

DECLARATION OF PERFORMANCE
NR. LE_5918420330_00_M_WIT-VM 210 (1)

LANGUAGE VERSIONS :

Language	Site
EN	2
ETA– 20/0647(EN)	4
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CZ	28
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DE	32
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DECLARATION OF PERFORMANCE

No. 5918420330_00_M_WIT-VM 210 (1)

**This is an English translation of the original German wording.
In cases of doubt, the German version applies**

- | | |
|--|--|
| 1. Unique identification code of the product type: | Würth Injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM 210 Express
[Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM 210 Express injection system]
Art. no.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190 |
| 2. Intended use(s): | Bonded anchor for anchoring in concrete |
| 3. Manufactured by: | Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12-17
D-74653 Künzelsau |
| 4. System(s) of assessment and verification of constancy of performance: | System 1 |
| 5. European Assessment Document: | EAD 330499-01-0601 |
| European Technical Assessment: | ETA-20/0647 - 09/17/2020 |
| Technical Assessment Body: | Technical and Test Institute for Construction Prague (TZUS) |
| Notified Body or Bodies: | 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt |
| 6. Declared performance: | |

Essential characteristics	Performance	Harmonized technical specification
Mechanical resistance and stability (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Characteristic resistance under tensile and transverse loading for static and quasi-static actions	Annex C1 to C5	
Displacements under short term and long term loading	Annex C6 to C7	
Durability	Annex B1	
Characteristic resistance and displacements for seismic design category C1 and C2	Annex C8 to C10	
Hygiene, health and environment (BWR 3)		
No performance determined		

The performance of the above product corresponds to the declared performance. The declaration of performance is issued in compliance with EU Regulation 305/2011 under the sole responsibility of the above manufacturer.

Signed for and on behalf of the manufacturer by:



Frank Wolpert
Authorized Signatory, Head of Product
Management



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

Künzelsau, January 01, 2021



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for Construction Prague**
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www.eota.eu

European Technical Assessment

**ETA 20/0647
of 17/09/2020**

(English language translation, the original version in Czech language)

Technical Assessment Body issuing the ETA:

Technical and Test Institute for Construction Prague

Trade name of the construction product

Würth Injection System WIT-VM 210
WIT-VM 210 Blue
WIT-VM 210 Tropical
WIT-VM 210 Express

Product family to which the construction product belongs

Product area code: 33
Bonded anchor for use in concrete

Manufacturer

Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12-17
74653 Künzelsau
Germany

Manufacturing plant(s)

Plant 3, Germany

This European Technical Assessment contains

23 pages including 20 Annexes which form an
integral part of this assessment.

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

EAD 330499-01-0601 Bonded fasteners for use
in concrete

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es) referred to above). However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body - Technical and Test Institute for Construction Prague. Any partial reproduction has to be identified as such.

1. Technical description of the product

The Würth Injection System WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical and WIT-VM 210 Express for cracked and uncracked concrete is a bonded anchor consisting of a cartridge with injection mortar and a steel element. The steel element consists of a commercial threaded rod with a hexagon nut and a washer or reinforcing bar.

The steel element is placed into a drilled hole filled with injection mortar and is anchored via the bond between metal part, injection mortar and concrete.

The illustration and the description of the product are given in Annex A.

2. Specification of the intended use in accordance with the applicable EAD

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The provisions made in this European Technical Assessment are based on an assumed working life of the anchor of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the products in relation to the expected economically reasonable working life of the works.

3. Performance of the product and references to the methods used for its assessment

3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Characteristic resistance to tension and shear load for static and quasi-static loading	Annex C 1 to C 5
Displacements under short term and long term loading	Annex C 6 to C 7
Durability	Annex B 1
Characteristic resistance and displacements for seismic performance categories C1 and C2	Annex C 8 to C 10

3.2 Hygiene, health and environment (BWR 3)

No performance determined.

3.3 General aspects relating to fitness for use

Durability and serviceability are only ensured if the specifications of intended use according to Annex B1 are kept.

4. Assessment and verification of constancy of performance (AVCP) system applied with reference to its legal base

According to the Decision 96/582/EC of the European Commission¹ the system of assessment verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table applies.

Product	Intended use	Level or class	System
Metal anchors for use in concrete	For fixing and/or supporting to concrete, structural elements (which contributes to the stability of the construction works) or heavy units	-	1

¹ Official Journal of the European Communities L 254 of 08.10.1996

5. Technical details necessary for the implementation of the AVCP system, as provided in the applicable EAD

The factory production control shall be in accordance with the control plan which is a part of the technical documentation of this European Technical Assessment. The control plan is laid down in the context of the factory production control system operated by the manufacturer and deposited at Technický a zkušební ústav stavební Praha, s.p.² The results of factory production control shall be recorded and evaluated in accordance with the provisions of the control plan.

Issued in Prague on 17.09.2020

By

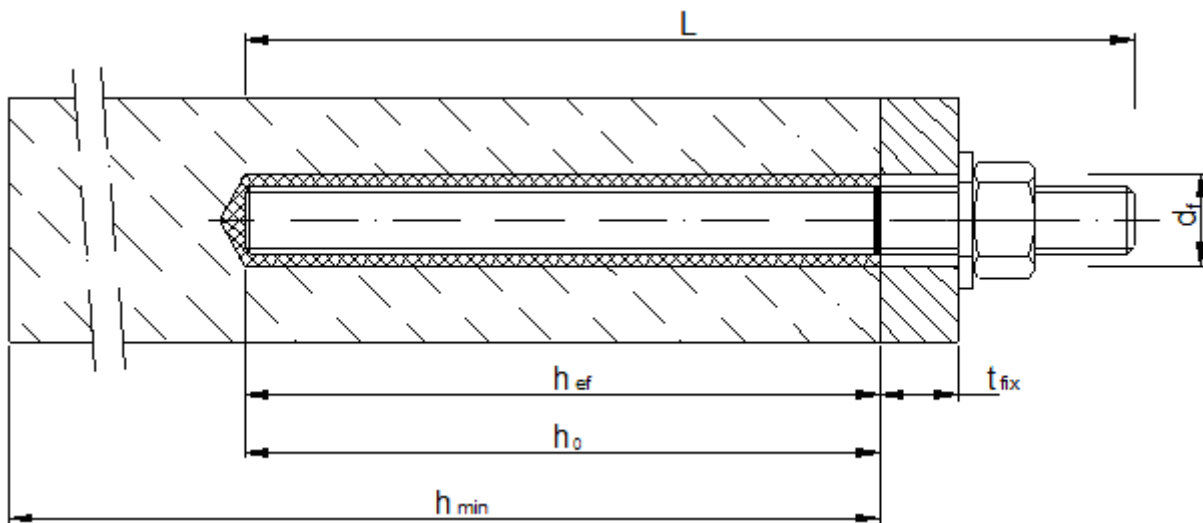
Ing. Mária Schaan

Head of the Technical Assessment Body

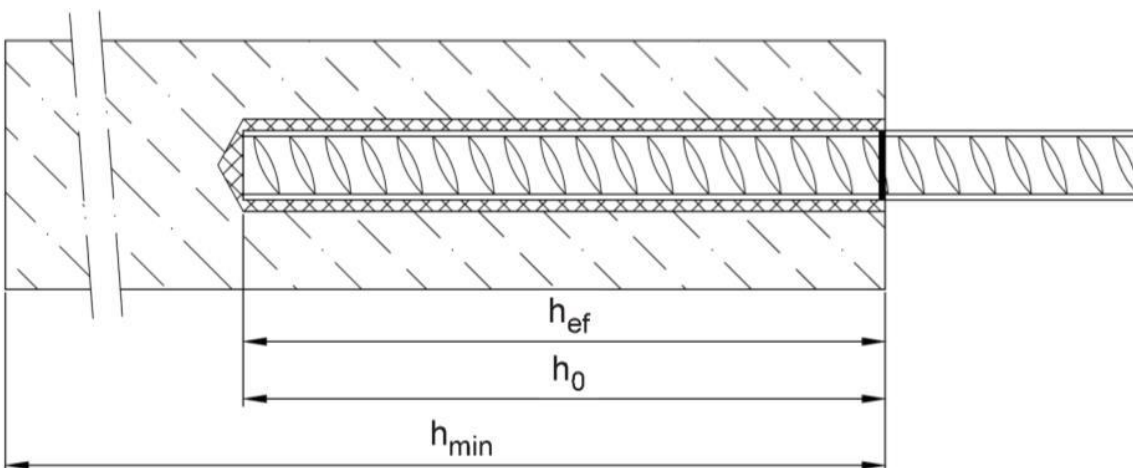
² The control plan is a confidential part of the documentation of the European Technical Assessment, but not published together with the ETA and only handed over to the approved body involved in the procedure of AVCP.

Installation threaded rod

prepositioned installation or
push through installation (annular gap filled with mortar)



Installation reinforcing bar



- d_f = diameter of clearance hole in the fixture
- t_{fix} = thickness of fixture
- h_{ef} = effective embedment depth
- h_0 = depth of drill hole
- h_{min} = minimum thickness of member

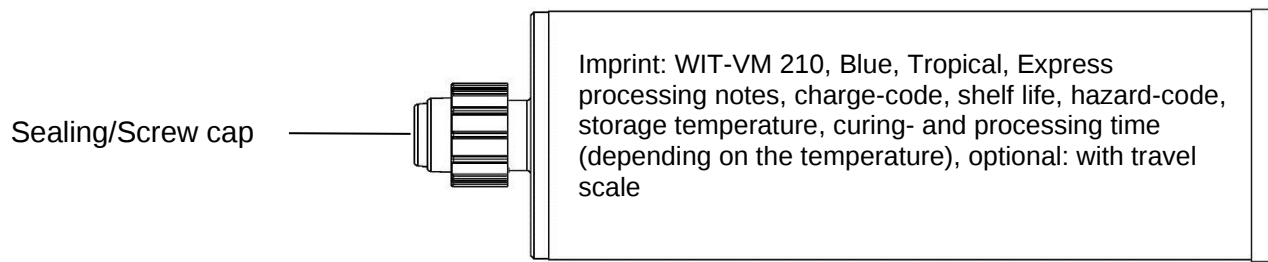
Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Product description
Installed conditions

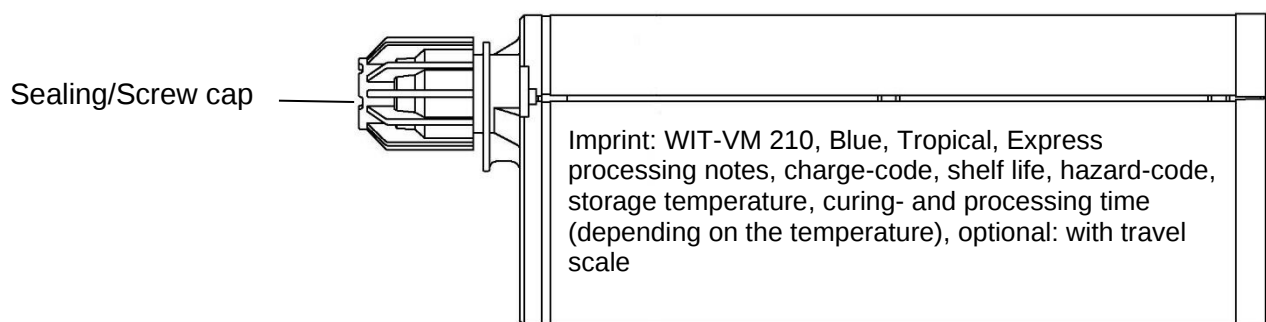
Annex A 1

Cartridge:

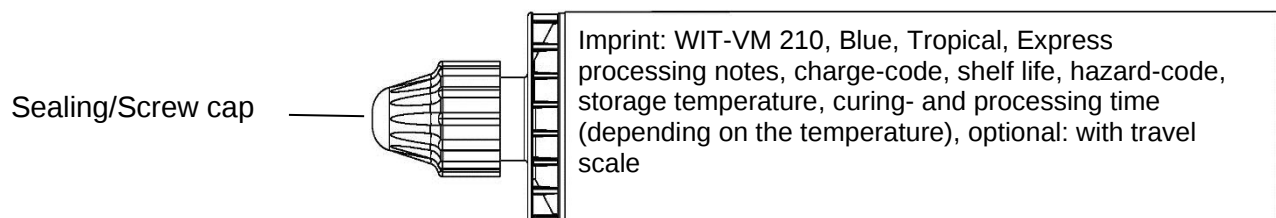
150 ml, 280 ml, 300 ml up to 330 ml and 380 ml up to 420 ml cartridge (Type: coaxial)



235 ml, 345 ml up to 360 ml and 825 ml cartridge (Type: “side-by-side”)



165 ml and 300 ml cartridge (Type: “foil tube”)



Static mixer

14W



Fill & Clean

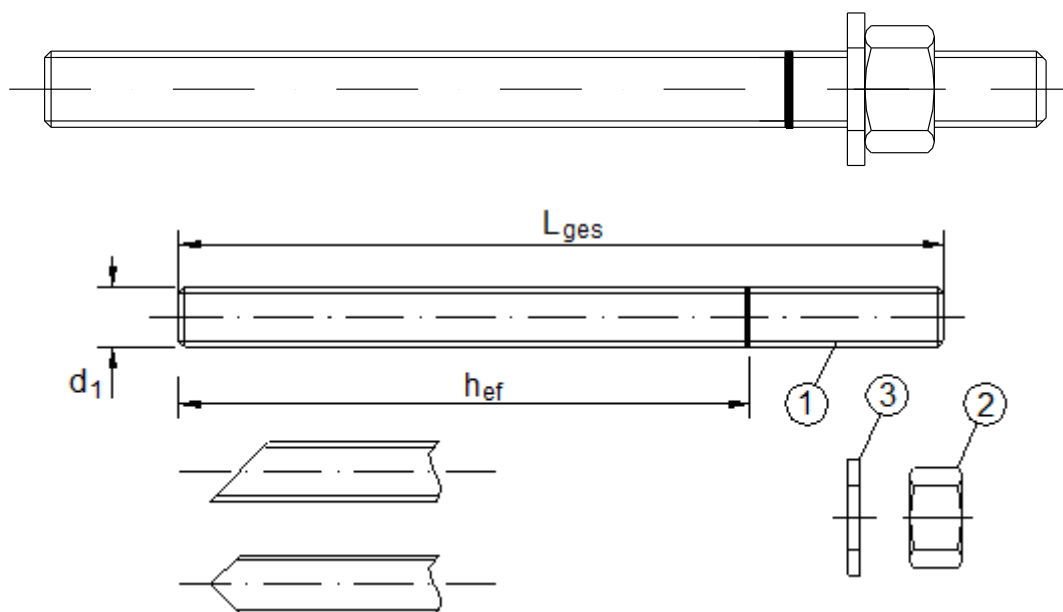


Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Product description
 Injection system

