SPAN TABLES:

FLOOR JOIST SPAN TABLES

TECBEAM

Limit State Capacities - Recommended maximum single spans (m)

FLOOR LIVE LOADS		SPANS ARE ALSO SUITABLE FOR A
1.5 kPa	HOUSES[3]	TECslab - Hebel FLOOR (Dead Load 1.0 kPa)[2]
2.0 kPa	RESIDENTIAL AND APARTMENTS[4]	

CODE	BEAM SIZE (mm)	Floor Joist SPACING (mm)					
		300	338	360	400	450	600
T257aP10	248 X 71	5.87	5.70	5.61	5.46	5.29	4.86
T257bP10	248 x 71	5.98	5.81	5.72	5.57	5.40	4.98
T259aP10	248 x 88	6.10	5.92	5.83	5.68	5.50	5.07
T259bP10	248 x 88	6.20	6.02	5.93	5.78	5.62	5.19
T259aP12	248 x 88	6.39	6.19	6.09	5.93	5.76	5.33
T259bP12	248 x 88	6.50	6.30	6.20	6.04	5.86	5.45
T259bL13	248 x 91	6.61	6.41	6.30	6.13	5.96	5.54
T307bP10	302 x 71	6.63	6.42	6.31	6.14	5.95	5.51
T309bP10	302 x 88	6.89	6.66	6.55	6.36	6.16	5.70
T309cP10	302 x 88	7.01	6.78	6.66	6.47	6.27	5.81
T309bP12	302 x 88	7.20	6.96	6.84	6.64	6.42	5.93
T309cP12	302 x 88	7.32	7.08	6.95	6.75	6.53	6.04
T309cL13	302 x 91	7.44	7.19	7.07	6.86	6.63	6.12
T357bP10	354 x 71	7.54	7.29	7.16	6.94	6.72	6.19
T357cP10	354 x 71	7.64	7.39	7.26	7.05	6.82	6.29
T357bP12	354 x 71	7.87	7.61	7.48	7.26	7.02	6.46

NOTES - to Houses and Residential Span Tables

1. Spans - face to face of supports. For continuous spans the above spans can be increased by 10% for floor weights <0.5 kPa, for higher floor weight check shear and bending at the intermediate support in large continuous spans
2. Max. Dead Load for tabled spans is 1.0 kPa -TECslab (Hebel) with a long term Serviceability deflection of 15mm
3. For houses, Serviceability (deflections) are to AS1684.1-1999 Residential timber-framed construction: Design Criteria
4. For residential, Serviceability to AS/NZS 1170.0&1, $\psi_s = 0.7$ results in longer spans, AS1684.1 criteria has been adopted
5. Spacing, nominal average, ie:
   - 300crs is equivalent to 450crs plus an extra joist @ 900crs
   - 338crs " " " 450crs " " " " 1350crs
   - 360crs " " " 450crs " " " " 1800crs

   NB If extra joists are installed, at least one row of strongbacks are required for uniform support
6. Strongbacks are required to control floor vibration. Where joists are within 0.75-1.5 m of their max. span, install one row midspan; where joists are within 0.75 m of the max. span install two rows of strongbacks.
   For floors heavier than 50 kg/m2, incl. TECslab, where spans are within 1.0 m of the maximum, install two rows of strongbacks. If lower vibration is required increase the strongback stiffness, eg use MGP12 or LVL instead of MGP10
7. Where a concentrated floor load exceeds 3.6kN, or 370kg add a strongback mid span if not required by Note 6
8. Beam CODE: T25, T30, T35 - joist depth (cm); 7 or 9 - joist width (cm); a, b, c - galvanized steel web thickness 0.8, 1.0, 1.2mm respectively; grade G300 Z275; P10, P12 - Pine timber flange MGP grade, equivalent to MGP10 & MGP12 respectively, L13 - LVL flange grade F16
9. Section properties and structural design guidelines are available from TECBEAM Australasia Pty Ltd or can be downloaded from 'Technical Documents' section on the TECBEAM Australasia web site: www.tecbeam.com.au

IMPORTANT: Updates may be made to this document without notice, please check the web site for the latest issue:

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