

Nail Anchor N

Steel, zinc plated / Stainless steel A4 / HCR



Range of loading: 0,71 kN–2,81 kN
Range of concrete quality: C12/15–C50/60

Description

The Nail Anchor N combines the advantages of a wedge anchor with an even easier installation. The Nail Anchor is simply hammered through the fixture into the concrete. Applying torque is not necessary in the threaded versions. When the load is applied the Nail Anchor expands automatically and anchors to the concrete. There is a nail head (N-K) version, a M6 external thread (N) version and a dual threaded sleeve M8/M10 (N-M).

The Nail anchor in stainless Steel A4/316 and stainless Steel HCR is also tested according to ZTV and RWS tunnel temperature curve in cracked concrete. Load capacities see page 200.

Advantages

- ETA assessment for redundant fastenings in cracked and uncracked concrete
- Fast and simple mounting
- Reduced anchorage depth (25 mm) for reduced drilling costs
- Very small edge distances and spacings
- Loads up to 2,81 kN
- Only one product for two applications: dual thread M8/M10 (N-M)

Applications

Ceiling constructions, piping, cladding etc.

Nail Anchor N



- Steel, zinc plated
- With thread M6

Description	Ref. No.	Drill hole Ø	Standard anchorage depth			Reduced anchorage depth			Anchor length	Pkg. content	Weight per pkg.
			Fixture thickness t _{fix} mm	Drill hole depth h ₁ mm	Anchorage depth h _{ef} mm	Fixture thickness t _{fix,red} mm	Drill hole depth h _{1,red} mm	Anchorage depth h _{ef,red} mm			
N 6-0-5/44	60005101	6	0	40	30	5	35	25	44	200	2,22
N 6-5-10/49	60010101	6	5	40	30	10	35	25	49	200	2,39
N 6-10-15/54	60015101	6	10	40	30	15	35	25	54	200	2,58

Nail Anchor N-K



- Steel, zinc plated
- With Nailhead

Description	Ref. No.	Drill hole Ø	Standard anchorage depth			Reduced anchorage depth			Anchor length	Pkg. content	Weight per pkg.
			Fixture thickness t _{fix} mm	Drill hole depth h ₁ mm	Anchorage depth h _{ef} mm	Fixture thickness t _{fix,red} mm	Drill hole depth h _{1,red} mm	Anchorage depth h _{ef,red} mm			
N-K 6-0-5/39	60105101	6	0	40	30	5	35	25	39	200	2,24
N-K 6-5-10/44	60110101	6	5	40	30	10	35	25	44	200	2,29
N-K 6-10-15/49	60115101	6	10	40	30	15	35	25	49	200	2,54
N-K 6-15-20/54	60120101	6	15	40	30	20	35	25	54	200	2,74
N-K 6-30-35/69	60135101	6	30	40	30	35	35	25	69	200	3,44
N-K 6-50-55/89	60155101	6	50	40	30	55	35	25	89	100	2,19



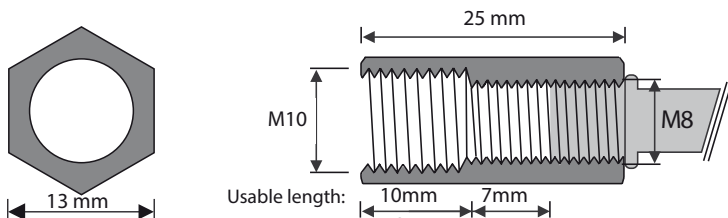
Nail Anchor N-M



- Steel, zinc plated
- Connecting thread M8 and M10

Description	Ref. No.	Drill hole Ø mm	Drill hole depth h ₁ mm	Anchorage depth h _{ef} mm	Anchor length l mm	Pkg. content pcs.	Weight per pkg. kg
N-M 6-25 M8/10	60310101	6	35	25	58	100	2,75
N-M 6-30 M8/10	60315101	6	40	30	63	100	2,85

Dimensions threaded sleeve N-M:



Nail Anchor N A4



- Stainless steel A4
- With thread M6

Description	Ref. No.	Drill hole Ø	Standard anchorage depth			Reduced anchorage depth			Anchor length mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix} mm	Drill hole depth h ₁ mm	Anchorage depth h _{ef} mm	Fixture thickness t _{fix,red} mm	Drill hole depth h _{1,red} mm	Anchorage depth h _{ef,red} mm			
N 6-5/49 A4	61010501	6	5	40	30	10	35	25 ¹⁾	49	200	2,39

¹⁾Reduced anchorage depth is only permitted for indoor use.

