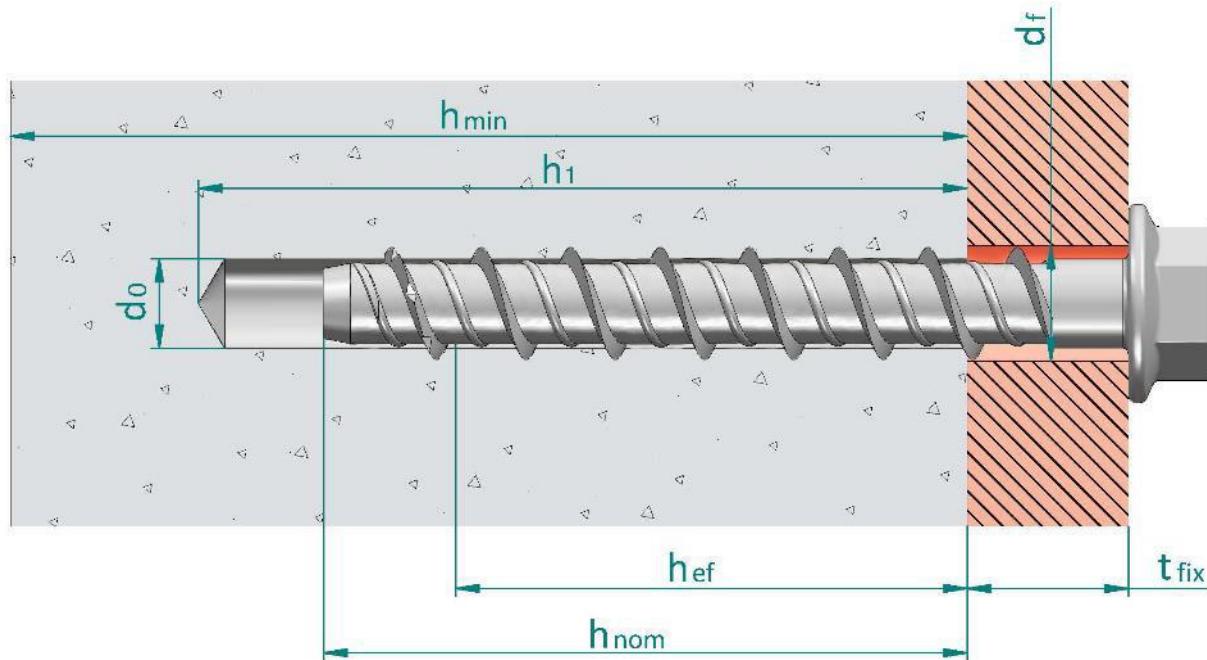




2. INSTALLATION DATA

2.1. INSTALLATION DRAWING



- d_0 : Nominal diameter of drill bit
- d_f : Fixture clearance hole diameter
- h_{ef} : Effective anchorage depth
- h_1 : Depth of drilled hole
- h_{nom} : Overall fastener embedment depth in the concrete
- h_{\min} : Minimum thickness of concrete member
- t_{fix} : Fixture thickness



NORDIC FASTENING GROUP AB

3. INSTALLATION PARAMETERS

General Installation parameters								Standard Installation depth ($h_{ef, std}$)								Reduced Installation depth ($h_{ef, red}$)												
Size	Drill bit diameter		Fixture clearance hole		Spanner		Maximum torque	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	
	d_o	d_f	SW/Tx	T_{inst}	S_{min}	Minimum allowable spacing																						
$\emptyset 5 \times 40$	5	7	8	35	35	SW 8	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$		
$\emptyset 5 \times 50$						SW 8								--	--	--	--	--	--	--	--	--	5	75	38	90	45	
$\emptyset 5 \times 60$						SW 8								5	105	53	170	85	100	40	35	25,0	5	15	25	45	65	
$\emptyset 5 \times 80$						SW 8								15														
$\emptyset 5 \times 100$						SW 8								35														
$\emptyset 6 \times 40$	6	9	10	35	35	SW 10	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$		
$\emptyset 6 \times 50$						SW 10								--	--	--	--	--	--	--	--	--	5	78	39	90	45	
$\emptyset 6 \times 60$						SW 10								--	--	--	--	--	--	--	--	--	15					
$\emptyset 6 \times 70$						SW 10								5	129	65	170	85	100	45	35	26,0	35	35	78	39	90	45
$\emptyset 6 \times 80$						SW 10								15									25					
$\emptyset 6 \times 100$						SW 10								25									45					
$\emptyset 6 \times 120$						SW 10								45									65					
$\emptyset 8 \times 55$	8	12	20	35	35	SW 13	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$		
$\emptyset 8 \times 60$						SW 13								--	--	--	--	--	--	--	--	--	5	113	57	130	65	
$\emptyset 8 \times 70$						SW 13								--	--	--	--	--	--	--	--	--	10					
$\emptyset 8 \times 80$						SW 13								5	152	76	200	100	100	60	50	37,5	40	40	113	57	130	65
$\emptyset 8 \times 90$						SW 13								15									20					
$\emptyset 8 \times 100$						SW 13								25									30					
$\emptyset 8 \times 110$						SW 13								35									40					
$\emptyset 8 \times 120$						SW 13								45									50					
$\emptyset 8 \times 140$						SW 13								55									60					
$\emptyset 10 \times 60$	10	14	30	50	40	SW 15	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$	h_{min}	h_1	h_{nom}	h_{ef}	t_{fix}	Thickness of fixture	$S_{cr,N}$	$C_{cr,N}$	$S_{cr,sp}$	$C_{cr,sp}$		
$\emptyset 10 \times 70$						SW 15								--	--	--	--	--	--	--	--	--	5	125	63	140	70	
$\emptyset 10 \times 80$						SW 15								--	--	--	--	--	--	--	--	--	15					
$\emptyset 10 \times 90$						SW 15								--	--	--	--	--	--	--	--	--	25					
$\emptyset 10 \times 100$						SW 15								5	201	101	210	105	100	65	55	41,5	35	35	125	63	140	70
$\emptyset 10 \times 120$						SW 15								15									45					
$\emptyset 10 \times 140$						SW 15								35									65					
						SW 15								55									85					



