



T-JOIST SLAB SYSTEM

- Eliminates the need to install and dismantle traditional plywood floor slab formworks.
- Speeds up project completion times and lowers your labor costs.
- Typical applications: Two-story single-detached houses, duplexes, and townhouses.

TECHNICAL DATA :

CONCRETE PROPERTIES

Concrete density, kgs/m ³	2,400
Strength @28 days, f'c MPa	31
Strength @ release, f'ci MPa	27
Modulus of elasticity @ service, Ec, MPa	30,094

PRESTRESSING STEEL stranded wire properties

6.35mm Ø wire

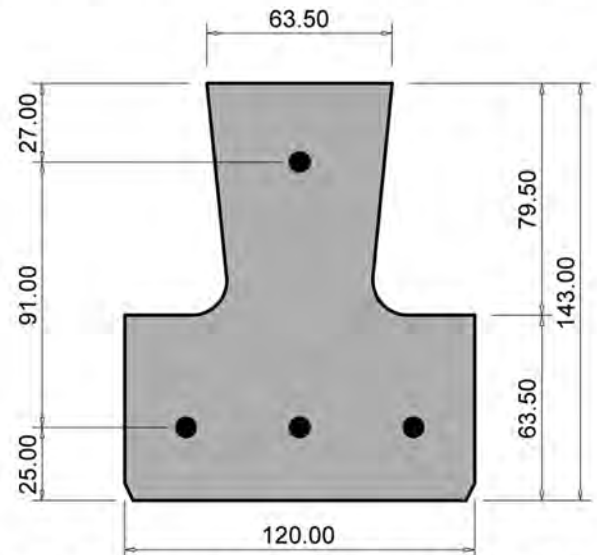
• 3-Wires, stress relieved, high tensile strands	
• Ultimate strength, fpu, Mpa	1,860
• Yield strength, fpy, Mpa	1,582
• Modulus of elasticity, Ep, Mpa	186 x 10 ³
• Area of wire, Ap, mm ²	21

9.53mm Ø wire

• 7-Wires, low relaxation, high tensile strands	
• Ultimate strength, fpu, MPa	1,860
• Yield strength, fpy, MPa	1,630
• Modulus of elasticity, Ep, MPa	195 x 10 ³
• Area of wire, Ap, mm ²	55

CONCRETE SLAB / TOPPING

• Min. compressive strength @ 28 days, f'c, MPa	21
• Slab/topping thickness, mm	51
• Volume, 50mm concrete slab, m ³ / m ²	0.08
• Volume, 75mm concrete slab, m ³ / m ²	0.105
• Wire mesh reinforcement 6 mm at 150 mm o.c	
• Weight of steel reinforcement, kgs/m ²	4



T-JOIST CROSS SECTION

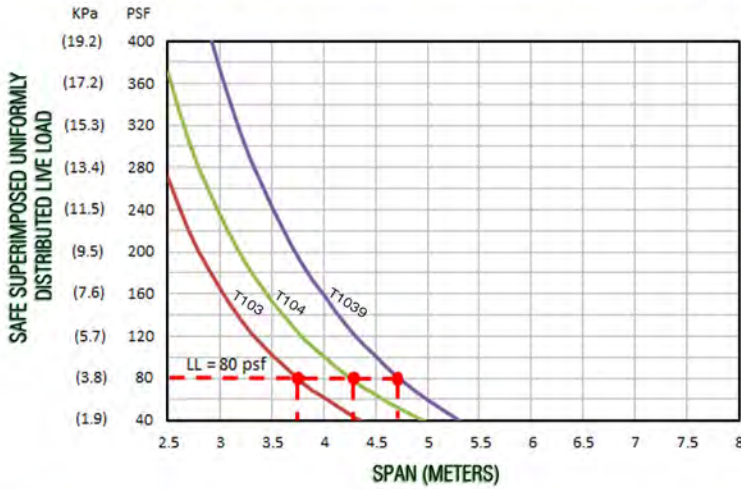
CROSS SECTIONAL PROPERTIES

• Width, mm	120
• Total height, mm	143
• Cross sec. net area, mm ²	12,561
• Distance of top fiber to neutral axis (ytop), mm	85
• Distance of bottom fiber to neutral axis (ybot), mm	58
• Moment of inertia (Ix), mm ⁴	20 x 10 ⁶
• Self weight (kgs/linear m)	30

