kunkeldübel

DECLARATION OF PERFORMANCE
DoP No. 0756-CPD-0165

1. Unique identification code of the product-type: **Kunkel Anchor K6, K6+, K6L, K8**

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):
ETA-04/0026, Annex B2 to B5
Batch number: see packaging of the product

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

generic type	Deformation-controlled expansion anchor
for use in	cracked or non-cracked concrete C20/25 - C50/60 (EN 206), for multiple point fixings for non-structural systems only
option	ETAG 001-6
loading	static or quasi-static
material	zinc-plated steel: dry internal conditions only covered sizes: K6, K6+, K6L, K8 stainless steel 1.4401, 1.4404: internal and external use without particular aggressive conditions covered sizes: K6E, K6+E, K6LE, K8E stainless steel 1.4571: internal and external use without particular aggressive conditions covered sizes: K6X, K6+X, K6LX, K8X highly corrosion resistant steel 1.4529, 1.4565: internal and external use with particular aggressive conditions covered sizes: K6C, K6+C, K6LC, K8C
temperature range (if applicable)	--

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

Kunkel GmbH Befestigungssysteme
Jakobstraße 24
66115 Saarbrücken
Germany

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2): --

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: **System 2+**

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard: --

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

	Deutsches Institut für Bautechnik, Berlin
issued	**ETA-04/0026**
on the basis of	**ETAG 001-6**

The notified body 2873 performed under system 2+:

(i) initial inspection of the manufacturing plant and of factory production control;
(ii) continuous surveillance, assessment and evaluation of factory production control.

and issued: certificate of conformity 2873-CPR-460-1

9. Declared performance:

Essential Characteristics	**Design Method**	**Performance**	**Harmonized Technical Specification**
characteristic resistance for tension	ETAG 001, Annex C	ETA-04/0026 Annex C1+C2	ETAG 001
characteristic resistance for shear	ETAG 001, Annex C	ETA-04/0026 Annex C1+C2	
minimum spacing and minimum edge distance	ETAG 001, Annex C	ETA-04/0026 Annex C1+C2	
Reaction to fire		Class A1	
Resistance to fire		Annex C3	

Where pursuant to Article 37 or 38 in the Specific Technical Documentation has been used, the requirements with which the product complies: --

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

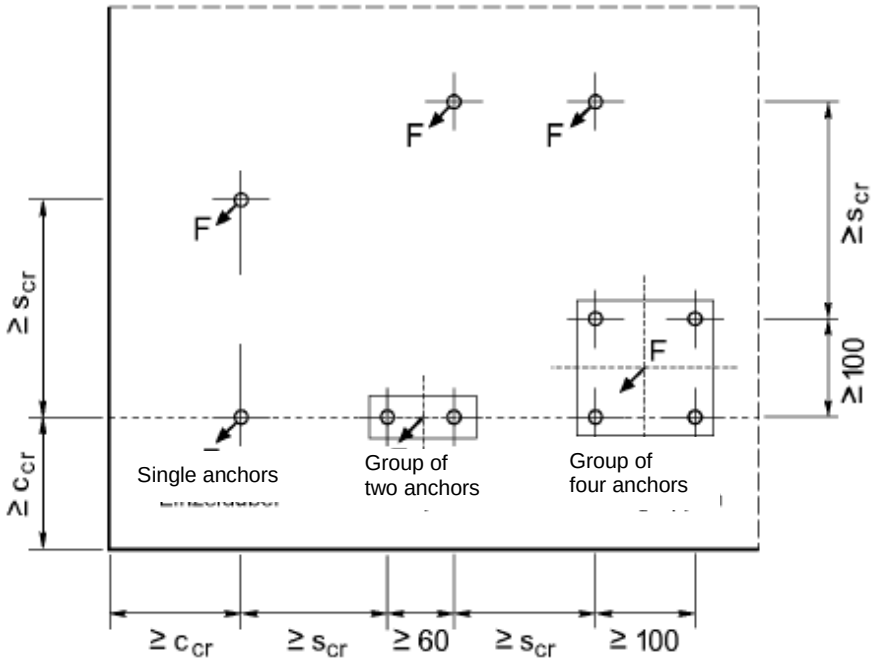
Thomas Kunkel
(General Manager)
Saarbrücken, 29.07.2021

Deutsches Institut für Bautechnik DIBt

Table C1: Characteristic values of resistance for all load directions for anchors made of galvanised steel

Anchor type			**K6**	**K6+**	**K6L**	**K8**
Any load direction						
Characteristic resistance in C20/25 to C50/60	F^0_{Rk}	[kN]	2	2,5	5	5
Partial safety factor[2)]	γ_m	[-]	1,5	1,5	2,1	2,1
Shear load with lever arm						
Characteristic bending moment	$M^0_{Rk,s}$ [1)]	[Nm]	3,6	7,7		18
Partial safety factor	γ_{ms}	[-]	1,25			

[1)] Characteristic bending moment $M^0_{Rk,s}$ for equation (5.5) in ETAG 001, Annex C or for equation (14) in CEN/TS 1992-4-4
[2)] The Installation safety factor γ_2 is included



The values given in table C1 are valid for one fixing point.

