

ift verification for frame

anchors 21-004570-PR01



SPAX®

Frame anchor 7.5 mm
for use in bricks,
concrete, sand-lime
bricks and wood

Number	21-004570-PR01 (NW-K26-09-en-02)
Owner	SPAX International GmbH & Co. KG Kölner Str. 71-77 58256 Ennepetal Germany
Product	Testing of a spacer mounting screw in different anchoring grounds
Designation	Spax Rahmenanker Zylinderkopf 7,5 x 150 mm
Fastening grounds	Flat brick-T10-36.5 Concrete C20/25 Lime sandstone plan stone 20-2.0 Spruce C24
Spax Rahmenanker	Material Rahmenanker: carbon steel, galvanised, properties Rahmen- anker: full threaded screw, cylinder head, T30 with 40 mm ribbed screw tip, dimensions Rahmenanker: (Ø7.5 x 150) mm
Special features	-/-

Result **)

Determination of the load-bearing capacity for centric tension, shear load and shear load at distance "e" according to ift-guideline MO-02/1 : 2015-06 Clause 4.1.3.1, 4.1.3.2 and 4.1.3.3

(Detailed results according to ift-guideline MO-02/1, see sheet 2 and 3)

****)** Decision rule: For the evaluation of conformity, the measurement uncertainty was not taken into account.

Basis

ift-guideline MO-02/1:2015-06

Test report: 21-004570-PR01
(PB-K26-09-de-01)

Replaces ift-Nachweis: 21-004570
-PR01 (NW-K26-09-en-01) dated
29.11.2022

Representation



Instructions for use

The results obtained can be used as evidence in accordance with the above basis.

Validity

There is no time limit.

When using this document the up-to-dateness of above basis and the conformity of the product have to be observed.

The data and results given relate solely to the tested/described specimen.

This test does not allow any statement to be made on further characteristics of the present structure regarding performance and quality, in particular the effects of weathering and ageing.

Notes on publication

The ift-Guidance Sheet "Conditions and Guidance for the Use of ift Test Documents" applies.

ift Rosenheim

24.01.2023



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Identity-Check



www.ift-rosenheim.de/ift-geprueft
ID: 817-41583

1 Summary

1.1 Results – Determination of the load-bearing capacity with transverse load at a distance „e“ according to ift-guideline MO-02/1 Clause 4.1.3.3

Fastening ground	screw-in depth	Distance „e“	characteristic load-bearing capacity F_{Rk} in kN ¹⁾ at deflection δ_F in mm			
			$F_{Rk,1mm}$	$F_{Rk,2mm}$	$F_{Rk,3mm}$	$F_{Rk,max}$
Hollow brick	60 mm	20 mm	0.04	0.27	0.48	0.53 ²⁾
Concrete	30 mm	20 mm	0.10	0.31	0.58	1.02
Lime stone	40 mm	20 mm	0.09	0.35	0.55	1.64
Spruce	50 mm	20 mm	0.14	0.34	0.49	1.67

¹⁾ characteristic load which ensures with a 75 % probability that 95 % of the values are higher than this (5 % fractiles).

²⁾ A correction (reduction) for deviation of the actual lithographic strength of the test specimens from the standardised one was not taken into account due to missing data.

1.1.1 Requirement according to ift-guideline MO-02/1 Clause 5.1

Fastening ground	tested loadcase	Distance „e“	$F_{Rk,\delta} = F_{Rd,\delta} = F_{empf,\delta}$	$F_{Rk,max}$	$F_{Rd,max}$	$F_{empf,max}$	$F_{empf,max} \geq F_{empf,\delta}$
Hollow brick	wind suction	20 mm	(0.48) ³⁾	0.53	0.21	0.15	0.15
Concrete		20 mm	0.58	1.02	0.82	0.58	0.58
Lime stone		20 mm	0.55	1.64	1.31	0.94	0.55
Spruce		20 mm	0.49	1.67	1.34	0.96	0.49

³⁾ Requirement according to ift-guideline MO-02/1 Clause 5.1 $F_{empf,max} \geq F_{empf,\delta}$ not fulfilled.