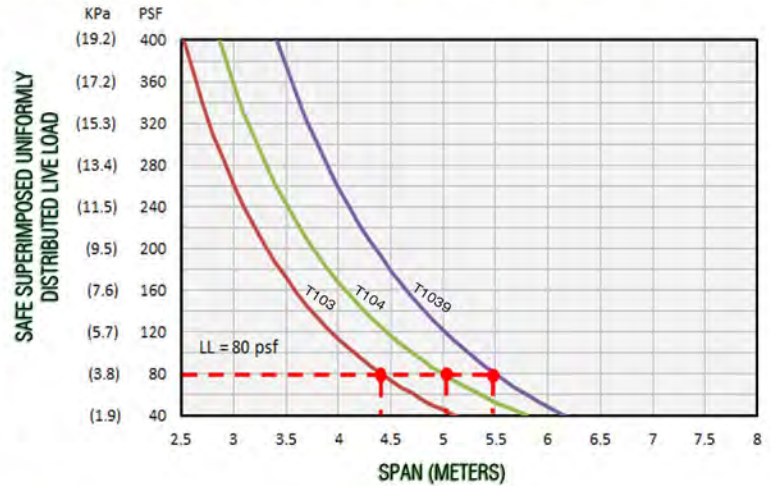
DESIGN CONSIDERATIONS

• Min. bearing requirement for concrete beam, mm	100
• Min. bearing requirement for steel beam, mm	75
• Superimposed dead load, kPa	2

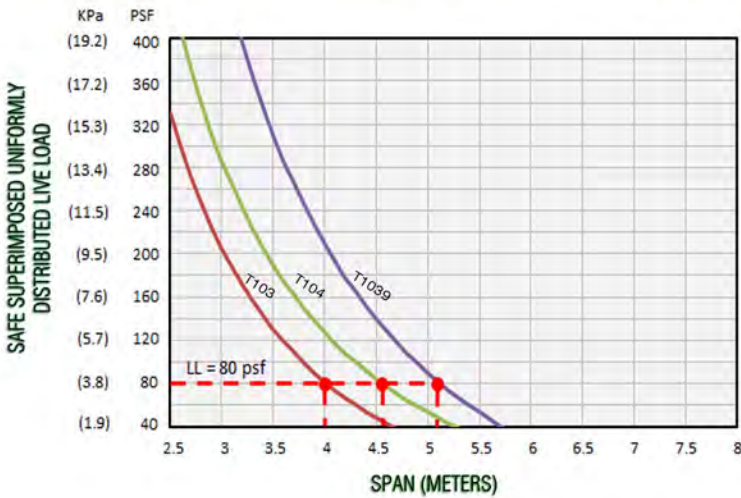
T-JOIST SPACED @ 900 mm w/ 50 mm THK. CONCRETE SLAB



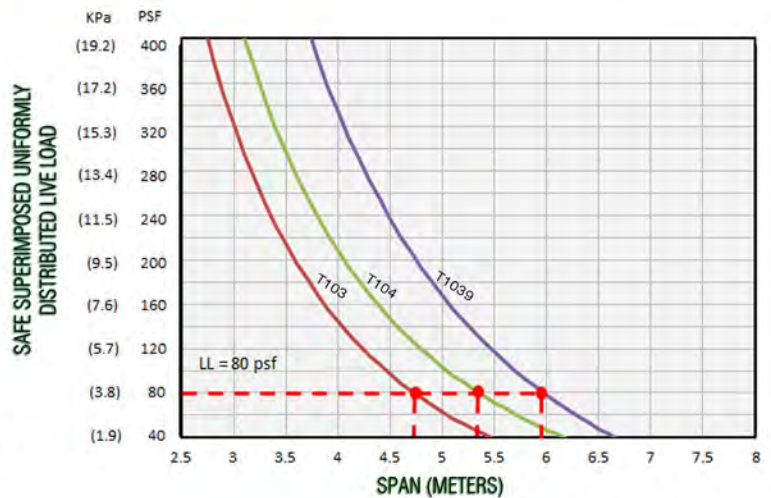
T-JOIST SPACED @ 620 mm w/ 50 mm THK. CONCRETE SLAB