General Installation parameters								Standard Installation depth ($h_{ef, std}$)								Reduced Installation depth ($h_{ef, red}$)								
Size [–]	Drill bit diameter d_0 [mm]	Fixture clearance hole d_f [mm]	Spanner [–]	Maximum torque T_{inst} [Nm]	Minimum allowable spacing S_{min} [mm]	Minimum allowable edge distance C_{min} [mm]	Minimum concrete thickness h_{min} [mm]	Depth of drill hole h_1 [mm]	Installation depth h_{nom} [mm]	Effective anchorage depth h_{ef} [mm]	Thickness of fixture t_{fix} [mm]	Critical spacing (concrete cone) $S_{cr,N}$ [mm]	Critical edge distance (cone) $C_{cr,N}$ [mm]	Critical spacing(splitting) $S_{cr,sp}$ [mm]	Critical edge distance (splitting) $C_{cr,sp}$ [mm]	Minimum concrete thickness h_{min} [mm]	Depth of drill hole h_1 [mm]	Installation depth h_{nom} [mm]	Effective anchorage depth h_{ef} [mm]	Thickness of fixture t_{fix} [mm]	Critical spacing (concrete cone) $S_{cr,N}$ [mm]	Critical edge distance (cone) $C_{cr,N}$ [mm]	Critical spacing(splitting) $S_{cr,sp}$ [mm]	Critical edge distance (splitting) $C_{cr,sp}$ [mm]
Ø12 x 80	12	16	SW 18	50	75	45	--	--	--	--	--	--	--	--	--	120	90	75	58,0	174	87	190	95	
Ø12 x 90			SW 18				--	--	--	--	--	--	--	--	--						5			
Ø12 x 110			SW 18				--	--	--	--	--	--	--	--	--						15			
Ø12 x 130			SW 18				--	--	--	--	--	--	--	--	--						35			
Ø12 x 150			SW 18				--	--	--	--	--	--	--	--	--						55			
Ø14 x 80	14	18	SW 21	70	80	50	--	--	--	--	--	--	--	--	--	120	90	75	58,0	174	87	190	95	
Ø14 x 100			SW 21				--	--	--	--	--	--	--	--	--						5			
Ø14 x 120			SW 21				--	--	--	--	--	--	--	--	--						25			
Ø14 x 130			SW 21				--	--	--	--	--	--	--	--	--						45			
Ø14 x 140			SW 21				--	--	--	--	--	--	--	--	--						55			
Ø14 x 160			SW 21				--	--	--	--	--	--	--	--	--						65			
Ø18 x 100	18	22	SW 24	90	90	55	--	--	--	--	--	--	--	--	--	140	110	90	69,5	209	105	230	115	
Ø18 x 130			SW 24				--	--	--	--	--	--	--	--	--						10			
Ø18 x 160			SW 24				--	--	--	--	--	--	--	--	--						40			
Ø18 x 180			SW 24				--	--	--	--	--	--	--	--	--						70			
Ø18 x 200			SW 24				--	--	--	--	--	--	--	--	--						90			
							--	--	--	--	--	--	--	--	--						110			



NORDIC FASTENING GROUP AB

4. INSTALLATION PROCEDURE

4.1. CONCRETE INSTALLATION



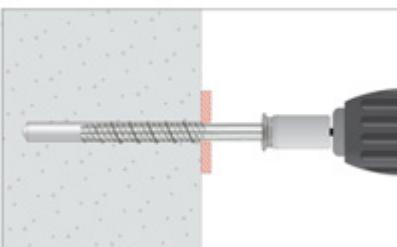
1. DRILLING

Check the concrete is well compacted and without significant porosity.
Suitable for dry, wet and flooded holes.
Use drill in hammer mode.
Drill according to specified depths in previous tables.



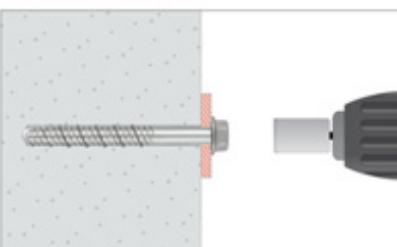
2. BLOW AND CLEAN

Clean the hole from dust and concrete remains.
Use blow pump and brush.



3. INSTALL

Select a powered impact wrench or a torque wrench that does not exceed the maximum torque indicated in previous tables.
Attach an appropriate size hex socket to the wrench.
Mount the screw anchor head in the socket.



4. APPLY THE TORQUE

Drive the anchor with an impact driver or a torque wrench through the fixture and into the hole until the anchor head washer comes in contact with the fixture. The anchor must be snug after installation. Do not spin the hex socket off the anchor to disengage.



NORDIC FASTENING GROUP AB

5. RESISTANCES

Resistances in concrete class C20/25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Values *underlined and in italics* show Steel failure, bold values concrete failure and other indicate pull out failure.

$$1 \text{ KN} \approx 100 \text{ kg}$$

5.1 CHARACTERISTIC RESISTANCE (STRUCTURAL APPLICATION) [kN]