

3.2. INSTALLATION PARAMETERS																											
General installation parameters								Standard installation depth										Reduced installation depth									
Family	Code	Size / Bolt letter	Assessed	Drill bit diameter	Fixture clearance hole	Torque	Minimum allowable spacing	Minimum allowable edge distance	Minimum concrete Thickness	Depth of drill hole ≥	Installation depth	Effective anchorage depth	Thickness of fixtures ≤	Critical spacing (concrete cone)	Critical edge distance (concrete cone)	Critical spacing (splitting)	Critical edge (splitting)	Minimum concrete thickness	Depth of drill hole ≥	Installation depth	Effective anchorage depth	Thickness of fixtures ≤	Critical spacing (concrete cone)	Critical edge distance (concrete cone)	Critical spacing (splitting)	Critical edge distance (splitting)	
[]	[]	[]	ETA	d ₀ [mm]	d _f [mm]	T _{inst} [Nm]	S _{min} [mm]	C _{min} [mm]	h _{min} [mm]	h ₁ [mm]	h _{nom} [mm]	h _{ef} [mm]	t _{fix} [mm]	S _{cr,N} [mm]	C _{cr,N} [mm]	S _{cr,sp} [mm]	C _{cr,sp} [mm]	h _{min} [mm]	h ₁ [mm]	h _{nom} [mm]	h _{ef} [mm]	t _{fix} [mm]	S _{cr,N} [mm]	C _{cr,N} [mm]	S _{cr,sp} [mm]	C _{cr,sp} [mm]	
IWA	IWA06060	M6x60 (B)	✓										2										--				
	IWA06070	M6x70 (C)	✓										12										--				
	IWA06080	M6x80 (D)	✓										22										--				
	IWA06090	M6x90 (E)	✓										32										--				
	IWA06100	M6x100(E)	✓										42										--				
	IWA06110	M6x110(F)	✓										52										--				
	IWA06120	M6x120(G)	✓	6	7	7	35	35	100	55	49,5	40	62	120	60	160	80	--	--	--	--	--	--	--	--	--	--
	IWA06130	M6x130(H)	✓										72										--				
	IWA06140	M6x140(I)	✓										82										--				
	IWA06150	M6x150(I)	✓										92										--				
	IWA06160	M6x160(J)	✓										102										--				
	IWA06170	M6x170(K)	✓										112										--				
	IWA06180	M6x180(L)	✓										122										--				
	IWA08060	M8x60 (B)	✓						--	--	--	--	--	--	--	--	--	--					3				
	IWA08075	M8x75 (C)	✓										5										18				
	IWA08090	M8x90 (E)	✓										20										33				
	IWA08100	M8x100(E)	✓										30										43	105	53	140	70
	IWA08115	M8x115(G)	✓	8	9	20	40	40	100	65	59,5	48	45	144	72	192	96	100	50	46,5	35	58					
	IWA08120	M8x120(G)	✓										50										63				
	IWA08130	M8x130(H)	✓										60										73				
	IWA08155	M8x155(J)	✓										85										98				
	IWA10070	M10x70(C)	✓							--	--	--	--	--	--	--	--	--					3				
	IWA10080	M10x80(D)	✓							--	--	--	--	--	--	--	--	--					13				
	IWA10090	M10x90(E)	✓	10	12	35	50	50					10						100	60	53,5	42	23	126	63	168	84
	IWA10100	M10x100(E)	✓							110	75	66,5	55	20	165	83	220	110					33				
	IWA10120	M10x120(G)	✓										40										53				