T-JOIST SPACED @ 900 mm w/ 75 mm THK. CONCRETE SLAB



T-JOIST SPACED @ 620 mm w/ 75 mm THK. CONCRETE SLAB

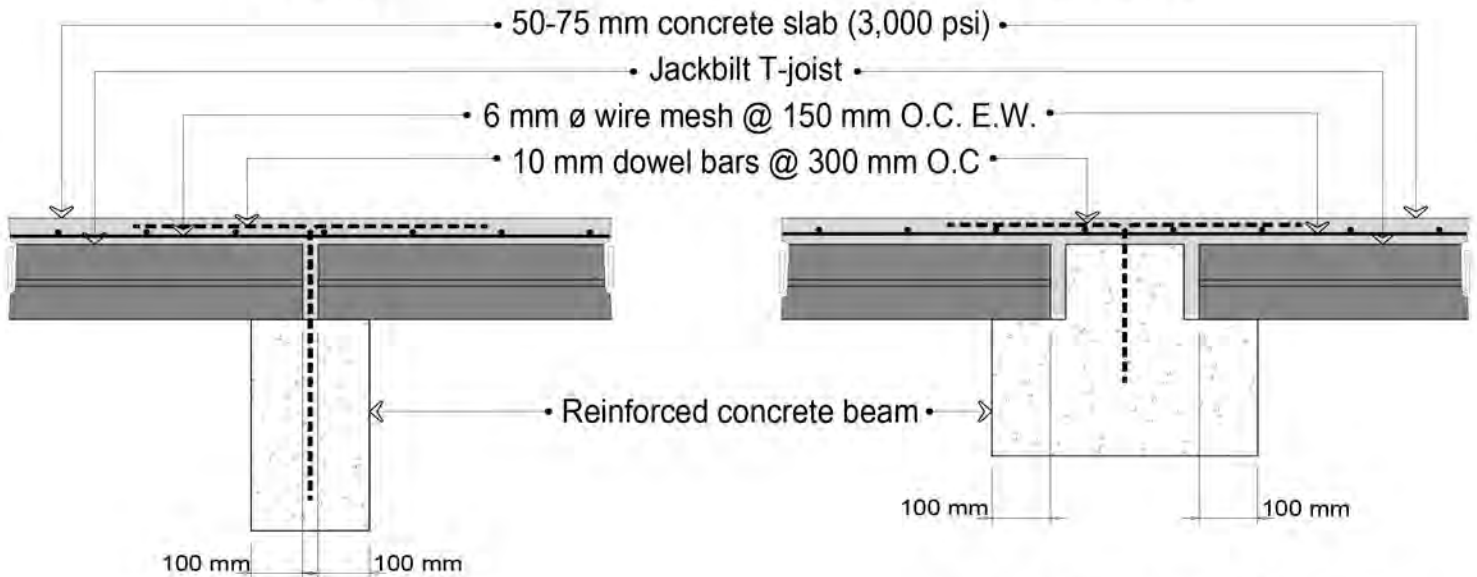
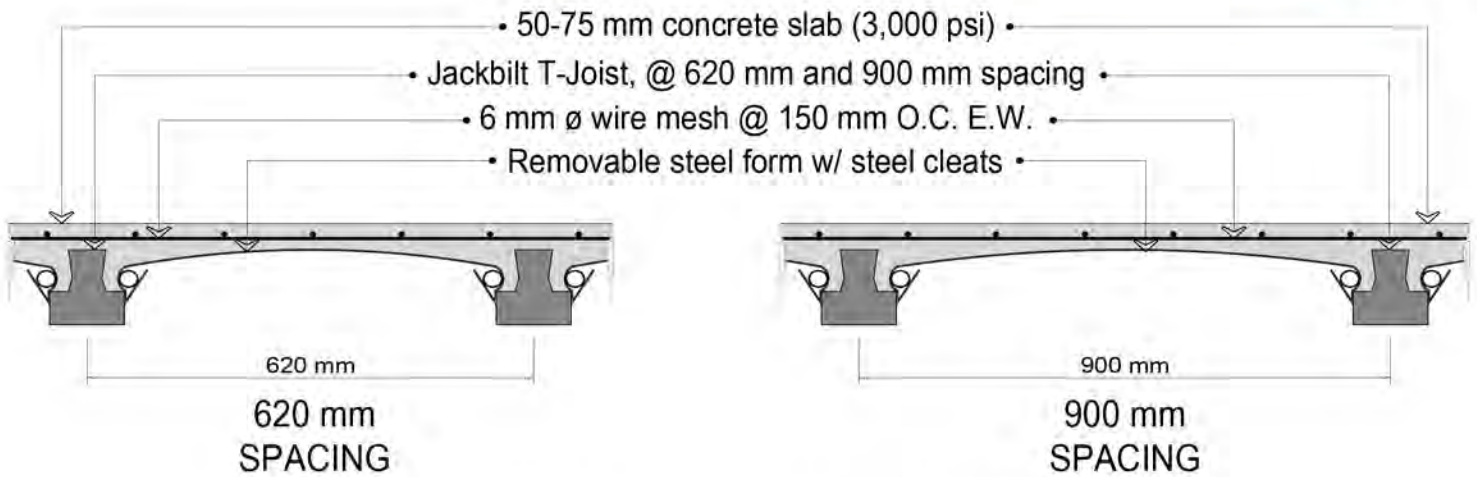