Annex A 2

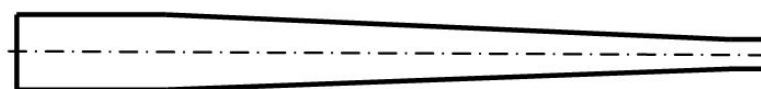
Threaded rod M8, M10, M12, M16, M20, M24 with washer and hexagon nut



Commercial standard threaded rod with:

- Materials, dimensions and mechanical properties acc. Table A1
- Inspection certificate 3.1 acc. to EN 10204:2004
- Marking of embedment depth

Filling washer and mixer reduction nozzle for filling the annular gap between anchor rod and fixture



Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Product description
 Threaded rod
 Filling washer

Annex A 3

Table A1: Materials

Part	Designation	Material				
Steel, zinc plated (Steel acc. to EN 10087:1998 or EN 10263:2001)						
- zinc plated ≥ 5 µm acc. to EN ISO 4042:1999 or						
- hot-dip galvanized ≥ 40 µm acc. to EN ISO 1461:2009 and EN ISO 10684:2004+AC:2009 or						
- sherardized ≥ 45 µm acc. to EN ISO 17668:2016						
1	Anchor rod	Property class	Characteristic steel ultimate tensile strength	Characteristic steel yield strength	Elongation at fracture	
		acc. to EN ISO 898-1:2013	4.6	f _{uk} =400 N/mm ²	f _{yk} =240 N/mm ²	A ₅ > 8%
			4.8	f _{uk} =400 N/mm ²	f _{yk} =320 N/mm ²	A ₅ > 8%
			5.6	f _{uk} =500 N/mm ²	f _{yk} =300 N/mm ²	A ₅ > 8%
			5.8	f _{uk} =500 N/mm ²	f _{yk} =400 N/mm ²	A ₅ > 8%
			8.8	f _{uk} =800 N/mm ²	f _{yk} =640 N/mm ²	A ₅ > 12% ²⁾
2	Hexagon nut	acc. to EN ISO 898-2:2012	4	for anchor rod class 4.6 or 4.8		
			5	for anchor rod class 5.6 or 5.8		
			8	for anchor rod class 8.8		
3a	Washer	Steel, zinc plated, hot-dip galvanized or sherardized (e.g.: EN ISO 887:2006, EN ISO 7089:2000, EN ISO 7093:2000 or EN ISO 7094:2000)				
3b	Filling washer	Steel, zinc plated, hot-dip galvanized or sherardized				
Stainless steel A2 (Material 1.4301 / 1.4311 / 1.4307 / 1.4567 or 1.4541, acc. to EN 10088-1:2014)						
Stainless steel A4 (Material 1.4401 / 1.4404 / 1.4571 / 1.4362 or 1.4578, acc. to EN 10088-1:2014)						
High corrosion resistance steel (Material 1.4529 or 1.4565, acc. to EN 10088-1: 2014)						
1	Anchor rod ¹⁾	Property class	Characteristic steel ultimate tensile strength	Characteristic steel yield strength	Elongation at fracture	
		acc. to EN ISO 3506-1:2009	50	f _{uk} =500 N/mm ²	f _{yk} =210 N/mm ²	A ₅ ≥ 8%
			70	f _{uk} =700 N/mm ²	f _{yk} =450 N/mm ²	A ₅ > 12% ²⁾
			80	f _{uk} =800 N/mm ²	f _{yk} =600 N/mm ²	A ₅ > 12% ²⁾
2	Hexagon nut ¹⁾	acc. to EN ISO 3506-1:2009	50	for anchor rod class 50		
			70	for anchor rod class 70		
			80	for anchor rod class 80		
3a	Washer	A2: Material 1.4301, 1.4311 / 1.4307 / 1.4567 or 1.4541, EN 10088-1:2014 A4: Material 1.4401, 1.4404 / 1.4571 / 1.4362 or 1.4578, EN 10088-1:2014 HCR: Material 1.4529 or 1.4565, acc. to EN 10088-1: 2014 (e.g.: EN ISO 887:2006, EN ISO 7089:2000, EN ISO 7093:2000 or EN ISO 7094:2000)				
3b	Filling washer	Stainless steel A4, High corrosion resistance steel				
¹⁾ Property class 80 only for stainless steel A4 + high corrosion resistance steel HCR						
²⁾ A ₅ > 8% fracture elongation if <u>no</u> requirement for performance C2 exists						
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical					Annex A 4	
Product description Materials threaded rod						

Reinforcing bar Ø 8, Ø 10, Ø 12, Ø 14, Ø 16, Ø 20, Ø 25



- Minimum value of related rib area $f_{R,min}$ according to EN 1992-1-1:2004+AC:2010
- Rib height of the bar shall be in the range $0,05d \leq h \leq 0,07d$
(d: nominal diameter of the bar; h: rib height of the bar)

Table A2: Materials

Part	Designation	Material
Reinforcing bars		
3	Rebar EN 1992-1-1:2004+AC:2010, Annex C	Bars are de-coiled rods class B or C f_{yk} and k according to NDP or NCL of EN 1992-1-1/NA $f_{uk} = f_{tk} = k \cdot f_{yk}$
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical Product description Reinforcing bar Materials reinforcing bar		
		Annex A 5

Specifications of intended use

Anchorage subject to:

- Static and quasi-static loads: Threaded rod M8 to M24, Rebar Ø 8 to Ø 25
- Seismic action for performance category C1: Threaded rod M8 to M16 (except hot-dip galvanised rods)
- Seismic action for performance category C2: Threaded rod M12 to M16 (except hot-dip galvanised rods)

Base materials:

- Reinforced or unreinforced normal weight concrete without fibres according to EN 206:2013+A1:2016.
- Strength classes C20/25 to C50/60 according to EN 206:2013+A1:2016.
- Uncracked concrete: Threaded rod M8 to M24, Rebar Ø 8 to Ø 25
- Cracked concrete: Threaded rod M8 to M16

Temperature range:

- T1: - 40 °C to +40 °C (max long term temperature +24 °C and max short term temperature +40 °C)
- T2: - 40 °C to +80 °C (max long term temperature +50 °C and max short term temperature +80 °C)

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions (all materials)
- For all other conditions according to EN 1993-1-4:2006+A1:2015 corresponding to corrosion resistance class:
 - Stainless steel class A2 according to Annex A 4, Table A1: CRC II
 - Stainless steel class A4 according to Annex A 4, Table A1: CRC III
 - High corrosion resistance steel HCR according to Annex A 4, Table A1: CRC V

Design:

- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e. g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Anchorages under static or quasi-static actions are designed in accordance with EN 1992-4

Concrete condition:

- I1 – installation in dry or wet (water saturated) concrete and use in service in dry or wet concrete
- I2 – installation in water-filled drill holes (not sea water) and use in service in dry or wet concrete

Installation:

- Hole drilling by hammer or compressed air drill mode.
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.

Installation direction:

- D3 - Downward and horizontal and upwards (e.g. overhead) installation.

Würth Injection System for concrete

WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Intended use
Specifications

Annex B 1

Table B1: Installation parameters for threaded rod

Anchor size			M 8	M 10	M 12	M 16	M 20	M 24
Diameter of element	$d = d_{nom}$	[mm]	8	10	12	16	20	24
Nominal drill hole diameter	d_0	[mm]	10	12	14	18	24	28
Effective embedment depth	$h_{ef,min}$	[mm]	60	60	70	80	90	96
	$h_{ef,max}$	[mm]	160	200	240	320	400	480
Diameter of clearance hole in the fixture	Prepositioned installation d_f	[mm]	9	12	14	18	22	26
	Push through installation d_f	[mm]	12	14	16	20	24	30
Maximum torque moment	$T_{inst} \leq$	[Nm]	10	20	40	80	120	160
Thickness of fixture	$t_{fix,min} >$	[mm]	0					
	$t_{fix,max} <$	[mm]	1500					
Minimum thickness of member	h_{min}	[mm]	$h_{ef} + 30 \text{ mm}$ $\geq 100 \text{ mm}$			$h_{ef} + 2d_0$		
Minimum spacing	s_{min}	[mm]	40	50	60	80	100	120
Minimum edge distance	c_{min}	[mm]	40	50	60	80	100	120

Table B2: Installation parameters for rebar

Rebar size			Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20	Ø 25
Diameter of element	$d = d_{nom}$	[mm]	8	10	12	14	16	20	25
Nominal drill hole diameter	d_0	[mm]	12	14	16	18	20	25	32
Effective embedment depth	$h_{ef,min}$	[mm]	60	60	70	75	80	90	100
	$h_{ef,max}$	[mm]	160	200	240	280	320	400	500
Minimum thickness of member	h_{min}	[mm]	$h_{ef} + 30 \text{ mm}$ $\geq 100 \text{ mm}$			$h_{ef} + 2d_0$			
Minimum spacing	s_{min}	[mm]	50	55	65	70	80	100	130
Minimum edge distance	c_{min}	[mm]	50	55	65	70	80	100	130

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Intended use
 Installation parameters

Annex B 2

Steel brush WIT-RMB

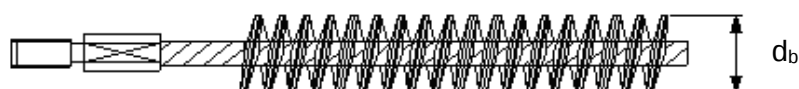


Table B3: Parameter cleaning and setting tools

Threaded Rod	Rebar	d ₀ Drill bit - Ø	d _b Brush - Ø		d _{b,min} min. Brush - Ø
[mm]	[mm]	[mm]	[mm]		[mm]
M8		10	WIT-RMB10	12	10,5
M10	8	12	WIT-RMB12	14	12,5
M12	10	14	WIT-RMB14	16	14,5
	12	16	WIT-RMB16	18	16,5
M16	14	18	WIT-RMB18	20	18,5
	16	20	WIT-RMB20	22	20,5
M20		24	WIT-RMB24	26	24,5
	20	25	WIT-RMB25	27	25,5
M24		28	WIT-RMB28	30	28,5
	25	32	WIT-RMB32	34	32,5



Hand pump (volume 750 ml)

Drill bit diameter (d₀): 10 mm to 20 mm
and anchorage depth up to 240 mm



Recommended compressed air tool (min 6 bar)

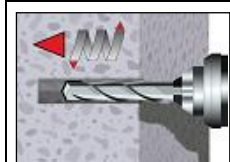
All applications

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

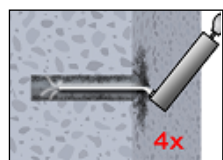
Intended use
Cleaning and setting tools

Annex B 3

Installation instructions



- 1 Drill with hammer drill a hole into the base material to the size and embedment depth required by the selected anchor (Table B1 or B2). In case of aborted drill hole: the drill hole shall be filled with mortar.



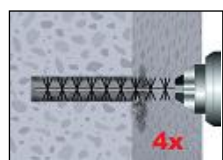
- Attention! Standing water in the bore hole must be removed before cleaning.**
- 2a Starting from the bottom or back of the bore hole, blow the hole clean with compressed air (min. 6 bar) or a hand pump (Annex B 3) a minimum of four times. If the bore hole ground is not reached an extension shall be used.

or

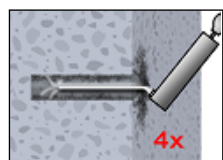


The hand-pump can be used for anchor sizes up to bore hole diameter 20 mm.

For bore holes larger than 20 mm or deeper 240 mm, compressed air (min. 6 bar) **must** be used.



- 2b Check brush diameter (Table B3) and attach the brush to a drilling machine or a battery screwdriver. Brush the hole with an appropriate sized wire brush $> d_{b,min}$ (Table B3) a minimum of four times. If the bore hole ground is not reached with the brush, a brush extension shall be used (Table B3).



- 2c Finally blow the hole clean again with compressed air (min. 6 bar) or a hand pump (Annex B 3) a minimum of four times. If the bore hole ground is not reached an extension shall be used.

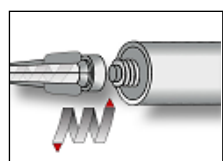
The hand-pump can be used for anchor sizes up to bore hole diameter 20 mm.

For bore holes larger than 20 mm or deeper 240 mm, compressed air (min. 6 bar) **must** be used.

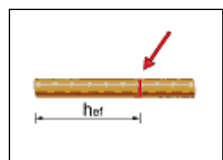
or



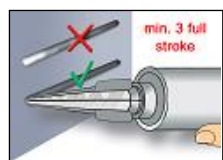
After cleaning, the bore hole has to be protected against re-contamination in an appropriate way, until dispensing the mortar in the bore hole. If necessary, the cleaning repeated has to be directly before dispensing the mortar. In-flowing water must not contaminate the bore hole again



3. Attach a supplied static-mixing nozzle to the cartridge and load the cartridge into the correct dispensing tool. Cut off the foil tube clip before use. For every working interruption longer than the recommended working time (Table B4) as well as for new cartridges, a new static-mixer shall be used.



4. Prior to inserting the anchor rod into the filled bore hole, the position of the embedment depth shall be marked on the anchor rods.