Design load hollow brick (fracture brick)

$$F_{Rd,max} = F_{Rk,max} / \gamma_m \quad \text{mit } \gamma_m = 2.50$$

Design load concrete (fracture Rahmenanker)

$$F_{Rd,max} = F_{Rk,max} / \gamma_m \quad \text{mit } \gamma_m = 1.25$$

Design load lime stone (fracture Rahmenanker)

$$F_{Rd,max} = F_{Rk,max} / \gamma_m \quad \text{mit } \gamma_m = 1.25$$

Design load spruce (fracture Rahmenanker)

$$F_{Rd,max} = F_{Rk,max} / \gamma_m \quad \text{mit } \gamma_m = 1.25$$

Recommended load (service load)

$$F_{empf,max} = F_{Rd,max} / \gamma_F \quad \text{mit } \gamma_F = 1.4$$

Condition according to ift-guideline MO-02/1 Clause 5.1 Equation (7)

$$F_{empf,max} \geq F_{empf,\delta} \quad F_{Rk,\delta} = F_{Rd,\delta} = F_{empf,\delta}$$

1.2 Results – Determination of the load-bearing capacity with transverse load according to ift-guideline MO-02/1 Clause 4.1.3.2

Fastening ground	screw-in depth h_{nom}	Distance to the stressed edge c	characteristic load- bearing capacity F_{RK} in kN ⁴⁾
Hollow brick	60 mm	45 mm	1.33 ⁵⁾
Concrete	30 mm	40 mm	2.69
Lime stone	40 mm	50 mm	4.38
Spruce	50 mm	50 mm	4.37

⁴⁾ characteristic load which ensures with a 75 % probability that 95 % of the values are higher than this (5 % fractiles).

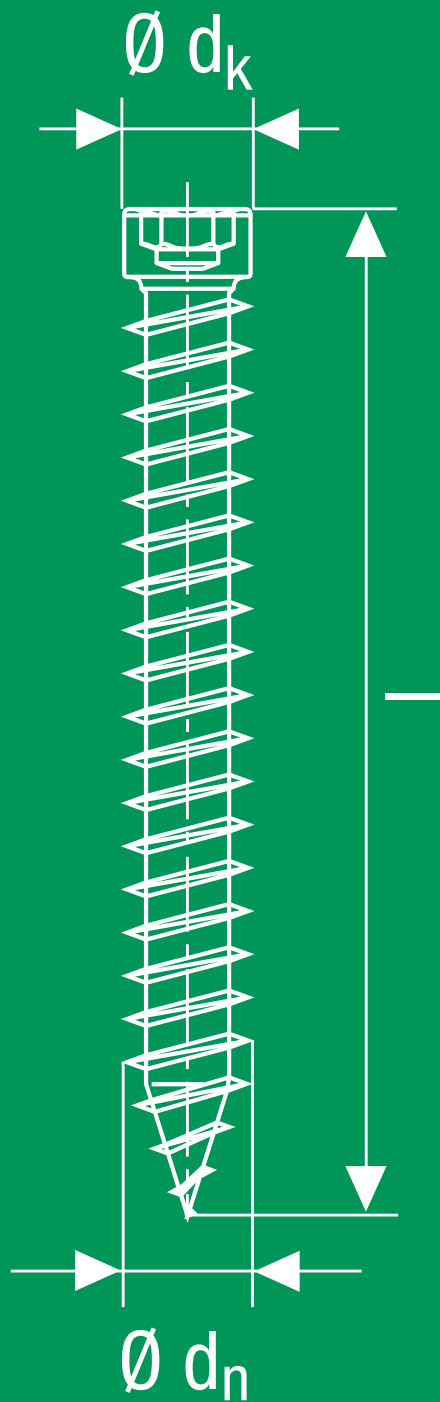
⁵⁾ A correction (reduction) for deviation of the actual lithographic strength of the test specimens from the standardised one was not taken into account due to missing data.

1.3 Results – Determination of the load-bearing capacity in case of centric tension according to ift-guideline MO-02/1 Clause 4.1.3.1

Fastening ground	screw-in depth h_{nom}	Distance to the stressed edge c	characteristic load- bearing capacity F_{RK} in kN ⁶⁾
Hollow brick	60 mm	45 mm	1.32 ⁷⁾
Concrete	30 mm	40 mm	3.24
Lime stone	40 mm	50 mm	1.42
Spruce	50 mm	50 mm	6.87

⁶⁾ characteristic load which ensures with a 75 % probability that 95 % of the values are higher than this (5 % fractiles).

⁷⁾ A correction (reduction) for deviation of the actual lithographic strength of the test specimens from the standardised one was not taken into account due to missing data.



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