ULTIMATE MOMENT CAPACITY

T-JOIST TYPE	SPACED @ 900 mm O.C.				SPACED @ 620 mm O.C.			
	50 mm CONCRETE		75 mm CONCRETE		50 mm CONCRETE		75 mm CONCRETE	
	(KN-m)	(KIPS-FT)	(KN-m)	(KIPS-FT)	(KN-m)	(KIPS-FT)	(KN-m)	(KIPS-FT)
T103	18.47	13.62	22.01	16.23	18.04	13.31	21.58	15.92
T104	23.85	17.59	28.28	20.86	23.18	17.10	27.60	20.36
T1039	37.97	28.01	45.71	33.71	36.04	26.58	43.73	32.25
2T103	35.05	25.85	42.12	31.07	33.41	24.64	40.46	29.84
2T104	44.78	33.03	53.61	39.54	42.28	31.18	51.06	37.66
2T1039	67.61	49.87	82.88	61.13	60.79	44.84	75.78	55.89

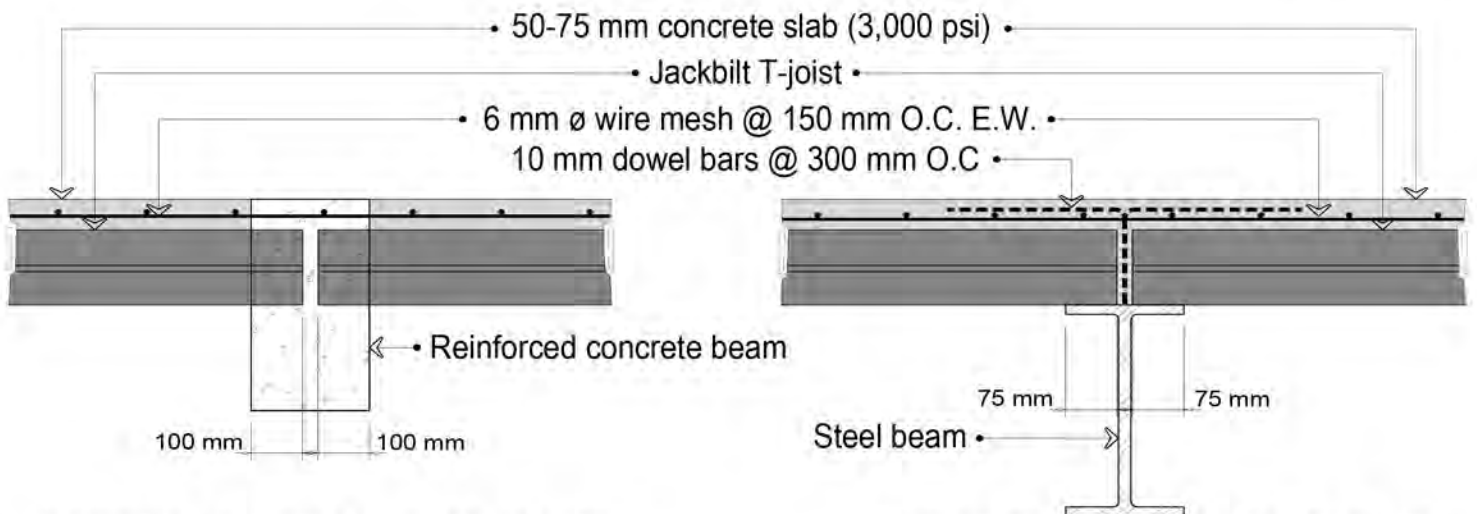
SCHEDULE OF STRANDS

@ 40 PSF LL	900 mm SPACING		620 mm SPACING	
	MAX. SPAN	MAX. SPAN	MAX. SPAN	MAX. SPAN
	50 mm	75 mm	50 mm	75 mm
T103	4.20	4.60	4.80	5.40
T104	4.90	5.20	5.60	6.10
T1039	5.50	5.70	6.00	6.20
2T103	5.50	6.00	6.20	6.80
2T104	6.30	6.90	7.10	7.60
2T1039	6.40	6.70	6.80	6.90



