DECLARATION OF PERFORMANCE

No. LE_5918240330_01_M_WIT-PM 200(1)

This version has been translated from German.
In the case of any doubt, the German original shall apply

1. Unique identification code of the product

Würth Injection system WIT-PM 200, WIT-PM 200 express, WIT-PM 200 tropical
Item prefix: 591824*;
0905 46*; 0905 47*; 5915 1*; 5915 2*; 5915 3*; 5916 0*; 5916 1*; 5916 2*; 5916 408 110; 5916 412 160; 5916 412 160; 5916 416 190; *
except for the following articles:

2. Type number, batch number or serial number or another feature for identifying the construction product in accordance with Article 11 paragraph 4

ETA-12/0569, Appendix A2
Batch number: See packaging

3. Intended use(s):

Product type	Bonded anchors with anchor bars in sizes M8 to M24 for anchoring in uncracked concrete
For use in	Uncracked concrete C20/25 to C50/60 (EN 206:2000-12)
Option	7
Loading	Static and quasi-static loads
Material	**Galvanized steel:** Only in dry interior rooms Sizes covered: M8 to M24 **Stainless steel (A4):** Indoor and outdoor areas where there are no particularly aggressive conditions Sizes covered: M8 to M24 **Highly corrosion-resistant steel (HCR)** Indoor and outdoor areas where there are particularly aggressive conditions Sizes covered: M8 to M24
Intended use	• Installation in dry, wet concrete or water-filled borehole • Overhead installation is possible • Use in uncracked concrete: M8 to M24
Temperature range	• Range I: -40°C to +40°C (max. short-term temperature +40°C, max. long-term temperature +24°C) • Range II: -40°C to +80°C (max. short-term temperature +80°C, max. long-term temperature +50°C)

4. Manufacturer in accordance with Article 11 paragraph 5

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Str. 12 - 17
D – 74653 Künzelsau

5. Authorized person in accordance with Article 12 paragraph 2

Not relevant

6. System(s) for assessment and checking of the constancy of performance of the construction product in accordance with Appendix V

System 1

7. a) If the construction product is covered by a harmonized standard:

EN number and ISSUE DATE

If 7a) applies then the notified body(bodies)

Code number of the notified body

7. b) If the construction product is based on a European assessment document

ETAG 001 Part 1 + 5 (27.06.2013)

If 7b) applies then
European Technical Assessment

ETA-12/0569 – issued on 25.01.2016

Technical assessment body

Technical and Test Institute for Construction Prague TZUS

Notified body

MPA Darmstadt (1343)

8. Declared performance

Declaration: For harmonized technical specifications the essential characteristics for the intended use(s) in accordance with number 2
The performance for each essential characteristic in accordance with level or class. If no performance is declared then "NPD" (no performance determined)

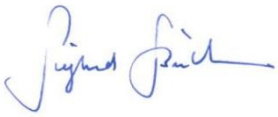
Essential characteristics	**Method of assessment**	**Performance**	**Harmonized technical specification**
Typical values for tensile stress	EOTA Technical Report TR 029 CEN/TS 1992-4:2009	ETA-12/0569, Appendix C1	ETAG 001 Part 1+5
Typical values for shear stress	EOTA Technical Report TR 029 CEN/TS 1992-4:2009	ETA-12/0569, Appendix C2	
Shifts for proof of serviceability	EOTA Technical Report TR 029 CEN/TS 1992-4:2009	ETA-12/0569, Appendix C3	

9. If, in accordance with Articles 37 and 38, reasonable technical documentation and/or specific technical documentation was used

a) REFERENCE NUMBER of the documentation to be used
b) Requirements fulfilled by the product

The performance of the above-mentioned product meets the declared performance/performances. The above-named manufacturer is solely responsible for creating the performance declaration in line with the (EU) regulation No. 305/2011.

Signed for the manufacturer and in the name of the manufacturer by:



Frank Wolpert
(Authorized representative, Head of Product Management)
Künzelsau, 27.06.2016

Dr.-Ing. Siegfried Beichter
(Authorized representative, Head of Quality Management)