Nail Anchor N-KA4



- Stainless steel A4
- With Nailhead

Description	Ref. No.	Drill hole Ø	Standard anchorage depth			Reduced anchorage depth ¹⁾			Anchor length mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix} mm	Drill hole depth h ₁ mm	Anchorage depth h _{ef} mm	Fixture thickness t _{fix,red} mm	Drill hole depth h _{1,red} mm	Anchorage depth h _{ef,red} mm			
N-K 6-0/39 A4	61105501	6	0	40	30	5	35	25 ¹⁾	39	200	2,24
N-K 6-5/44 A4	61110501	6	5	40	30	10	35	25 ¹⁾	44	200	2,29
N-K 6-10/49 A4	61115501	6	10	40	30	15	35	25 ¹⁾	49	200	2,54
N-K 6-15/54 A4	61120501	6	15	40	30	20	35	25 ¹⁾	54	200	2,74
N-K 6-20/59 A4	61125501	6	20	40	30	25	35	25 ¹⁾	59	200	2,91
N-K 6-30/69 A4	61135501	6	30	40	30	35	35	25 ¹⁾	69	200	3,44
N-K 6-50/89 A4	61155501	6	50	40	30	55	35	25 ¹⁾	89	100	2,19

¹⁾Reduced anchorage depth is only permitted for indoor use.

Nail Anchor N HCR



- High corrosion resistant steel 1.4529 (HCR)
- With thread M6

Description	Ref. No.	Drill hole Ø	Standard anchorage depth			Reduced anchorage depth			Anchor length mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix} mm	Drill hole depth h ₁ mm	Anchorage depth h _{ef} mm	Fixture thickness t _{fix,red} mm	Drill hole depth h _{1,red} mm	Anchorage depth h _{ef,red} mm			
N 6-5/49 HCR	61010651	6	5	40	30	10	35	25 ¹⁾	49	200	2,39

¹⁾Reduced anchorage depth is only permitted for indoor use.

Nail Anchor N-K HCR



→ High corrosion resistant steel 1.4529 (HCR)

→ With Nailhead



Description	Ref. No.	Drill hole Ø	Standard anchorage depth			Reduced anchorage depth ¹⁾			Anchor length mm	Pkg. content pcs.	Weight per pkg. kg
			Fixture thickness t _{fix} mm	Drill hole depth h _i mm	Anchorage depth h _{ef} mm	Fixture thickness t _{fix,red} mm	Drill hole depth h _{i,red} mm	Anchorage depth h _{ef,red} mm			
N-K 6-5/44 HCR	61110651	6	5	40	30	10	35	25 ¹⁾	44	200	2,29
N-K 6-30/69 HCR	61135651	6	30	40	30	35	35	25 ¹⁾	69	200	3,44
N-K 6-50/89 HCR	61155651	6	50	40	30	55	35	25 ¹⁾	89	100	2,19

¹⁾Reduced anchorage depth is only permitted for indoor use.

Setting Tool

→ Setting Tool for Nail Anchor N-K

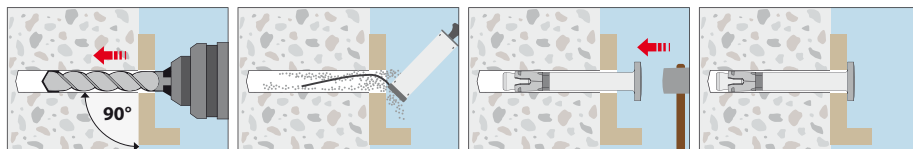
→ With SDS plus connection

→ With centering tip for secure fit



Description	Ref. No.	Pkg. content	Weight per pkg. kg
		pcs.	
N-K SWZ SDS	09795101	1	0,05

Installation





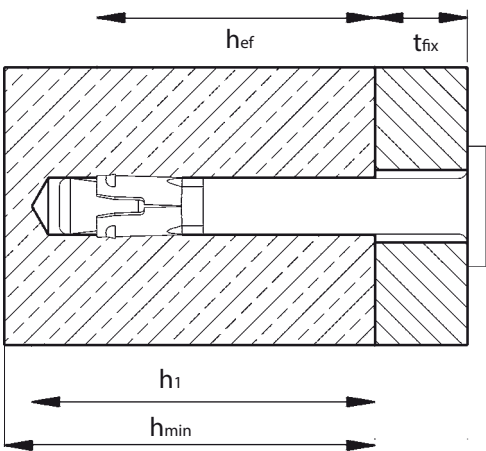
Extract from Permissible Service Conditions of European Technical Assessment ETA-11/0240 for use in concrete for redundant non-structural systems

Approved loads according to EN 1992-4 for single anchors without the influence of spacing and edge distances. The total safety factor (γ_M and γ_P) is included. The admissible loads per fixing point can be taken from the relevant national regulations of the EOTA member states and may be lower than the approved load of the anchor. Load capacities under fire exposure see page 197.