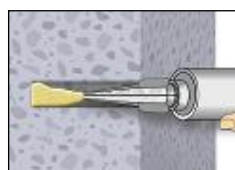
5. Prior to dispensing into the drill hole, squeeze out separately a minimum of three full strokes and discard non-uniformly mixed adhesive components until the mortar shows a consistent grey or blue (WIT-VM 210 Blue) colour. For foil tube cartridges it must be discarded a minimum of six full strokes.

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

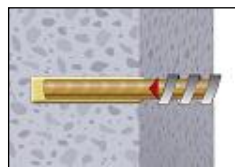
Intended use
 Installation instructions

Annex B 4

Installation instructions (continuation)

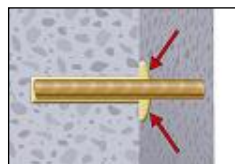


6. Starting from the bottom or back of the cleaned anchor hole fill the hole up to approximately two-thirds with adhesive. Slowly withdraw the static mixing nozzle as the hole fills to avoid creating air pockets. If the bottom or back of the anchor hole is not reached, an appropriate extension nozzle must be used. Observe the gel-/ working times given in Table B4.

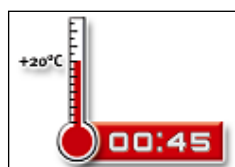


7. Push the threaded rod into the anchor hole while turning slightly to ensure positive distribution of the adhesive until the embedment depth is reached.

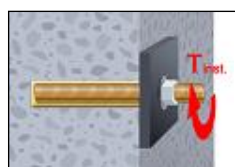
The anchor should be free of dirt, grease, oil or other foreign material.



8. Be sure that the anchor is fully seated at the bottom of the hole and that excess mortar is visible at the top of the hole. If these requirements are not maintained, the application has to be renewed. For overhead application the anchor rod should be fixed (e.g. wedges).



9. Allow the adhesive to cure to the specified time prior to applying any load or torque. Do not move or load the anchor until it is fully cured (attend Table B4).



10. After full curing, the add-on part can be installed with the max. torque (Table B1) by using a calibrated torque wrench.

Table B4: Minimum curing time

Concrete temperature	WIT-VM 210 Tropical		WIT-VM 210, WIT-VM 210 Blue ¹⁾		WIT-VM 210 Express	
	Max. working time	Min. curing time	Max. working time	Min. curing time	Max. working time	Min. curing time
-10 to -6 °C					60 min	4 h
-5 to -1 °C			90 min	6 h	45 min	2 h
0 to +4 °C			45 min	3 h	25 min	80 min
+5 to +9 °C			25 min	2 h	10 min	45 min
+10 to +14 °C	30 min	5 h	20 min	100 min	4 min	25 min
+15 to +19 °C	20 min	210 min	15 min	80 min	3 min	20 min
+20 to +29 °C	15 min	145 min	6 min	45 min	2 min	15 min
+30 to +34 °C	10 min	80 min	4 min	25 min		
+35 to +39 °C	6 min	45 min	2 min	20 min		
+40 to +44 °C	4 min	25 min				
+45 °C	2 min	20 min				
Cartridge temperature	+5°C to +45°C		+5°C to +40°C		0°C to +30°C	

¹⁾ The WIT-VM 210 Blue injection mortar has a curing time proof by changing the color from blue to gray after curing minimum time. The curing time proof is only valid for the standard version of the mortar.

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Intended use
 Installation instructions (continuation)
 Curing time

Annex B 5

Table C1: Characteristic values for steel tension resistance and steel shear resistance of threaded rods

Size			M 8	M 10	M 12	M 16	M 20	M 24	
Cross section area		A _s	[mm ²]	36,6	58	84,3	157	245	353
Characteristic tension resistance, Steel failure ¹⁾									
Steel, Property class 4.6 and 4.8		N _{Rk,s}	[kN]	15 (13)	23 (21)	34	63	98	141
Steel, Property class 5.6 and 5.8		N _{Rk,s}	[kN]	18 (17)	29 (27)	42	78	122	176
Steel, Property class 8.8		N _{Rk,s}	[kN]	29 (27)	46 (43)	67	125	196	282
Stainless steel A2, A4 and HCR, Property class 50		N _{Rk,s}	[kN]	18	29	42	79	123	177
Stainless steel A2, A4 and HCR, Property class 70		N _{Rk,s}	[kN]	26	41	59	110	171	247
Stainless steel A4 and HCR, Property class 80		N _{Rk,s}	[kN]	29	46	67	126	196	282
Characteristic tension resistance, Partial safety factor ²⁾									
Steel, Property class 4.6		γ _{Ms,N}	[-]	2,0					
Steel, Property class 4.8		γ _{Ms,N}	[-]	1,5					
Steel, Property class 5.6		γ _{Ms,N}	[-]	2,0					
Steel, Property class 5.8		γ _{Ms,N}	[-]	1,5					
Steel, Property class 8.8		γ _{Ms,N}	[-]	1,5					
Stainless steel A2, A4 and HCR, Property class 50		γ _{Ms,N}	[-]	2,86					
Stainless steel A2, A4 and HCR, Property class 70		γ _{Ms,N}	[-]	1,87					
Stainless steel A4 and HCR, Property class 80		γ _{Ms,N}	[-]	1,6					
Characteristic shear resistance, Steel failure ¹⁾									
Without lever arm	Steel, Property class 4.6 and 4.8	V ⁰ _{Rk,s}	[kN]	9 (8)	14 (13)	20	38	59	85
	Steel, Property class 5.6 and 5.8	V ⁰ _{Rk,s}	[kN]	11 (10)	17 (16)	25	47	74	106
	Steel, Property class 8.8	V ⁰ _{Rk,s}	[kN]	15 (13)	23 (21)	34	63	98	141
	Stainless steel A2, A4 and HCR, Property class 50	V ⁰ _{Rk,s}	[kN]	9	15	21	39	61	88
	Stainless steel A2, A4 and HCR, Property class 70	V ⁰ _{Rk,s}	[kN]	13	20	30	55	86	124
	Stainless steel A4 and HCR, Property class 80	V ⁰ _{Rk,s}	[kN]	15	23	34	63	98	141
With lever arm	Steel, Property class 4.6 and 4.8	M ⁰ _{Rk,s}	[Nm]	15 (13)	30 (27)	52	133	260	449
	Steel, Property class 5.6 and 5.8	M ⁰ _{Rk,s}	[Nm]	19 (16)	37 (33)	65	166	324	560
	Steel, Property class 8.8	M ⁰ _{Rk,s}	[Nm]	30 (26)	60 (53)	105	266	519	896
	Stainless steel A2, A4 and HCR, Property class 50	M ⁰ _{Rk,s}	[Nm]	19	37	66	167	325	561
	Stainless steel A2, A4 and HCR, Property class 70	M ⁰ _{Rk,s}	[Nm]	26	52	92	232	454	784
	Stainless steel A4 and HCR, Property class 80	M ⁰ _{Rk,s}	[Nm]	30	59	105	266	519	896
Characteristic shear resistance, Partial safety factor ²⁾									
Steel, Property class 4.6		γ _{Ms,V}	[-]	1,67					
Steel, Property class 4.8		γ _{Ms,V}	[-]	1,25					
Steel, Property class 5.6		γ _{Ms,V}	[-]	1,67					
Steel, Property class 5.8		γ _{Ms,V}	[-]	1,25					
Steel, Property class 8.8		γ _{Ms,V}	[-]	1,25					
Stainless steel A2, A4 and HCR, Property class 50 50		γ _{Ms,V}	[-]	2,38					
Stainless steel A2, A4 and HCR, Property class 50 70		γ _{Ms,V}	[-]	1,56					
Stainless steel A4 and HCR, Property class 80		γ _{Ms,V}	[-]	1,33					
¹⁾ Values are only valid for the given stress area A _s . Values in brackets are valid for undersized threaded rods with smaller stress area A _s for hot dipped threaded rods galvanized according to EN ISO 10684:2004+AC:2009.									
²⁾ in absence of national regulation									
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical							Annex C 1		
Performances Characteristic values for steel tension resistance and steel shear resistance of threaded rods									

Table C2: Characteristic values of tension loads under static and quasi-static action

Anchor size threaded rod				M 8	M 10	M 12	M 16	M 20	M 24
Steel failure									
Characteristic tension resistance		N _{Rk,s}	[kN]	A _s • f _{uk} (or see Table C1)					
Partial factor		γ _{Ms,N}	[-]	see Table C1					
Combined pull-out and concrete cone failure									
Characteristic bond resistance in uncracked concrete C20/25									
Temperature range I: 40°C/24°C	dry and wet concrete	τ _{Rk,ucr}	[N/mm²]	8,5	8,0	8,0	8,0	8,0	8,0
	flooded bore hole	τ _{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	τ _{Rk,ucr}	[N/mm²]	6,5	6,0	6,0	6,0	6,0	6,0
	flooded bore hole	τ _{Rk,ucr}	[N/mm²]	6,5	6,0	6,0	6,0	6,0	6,0
Increasing factors for uncracked concrete ψ _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					
Characteristic bond resistance in cracked concrete C20/25									
Temperature range I: 40°C/24°C	dry and wet concrete	τ _{Rk,cr}	[N/mm²]	4,5	4,5	4,5	4,5	NPA	
	flooded bore hole	τ _{Rk,cr}	[N/mm²]	4,5	4,5	4,5	4,5	NPA	
Temperature range II: 80°C/50°C	dry and wet concrete	τ _{Rk,cr}	[N/mm²]	3,5	3,5	3,5	3,5	NPA	
	flooded bore hole	τ _{Rk,cr}	[N/mm²]	3,5	3,5	3,5	3,5	NPA	
Increasing factors for cracked concrete ψ _c		C25/30		1,02					
		C30/37		1,04					
		C35/45		1,06					
		C40/50		1,07					
		C45/55		1,08					
		C50/60		1,09					
Concrete cone failure									
Factor for uncracked concrete		k _{ucr,N}	[-]	11,0					
Factor for cracked concrete		k _{cr,N}	[-]	7,7					
Edge distance		c _{cr,N}	[mm]	1,5 h _{ef}					
Axial distance		s _{cr,N}	[mm]	2 c _{cr,N}					
Splitting failure									
Edge distance	h/h _{ef} ≥ 2,0	c _{cr,sp}	[mm]	1,0 h _{ef}					
	2,0 > h/h _{ef} > 1,3			2 · h _{ef} ⎛ 2,5 − $\frac{h}{h_{ef}}$ ⎞					
	h/h _{ef} ≤ 1,3			2,4 h _{ef}					
Axial distance		s _{cr,sp}	[mm]	2 c _{cr,sp}					
Installation factor									
for dry and wet concrete		γ _{inst}	[-]	1,2					
for flooded bore hole		γ _{inst}	[-]	1,2					
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical								Annex C 2	
Performances Characteristic values of tension loads under static and quasi-static action									

Table C3: Characteristic values of shear loads under static and quasi-static action

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M 24
Steel failure without lever arm								
Characteristic shear resistance Steel, strength class 4.6, 4.8 and 5.6, 5.8	$V_{Rk,s}^0$	[kN]	$0,6 \cdot A_s \cdot f_{uk}$ (or see Table C1)					
Characteristic shear resistance Steel, strength class 8.8 Stainless Steel A2, A4 and HCR, all classes	$V_{Rk,s}^0$	[kN]	$0,5 \cdot A_s \cdot f_{uk}$ (or see Table C1)					
Partial factor	$\gamma_{Ms,V}$	[-]	see Table C1					
Ductility factor	k_7	[-]	1,0					
Steel failure with lever arm								
Characteristic bending moment	$M_{Rk,s}^0$	[Nm]	$1,2 \cdot W_{el} \cdot f_{uk}$ (or see Table C1)					
Partial factor	$\gamma_{Ms,V}$	[-]	see Table C1					
Concrete pry-out failure								
Factor	k_8	[-]	2,0					
Installation factor	γ_{inst}	[-]	1,0					
Concrete edge failure								
Effective length of fastener	l_f	[mm]	$\min(h_{ef}; 12 d_{nom})$					
Outside diameter of fastener	d_{nom}	[mm]	8	10	12	16	20	24
Installation factor	γ_{inst}	[-]	1,0					
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical							Annex C 3	
Performances Characteristic values of shear loads under static and quasi-static action								

Table C4: Characteristic values of tension loads under static and quasi-static action

Anchor size rebar			Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20	Ø 25	
Steel failure										
Characteristic tension resistance	N _{Rk,s}	[kN]	A _s • f _{uk} ¹⁾							
Cross section area	A _s	[mm²]	50	79	113	154	201	314	491	
Partial factor	γ _{Ms,N}	[-]	1,4 ²⁾							
Combined pull-out and concrete cone failure										
Characteristic bond resistance in uncracked concrete C20/25										
Temperature range I: 40°C/24°C	dry and wet concrete	τ _{Rk,ucr}	[N/mm²]	7,0	7,0	7,0	7,0	6,5	6,5	6,5
	flooded bore hole	τ _{Rk,ucr}	[N/mm²]	7,0	7,0	7,0	7,0	6,5	6,5	6,5
Temperature range II: 80°C/50°C	dry and wet concrete	τ _{Rk,ucr}	[N/mm²]	5,5	5,5	5,5	5,5	5,5	5,0	5,0
	flooded bore hole	τ _{Rk,ucr}	[N/mm²]	5,5	5,5	5,5	5,5	5,5	5,0	5,0
Increasing factors for uncracked concrete ψ _c		C25/30		1,02						
		C30/37		1,04						
		C35/45		1,06						
		C40/50		1,07						
		C45/55		1,08						
		C50/60		1,09						
Concrete cone failure										
Factor for uncracked concrete	k _{ucr,N}	[-]	11,0							
Edge distance	c _{cr,N}	[mm]	1,5 h _{ef}							
Axial distance	s _{cr,N}	[mm]	2 c _{cr,N}							
Splitting failure										
Edge distance	h/h _{ef} ≥ 2,0	c _{cr,sp}	[mm]	1,0 h _{ef}						
	2,0 > h/h _{ef} > 1,3			2 · h _{ef} ⎛ 2,5 − $\frac{h}{h_{ef}}$ ⎞						
	h/h _{ef} ≤ 1,3			2,4 h _{ef}						
Axial distance	s _{cr,sp}	[mm]	2 c _{cr,sp}							
Installation factor										
for dry and wet concrete	γ _{inst}	[-]	1,2							
for flooded bore hole	γ _{inst}	[-]	1,2							
¹⁾ f_{uk} shall be taken from the specifications of reinforcing bars ²⁾ in absence of national regulation										
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical									Annex C 4	
Performances Characteristic values of tension loads under static and quasi-static action										

