

Hollow Composite Floors

Load/Span Table

A Bison Hollow Composite Floor is a Bison Hollowcore Slab with a structural concrete topping. This combination delivers increased structural performance overall, with an improved lateral load distribution where necessary for heavy point loads. The floor may be designed in the unpropped or partially propped condition to suit particular requirements. It is particularly suitable for industrial buildings, high buildings, car parks or other structures where additional longitudinal and transverse tying is required.

Overall structural depth mm	Unit Depth	Self wt kN / m ²	Spans indicated below allow for characteristic service load (live load) plus self weight plus 1.5 kN/m ² for finishes								
			Characteristic service loads kN/m ²								
			0.75	1.5	2.0	2.5	3.0	4.0	5.0	10.0	15.0
			Effective span in metres								
200	150	3.6	8.25	8.25	8.1	7.9	7.7	7.4	7.1	5.8	4.9
250	200	4.2	10.4	9.9	9.7	9.4	9.2	8.8	8.4	7	6
300	250	4.5	11.7	11.2	10.9	10.6	10.4	9.9	9.5	7.8	6.8
375	300	5.8	14.5	14	13.7	13.5	13.2	12.7	12.3	10.7	8.8
425	350	6.2	16	15.5	15.2	14.9	14.6	14.1	13.7	11.9	10
475	400	6.6	17.1	16.5	16.2	15.9	15.6	15.1	14.6	12.7	10.7
525	450	7.2	18.5	17.9	17.6	17.3	17	16.4	15.9	13.9	11.7

The above data is based upon 50 or 75mm structural topping of C30 concrete which should be regarded as a minimum. Other topping depths may be recommended in some circumstances. Design data for alternative combinations are available from Bison design offices. In relation to the overall structural concept of the building it is also important also to consider topping reinforcement, daywork and movement joints.