutting or Forming Holes in Suspended Concrete Floor Slabs’ must be adhered to. Avoid drilling or coring holes through ribs due to the risk of cutting pre-stressing strand and reinforcing. If a strand is inadvertently cut on site, prop both sides of the cut and inform Ultimate Engineered Concrete immediately.

If drilling or coring into a leg is necessary, please consult Ultimate Engineered Concrete who will be able to provide permissible zones. The ideal location for penetrations and services is through the 50mm thick flange and topping slab are spaced at legs 1,200mm centres. This allows for a penetration of up to 800mm wide through the flange. Fixings can be made into the flange for light loads, or into the topping slab for heavier loads. A qualified Engineer should be consulted.

## TEMPORARY PROPPING

One advantage of Double Tees is that temporary propping is not normally required. However, on occasion propping is required. Particularly longer spans with thicker toppings. Ultimate Engineered Concrete will indicated prop locations and heights on the shop drawings. Double Tees are typically un-propped.

For multi-storey construction props must be in place for a minimum of 3 levels below the level being constructed or to solid ground. Load on the props to the finished floors below should be relieved and remain snug prior to the props supporting the floor being built taking wet concrete topping loads. De-prop when topping has reached 75% of its 28 day strength.

## CAMBER

Camber or hog, is a result of the pre-stressing process and in some cases unavoidable. The amount of camber will depend on a variety of factors including amount of pre-stress forces applied to the Double Tees, time in storage since manufacture, weather and also length of the Double Tee.

Camber may be in the region of span/300. However, due to the propping methodology and design calculations, long term deflection will produce a near flat floor.