Table C5: Characteristic values of shear loads under static and quasi-static action

Anchor size rebar			Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20	Ø 25	
Steel failure without lever arm										
Characteristic shear resistance	$V_{Rk,s}^0$	[kN]	$0,5 \cdot A_s \cdot f_{uk}^{1)}$							
Cross section area	A_s	[mm ²]	50	79	113	154	201	314	491	
Partial factor	$\gamma_{Ms,V}$	[-]	$1,5^{2)}$							
Ductility factor	k_7	[-]	1,0							
Steel failure with lever arm										
Characteristic bending moment	$M_{Rk,s}^0$	[Nm]	$1,2 \cdot W_{el} \cdot f_{uk}^{1)}$							
Elastic section modulus	W_{el}	[mm ³]	50	98	170	269	402	785	1534	
Partial factor	$\gamma_{Ms,V}$	[-]	$1,5^{2)}$							
Concrete pry-out failure										
Factor	k_8	[-]	2,0							
Installation factor	γ_{inst}	[-]	1,0							
Concrete edge failure										
Effective length of fastener	l_f	[mm]	$\min(h_{ef}; 12 d_{nom})$							$\min(h_{ef}; 300mm)$
Outside diameter of fastener	d_{nom}	[mm]	8	10	12	14	16	20	25	
Installation factor	γ_{inst}	[-]	1,0							
¹⁾ f_{uk} shall be taken from the specifications of reinforcing bars ²⁾ in absence of national regulation										
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical								Annex C 5		
Performances Characteristic values of shear loads under static and quasi-static action										

Table C6: Displacement under tension load¹⁾ (threaded rod)

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M24
Uncracked concrete C20/25 under static and quasi-static action								
Temperature range I: 40°C/24°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,03	0,04	0,05	0,07	0,08	0,10
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,07	0,08	0,08	0,08	0,08	0,10
Temperature range II: 80°C/50°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,02	0,03	0,03	0,04	0,04	0,05
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,15	0,17	0,17	0,17	0,17	0,17
Cracked concrete C20/25 under static and quasi-static action								
Temperature range I: 40°C/24°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,07	0,08	0,07	0,08	NPA	
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,13	0,11	0,11	0,10	NPA	
Temperature range II: 80°C/50°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,09	0,08	0,07	0,09	NPA	
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,17	0,14	0,14	0,13	NPA	

¹⁾ Calculation of the displacement

$$\delta_{N0} = \delta_{N0}\text{-factor} \cdot \tau; \quad (\tau: \text{action bond stress for tension})$$

$$\delta_{N\infty} = \delta_{N\infty}\text{-factor} \cdot \tau;$$

Table C7: Displacement under shear load²⁾ (threaded rod)

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M24
For uncracked concrete C20/25 under static and quasi-static action								
All temperature ranges	δ_{V0} -factor	[mm/kN]	0,02	0,02	0,01	0,01	0,01	0,01
	$\delta_{V\infty}$ -factor	[mm/kN]	0,03	0,02	0,02	0,01	0,01	0,01
For cracked concrete C20/25 under static and quasi-static action								
All temperature ranges	δ_{V0} -factor	[mm/kN]	0,05	0,04	0,03	0,01	NPA	
	$\delta_{V\infty}$ -factor	[mm/kN]	0,07	0,06	0,04	0,02	NPA	

²⁾ Calculation of the displacement

$$\delta_{V0} = \delta_{V0}\text{-factor} \cdot V; \quad (V: \text{action shear load})$$

$$\delta_{V\infty} = \delta_{V\infty}\text{-factor} \cdot V;$$

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Performances
Displacement (threaded rod)

Annex C 6

Table C8: Displacement under tension load¹⁾ (rebar)

Anchor size rebar			Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20	Ø 25
Uncracked concrete C20/25 under static and quasi-static action									
Temperature range I: 40°C/24°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,03	0,06	0,02	0,03	0,05	0,06	0,06
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,08	0,08	0,08	0,08	0,08	0,08	0,08
Temperature range II: 80°C/50°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,03	0,06	0,02	0,03	0,05	0,06	0,06
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,15	0,15	0,15	0,15	0,16	0,16	0,16

¹⁾ Calculation of the displacement

$$\delta_{N0} = \delta_{N0}\text{-factor} \cdot \tau; \quad (\tau: \text{action bond stress for tension})$$

$$\delta_{N\infty} = \delta_{N\infty}\text{-factor} \cdot \tau;$$

Table C9: Displacement under shear load²⁾ (rebar)

Anchor size rebar			Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20	Ø 25
For uncracked concrete C20/25 under static and quasi-static action									
All temperature ranges	δ_{V0} -factor	[mm/kN]	0,04	0,04	0,01	0,01	0,01	0,01	0,01
	$\delta_{V\infty}$ -factor	[mm/kN]	0,05	0,06	0,02	0,02	0,02	0,02	0,02

²⁾ Calculation of the displacement

$$\delta_{V0} = \delta_{V0}\text{-factor} \cdot V; \quad (V: \text{action shear load})$$

$$\delta_{V\infty} = \delta_{V\infty}\text{-factor} \cdot V;$$

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Performances
Displacement (rebar)

Annex C 7

Table C10: Characteristic values of tension loads under seismic action (performance category C1 + C2)

Anchor size threaded rod				M 8	M 10	M 12	M 16	M 20	M 24	
Steel failure										
Characteristic tension resistance (Seismic C1)		$N_{Rk,s,eq,C1}$	[kN]	$1,0 \cdot N_{Rk,s}$				NPA		
Characteristic tension resistance (Seismic C2) Steel, strength class 8.8 Stainless Steel A4 and HCR, Strength class ≥ 70		$N_{Rk,s,eq,C2}$	[kN]	NPA		$1,0 \cdot N_{Rk,s}$		NPA		
Partial factor		$\gamma_{Ms,N}$	[-]	see Table C1						
Combined pull-out and concrete cone failure										
Characteristic bond resistance in cracked and uncracked concrete C20/25										
Temperature range I: 40°C/24°C	dry and wet concrete and flooded bore hole	$\tau_{Rk,eq,C1}$	[N/mm²]	2,30	2,25	2,30	2,20	NPA		
		$\tau_{Rk,eq,C2}$	[N/mm²]	NPA		0,75	0,95	NPA		
Temperature range II: 80°C/50°C		$\tau_{Rk,eq,C1}$	[N/mm²]	1,85	1,80	1,80	1,75	NPA		
		$\tau_{Rk,eq,C2}$	[N/mm²]	NPA		0,60	0,75	NPA		
Increasing factors for cracked concrete ψ_c		C25/30 to C50/60		1,0						
Concrete cone failure										
Factor for uncracked concrete		$k_{ucr,N}$	[-]	11,0						
Factor for cracked concrete		$k_{cr,N}$	[-]	7,7						
Edge distance		$c_{cr,N}$	[mm]	$1,5 h_{ef}$						
Axial distance		$s_{cr,N}$	[mm]	$2 c_{cr,N}$						
Splitting failure										
Edge distance	$h/h_{ef} \geq 2,0$	$c_{cr,sp}$	[mm]	$1,0 h_{ef}$						
	$2,0 > h/h_{ef} > 1,3$			$2 \cdot h_{ef} \left(2,5 - \frac{h}{h_{ef}} \right)$						
	$h/h_{ef} \leq 1,3$			$2,4 h_{ef}$						
Axial distance		$s_{cr,sp}$	[mm]	$2 c_{cr,sp}$						
Installation factor										
for dry and wet concrete		γ_{inst}	[-]	1,2						
for flooded bore hole		γ_{inst}	[-]	1,2						

**Table C11: Characteristic values of shear loads under seismic action
(performance category C1 + C2)**

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M 24
Steel failure without lever arm								
Characteristic shear resistance (Seismic C1)	$V^0_{Rk,s,eq,C1}$	[kN]	$0,7 \cdot V^0_{RK,s}$				NPA	
Characteristic shear resistance (Seismic C2) Steel, strength class 8.8 Stainless Steel A4 and HCR Strength class ≥ 70	$V^0_{Rk,s,eq,C2}$	[kN]	NPA		$0,7 \cdot V^0_{RK,s}$		NPA	
Partial factor	$\gamma_{Ms,V}$	[-]	see Table C1					
Ductility factor	k_7	[-]	1,0					
Steel failure with lever arm								
Characteristic bending moment	$M^0_{Rk,s,eq,C1}$	[Nm]	No Performance Assessed (NPA)					
Characteristic bending moment	$M^0_{Rk,s,eq,C2}$	[-]	No Performance Assessed (NPA)					
Concrete pry-out failure								
Factor	k_8	[-]	2,0					
Installation factor	γ_{inst}	[-]	1,0					
Concrete edge failure								
Effective length of fastener	l_f	[mm]	$\min(h_{ef}, 12 d_{nom})$					
Outside diameter of fastener	d_{nom}	[mm]	8	10	12	16	20	24
Installation factor	γ_{inst}	[-]	1,0					
Factor for annular gap	α_{gap}	[-]	$0,5 (1,0)^{1)}$					
¹⁾ Value in brackets valid for filled annular gap between anchor and clearance hole in the fixture. Use of special washer Annex A 3 is required.								
Würth Injection System for concrete WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical							Annex C 9	
Performances Characteristic values of shear loads under seismic action (performance category C1 + C2)								

Table C12: Displacement under tension load¹⁾ (threaded rod)

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M24
Cracked concrete C20/25 under seismic C1 action								
Temperature range I: 40°C/24°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,07	0,08	0,07	0,08	NPA	
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,13	0,11	0,11	0,10	NPA	
Temperature range II: 80°C/50°C	δ_{N0} -factor	[mm/(N/mm ²)]	0,09	0,08	0,07	0,09	NPA	
	$\delta_{N\infty}$ -factor	[mm/(N/mm ²)]	0,17	0,14	0,14	0,13	NPA	

¹⁾ Calculation of the displacement

$$\delta_{N0} = \delta_{N0}\text{-factor} \cdot \tau; \quad (\tau: \text{action bond stress for tension})$$

$$\delta_{N\infty} = \delta_{N\infty}\text{-factor} \cdot \tau;$$

Table C13: Displacement under shear load²⁾ (threaded rod)

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M24
Cracked concrete C20/25 under seismic C1 action								
All temperature ranges	δ_{V0} -factor	[mm/kN]	0,05	0,04	0,03	0,01	NPA	
	$\delta_{V\infty}$ -factor	[mm/kN]	0,07	0,06	0,04	0,02	NPA	

²⁾ Calculation of the displacement

$$\delta_{V0} = \delta_{V0}\text{-factor} \cdot V; \quad (V: \text{action shear load})$$

$$\delta_{V\infty} = \delta_{V\infty}\text{-factor} \cdot V;$$

Table C14: Displacement under tension load (threaded rod)

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M24
Cracked concrete C20/25 under seismic C2 action								
All temperature ranges	$\delta_{N,eq}(DLS)$	[mm]	NPA		0,23	0,29	NPA	
	$\delta_{N,eq}(ULS)$	[mm]	NPA		0,43	0,55	NPA	

Table C15: Displacement under shear load (threaded rod)

Anchor size threaded rod			M 8	M 10	M 12	M 16	M 20	M24
Cracked concrete C20/25 under seismic C2 action								
All temperature ranges	$\delta_{V,eq}(DLS)$	[mm]	NPA		3,6	3,0	NPA	
	$\delta_{V,eq}(ULS)$	[mm]	NPA		7,0	6,6	NPA	

Würth Injection System for concrete
WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Express, WIT-VM 210 Tropical

Performances
Displacements under seismic C1 and C2 action

Annex C 10

ДЕКЛАРАЦИЯ ЗА ЕКСПЛОАТАЦИОННИ ПОКАЗАТЕЛИ

№5918420330_00_M_WIT-VM 210 (1)

Настоящият текст е превод от немски на български.

В случай на съмнение важи оригиналът на немски

1. Уникален идентификационен код на типа на продукта: Würth Injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express (Würth инжекционна система WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM 210 Express)
Арт. №: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Предвидена употреба/употреби: Verbunddübel zur Verankerung im Beton (Свързващ дюбел за закотвяне в бетон)
3. Производител: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 – 17
D – 74653 Künzelsau
4. Система (и) за оценка и проверка на постоянството на експлоатационните показатели: Система 1
5. Европейски документ за оценяване: EAD 330499-01-0601
Европейска техническа оценка: ETA-20/0647 - 17.9.2020 г.
Орган за техническа оценка: Technical and Test Institute for Construction Prague (TZUS)
Нотифициран(и) орган(и): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Деклариран(и) експлоатационен(и) показател(и):

Основни характеристики	Експлоатационни показатели	Хармонизирана техническа спецификация
Механична якост и устойчивост (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Характерно съпротивление при напречно натоварване и натоварване на опън за статични и квазистатични въздействия	Приложение C1 до C5	
Измествания под краткотрайно и дълготрайно натоварване	Приложение C6 до C7	
Устойчивост	Приложение B1	
Характерно съпротивление и измествания за сеизмична категория експлоатационни характеристики C1 и C2	Приложение C8 до C10	
Хигиена, здравеопазване и опазване на околната среда (BWR 3)		
Не е определен експлоатационен показател		

Експлоатационните показатели на продукта, посочен по-горе, са в съответствие с декларираните експлоатационни показатели. Отговорност за издаването на декларацията за експлоатационни показатели носи изцяло производителят в съответствие с Регламент на (ЕС) № 305/2011.