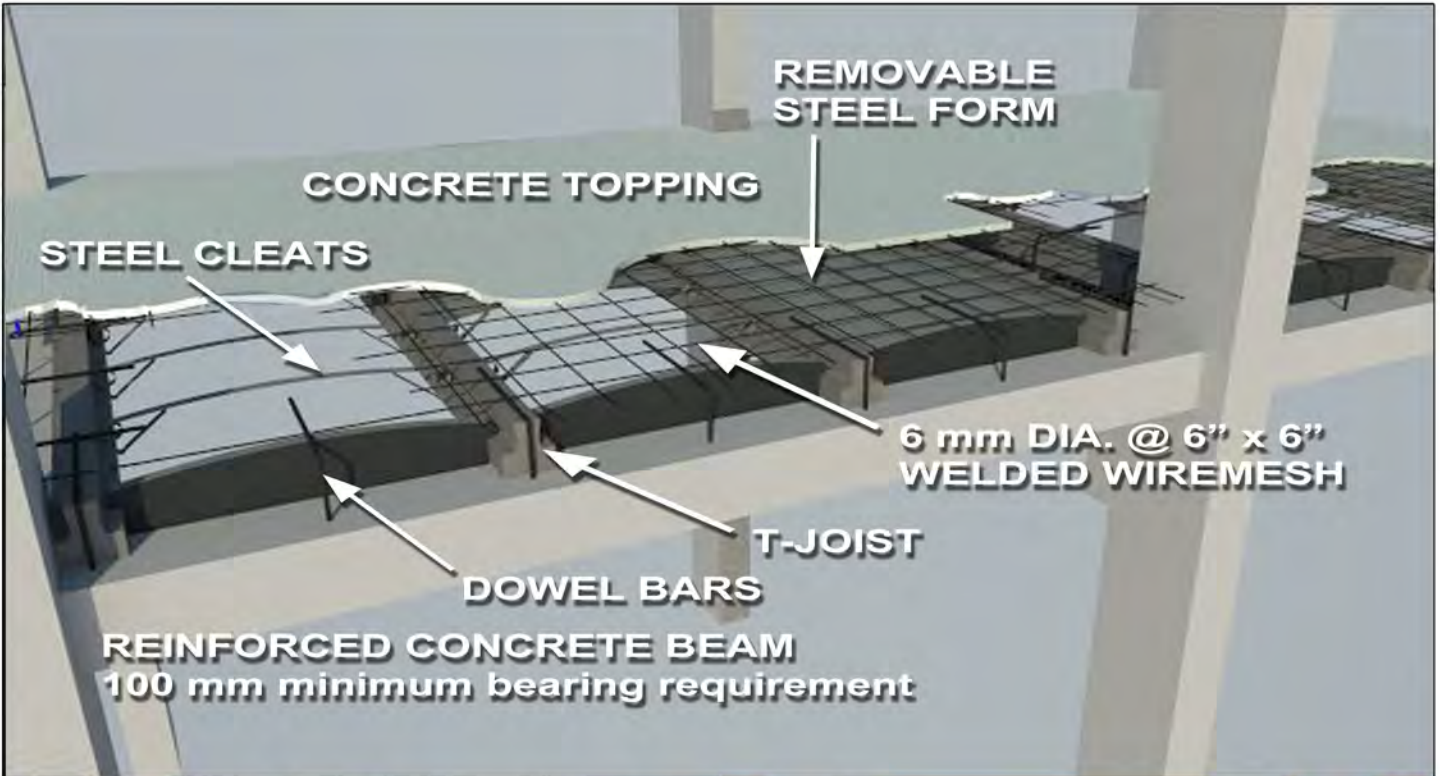
CONNECTION DETAIL ON TOP OF CONCRETE BEAM

CONNECTION DETAIL ON CORBEL TYPE CONCRETE BEAM



CONNECTION DETAIL INTEGRATED WITH CONCRETE BEAM

CONNECTION DETAIL ON TOP OF STEEL BEAM



Recommended Shoring

Less than 3 m.	No Shoring
3 to 5 m.	Mid-span
Longer than 5 m.	Third point

No special equipment needed

T-Joist installation is simple and easy. One T-Joist is light enough to be carried by two workers.

NOTE :

- Shoring must be able to support the dead weight of the concrete slab and the construction live load. Shoring must rest on a firm base and must be adequately braced to prevent settlement or lateral displacement.
- The steel forms are collapsible and reusable. They support the weight of the concrete slab during pouring and may be removed 3 days after pouring the concrete slab. Shoring of T-joists must remain in place for at least 7 days.
- T-Joists can accommodate the weight of workers.