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[]	[]	[]	ETA	d _i [mm]	d _f [mm]	T _{inst} [Nm]	S _{min} [mm]	C _{min} [mm]	h _{min} [mm]	h ₁ [mm]	h _{nom} [mm]	h _{ef} [mm]	t _{fix} [mm]	S _{cr,N} [mm]	C _{cr,N} [mm]	S _{cr,sp} [mm]	C _{cr,sp} [mm]	h _{min} [mm]	h ₁ [mm]	h _{nom} [mm]	h _{ef} [mm]	t _{fix} [mm]	S _{cr,N} [mm]	C _{cr,N} [mm]	S _{cr,sp} [mm]	C _{cr,sp} [mm]		
IWA	IWA10140	M10x140(I)	✓										60										73					
	IWA10150	M10x150(I)	✓										70										83					
	IWA10160	M10x160(J)	✓	10	12	35	50	50	110	75	66.5	55	80	165	83	220	110	100	60	53.5	42	93	126	63	168	84		
	IWA10170	M10x170(K)	✓										90										103					
	IWA10210	M10x210(N)	✓										130										143					
	IWA10230	M10x230(P)	✓										150										163					
	IWA12090	M12x90(E)	✓						--	--	--	--	--	--	--	--	--	--					13					
	IWA12100	M12x100(E)	✓										8										23					
	IWA12110	M12x110(F)	✓										18										33					
	IWA12120	M12x120(G)	✓										28										43					
	IWA12130	M12x130(H)	✓	12	14	60	70	70	130	85	77	65	38	195	98	260	130	100	70	62	50	53	150	75	200	100		
	IWA12140	M12x140(I)	✓										48										63					
	IWA12160	M12x160(J)	✓										68										83					
	IWA12180	M12x180(L)	✓										88										103					
	IWA12200	M12x200(M)	✓										108										123					
	IWA12220	M12x220(O)	✓										128										143					
	IWA12250	M12x250(Q)	✓										158										173					
	IWA14120	M14x120(G)	✓										12										--					
	IWA14145	M14x145(I)	✓										37										--					
	IWA14170	M14x170(K)	✓	14	16	90	80	80	150	100	91	75	62	225	113	300	150	--	--	--	--	--	--	--	--	--	--	
	IWA14220	M14x220(O)	✓										112										--					
	IWA14250	M14x250(Q)	✓										142										--					

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[]	[]	[]	ETA	d ₀ [mm]	d _f [mm]	T _{inst} [Nm]	S _{min} [mm]	C _{min} [mm]	h _{min} [mm]	h ₁ [mm]	h _{nom} [mm]	h _{ef} [mm]	t _{fix} [mm]	S _{cr,N} [mm]	C _{cr,N} [mm]	S _{cr,sp} [mm]	C _{cr,sp} [mm]	h _{min} [mm]	h ₁ [mm]	h _{nom} [mm]	h _{ef} [mm]	t _{fix} [mm]	S _{cr,N} [mm]	C _{cr,N} [mm]	S _{cr,sp} [mm]	C _{cr,sp} [mm]	
IWA	IWA16125	M16 x 125(G)	✓										3										22				
	IWA16145	M16 x 145(I)	✓										23										42				
	IWA16170	M16 x 170(K)	✓	16	18	120	90	90	168	110	103,5	84	48	252	126	280	140	130	90	84,5	65	67	195	98	260	130	
	IWA16220	M16 x 220(O)	✓										98										117				
	IWA16250	M16 x 250(Q)	✓										128										147				
	IWA16280	M16 x 280(S)	✓										158										177				
	IWA20170	M20 x 170(K)	✓										23										49				
	IWA20220	M20 x 220(O)	✓	20	22	240	135	135	206	135	125	103	73	309	155	360	180	150	107	97	75	99	225	113	300	150	
IWA20270	M20 x 270(S)	✓										123										149					
IWA	IWA06045	M6 x 45 (A)	✗						--	--	--	--	--	--	--	--	--	10	40	35	25	1	75	38	160	80	
	IWA06060	M6 x 60 (B)	✓										2									--					
	IWA06080	M6 x 80 (D)	✓										22									--					
	IWA06120	M6 x 120(G)	✓	6	7	7	50	50					62									--					
	IWA06140	M6 x 140(I)	✓						100	55	49,5	40	82	120	60	160	80	--	--	--	--	--	--	--	--	--	
	IWA06160	M6 x 160(J)	✓										102									--					
	IWA06170	M6 x 170(K)	✓										112									--					
	IWA06180	M6 x 180(L)	✓										122									--					
IWA	IWA08050	M8 x 50 (A)	✗						--	--	--	--	--	--	--	--	--	100	40	35	23	4	69	35	140	70	
	IWA08075	M8 x 75 (C)	✓	8	9	20	65	65					5									18					
	IWA08090	M8 x 90 (E)	✓						100	65	59,5	48	20	144	72	192	96	100	50	46,5	35	33	105	53	140	70	
	IWA08115	M8 x 115(G)	✓										45									58					
	IWA10070	M10 x 70 (C)	✓						--	--	--	--	--	--	--	--	--					3					
	IWA10090	M10 x 90 (E)	✓	10	12	35	70	70					10					100	60	53,5	42	23	126	63	168	84	
	IWA10120	M10 x 120(G)	✓						110	75	66,5	55	40	165	83	220	110					53					
	IWA10150	M10 x 150(I)	✓										70									83					