Подписана за производителя и от името на производителя от:



Франк Волперт
Прокурисл мениджър Продуктов
мениджмънт



Др. инж. Зигфрид Байхтер
(Прокурисл мениджър Качество)

Кюнцелзау, 01.1.2021 г.

PROHLÁŠENÍ O VLASTNOSTECH

Č. 5918420330_00_M_WIT-VM 210 (1)

**Jedná se o verzi přeloženou z němčiny.
V případě pochybností platí německý originál**

1. **Jednoznačný identifikační kód typu výrobku:** Injekční systém Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Č. výr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Zamýšlené/zamýšlená použití:** Spojovací hmoždinka pro ukotvení do betonu
3. **Výrobce:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **Systém(y) pro hodnocení a kontrolu stálosti vlastností:** Systém 1
5. **Evropský dokument pro posuzování:** EAD 330499-01-0601
Evropské technické schválení: ETA-20/0647 - 17. 09. 2020
Pracoviště pro technické posuzování: Technical and Test Institute for Construction Prague (TZUS)
Oznámený subjekt/oznámené subjekty: 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. **Deklarovaná vlastnost/deklarované vlastnosti:**

Podstatné charakteristické vlastnosti	Vlastnost	Harmonizovaná technická specifikace
Mechanická pevnost a stálost (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Charakteristická odolnost při namáhání tahem a příčném namáhání pro statické a kvazistatické účinky	Příloha C1 až C5	
Posuny při krátkodobém a dlouhodobém namáhání	Příloha C6 až C7	
Trvanlivost	Příloha B1	
Charakteristická odolnost a posuny pro seizmickou kategorii C1 a C2	Příloha C8 až C10	
Hygiena, zdraví a ochrana životního prostředí (BWR 3)		
Vlastnosti neurčeny		

Vlastnosti výše uvedeného výrobku jsou ve shodě se souborem deklarovaných vlastností. Za vyhotovení prohlášení o vlastnostech v souladu s nařízením (EU) č. 305/2011 je odpovědný výhradně výše uvedený výrobce.

Podepsal za výrobce a jeho jménem:



Frank Wolpert
(zmocněnec - ředitel produktového
managementu)



Dr.-Ing. Siegfried Beichter
(zmocněnec - ředitel oddělení jakosti)

Künzelsau, 01. 01. 2021

YDEEVNEDEKLARATION

Nr.5918420330_00_M_WIT-VM 210 (1)

**Denne version er oversat fra tysk.
I tvivlstilfælde gælder den tyske original**

1. **Produkttypens entydige identifikationskode:** Würth injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Art.-nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Anvendelsesformål:** Skruedybel til forankring i beton
3. **Producent:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **System(er) til bedømmelse og kontrol af ydelsesbestandigheden:** System 1
5. **Europæisk vurderingsdokument:** EAD 330499-01-0601
Europæisk teknisk bedømmelse: ETA-20/0647 - 17-09-2020
Teknisk evalueringsmyndighed: Technical and Test Institute for Construction Prague (TZUS)
Notificeret myndighed/notificerede myndigheder: 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. **Deklareret ydeevne/deklarerede ydeevner:**

Væsentlige egenskaber	Ydelse	Harmoniseret teknisk specifikation
Mekanisk modstandsdygtighed og stabilitet (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Karakteristisk modstand under træk- og tværbelastning til statiske og kvasi-statiske påvirkninger	Bilag C1 til C5	
Forskydninger under korttids- og langtidsbelastning	Bilag C6 til C7	
Holdbarhed	Bilag B1	
Karakteristisk modstand og forskydninger til seismisk ydelseskategori C1 og C2	Bilag C8 til C10	
Hygiejne, sundhed og miljøbeskyttelse (BWR 3)		
Ingen ydelse fastsat		

Det ovenstående produkts ydeevne svarer til den deklarerede ydeevne/de deklarerede ydeevner. For udstedelsen af ydeevnedeklarationen i henhold til forordning (EU) nr. 305/2011 er udelukkende ovenstående producent ansvarlig.

Underskrevet for og på vegne af producenten af:



Frank Wolpert
(Prokurist - leder produktmanagement)



Dr.-ing. Siegfried Beichter
(Prokurist - leder af kvalitetsafdelingen)

Künzelsau, den 01.01.2021

LEISTUNGSERKLÄRUNG

Nr.5918420330_00_M_WIT-VM 210 (1)

1. Eindeutiger Kenncode des Produkttyps: Würth Injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Art.-Nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Verwendungszweck(e): Verbunddübel zur Verankerung im Beton
3. Hersteller: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. System(e) zur Bewertung und Überprüfung der Leistungsbeständigkeit: System 1
5. Europäisches Bewertungsdokument: EAD 330499-01-0601
Europäische Technische Bewertung: ETA-20/0647 - 17.09.2020
Technische Bewertungsstelle: Technical and Test Institute for Construction Prague (TZUS)
Notifizierte Stelle(n): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Erklärte Leistung(en):

Wesentliche Merkmale	Leistung	Harmonisierte technische Spezifikation
Mechanische Festigkeit und Standsicherheit (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Charakteristischer Widerstand unter Zug- und Querbeanspruchung für statische und quasi-statische Einwirkungen	Anhang C1 bis C5	
Verschiebungen unter Kurzzeit- und Langzeitbeanspruchung	Anhang C6 bis C7	
Dauerhaftigkeit	Anhang B1	
Charakteristischer Widerstand und Verschiebungen für seismische Leistungskategorie C1 und C2	Anhang C8 bis C10	
Hygiene, Gesundheit und Umweltschutz (BWR 3)		
Keine Leistung festgelegt		

Die Leistung des vorstehenden Produkts entspricht der erklärten Leistung/den erklärten Leistungen. Für die Erstellung der Leistungserklärung im Einklang mit der Verordnung (EU) Nr. 305/2011 ist allein der obengenannte Hersteller verantwortlich.

Unterzeichnet für den Hersteller und im Namen des Herstellers von:



Frank Wolpert
(Prokurist - Leiter Produktmanagement)



Dr. -Ing. Siegfried Beichter
(Prokurist - Leiter Qualität)

Künzelsau, den 01.01.2021

DECLARACIÓN DE PRESTACIONES

N.º 5918420330_00_M_WIT-VM 210 (1)

**Esta versión está traducida del alemán.
En caso de duda es aplicable el original alemán**

1. Código de identificación única del producto tipo: Würth Injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express (sistema de inyección Würth)
N.º de art.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Uso(s) previsto(s): Taco químico para anclaje en hormigón
3. Fabricante: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. Sistema(s) de evaluación y verificación de la constancia de las prestaciones: Sistema 1
5. Documento de evaluación europeo: EAD 330499-01-0601
Evaluación Técnica Europea: ETA-20/0647 - del 17/09/2020
Organismo de Evaluación Técnica: Technical and Test Institute for Construction Prague (TZUS)
Organismo(s) notificado(s): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Prestaciones declaradas:

Características esenciales	Prestación	Especificaciones técnicas armonizadas
Resistencia mecánica y estabilidad (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Resistencia característica bajo esfuerzo transversal y de tracción para efectos estáticos o cuasiestáticos	Anexos C1 hasta C5	
Desplazamientos para exposición de corta y larga duración	Anexos C6 hasta C7	
Durabilidad	Anexo B1	
Resistencia característica y desplazamientos para las categorías de actividad sísmicas C1 y C2	Anexos C8 hasta C10	
Higiene, salud y protección medioambiental (BWR 3)		
No se ha determinado ninguna prestación		

Las prestaciones del producto identificado anteriormente son conformes con el conjunto de prestaciones declaradas. La presente declaración de prestaciones se emite de conformidad con el Reglamento (UE) n.º 305/2011, bajo la sola responsabilidad del fabricante arriba identificado.

Firmado por y en nombre del fabricante por:



Frank Wolpert
(Apoderado - Director de Product
Management)



Dr. -Ing. Siegfried Beichter
(Apoderado - Director de Calidad)

Künzelsau, el 01/01/2021

TOIMIVUSDEKLARATSIOON

Nr.5918420330_00_M_WIT-VM 210 (1)

**Tegemist on saksa keelest tõlgitud versiooniga.
Kahtluste korral kehtib saksakeelne originaaltekst**

- | | |
|---|--|
| 1. Tootetüübi kordumatu identifitseerimiskood: | Würthi ankurdussüsteem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Art-nr: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190 |
| 2. Ettenähtud kasutusotstarve või -otstarbed: | Sidumisankur kinnitamiseks betooni |
| 3. Tootja: | Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau |
| 4. Toimivuse püsivuse hindamise ja kontrolli süsteem(id): | Süsteem 1 |
| 5. Euroopa hindamisdokument:
Euroopa tehniline hinnang:
Tehnilise hindamise asutus:
Teavitatud asutus(ed): | EAD 330499-01-0601
ETA-20/0647 - 17.09.2020
Technical and Test Institute for Construction Prague (TZUS)
2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt |
| 6. Deklareeritud toimivus(ed): | |

Põhiomadused	Toimivus	Ühtlustatud tehniline kirjeldus
Mehaaniline tugevus ja vastupidavus (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Iseloomulik vastupanu tõmbe- ja külgjõule staatilise ja kvaasistaatilise mõju puhul	Lisa C1 kuni C5	
Nihked lühiajalisel ja pikaajalisel koormamisel	Lisa C6 kuni C7	
Vastupidavus	lisa B1	
Iseloomulik vastupanu ja nihked seismiliste toimivuskategooriate C1 ja C2 puhul	Lisa C8 kuni C10	
Hügieen, tervishoid ja keskkonnakaitse (BWR 3)		
Toimivust ei esine		

Eespool nimetatud toodete toimivus vastab deklareeritud toimivusele / deklareeritud toimivustele. Vastavusdeklaratsiooni koostamise eest koostöös määrusega (EL) nr 305/2011 vastutab ainuisikuliselt eespool nimetatud tootja.

Tootja poolt ja nimel allkirjastanud:



Frank Wolpert
(Prokurist-tootejuht)



Dr. ins. Siegfried Beichter
(Prokurist-kvaliteedijuht)

Künzelsau, 01.01.2021

SUORITUSTASOILMOITUS

Nro 5918420330_00_M_WIT-VM 210 (1)

**Tämä on käännös saksankielisestä.
Epäilyksissä pätee saksankielinen alkuperäisilmoitus.**

1. Tuotetyypin yksilöllinen tunnistus: Würth injektiojärjestelmä WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Tuote-nro: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Aiottu käyttötarkoitus (aiotut käyttötarkoitukset): Vaarnaruuvi betoniin ankkuroimiseksi
3. Valmistaja: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau, Saksa
4. Suoritusarvioinnin ja tarkistamisen järjestelmä(t): Järjestelmä 1
5. Eurooppalainen arviointidokumentti: EAD 330499-01-0601
Eurooppalainen tekninen arviointi: ETA-20/0647 - 17.09.2020
Teknisestä arvioinnista vastaava laitos: Technical and Test Institute for Construction (TZUS; rakennusalan tekninen- ja testi-instituutti), Praha
Ilmoitettu laitos / ilmoitetut laitokset: 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW; träsrakenneteollisuuden ja materiaalimekaniikan instituutti), Darmstadt
6. Ilmoitettu suoritusarvio/ilmoitetut suoritusarvot:

Perusominaisuudet	Suoritusasto	Yhdenmukaistetut tekniset eritelmät
Mekaaninen lujuus ja vakaus (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Ominaisvastus veto- ja poikkikuormituksessa staattiselle ja kvasistaattiselle rasitukselle	Liitteet C1 - C5	
Siirtymä lyhytaikaisessa ja pitkäaikaisessa kuormituksessa	Liitteet C6 - C7	
Kestävyys	Liite B1	
Ominaisvastus ja siirtymä seismisille teholuokille C1 ja C2	Liitteet C8 - C10	
Hygienia, terveys ja ympäristönsuojelu (BWR 3)		
Ei määritettyä suoritusastoa		

Edellä yksilöidyn tuotteen suoritusarvio on ilmoitettujen suoritusarvioiden joukon mukainen. Tämä suoritusarvioilmoitus on asetuksen (EU) N:o 305/2011 mukaisesti annettu edellä ilmoitetun valmistajan yksinomaisella vastuulla.

Valmistajan puolesta allekirjoittanut:



Frank Wolpert
(Prokuristi - tuotehallinnon johtaja)



TkT Siegfried Beichter
(Prokuristi - laadunjohtaja)

Künzelsau, 01.01.2021

DÉCLARATION DE PERFORMANCES

N° 5918420330_00_M_WIT-VM 210 (1)

**Il s'agit ici de la version traduite à partir de l'allemand.
En cas de doute, la version allemande fait foi**

1. **Code d'identification unique du produit type :** Système à injecter Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
N° de réf. : 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Usage(s) prévu(s) :** Cheville composite d'ancrage dans le béton
3. **Fabricant :** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Strasse 12 - 17
D - 74653 Künzelsau
4. **Système(s) d'évaluation et de vérification de la constance des performances :** Système 1
5. **Document d'évaluation européen :** EAD 330499-01-0601
Évaluation technique européenne : ETA-20/0647 - 17/09/2020
Organisme d'évaluation technique : Technical and Test Institute for Construction Prague TZUS
Organisme(s) notifié(s) : 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. **Performance(s) déclarée(s) :**

Caractéristiques essentielles	Performance	Spécification technique harmonisée
Résistance mécanique et stabilité verticale (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Résistance caractéristique sous contrainte de traction et transversale pour forces pénétrantes statiques et quasi-statiques	Annexes C1 à C5	
Déplacements sous contrainte de courte et de longue durée	Annexes C6 à C7	
Durabilité	Annexe B1	
Résistance caractéristique et déplacements pour les catégories de performance sismique C1 et C2	Annexes C8 à C10	
Hygiène, santé et environnement (BWR 3)		
Pas de performance constatée		

La performance du produit susmentionné correspond à la performance / aux performances déclarée(s). Conformément au règlement (UE) N°305/2011, la présente déclaration des performances est établie sous la seule responsabilité du fabricant mentionné ci-dessus.

