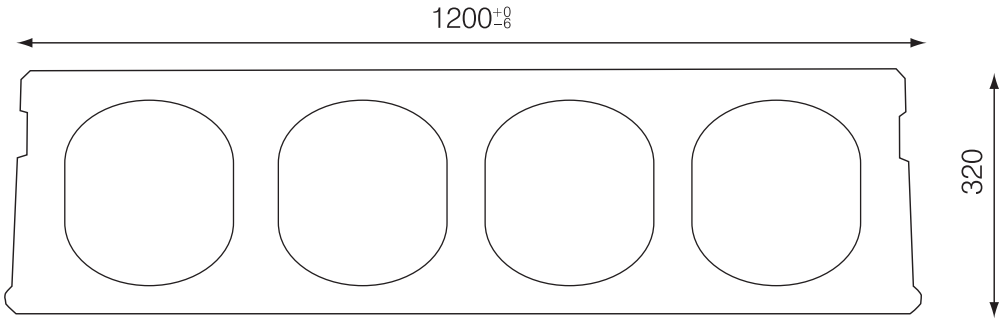
DP HOLLOW CORE SLAB — TYPE DP 4 - 320



Load Table DP 4 - 320

NO STRUCTURAL TOPPING

STRAND PATTERN	BEARING CAPACITY PER SLAB UNIT (1.20 M WIDTH)	SPAN (m)	8	10	11	12	13	14	15	16
5 no. 12.5 mm	M_{SLS} = 140 kNm/s.u.	q_{SLS} (kN/m^2)	9.4	4.4	3.0	1.8				
	M_{ULS} = 196 kNm/s.u.	q_{ULS} (kN/m^2)	14.5	7.1	4.9	3.1				
Mcrack = 188 kNm/s.u.	V_{UD} = 122 kN/s.u.	c (mm)	-7	-4	-2	+4				
7 no. 12.5 mm	M_{SLS} = 193 kNm/s.u.	q_{SLS} (kN/m^2)	13.8	7.8	5.6	4.1	2.8	1.9		
	M_{ULS} = 270 kNm/s.u.	q_{ULS} (kN/m^2)	21.1	12.1	8.9	6.6	4.7	3.3		
Mcrack = 224 kNm/s.u.	V_{UD} = 130 kN/s.u.	c (mm)	-12	-13	-11	-8	-4	+7		
9 no. 12.5 mm	M_{SLS} = 244 kNm/s.u.	q_{SLS} (kN/m^2)	14.4	10.6	8.3	6.3	4.8	3.5	2.5	
	M_{ULS} = 342 kNm/s.u.	q_{ULS} (kN/m^2)	22.0	16.4	12.9	9.9	7.6	5.7	4.2	
Mcrack = 260 kNm/s.u.	V_{UD} = 134 kN/s.u.	c (mm)	-17	-20	-20	-18	-14	-8	-3	
10 no. 12.5 mm	M_{SLS} = 268 kNm/s.u.	q_{SLS} (kN/m^2)	14.6	10.8	9.5	7.4	5.6	4.3	3.2	2.3
	M_{ULS} = 376 kNm/s.u.	q_{ULS} (kN/m^2)	22.4	16.7	14.7	11.5	8.9	6.9	5.2	3.9
Mcrack = 270 kNm/s.u.	V_{UD} = 136 kN/s.u.	c (mm)	-18	-23	-23	-22	-18	-12	-6	+10
11 no. 12.5 mm	M_{SLS} = 287 kNm/s.u.	q_{SLS} (kN/m^2)		11.1	9.7	8.4	6.4	5.0	3.8	2.9
	M_{ULS} = 408 kNm/s.u.	q_{ULS} (kN/m^2)		17.1	15.0	13.0	10.1	7.9	6.1	4.7
Mcrack = 287 kNm/s.u.	V_{UD} = 138 kN/s.u.	c (mm)		-27	-28	-27	-25	-19	-12	-4

Slab Selfweight = 4.00kN/m^2
Joint Filling = 0.22kN/m^2
Total Selfweight = 4.22kN/m^2

M_{SLS} = Slab Moment Capacity (Service limit Stage)
M_{ULS} = Slab Moment Capacity (Ultimate limit Stage)
V_{UD} = Slab Shear Capacity (Ultimate limit Stage)

q_{SLS} = Maximum allowed imposed dead and live load,unfactored (excluding selfweight of slab)
q_{ULS} = Maximum allowed imposed dead and live load ,factored (excluding selfweight of slab)
c = Theoretical camber at time of installation (+ indicate deflection)

Load Table DP 4 - 320 + 75

75mm STRUCTURAL TOPPING

STRAND PATTERN	BEARING CAPACITY PER SLAB UNIT (1.20 M WIDTH)	SPAN (m)	8	10	11	12	13	14	15	16
10 no. 12.5 mm	M_{SLS} = 324 kNm/s.u.	q_{SLS}		10.1	8.6	7.4	6.1	4.4	3.1	1.9
	M_{ULS} = 463 kNm/s.u.	q_{ULS}		15.8	13.6	11.7	9.7	7.2	5.2	3.5
Mcrack = 324 kNm/s.u.	V_{UD} = 146 kN/s.u.	c_t		-20	-19	-16	-9	-3	+14	+32
11 no. 12.5 mm	M_{SLS} = 350 kNm/s.u.	q_{SLS}		10.3	8.8	7.6	6.6	5.3	3.8	2.6
	M_{ULS} = 504 kNm/s.u.	q_{ULS}		16.1	13.9	12.0	10.5	8.6	6.4	4.6
Mcrack = 350 kNm/s.u.	V_{UD} = 148 kNs.u.	c_t		-24	-24	-22	-16	-8	+5	+23

Slab Selfweight = 4.00kN/m^2
Joint Filling = 0.22kN/m^2
75mm Topping = 1.87kN/m^2
Total Selfweight = 6.07kN/m^2

M_{SLS} = Slab Moment Capacity (Service limit Stage)
M_{ULS} = Slab Moment Capacity (Ultimate limit Stage)
V_{UD} = Slab Shear Capacity (Ultimate limit Stage)

q_{SLS} = Maximum allowed imposed dead and live load,unfactored (excluding selfweight of slab + topping)
q_{ULS} = Maximum allowed imposed dead and live load ,factored (excluding selfweight of slab+ topping)
c_t = Theoretical camber just after casting the topping (+ indicate deflection)