Loads and performance data	Nail Anchor steel zinc plated, stainless steel A4, HCR	N		N-K		N-M	
		cracked / uncracked concrete					
Effective anchorage depth	h_{ef} [mm]	25	30	25	30	25	30
Approved loads (Picture 1)	C12/15 appr. F [kN]	1,43	1,90	1,43	1,90	1,43 ¹⁾	1,90 ¹⁾
	C20/25 - C50/60 appr. F [kN]	2,14	2,81	2,14	2,81	2,14 ¹⁾	2,81 ¹⁾
Approved loads (Picture 2)	C12/15 appr. F [kN]	0,71	0,95	0,71	0,95	0,71 ¹⁾	0,95 ¹⁾
	C20/25 - C50/60 appr. F [kN]	0,95	1,19	0,95	1,19	0,95 ¹⁾	1,19 ¹⁾
Approved bending moments	appr. F [Nm]	5,3	5,3	7,3/7,7 ²⁾	7,3/7,7 ²⁾	7,3	7,3
Minimum thickness of concrete slab	h_{min} [mm]	80	80	80	80	80	80
Installation parameters							
Drill hole diameter	d_o [mm]	6	6	6	6	6	6
Diameter of clearance hole in the fixture	d_f [mm]	7	7	7	7	-	-
Diameter nailhead	[mm]	-	-	13	13	-	-
Depth of drill hole	h_1 [mm]	35	40	35	40	35	40
Installation torque	$T_{inst \leq}$ [Nm]	4	4	-	-	-	-

¹⁾When applying a shear load to anchor version N-M, shear load with lever arm must be proven.

²⁾Steel zinc plated / stainless steel A4, HCR



Respective spacing and edge distances [mm]:

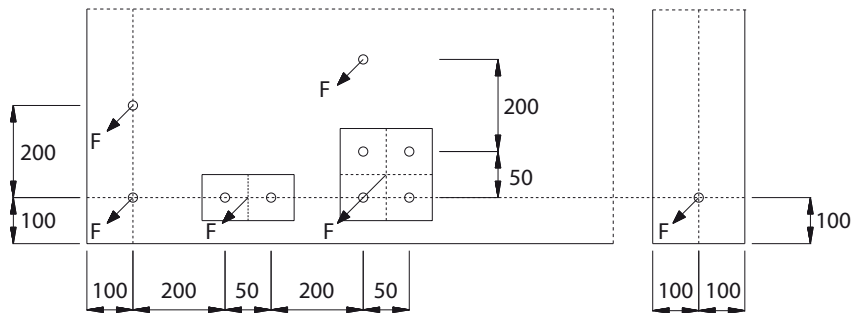
The approved load F is for one fixing point.

One fixing point can be:

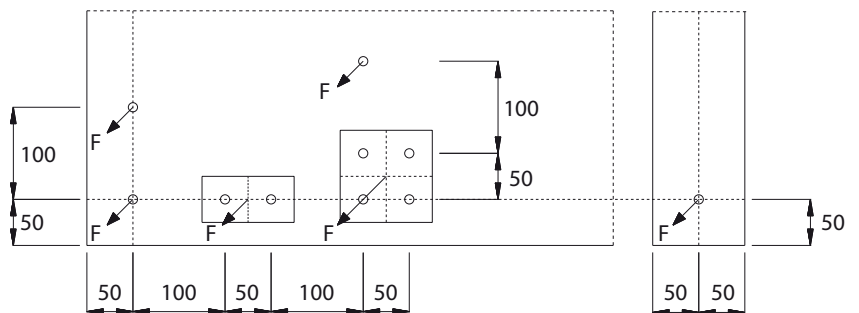
- **Single anchor,**
- **Pair of anchors** with spacing $s \geq 50$ mm or
- **Group of four anchors** with $s \geq 50$ mm

If the spacing in a fixing point is greater than or equal to the respective spacing between the fixing points, the characteristic resistances apply to every single anchor.

Picture 1: maximum loads



Picture 2: minimum spacing and edge distance



Mechanical Heavy Duty Anchors