

# NAIL ANCHOR W-NA-K/HCR

35.1

Performance data		
Anchor diameter [mm]	6 (h <sub>ef</sub> [mm] = 30)	
Multiple attachment of non-load-bearing systems in concrete (for all load directions) for c ≥ 100 mm and s ≥ 200 mm	F <sub>perm</sub> [kN] ≥ C12/15	1.9
	F <sub>perm</sub> [kN] ≥ C20/25 and ≤ C50/60 <sup>1)</sup>	2.8
Multiple attachment of non-load-bearing systems in concrete (for all load directions) for c ≥ 50 mm and s ≥ 100 mm	F <sub>perm</sub> [kN] ≥ C12/15	0.9
	F <sub>perm</sub> [kN] ≥ C20/25 and ≤ C50/60 <sup>1)</sup>	1.2
Perm. loading under fire load (Technical Report TR 020) Axial and edge spacing, see European Technical Approval ETA-11/0339	R30; F <sub>perm</sub> [kN] <sup>2)</sup>	0.9
	R60; F <sub>perm</sub> [kN] <sup>2)</sup>	0.9
	R90; F <sub>perm</sub> [kN] <sup>2)</sup>	0.9
	R120; F <sub>perm</sub> [kN] <sup>2)</sup>	0.7
Permissible bending torque	M <sub>perm</sub> [Nm]	7.7

Characteristic values		
Minimum component thickness	h <sub>min</sub> [mm]	80
Effective anchoring depth	h <sub>ef</sub> [mm]	30
Nom. drill dia. <sup>3)</sup>	d <sub>0</sub> [in mm]	6
Drill cutting dia. <sup>3)</sup>	d <sub>cut</sub> ≤ [mm]	6.4
Drill hole depth	h <sub>0</sub> ≥ [mm]	40
Through-hole in the component being connected	d <sub>f</sub> ≤ [mm]	7

Anchor dimensions			
Attachment height h <sub>ef</sub> = 30	t <sub>fix</sub> [mm]	5	30
Nail anchor W-NA-K/HCR	Art. No.	0905 381 005	0905 381 030
Packing unit	P.Qty.	200	200

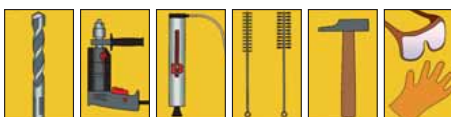
## Fire test in acc. with the ZTV tunnel fire curve in the cracked tensile zone

Based on the test result, the following permissible load per anchor can be specified for the nail anchor W-NA-K/HCR under primarily static load in reinforced or non-reinforced standard concrete with a strength class of C12/15 minimum and C50/60 maximum in accordance with EN 206-1: 2000-12, given a fire load in line with the ZVT-ING temperature time curve:

Designation	Maximum loading under a fire load in acc. with the "Tunnel Fire Compartment Curve" as per ZTV-ING max. F [kN]
NAIL ANCHOR W-NA-K/HCR	0.12

- When designing the fastening materials, it is necessary to check whether the permissible loads as defined by ETA-11/0339 are definitive
- This assessment applies only to the nail anchor W-NA-K/HCR, taking into account the regulations of the European Technical Approval ETA-11/0339 with setting depths h<sub>ef</sub> of at least 30 mm
- The assessment for the nail anchor W-NA-K/HCR applies only in conjunction with reinforced concrete ceilings, the design of which conforms to the regulations of ZVT-ING, Part 5 Tunnel Construction for "fire protection measures for construction" or has passed a fire test with a fire load in line with the ZTV-ING temperature time curve

## Würth System Components



<sup>1)</sup> The part safety coefficient of the resistances regulated in the approval and a part safety coefficient of the effects of γ<sub>F</sub> = 1.4 have been taken into account. For the combination of tensile and transverse loads, for edge influence and anchor groups, please refer to the Guideline for European Technical Approval (ETAG), Appendix C.

<sup>2)</sup> The part safety coefficients for the load-bearing capacity under a fire load of γ<sub>M,fi</sub> = 1.0 and the part safety coefficient of the effects of γ<sub>F</sub> = 1.0 recommended in the approval are taken into account.

<sup>3)</sup> The carbide impact drills must meet the specifications of the code of practice of the German Institute of Building Technology (Deutsches Institut für Bautechnik) and of the Tool Industry Trade Association (Fachverband Werkzeugindustrie e.V.) with regard to the "characteristic values, requirements and tests of masonry drills with carbide cutters used to drill holes for anchor installation". Würth hammer drills correspond to the specifications of the code of practice.