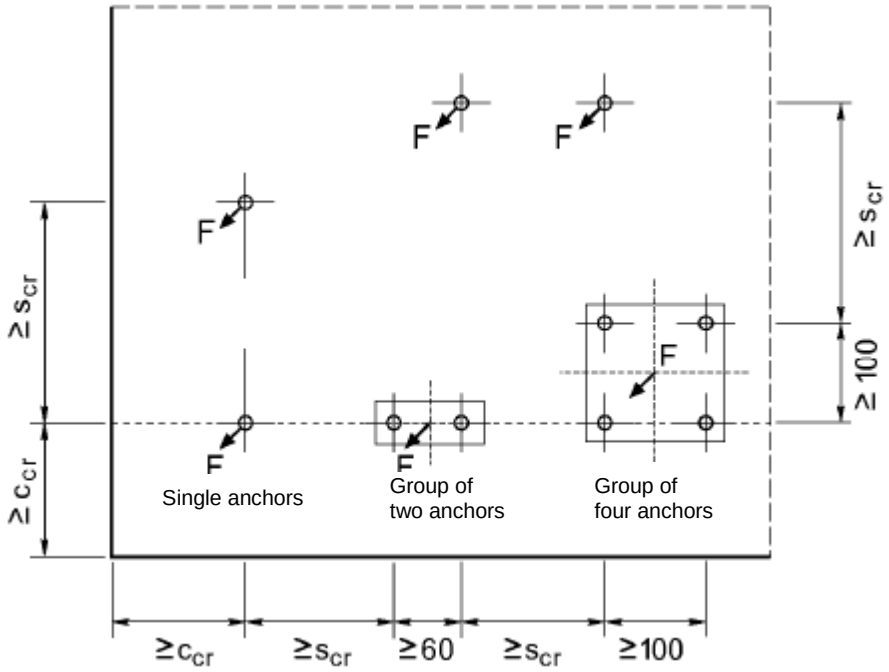
Fixing points can be:
- **Single anchors**,
- **Groups of two anchors** with $s_1 \geq 60$mm or
- **Groups of four anchors** with $s_1 = s_2 \geq 100$mm

Kunkel anchor K6, K6+, K6L and K8	**Annex C1**
Performance Characteristic values of resistance for all load directions for anchors made of galvanised steel	

Table C2: Characteristic values of resistance for all load directions for anchors made of stainless and high corrosion resistant steel

Anchor type			**K6 E,X,C**	**K6+ E,X,C**	**K6L E,X,C**	**K8 E,X,C**
Any load direction						
Characteristic resistance in C20/25 to C50/60	F^0_{Rk}	[kN]	1,5	2,5	3	5
Partial safety factor	γ_m	[-]	2,1	1,8	2,1	1,8
Shear load with lever arm						
Characteristic bending moment	$M^0_{Rk,s}$ [1)]	[Nm]	4,0	8,4		20,6
Partial safety factor	γ_{ms}	[-]	1,5			

1) Characteristic bending moment $M^0_{Rk,s}$ for equation (5.5) in ETAG 001, Annex C or for equation (14) in CEN/TS 1992-4-4
2) The Installation safety factor γ_2 is included



The values given in table C2 are valid for one fixing point.

Fixing points can be:
- **Single anchors**,
- **Groups of two anchors** with $s_1 \geq 60$mm or
- **Groups of four anchors** with $s_1 = s_2 \geq 100$mm
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Kunkel anchor K6, K6+, K6L and K8	**Annex C2**
Performance Characteristic values of resistance for all load directions for anchors made of stainless and high corrosion resistant steel	

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Table C3: Characteristic values under fire exposure in all load directions in concrete C20/25 to C50/60

Fire resistance class	Anchor type			K6 (..E,..X,..C)	K6+, K6L (..E,..X,..C)	K8 (..E,..X,..C)
R30	Characteristic resistance	$F_{Rk,s(30)}$	[kN]	0,3	0,6	1,2
R60	Characteristic resistance	$F_{Rk,s(60)}$	[kN]	0,3	0,5	1,0
R90	Characteristic resistance	$F_{Rk,s(90)}$	[kN]	0,3	0,3	0,6
R120	Characteristic resistance	$F_{Rk,s(120)}$	[kN]	0,2	0,2	0,4
R30 to R120	Spacing	$s_{cr} = s_{min}$	[mm]	200	200	200
	Edge distance for fire attack from one side only	$c_{cr} = c_{min}$	[mm]	150	150	150
	Edge distance for fire attack from more than one side	$c_{cr} = c_{min}$	[mm]	300	300	300

Kunkel anchor K6, K6+, K6L and K8

Performance
Characteristic values under fire exposure in all load directions in concrete C20/25 to C50/60

Annex C3