Signée pour le fabricant et en son nom par :



Frank Wolpert
(Fondé de pouvoir – Directeur Gestion
Produits)



Dr. -Ing. Siegfried Beichter
(Fondé de pouvoir – Directeur Qualité)

Künzelsau, le 01/01/2021

DEARBHÚ FEIDHMÍOCHTA

Uimh5918420330_00_M_WIT-VM 210 (1)

Is é seo an leagan a aistríodh ón nGearmáinis.

Má tá aon amhras ort tá feidhm ag an bunleagan Gearmáinise

1. **Cód aitheantais uathúil an chineáil táirge:** Würth Injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Uimh.earra: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Úsáid(i) b(h)eartaithe:** Ancaire nasctha le haghaidh daingnithe i gcoincreít
3. **Déantúsóir:** Adolf Würth GmbH & Co. KG
Reinhold- Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **Córa(i)s chun seasmhacht feidhmíochta a mheas agus a scrúdú:** Córas 1
5. **Doiciméad Measúnaithe Eorpach:** EAD 330499-01-0601
Measúnú Teicniúil Eorpach: ETA-20/0647 - 17/09/2020
Ionad Measúnaithe Teicniúil: Technical and Test Institute for Construction Prague (TZUS)
Iona(i)d dá dtugtar fógra: 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt (Institiúid um Fhoirgníocht Chruach agus Meicníocht Ábhair (IFSW), Darmstadt
6. **Feidhmíocht(aí) d(h)earbhaithe:**

Príomhthréithe	Feidhmíocht	Sonraíocht theicniúil chomhchuibhithe
Friotaíocht agus Cobhsaíocht Mheicniúil (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Friotaíocht thréitheach faoi strus tarraingthe agus trasnach maidir le tionchair statacha agus chuasastatacha	larscríbhinn C1 go C5	
Aistrithe faoi ualaí gearrthéarmacha agus fadtéarmacha	larscríbhinn C6 go C7	
Marthanacht	larscríbhinn B1	
Friotaíocht thréitheach agus aistriú maidir le catagóir feidhmíochta sheismeach C1 agus C2	larscríbhinn C8 go C10	
Sláintíocht, Sláinte agus Cosaint Comhshaoil (BWR 3)		
Níor deimhníodh aon fheidhmíocht		

Tá feidhmíocht an táirge thuas ag teacht leis an bhfeidhmíocht dhearbhaithe/na feidhmíochtaí dearbhaithe. Is ar an déantúsóir thuasluaite amháin atá an fhreagracht Dearbhú Feidhmíochta a dhéanamh de réir Rialacháin (AE) Uimh. 305/2011.

Síniú ar son agus thar ceann an déantúsóra ag:



Frank Wolpert
(Oifigeach Údaraithe - Stiúrthóir um
Bainistíocht Táirgí)



Dr. -Ing. Siegfried Beichter
(Oifigeach Údaraithe - Stiúrthóir
Cáilíochta)

Künzelsau, 01/01/2021

ΔΗΛΩΣΗ ΕΠΙΔΟΣΕΩΝ

Αρ. 5918420330_00_M_WIT-VM 210 (1)

**Πρόκειται για την έκδοση μεταφρασμένη από τα γερμανικά.
Σε περίπτωση αμφιβολιών, ισχύει το γερμανικό πρωτότυπο**

1. Μοναδικός κωδικός αναγνώρισης του τύπου του προϊόντος: Σύστημα έγχυσης Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Αρ. είδ.: 591842*, 591843*, 591844*, 591845*, 090546*, 090547*, 59151*, 59152*, 59153*, 59154*, 59160*, 5916108999, 5916110999, 5916112999, 5916116999, 5916208999, 5916210999, 5916212999, 5916216999, 5916408110, 5916410130, 5916412160, 5916416190
2. Σκοπός (-οί) χρήσης: Χημικό αγκύριο για αγκύρωση σε σκυρόδεμα
3. Κατασκευαστής: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. Σύστημα (-τα) για την αξιολόγηση και τον έλεγχο της διατήρησης της επίδοσης: Σύστημα 1
5. Ευρωπαϊκό έντυπο αξιολόγησης: EAD 330499-01-0601
Ευρωπαϊκή τεχνική αξιολόγηση: ETA-20/0647 - 17.09.2020
Οργανισμός τεχνικής αξιολόγησης: Technical and Test Institute for Construction Prague (TZUS)
Κοινοποιημένος οργανισμός (-οί): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Δηλωμένη επίδοση (-εις):

Σημαντικά χαρακτηριστικά	Επίδοση	Εναρμονισμένες τεχνικές προδιαγραφές
Μηχανική αντοχή και αντίσταση (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Χαρακτηριστική αντίσταση υπό εφελκυστική και εγκάρσια καταπόνηση για στατικές και οιονεί στατικές επιδράσεις	Παράρτημα C1 έως C5	
Μετατοπίσεις υπό μικρής ή μεγάλης διάρκειας καταπόνηση	Παράρτημα C6 έως C7	
Ανθεκτικότητα	Παράρτημα B1	
Χαρακτηριστική αντίσταση και μετατοπίσεις για σεισμική κατηγορία ισχύος C1 και C2:	Παράρτημα C8 έως C10	
Υγιεινή, υγεία και προστασία περιβάλλοντος (BWR 3)		
Δεν έχει καθοριστεί επίδοση		

Η επίδοση του προαναφερόμενου προϊόντος αντιστοιχεί στη δηλωμένη επίδοση/στις δηλωμένες επιδόσεις. Για τη σύνταξη της δήλωσης επιδόσεων σε συμμόρφωση με τον κανονισμό (ΕΕ) αρ. 305/2011 ο μόνος υπεύθυνος είναι ο προαναφερόμενος κατασκευαστής.

Υπογράφεται για τον κατασκευαστή και εν ονόματι του κατασκευαστή από:



Frank Wolpert

(Γενικός εμπορικός πληρεξούσιος -
Διευθυντής διαχείρισης παραγωγής)



Dr. -Ing. Siegfried Beichter

(Γενικός εμπορικός πληρεξούσιος -
Διευθυντής ποιότητας)

Künzelsau, την 01.01.2021

IZJAVA O SVOJSTVIMA

Br.5918420330_00_M_WIT-VM 210 (1)

**Ova je verzija teksta prevedena s njemačkog.
U slučaju dvojbe original na njemačkom ima prednost**

1. Jedinstvena identifikacijska oznaka tipa proizvoda: Würth injekcijski sustav WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Br. art.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Namjena(e): Spojni zatici za kotvljenje u betonu
3. Proizvođač: Adolf Würth GmbH & Co. KG
Reinhold- Würth-Str. 12 - 17
D - 74653 Künzelsau
4. Sustav/i za ocjenjivanje i provjeru postojanosti svojstava: Sustav 1
5. Europski dokument za ocjenjivanje: EAD 330499-01-0601
Europska tehnička ocjena: ETA-20/0647 - 17.9.2020.
Tijelo za tehničku ocjenu: Technical and Test Institute for Construction Prague (TZUS)
Prijavljeno/a tijelo/a: 2873, Institut za čelične konstrukcije i mehaniku materijala (IFSW), Darmstadt
6. Navedeno svojstvo/a:

Bitna obilježja	Svojstvo	Usklađene tehničke specifikacije
Mehanička čvrstoća i stabilnost (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Karakteristični otpor pri uzdužnom i poprečnom opterećenju za statično i kvazistatično djelovanje	Prilozi C1 do C5	
Pomicanja pod kratkoročnom i dugoročnom opterećenju	Prilozi C6 do C7	
Trajanost	Prilog B1	
Karakteristični otpor i pomicanja za seizmičku kategoriju učinka C1 i C2	Prilozi C8 do C10	
Higijena, zdravlje i zaštita okoliša (BWR 3)		
Nije utvrđeno svojstvo		

Svojstvo gore navedenog proizvoda odgovara navedenom svojstvu / navedenim svojstvima. Za izradu Izjave o svojstvima prema Odredbi (EU) br. 305/2011 isključivo je odgovoran gore navedeni proizvođač.

Potpisano za i u ime proizvođača od strane:



Frank Wolpert
(Prokurist – voditelj upravljanja
proizvodima)



Dr. – Ing. Siegfried Beichter
(Prokurist – voditelj za kvalitetu)

Künzelsau, 1.1.2021.

TELJESÍTMÉNYNYILATKOZAT

5918420330_00_M_WIT-VM 210 (1) sz.

Ez a német nyelvről lefordított változat.

Kétség esetén a német nyelvű eredeti az érvényes.

1. A terméktípus egyedi azonosító kódja: Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express injekciós rendszer
Cikkszámok: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Felhasználási cél(ok): Kötőanyaggal rögzített horgony betonban való horgonyzáshoz
3. Gyártó: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. A teljesítményállandóság értékelésére és ellenőrzésére szolgáló rendszer(ek): 1-es rendszer
5. Európai értékelési dokumentum: EAD 330499-01-0601
Európai Műszaki Értékelés: ETA-20/0647 - 2020.09.17.
Műszaki értékelő szervezet: Technical and Test Institute for Construction Prague (TZUS)
Bejelentett szerv(ek): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Nyilatkozatban szereplő teljesítmény(ek):

Lényeges jellemzők	Teljesítmény	Harmonizált műszaki specifikáció
Mechanikai szilárdság és állékonyság (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Jellemző ellenállás húzó és keresztirányú igénybevétel esetén statikus és kvázi-statisz hatásokhoz	C1 – C5 melléklet	
Elmozdulások rövid idejű és hosszú idejű igénybevétel alatt	C6 – C7 melléklet	
Tartósság	B1 melléklet	
Jellemző ellenállás és eltolódások a C1 és C2 szeizmikus teljesítménykategória esetén	C8 – C10 melléklet	
Higiénia, egészség és környezetvédelem (BWR 3)		
Nincs meghatározott teljesítmény		

A fent megnevezett termék teljesítménye megfelel a teljesítménynyilatkozatban rögzített teljesítménynek/teljesítményeknek. A 305/2011 sz. EU rendelet előírásai alapján készült teljesítménynyilatkozat összeállítása kizárólag a fent nevezett gyártó felelőssége.

A gyártó képviselőjében és nevében aláírta:



Frank Wolpert
(cégvezető – termékmenedzsment
vezető)



Dr. -Ing. Siegfried Beichter
(cégvezető – minőségügyi vezető)

Künzelsau, 2021.01.01.

DICHIARAZIONE DI PRESTAZIONE

N. 5918420330_00_M_WIT-VM 210 (1)

**La presente è la versione tradotta dal tedesco.
In caso di incertezze si considera valido l'originale in tedesco**

- | | |
|---|--|
| 1. Codice di identificazione unico del prodotto-tipo: | Würth Injektionssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express (Ancorante chimico - sistema ad iniezione WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express)
Art. n.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190 |
| 2. Utilizzo/i previsto/i: | Ancorante chimico per l'ancoraggio nel calcestruzzo |
| 3. Azienda produttrice: | Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau |
| 4. Sistema/i di valutazione e verifica della prestazione: | Sistema 1 |
| 5. Documento per la Valutazione Europea: | EAD 330499-01-0601 |
| Valutazione tecnica europea: | ETA-20/0647 - 17.09.2020 |
| Organismo di valutazione tecnica: | Technical and Test Institute for Construction Prague (TZUS) |
| Organismo/i notificato/i: | 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt |
| 6. Prestazione/i dichiarata/e: | |

Caratteristiche essenziali	Prestazione	Norma tecnica armonizzata
Resistenza meccanica e stabilità (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Resistenza caratteristica ai carichi a trazione e orizzontali per carichi statici e quasi statici	Allegati da C1 a C5	
Variazioni con carichi a breve e lungo termine	Allegati da C6 a C7	
Durabilità	Allegato B1	
Resistenza caratteristica e variazioni per categoria sismica C1 e C2	Allegati da C8 a C10	
Igiene, salute e ambiente (BWR 3)		
Nessuna prestazione determinata		

La prestazione del prodotto di cui sopra è conforme alla prestazione dichiarata/alle prestazioni dichiarate. Si rilascia la presente dichiarazione di prestazione ai sensi del Regolamento (UE) N. 305/2011 sotto la responsabilità esclusiva del suddetto fabbricante.

Firmato a nome e per conto del fabbricante da:



Frank Wolpert
(Procuratore - Responsabile gestione
prodotto)



Dr. -Ing. Siegfried Beichter
(Procuratore - Responsabile Qualità)

Künzelsau, 01.01.2021

EKSPLOATACINIŲ SAVYBIŲ DEKLARACIJA**Nr.5918420330_00_M_WIT-VM 210 (1)**

**Tai yra vertimas iš vokiečių kalbos.
Kilus abejonių, vadovautis originalu vokiečių kalba.**

1. Produkto tipo unikalus atpažinimo kodas: „Würth“ injekcinė sistema WIT-VM 210, WIT-VM 210 „Blue“, WIT-VM 210 „Tropical“, WIT-VM210 „Express“
Prekės Nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Naudojimo paskirtis (-ys): sujungimo kaištis tvirtinimui betone
3. Gamintojas: „Adolf Würth GmbH & Co. KG“
Reinhold-Würth g. 12-17
D - 74653 Kiuncelsau
4. Eksploatacinių savybių atsparumo įvertinimo ir patikrinimo sistema (-os): 1 sistema
5. Europos įvertinimo dokumentas: EAD 330499-01-0601
Europos techninis įvertinimas: ETA-20/0647, atliktas 2020-09-17
Techninio vertinimo įstaiga: Prahos statybos technikos ir bandymų institutas (TZUS)
Notifikuotoji (-osios) įstaiga (-os): 2873, „Institut für Stahlbau und Werkstoffmechanik“ (IFSW), Darmštatas
6. Deklaruojama (-os) eksploatacinė (-s) savybė (-s):

Pagrindinės charakteristikos	Eksploatacinės savybės	Darnusis techninis standartas
Mechaninis stiprumas ir stabilumas (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Būdingas pasipriešinimas tempimui ir skersinei įtampai esant statinei ir kvazistatinei apkrovai	Priedai: C1 iki C5	
Poslinkiai esant trumpalaikiai ir ilgalaikiai apkrovai	Priedai: C6 iki C7	
Ilgamžiškumas	B1 priedas	
Būdingas atsparumas ir poslinkis seisminei eksploatacinių savybių kategorijai C1 ir C2	Priedai: C8 iki C10	
Higiena, sveikata ir aplinkosauga (BWR 3)		
Eksploatacinė savybė nenustatyta		

Turimos produkto eksploatacinės savybės atitinka deklaruotas eksploatacines savybes. Už eksploatacinių savybių deklaracijos, atitinkančios potvarkį (ES) Nr. 305/2011, sudarymą atsako tik nurodytas gamintojas.

