

DECLARATION OF PERFORMANCE

No. 0004 - EN



1. Unique identification code of the product-type: **fischer termoz CS 8**

2. Intended use/es:

Product	Intended use/es
Plastic anchors for use in concrete and masonry	Screwed-in plastic anchor for fixing of external thermal insulation composite systems with rendering in concrete, masonry, lightweight aggregate concrete and autoclaved aerated concrete

3. Manufacturer: **fischerwerke GmbH & Co. KG, Klaus-Fischer-Straße 1, 72178 Waldachtal, Germany**

4. Authorised representative: --

5. System/s of AVCP: **2+**

6a. Harmonised standard: ---

Notified body/ies: ---

6b. European Assessment Document: **ETAG 014; 2011-02**

European Technical Assessment: **ETA-14/0372; 2015-02-27**

Technical Assessment Body: **ETA-Danmark A/S**

Notified body/ies: **1343 – MPA Darmstadt**

7. Declared performance/s:

Safety in use (BWR 4)

Essential characteristics	See Annex C 1 – C 4
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8. Appropriate Technical Documentation and/or Specific Technical Documentation: ---

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Andreas Bucher, Dipl.-Ing.

Wolfgang Hengesbach, Dipl.-Ing., Dipl.-Wirtsch.-Ing.

Tumlingen, 2015-03-02

Table C1: Characteristic resistance to tension loads N_{Rk} in concrete and masonry for a single anchor in kN

Base material	Bulk density class ρ [kg/dm ³]	Minimum compressive strength f_b [N/mm ²]	Remarks	Drill mode ¹⁾	Characteristic resistance termoz CS 8 N_{Rk} [kN]
Concrete \geq C 12/15 and $<$ C 50/60	-	-	EN 206-1:2000	H	1,2
Concrete C50/60					1,5
Weather resistant concrete shell \geq C20/25	-	-	EN 206-1:2000 ; $h \geq$ 42 mm	H	1,2
Weather resistant concrete shell C 50/60	-	-	EN 206-1:2000 ; $h \geq$ 42 mm		1,5
Solid Clay bricks e.g. acc. to DIN 105-100:2012-01, EN 771-1:2011, Mz	\geq 1,8	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
Calcium silicate solid bricks, e.g. acc. to DIN V 106:2005-10, EN 771-2:2011, KS	\geq 1,8	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,5
		12			0,9
Solid lightweight concrete block, e.g. acc. to DIN V 18152-100:2005-10 EN 771-3:2011 Vbl	\geq 1,4	8	Cross section reduced up to 15% by perforation vertically to the resting area	H	0,5
Solid concrete block, e.g. acc. to DIN V 18152-100:2005-10 EN 771-3:2011, Vbn	\geq 2,0	20	Cross section reduced up to 15% by perforation vertically to the resting area	H	1,2
		12			0,75
Vertically perforated clay bricks e.g. acc. to DIN 105-100:2012-01, EN 771-1:2011, HLz	\geq 1,0	12	Cross section reduced between 15% and 50% by perforation vertically to the resting area. Exterior web thickness \geq 12 mm	R	0,6
	\geq 1,6	48			1,5
Hollow calcium silicate brick, acc. to DIN V 106:2005-10, EN 771-2:2011, KSL	\geq 1,4	20	Cross section reduced between 15% and 50% by perforation vertically to the resting area. Exterior web thickness \geq 23 mm	H	0,9
		12			0,5
Partial safety factor				$\gamma_M^{2)}$	2,0

1) H = Hammer drilling, R = Rotary drilling

2) In absence of other national regulations

Cat. "C" values valid for reduced anchorage depth 25mm

fischer termoz CS 8	Annex C1 of European Technical Assessment ETA-14/0372
Intended use - Characteristic resistance of the anchor	

Table C1: Char. resistance to tension loads N_{Rk} in masonry and aerated concrete for a single anchor in kN

Base material	Bulk density class ρ [kg/dm ³]	Minimum compressive strength f_b [N/mm ²]	Remarks	Drill mode ¹⁾	Characteristic resistance termoz CS 8 N_{Rk} [kN]
Hollow brick light-weight concrete, e.g. acc. to DIN V 18153-100: 2005-10, EN 771-3:2011 Hbl	$\geq 0,9$	4	Exterior web thickness ≥ 20 mm	H	0,5
Hollow brick concrete, e.g. acc. to DIN V 18153-100: 2005-10, EN 771-3:2011 Hbn	$\geq 1,2$	10	Exterior web thickness ≥ 38 mm	H	1,2
		8			0,9
		6			0,75
		4			0,5
Lightweight Aggregate Concrete \geq LAC 6	$\geq 0,9$	6	DIN EN 1520	H	0,75
Autoclaved aerated concrete blocks, e.g. AAC acc. to DIN V 4165-100:2005-10, EN 771-4 $h_{nom} = 35$ mm	$\geq 0,50$	4	DIN V 4165-100	R	0,3
Autoclaved aerated concrete blocks, e.g. AAC acc. to DIN V 4165-100:2005-10, EN 771-4 $h_{nom} = 55$ mm					0,6
Partial safety factor				$\gamma_M^{2)}$	2,0