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IWA	IWA12075	M12 x 75(C)	✗						--	--	--	--	--	--	--	--	--	100	60	55	43	5	129	65	200	100	
	IWA12090	M12 x 90 (D)	✓						--	--	--	--	--	--	--	--	--					13					
	IWA12110	M12 x 110(F)	✓	12	14	60	85	85					18					100	70	62	50	33	150	75	200	100	
	IWA12140	M12 x 140 (1)	✓						130	85	77	65	48	195	98	260	130					63					
	IWA16090	M16 x 90 (D)	✗						--	--	--	--	--	--	--	--	--	100	75	69	49	4	147	74	280	140	
	IWA16145	M16 x 145 (I)	✓	16	18	120	110	110					23														
	IWA16170	M16 x 170(K)	✓						168	110	103,5	84	48	252	126	336	168	--	--	--	--	--	--	--	--	--	
	IWA20120	M20 x 120(G)	✗						--	--	--	--	--	--	--	--	--	145	105	93	71	5	213	107	360	180	
	IWA20170	M20 x 170(K)	✓	20	22	240	135	135					23														
	IWA20220	M20 x 220(O)	✓						206	135	125	103	73	309	155	412	200	--	--	--	--	--	--	--	--	--	
	IWA406045	M6 x 45(A)	✗						--	--	--	--	--	--	--	--	--	100	40	35	25	1	75	38	160	80	
	IWA406060	M6 x 60(B)	✓	6	7	7	50	50					2	120	60	160	80										
	IWA406080	M6 x 80 (D)	✓						100	55	49,5	40	22					--	--	--	--	--	--	--	--	--	
	IWA408050	M8 x 50(A)	✗						--	--	--	--	--	--	--	--	--	100	40	35	23	4	69	35	140	70	
	IWA408075	M8 x 75 (C)	✓	8	9	20	65	65					5										8				
	IWA408090	M8 x 90 (E)	✓						100	65	59,5	48	20	144	72	192	96	100	50	46,5	35	23	105	53	140	70	
	IWA408115	M8 x 115(G)	✓										45										58				
	IWA410070	M10 x 70 (C)	✓						--	--	--	--	--	--	--	--	--						3				
	IWA410090	M10 x 90 (E)	✓	10	12	35	70	70					10					100	60	53,5	42	23	126	63	168	84	
	IWA410120	M10 x 120(G)	✓						110	75	66,5	55	40	165	83	220	110						53				
	IWA410150	M10 x 150(I)	✓										70										83				
	IWA412075	M12 x 75 (C)	✗						--	--	--	--	--	--	--	--	--	100	60	55	43	5	129	65	200	100	
	IWA412090	M12 x 90 (D)	✓	12	14	60	85	85	--	--	--	--	--	--	--	--	--					13					
	IWA412110	M12 x 110(F)	✓						130	85	77	65	18	195	98	260	130	100	70	62	50	33	150	75	200	100	
	IWA412140	M12 x 140(I)	✓										48										63				

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[illegible]