Pasirašo gamintojas ir atstovas gamintojo vardu:



Frank Wolpert

(Įgaliotasis produkto vadovas)



Dr. inž. Siegfried Beichter

(Įgaliotasis kokybės vadovas)

Kiuncelsau, 2021-01-01

EKSPLOATĀCIJAS ĪPAŠĪBU DEKLARĀCIJA

Nr.5918420330_00_M_WIT-VM 210 (1)

**Šī ir no vācu valodas tulkota dokumenta versija.
Šaubu gadījumā spēkā ir oriģināls vācu valodā**

1. **Nepārprotams produkta tipa identifikācijas kods:** Würth injekcijas sistēma WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Preces Nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Lietojuma mērķis(-i):** savienošanas dībelis enkurošanai betonā
3. **Ražotājs:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau (Kincelzava)
4. **Ekspluatācijas īpašību noturības novērtējuma un pārbaudes sistēma(-as):** Sistēma 1
5. **Eiropas novērtējuma dokuments:** EAD 330499-01-0601
Eiropas Tehniskais novērtējums: ETA-20/0647 - 17.09.2020
Tehniskā novērtējuma iestāde: Technical and Test Institute for Construction Prague TZUS (Prāga)
Paziņotā(-ās) iestāde(-es): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt (Darmštate)
6. **Deklarētā(-ās) ekspluatācijas īpašība(-as):**

Būtiskie raksturlielumi	Ekspluatācijas īpašības	Saskaņotā tehniskā specifikācija
Mehāniskā izturība un stiprība (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Raksturīgā pretestība stiepes un šķērsslodzei statiskai un kvazistatiskai iedarbībai	Skatīt C1 līdz C5 pielikumu	
Bīde pie īslaicīgas un ilgstošas slodzes	Skatīt C6 līdz C7 pielikumu	
Ilgizturība	B1. pielikums	
Raksturīgā pretestība un bīde saistībā ar seismisko īpašību kategoriju C1 un C2	Skatīt C8 līdz C10 pielikumu	
Higiēna, veselība un vides aizsardzība (BWR 3)		
Veikspēja nav konstatēta		

Šā produkta ekspluatācijas īpašības atbilst deklarētajai(-ām) ekspluatācijas īpašībai(-ām). Par ekspluatācijas īpašību deklarācijas sagatavošanu saskaņā ar Regulu (ES) Nr. 305/2011 ir atbildīgs tikai iepriekš minētais ražotājs.

Ražotāja un ražotāja pārstāvja paraksts:



Frank Wolpert (Franks Volperts)

*(Prokurist – Leiter Produktmanagement
(prokūrists – produktu nodaļas
vadītājs))*

Künzelsau (Kincelzava), 01.01.2021.



Dr. -Ing. Siegfried Beichter (Dr. ing.
Zigfrīds Beihlers)

*(Prokurist – Leiter Qualität (prokūrists –
kvalitātes sistēmas vadītājs))*

DIKJARAZZJONI TA' PRESTAZZJONI

Nru 5918420330_00_M_WIT-VM 210 (1)

Din hija l-verżjoni tradotta mill-Ġermaniż.

F'każ ta' dubju jgħodd id-dokument oriġinali bil-lingwa Ġermaniża

1. **Kodiċi uniku ta' identifikazzjoni tat-tip tal-prodott:** Würth Sistema b'Injezzjoni WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Nru tal-oġġett: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Użu/i intenzjonat/i:** Kaviġja għat-twaħħil, għall-ankraġġ fil-konkrit
3. **Manifattur:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Str. 12 - 17
D - 74653 Künzelsau
4. **Sistema jew sistemi ta' valutazzjoni u verifika tal-kostanza ta' prestazzjoni:** Sistema 1
5. **Dokument Ewropew ta' valutazzjoni:** EAD 330499-01-0601
Valutazzjoni Teknika Ewropea: ETA-20/0647 - 17/09/2020
Korp tal-valutazzjoni teknika: Technical and Test Institute for Construction Prague (TZUS)
Korp/i nnotifikat/i: 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt, Germany
6. **Prestazzjoni/jiet ddikjarata/i:**

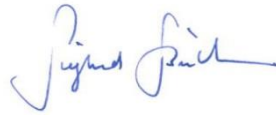
Karatteristiċi essenzjali	Prestazzjoni	Speċifikazzjoni teknika armonizzata
Stabbiltà u ebusija mekkanika (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Reżistenza karatteristika taħt stress tensili u transversali għal tagħbija statika u kważi statika	Anness C1 sa C5	
Spostamenti taħt stress għal ħin qasir u ħin twil	Anness C6 sa C7	
Durabbiltà	Anness B1	
Reżistenza karatteristika u spostamenti għall-kategorija ta' prestazzjoni sismika C1 u C2	Anness C8 sa C10	
Iġjene, saħħa u protezzjoni tal-ambjent (BWR 3)		
Lebda prestazzjoni ddeterminata		

Il-prestazzjoni tal-prodott identifikat hawn fuq hija konformi mal-prestazzjonijiet iddikjarati. Din id-dikjarazzjoni ta' prestazzjoni hi maħruġa skont ir-Regolament (UE) Nru 305/2011 taħt ir-responsabbiltà unika tal-manifattur identifikat hawn fuq.

Iffirmat għal u f'isem il-manifattur minn:



Frank Wolpert
(Rapp. Awtorizzat - Kap, Ġestjoni tal-
Prodott)



Dr. -Ing. Siegfried Beichter
(Rapp. Awtorizzat - Kap, Ġestjoni tal-
Kwalità)

Künzelsau, 01/01/2021

PRESTATIEVERKLARING

Nr.5918420330_00_M_WIT-VM 210 (1)

**Dit is een uit het Duits vertaalde versie.
In twijfelgevallen geldt het Duitse origineel.**

1. Eenduidige identificatiecode van het producttype: Würth injectiesysteem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Art.nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Gebruiksdoel(en): compoundanker voor verankering in beton
3. Fabrikant: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. Systeem/systemen voor beoordeling en verificatie van de prestatiebestendigheid: Systeem 1
5. Europees beoordelingsdocument: EAD 330499-01-0601
Europese technische beoordeling: ETA-20/0647 - 17/09/2020
Technische beoordelingsinstantie: Technical and Test Institute for Construction Prague (TZUS)
Aangemelde instantie(s): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Vastgestelde prestatie(s):

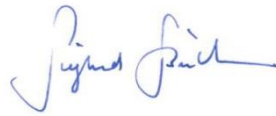
Belangrijkste eigenschappen	Prestatie	Geharmoniseerde technische specificatie
Mechanische sterkte en stabiliteit (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Karakteristieke weerstand onder trek- en dwarsbelasting bij statische en quasi-statische inwerkingen	Bijlage C1 t/m C5	
Verschuivingen onder kortstondige en langdurige belasting	Bijlage C6 t/m C7	
Duurzaamheid	Bijlage B1	
Karakteristieke weerstand en verschuiving voor seismische prestatiecategorie C1 en C2	Bijlage C9 t/m C10	
Hygiëne, gezondheid en milieubescherming (BWR 3)		
Geen prestatie vastgelegd		

De prestatie van het bovenvermelde product voldoet aan de vastgestelde prestatie(s). Voor het opstellen van de prestatieverklaring overeenkomstig verordening (EU) nr. 305/2011 is uitsluitend de bovengenoemde fabrikant verantwoordelijk.

Ondertekend voor de fabrikant en in naam van de fabrikant door:



Frank Wolpert
(Procuratiehouder - Hoofd
Productmanagement)



dr.-ing. Siegfried Beichter
(Procuratiehouder - Hoofd Kwaliteit)

Künzelsau, 01/01/2021

YTELSESERKLÆRING**Nr. 5918420330_00_M_WIT-VM 210 (1)**

**Dette er en versjon som er oversatt fra tysk.
Skulle det oppstå tvil, gjelder den tyske originalen**

1. Entydig kode for produkttypen: Würth injeksjonssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Art.-nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Bruksområde: Komposittplugg til forankring i betong
3. Produsent: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 – 17
D – 74653 Künzelsau
4. System(er) til vurdering og kontroll av ytelsesbestandigheten: System 1
5. Europeisk vurderingsdokument: EAD 330499-01-0601
Europeisk teknisk godkjenning: ETA-20/0647 – 17.09.2020
Teknisk godkjenningsorgan: Technical and Test Institute for Construction Prague (TZUS)
Teknisk(e) kontrollorgan(er): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt, Tyskland
6. Erklært(e) ytelse(r):

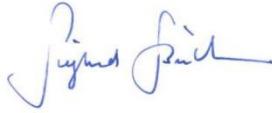
Vesentlige egenskaper	Ytelse	Harmonisert teknisk spesifikasjon
Mekanisk fasthet og stabilitet (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Karakteristisk motstand under strekk- og tverrbelastning for statisk og nesten-statisk belastning	Vedlegg C1 til C5	
Forskyvninger ved kortvarig og langvarig belastning	Vedlegg C6 til C7	
Holdbarhet	Vedlegg B1	
Karakteristisk motstand og forskyvninger for seismisk kategori C1 og C2	Vedlegg C8 til C10	
Hygiene, helse og miljøvern (BWR 3)		
Ingen ytelse fastlagt		

Ytelsen til dette produktet tilsvarende den erklærte ytelsen / de erklærte ytelsene. Produsenten som er nevnt over, er eneansvarlig for at det lages en ytelseserklæring i henhold til forordningen (EU) nr. 305/2011.

Undertegnet for produsenten og på vegne av produsenten:



Frank Wolpert
(prokurist - leder produktstyring)



Dr. ing. Siegfried Beichter
(prokurist- leder kvalitet)

Künzelsau, den 01.01.2021

DEKLARACJA WŁAŚCIWOŚCI UŻYTKOWYCH

Nr 5918420330_00_M_WIT-VM 210 (1)

**Ten dokument jest wersją przełożoną z języka niemieckiego.
W razie wątpliwości obowiązuje wersja niemiecka.**

1. Niepowtarzalny kod identyfikacyjny produktu: Würth system do zastrzyków WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Nr artykułu: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Przeznaczenie: kołek rozporowy do kotwienia w betonie
3. Producent: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. System (systemy) oceny i weryfikacji stałości właściwości użytkowych: System 1
5. Europejski dokument oceny: EAD 330499-01-0601
Europejska Ocena Techniczna: ETA-20/0647 - 17.09.2020
Placówka sporządzająca ocenę techniczną: Technical and Test Institute for Construction Prague (TZUS)
Jednostka/-i notyfikowana/-e: 2873, Institut für Stahlbau und Werkstoffmechanik (Instytut konstrukcji stalowych i mechaniki tworzyw), Darmstadt
6. Deklarowane właściwości użytkowe:

Istotne cechy	Właściwości użytkowe	Zharmonizowana specyfikacja techniczna
Wytrzymałość mechaniczna i stateczność (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Opór właściwy przy rozciąganiu i obciążeniu poprzecznym dla oddziaływań statycznych i quasi statycznych	Załącznik C1 do C5	
Przesunięcia na skutek krótko- i długotrwałego obciążenia	Załącznik C6 do C7	
Trwałość	Załącznik B1	
Opór właściwy i przesunięcia dla sejsmicznej kategorii właściwości C1 i C2	Załącznik C8 do C10	
Higiena, zdrowie i ochrona środowiska (BWR 3)		
Nie stwierdzono		

Właściwości użytkowe powyższego produktu pokrywają się z deklarowanymi właściwościami użytkowymi. Za sporządzenie deklaracji właściwości użytkowych zgodnie z rozporządzeniem (UE) nr 305/2011 odpowiedzialny jest wyłącznie wyżej wymieniony producent.

Podpisano za producenta i w jego imieniu:



Frank Wolpert
(Prokurent - Kierownik działu
zarządzania produktami)



Dr inż. Siegfried Beichter
(Prokurent - Kierownik działu jakości)

Künzelsau, dnia 01.01.2021 r.

DECLARAÇÃO DE DESEMPENHO

N.º 5918420330_00_M_WIT-VM 210 (1)

Versão traduzida da versão alemã.