1) H = Hammer drilling, R = Rotary drilling

2) In absence of other national regulations

Cat "C" = values valid for reduced anchorage depth 25 mm

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Performance - Characteristic resistance of the anchor

Table C2: Point thermal transmittance acc. to EOTA Technical Report TR 025:2007-06

Anchor type	Thickness of insulation material h_D [mm]	Point thermal transmittance χ [W/K]
termoz CS 8 / 110 – 230 flush mounted	60 - 80	0,001
	100 - 180	0,002
termoz CS 8 / 250 – 390 flush mounted	200 - max.	0,001
termoz CS 8 / 250 - 310 ^{*)} flush mounted	200 - 220	0,001
	240 - 260	0,002
termoz CS 8 / 110 – 230 countersunk mounted	80 - 120	0,001
	140 – 180	0,002
termoz CS 8 / 250 – 390 countersunk mounted	200 – max.	0,001
termoz CS 8 / 250 – 310 countersunk mounted ^{*)}	200 - 260	0,001

*) Renovation type

Table C3: Plate stiffness acc. to EOTA Technical Report TR 026:2007-06

Anchor type	Max. size of the anchor plate [mm]	Load resistance of the anchor plate [kN]	Plate stiffness [kN/mm]
termoz CS 8	60	1,7	0,6

Table C4: Displacements

Base material	Tension load F_{Rd} [kN]	Displacements δ_m [mm]
Concrete \geq C12/15 (EN 206-1:2000)	0,40	< 0,3
Concrete C50/60 (EN 206-1:2000)	0,50	< 0,3
Weather resistant concrete shell \geq C20/C25 (EN 206-1:2000)	0,40	< 0,4
Weather resistant concrete shell C50/60 (EN 206 1:2000)	0,50	< 0,4
Clay brick DIN 105-100:2012-01, EN 771-1:2011, Mz 20	0,50	< 0,3
Calcium silicate solid bricks DIN V 106:2005-10 EN 771-2 :2011,KS 20	0,50	< 0,3
Calcium silicate solid bricks DIN V 106:2005-10 EN 771-2 :2011,KS 12	0,30	
Solid lightweight concrete block DIN V 18152-100:2005-10 EN 771-3 :2011,Vbl 8	0,17	< 0,2

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Performance - Point thermal transmittance, plate stiffness and displacements

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Table C4.1: Displacements

Base material	Tension load F_{Rd} [kN]	Displacements δ_m [mm]
Solid concrete block DIN V 18152-100:2005-10 EN 771-3:2011,Vbn 20	0,40	< 0,3
Solid concrete block DIN V 18152-100:2005-10 EN 771-3:2011,Vbn 12	0,25	
Vertically perforated clay brick DIN 105-100:2012-01 EN 771-1:2011,Hlz 12	0,20	< 0,2
Vertically perforated clay brick DIN 105-100:2012-01 EN 771-1:2011,Hlz 48	0,50	< 0,3
Hollow calcium silicate brick DIN V 106:2005-10 EN 771-2:2011, KSL 20	0,30	< 0,2
Hollow calcium silicate brick DIN V 106:2005-10 EN 771-2:2011, KSL 12	0,17	
Hollow brick light-weight concrete DIN V 18153-100: 2005-10 EN 771-3:2011, Hbl 4	0,17	< 0,1
Hollow brick concrete DIN V 18153-100: 2005-10 EN 771-3:2011, Hbn 10	0,40	< 0,2
Hollow brick concrete DIN V 18153-100: 2005-10 EN 771-3:2011, Hbn 8	0,30	
Hollow brick concrete DIN V 18153-100: 2005-10 EN 771-3:2011, Hbn 6	0,25	
Hollow brick concrete DIN V 18153-100: 2005-10 EN 771-3:2011, Hbn 4	0,17	
Lightweight Aggregate Concrete \geq LAC 6 DIN EN 1520	0,25	< 0,2
Autoclaved aerated concrete blocks DIN V 4165-100:2005-10 EN 771-4, AAC 4, $h_{nom} = 35$ mm	0,10	< 0,1
Autoclaved aerated concrete blocks DIN V 4165-100:2005-10 EN 771-4, AAC 4, $h_{nom} = 55$ mm	0,20	< 0,1

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Performance - Displacements

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