Appendix C1, Table C1: Typical values for tensile stress in uncracked concrete

Anchor size:				**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Steel failure									
Typical tensile strength		$N_{Rk,s}$	[kN]	$A_s \times f_{uk}$					
Combined failure through extraction and concrete failure									
Typical strength in uncracked concrete C20/25									
Temperature range I: 40°C/24°C	dry and wet concrete	$\tau_{Rk,ucr}$	[N/mm²]	8.5	8.0	8.0	8.0	8.0	8.0
	water-filled borehole	$\tau_{Rk,ucr}$	[N/mm²]	8.5	8.0	8.0	8.0	8.0	8.0
Temperature range II: 80°C/50°C	dry and wet concrete	$\tau_{Rk,ucr}$	[N/mm²]	6.5	6.0	6.0	6.0	6.0	6.0
	water-filled borehole	$\tau_{Rk,ucr}$	[N/mm²]	6.5	6.0	6.0	6.0	6.0	6.0
Increasing factor for concrete χ_c		C25/30		1.04					
		C30/37		1.08					
		C35/45		1.13					
		C40/50		1.15					
		C45/55		1.17					
		C50/60		1.19					
Factor in accordance with CEN/TS 1992-4-5 Part 6.2.2.3		K_8	[-]	10.1					
Concrete cone failure									
Factor in accordance with CEN/TS 1992-4-5 Part 6.2.3.1		k_{ucr}	[-]	10.1					
Edge clearance		$c_{cr,N}$	[mm]	$1.5\ h_{ef}$					
Axle clearance		$s_{cr,N}$	[mm]	$3.0\ h_{ef}$					
Crevices									
Edge clearance		$c_{cr,sp}$	[mm]	$1.0 \cdot h_{ef} \leq 2 \cdot h_{ef}^{\left(2,5 - \frac{h}{hef}\right)} \leq 2.4 \cdot h_{ef}$					
Axle clearance		$s_{cr,sp}$	[mm]	$2\ c_{cr,sp}$					
Installation safety coefficient (dry and wet concrete)		$\gamma_2 = \gamma_{inst}$		1.2					
Installation safety coefficient (water-filled borehole)		$\gamma_2 = \gamma_{inst}$		1.2					

Appendix C2, Table C2: Typical values for shear stress in uncracked concrete

Anchor size:			**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Steel failure without lever arm								
Typical shear load-bearing capacity	$V_{Rk,s}$	[kN]	$0.5 \times A_s \times f_{uk}$					
Flexibility factor in accordance with CEN/TS 1992-4-5 Part 6.3.2.1	K_2		0.8					
Steel failure with lever arm								
Typical bending torque	$M^0_{Rk,s}$	[Nm]	$1.2 \times W_{el} \times f_{uk}$					
Concrete failure on the non-load side								
Factor in equation (27) of the CEN/TS 1992-4-5 Chapter 6.3.3 Factor in equation (5.7) of the Technical Report 029 Chapter 5.2.3.3	$K_{(3)}$	[-]	2.0					
Installation safety coefficient	$\gamma_2 = \gamma_{inst}$		1.0					
Concrete edge failure								
Effective anchoring length	l_f	[mm]	$l_f = \min(h_{ef}; 8\ d_{nom})$					
Outside diameter of the anchor	d_{nom}	[mm]	8	10	12	16	20	24
Installation safety coefficient	$\gamma_2 = \gamma_{inst}$		1.0					

Appendix C3

Table C3: Shift under tensile stress [1] (threaded rod)

Anchor size:			**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Uncracked concrete C20/25								
Temperature range I:	δ_{N0} factor	[mm/(N/mm²)]	0.03	0.04	0.05	0.07	0.08	0.10
40°C/24°C	$\delta_{N\infty}$ factor	[mm/(N/mm²)]	0.07	0.08	0.08	0.08	0.08	0.10
Temperature range II:	δ_{N0} factor	[mm/(N/mm²)]	0.02	0.03	0.03	0.04	0.04	0.05
80°C/50°C	$\delta_{N\infty}$ factor	[mm/(N/mm²)]	0.15	0.17	0.17	0.17	0.17	0.17

[1] Calculation of the shift

$\delta_{N0} = \delta_{N0}$ factor · τ;

$\delta_{N\infty} = \delta_{N\infty}$ factor · τ;

Table C4: Shift under shear stress [1] (threaded rod)

Anchor size:			**M8**	**M10**	**M12**	**M16**	**M20**	**M24**
Uncracked concrete C20/25								
All temperature ranges	δ_{V0} factor	[mm/(N/mm²)]	0.02	0.02	0.01	0.01	0.01	0.01
	$\delta_{V\infty}$ factor	[mm/(N/mm²)]	0.03	0.02	0.02	0.01	0.01	0.01

[1] Calculation of the shift

$\delta_{V0} = \delta_{V0}$ factor · V;

$\delta_{V\infty} = \delta_{V\infty}$ factor · V;