Em caso de dúvida, é válido o original em alemão

1. **Código de identificação inequívoco do tipo de produto:** Sistema de injeção WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express Würth
N.º art.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Fim/fins de utilização:** Cavilha de fixação por aderência para ancoragem em betão
3. **Fabricante:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **Sistema(s) para avaliação e verificação da constância do desempenho:** Sistema 1
5. **Documento de avaliação europeu:** EAD 330499-01-0601
Avaliação Técnica Europeia: ETA-20/0647 - 17.09.2020
Organismo de Avaliação Técnica: Technical and Test Institute for Construction Prague (TZUS)
Organismo(s) notificado(s): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. **Desempenho(s) declarado(s):**

Características essenciais	Desempenho	Especificação técnica harmonizada
Resistência mecânica e estabilidade (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Resistência característica sob esforço de tração e esforço transversal para cargas estáticas e quase-estáticas	Anexo C1 até C5	
Deslocamentos sob esforço a curto prazo e a longo prazo	Anexo C6 até C7	
Durabilidade	Anexo B1	
Resistência característica e deslocamentos para a categoria de desempenho sísmico C1 e C2	Anexo C8 até C10	
Higiene, saúde e proteção do ambiente (BWR 3)		
Desempenho não determinado		

O desempenho do produto corresponde ao(s) desempenho(s) declarado(s). O fabricante acima mencionado é o único responsável pela elaboração da declaração de desempenho, em conformidade com o Regulamento (UE) n.º 305/2011.

Assinado pelo fabricante e em nome do fabricante por:



Frank Wolpert
(Procurador - Diretor de gestão de
produtos)



Dr. Eng.° Siegfried Beichter
(Procurador - Diretor de qualidade)

Künzelsau, a 01.01.2021

DECLARAȚIE DE PERFORMANȚĂ

Nr.5918420330_00_M_WIT-VM 210 (1)

**Prezenta versiune este o traducere din limba germană.
În caz de dubiu, se aplică originalul în limba germană**

1. **Cod unic de identificare al tipului de produs:** Sistem de injecție Würth WIT-VM 210, WIT-VM 210 blue, WIT-VM 210 tropical, WIT-VM210 expres
Nr. articol: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Scopul sau scopurile de utilizare:** Diblu de îmbinare pentru ancorare în beton
3. **Producător:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **Sistem(e) pentru evaluarea și verificarea constanței performanței:** Sistem 1
5. **Document european de evaluare:** EAD 330499-01-0601
Evaluare tehnică europeană: ETA-20/0647 - 17.09.2020
Organism de evaluare tehnică: Technical and Test Institute for Construction Prague (TZUS)
Organism(e) notificat(e): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt (Institutul pentru construcții metalice și mecanica materialelor)
6. **Performanța(e) declarată(e):**

Caracteristici esențiale	Performanță	Specificație tehnică armonizată
Rezistență mecanică și stabilitate (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Rezistență caracteristică la solicitare de tracțiune și solicitare transversală, pentru efecte statice și cvazistatice	Anexa C1 până la C5	
Deplasări la solicitări de scurtă și de lungă durată	Anexa C6 până la C7	
Durabilitate	Anexa B1	
Rezistență caracteristică și deplasarea pentru categoria de performanțe seismice C1 și C2	Anexa C8 până la C10	
Igienă, sănătate și protecția mediului înconjurător (BWR 3)		
Nu s-a stabilit nicio performanță		

Performanța produsului prezentat este în conformitate cu performanța declarată / cu performanțele declarate. Pentru realizarea declarației de performanță în conformitate cu Ordonanța (UE) nr. 305/2011, singurul responsabil este producătorul menționat mai sus.

Semnată pentru și în numele producătorului, de către:



Frank Wolpert
(Reprezentant legal - director pentru
producție)



Dr.-Ing. Siegfried Beichter
(Reprezentant legal - director dep.
calitate)

Künzelsau, 01.01.2021

ДЕКЛАРАЦИЯ ХАРАКТЕРИСТИК

№ 5918420330_00_M_WIT-VM 210 (1)

**Здесь речь идет о переведенной с немецкого языка версии.
В случае сомнений руководствоваться немецким оригиналом**

- | | |
|--|--|
| 1. Однозначная маркировка типа продукта: | Система инъекции Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Арт. №: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190 |
| 2. Цель(и) применения: | Комбинированный дюбель для анкеровки в бетоне |
| 3. Изготовитель: | Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 – 17
D – 74653 Künzelsau |
| 4. Система(ы) для оценки и проверки стабильности характеристик: | Система 1 |
| 5. Европейский оценочный документ:
Европейская техническая оценка:
Орган технической оценки
Уполномоченный(е) орган(ы): | EAD 330499-01-0601
ETA-20/0647 – 17.09.2020
Technical and Test Institute for Construction Prague (TZUS)
2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt |
| 6. Заявленная(-ые) характеристика(-и): | |

Важные признаки	Характеристика	Гармонизированная техническая спецификация
Механическая прочность и устойчивость (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Типичное сопротивление при работе на растяжение и срез (статические и квазистатические нагрузки)	Приложение с C1 по C5	
Смещения при кратковременном и длительном действии нагрузок	Приложение с C6 по C7	
Выносливость	Приложение B1	
Типичное сопротивление и смещения для категорий сейсмических нагрузок C1 и C2	Приложение с C8 по C10	
Гигиена, здоровье и охрана окружающей среды (BWR 3)		
Характеристика не определена		

Характеристика вышеприведенного продукта соответствует заявленной(-ым) характеристике/характеристикам. За составление декларации характеристик в соответствии с предписанием (EU) № 305/2011 отвечает исключительно вышеупомянутый изготовитель.

Подписано за изготовителя и от имени изготовителя:



Франк Вольперт
(Прокурис -
Нач.производств.отдела)



Д-р-инж. Зигфрид Байхтер
(Прокурис - Нач. ОТК)

Кюнцельзау, 01.01.2021

PRESTANDEKLARATION

Nr.5918420330_00_M_WIT-VM 210 (1)

**Denna version är översatt från tyska.
I tveksamma fall gäller originalet på tyska.**

1. **Produkttypens unika identifikationskod:** Würth injekteringssystem WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Art.-nr.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Användningsändamål:** Ankarplugg för förankring i betong
3. **Tillverkare:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **System för bedömning och kontroll av prestandabeständighet:** System 1
5. **Europeiskt bedömningsdokument:** EAD 330499-01-0601
Europeisk teknisk bedömning: ETA-20/0647 - 2020-09-17
Tekniskt bedömningsorgan: Technical and Test Institute for Construction Prague (TZUS)
Notificerade organ: 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. **Deklarerad prestanda:**

Väsentliga egenskaper	Prestanda	Harmoniserad teknisk specifikation
Mekanisk hållfasthet och stabilitet (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Karakteristiskt motstånd under dragpåkänning och tvärbelastning för statisk och kvasistatisk påverkan	Bilaga C1 till C5	
Förskjutningar under korttids- och långtidspåverkan	Bilaga C6 till C7	
Varaktighet	Bilaga B1	
Karakteristiskt motstånd och förskjutningar för seismisk prestandakategori C1 och C2	Bilaga C8 till C10	
Hygien, hälsa och miljöskydd (BWR 3)		
Ingen prestanda fastställd		

Ovanstående produkts prestanda överensstämmer med den prestanda som anges. Denna prestandadeklARATION utfärdas i överensstämmelse med förordning (EU) nr. 305/2011 på eget ansvar av ovanstående tillverkare.

Undertecknad för tillverkaren och på tillverkarens vägnar av:



Frank Wolpert
(Prokurist - Chef Produkthantering)



Dr.-ing. Siegfried Beichter
(Prokurist - Chef Kvalitet)

Künzelsau, 2021-01-01

VYHLÁSENIE O VLASTNOSTIACH**Č. 5918420330_00_M_WIT-VM 210 (1)**

**Jedná sa tu o preloženú nemeckú verziu.
V prípade pochybností platí nemecký originál**

1. **Jednoznačný identifikačný kód typu výrobku:** Würth Injekčný systém WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Výr. č.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. **Účel(y) použitia:** Spojovacie hmoždinky na ukotvenie do betónu
3. **Výrobca:** Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. **Systém (systémy) na posudzovanie a overovanie odolnosti parametrov:** Systém 1
5. **Európsky vyhodnocovací dokument:** EAD 330499-01-0601
Európske technické vyhodnotenie: ETA-20/0647 - 17. 09. 2020
Pracovisko pre technické vyhodnotenie: Technický a skúšobný ústav stavebný Praha (TZUS)
Notifikovaný orgán(y): 2873, Ústav pre oceľové konštrukcie a mechaniku materiálov (IFSW), Darmstadt
6. **Vlastnosť(i) uvedené vo vyhlásení:**

Podstatné znaky	Vlastnosť	Harmonizovaná technická špecifikácia
Mechanická pevnosť a stabilita (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Charakteristická odolnosť pri ťahovom a priečnom namáhaní pre statické a kvázi-statické účinky	Dodatok C1 až C5	
Posuny pod krátkodobým a dlhodobým namáhaním	Dodatok C6 až C7	
Odolnosť	Dodatok B1	
Charakteristická odolnosť a posuny pre seizmickú kategóriu výkonu C1 a C2	Dodatok C8 až C10	
Hygiena, ochrana zdravia a životného prostredia (BWR 3)		
Nezistený žiadny výkon		

Vlastnosť vyššie uvedeného produktu zodpovedá vyhlásenej vlastnosti / vyhláseným vlastnostiam. Na vyhotovenie vyhlásenia o parametroch v súlade s nariadením (EÚ) č. 305/2011 je zodpovedný sám vyššie uvedený výrobca.

Podpísané pre výrobcu a v mene výrobcu:



Frank Wolpert
(Prokurista - vedúci výrobného
manažmentu)



Dr. -Ing. Siegfried Beichter
(Prokurista - vedúci kvality)

Künzelsau, dňa 01. 01. 2021

IZJAVA O LASTNOSTIH

Št. 5918420330_00_M_WIT-VM 210 (1)

**To besedilo je prevod iz nemščine.
V primeru dvoma velja nemški izvirnik**

- | | |
|---|---|
| 1. Enotna identifikacijska oznaka tipa izdelka: | Vbrizgalni sistem Würth WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Št. art.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190 |
| 2. Nameni uporabe: | Kombinirano sidro za sidranje v beton |
| 3. Proizvajalec: | Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau, Nemčija |
| 4. Sistemi za vrednotenje in preverjanje trajnosti lastnosti: | Sistem 1 |
| 5. Evropski ocenjevalni dokument:
Evropsko tehnično vrednotenje:
Organ, ki je opravil tehnično vrednotenje:
Obveščeni organ: | EAD 330499-01-0601
ETA-20/0647 - 17.09.2020
Technical and Test Institute for Construction Prague (TZUS)

2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt |
| 6. Navedene lastnosti: | |

Bistvene značilnosti	Lastnost	Harmonizirana tehnična specifikacija
Mehanska trdnost in stabilnost (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Značilna odpornost pri vlečni in prečni obremenitvi za statične ter kvazistatične vplive	Priloge od C1 do C5	
Premikanje pri kratkotrajni in dolgotrajni obremenitvi	Priloge od C6 do C7	
Trajnost	Priloga B1	
Značilna odpornost in premik pri seizmičnih obremenitvah, kategoriji zmogljivosti C1 in C2	Priloge od C8 do C10	
Higiena, zdravje in varovanje okolja (BWR 3)		
Ni določenih lastnosti		

Lastnosti tega izdelka ustrezajo navedenim lastnostim. Za pripravo izjave o lastnostih po uredbi (EU) št. 305/2011 je odgovoren izključno zgoraj navedeni proizvajalec.

Podpis za proizvajalca in v njegovem imenu:



Frank Wolpert
(prokurist – vodja izdelkov)



Dr. -Ing. Siegfried Beichter
(prokurist – vodja za kakovost)

Künzelsau, 1. 1. 2021

PERFORMANS BEYANI**No.5918420330_00_M_WIT-VM 210 (1)**

**Bu metin, Almanca dilinden yapılmış bir çeviridir.
Şüpheli durumlarda Almanca orijinal metin geçerli olacaktır**

1. Ürün tipinin açık kodu: Würth Enjeksiyon sistemi WIT-VM 210, WIT-VM 210 Blue, WIT-VM 210 Tropical, WIT-VM210 Express
Ürün No.: 591842*; 591843*; 591844*; 591845*; 090546*; 090547*; 59151*; 59152*; 59153*; 59154*; 59160*; 5916108999; 5916110999; 5916112999; 5916116999; 5916208999; 5916210999; 5916212999; 5916216999; 5916408110; 5916410130; 5916412160; 5916416190
2. Kullanma amacı (amaçları): Betona ankraj için kimyasal dübel
3. Üretici: Adolf Würth GmbH & Co. KG
Reinhold-Würth-Straße 12 - 17
D - 74653 Künzelsau
4. Performansın sürdürülebilirliğinin değerlendirilmesi ve kontrolü için sistem(ler): Sistem 1
5. Avrupa Değerlendirme Belgesi: EAD 330499-01-0601
Avrupa Teknik Değerlendirmesi: ETA-20/0647 - 17.09.2020
Teknik Değerlendirme Kuruluşu: Technical and Test Institute for Construction Prague (TZUS)
Akredite kuruluş(lar): 2873, Institut für Stahlbau und Werkstoffmechanik (IFSW), Darmstadt
6. Beyan edilen performans(lar):

Önemli özellikler	Performans	Uyumlandırılmış teknik nitelik
Mekanik dayanıklılık ve kararlılık (BWR 1)		ETA-20/0647 EAD 330499-01-0601
Statik ve sözde statik etkiler için çekme yükü ve yan yük altındaki karakteristik direnç	Ek C1 ila C5	
Kısa ve uzun süreli yük altında kaydırmalar	Ek C6 ila C7	
Dayanıklılık	Ek B1	
Sismik performans kategorisi C1 ve C2 için karakteristik direnç ve kaydırmalar	Ek C8 ila C10	
Hijyen, sağlık ve çevre koruma (BWR 3)		
Bir performans belirlenemedi		

Mevcut ürünün performansı, beyan edilen performansa / beyan edilen performanslara uygundur. Performans beyanının 305/2011 numaralı yönetmelikle (AB) uyumlu olarak oluşturulmasından yukarıda belirtilen üretici tek başına sorumludur.

Üretici için ve üretici adına imzalayan:



Frank Wolpert

(İmzaya yetkili ürün yönetim bölümü
yöneticisi)



Dr. Müh. Siegfried Beichter

(İmzaya Yetkili Kalite Yöneticisi)

Künzelsau, 01.01.2021