Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment ETA-16/0790 of 23 March 2017

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Secupin/Monopin SPA-TYPE-XXX different Types;D-Bolt AP-063-GE, AP-063-GPS
Product family to which the construction product belongs	Anchor Devices for Personal Fall Protection Systems Fastened to Concrete Structures
Manufacturer	SKYLOTEC GmbH Im Mühlengrund 6-8 56566 Neuwied DEUTSCHLAND
Manufacturing plant	SKYLOTEC GmbH Im Mühlengrund 6-8 56566 Neuwied DEUTSCHLAND
This European Technical Assessment contains	23 pages including 17 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	European Assessment Document (EAD) 331072-01-0601331072-00-0601 "Anchor Devices for personal fall protection systems, fastened to concrete structures", version 0.

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Specific part

1 Technical description of the product

The subject of this assessment are anchor points for protecting persons (operators) working at heights against a fall. The fall protection systems are made of stainless steel. They are fastened to reinforced concrete (cracked or uncracked), strength classes C20/25 to C50/60 according to EN 206. The fall protection systems are fastened to the concrete with the different fasteners which can be seen in the annexes.

This ETA includes the products listed in the following **Table 1**:

Table 1: Products of this ETA

Annex No.	Trade Name (Product of this ETA)	Fastener
1	Secupin SPA-20-01-300	Würth Screw Anchor W-SA A4 12x100/10
1	Secupin SPA-20-01-400	Würth Screw Anchor W-SA A4 12x100/10
1	Secupin SPA-20-01-500	Würth Screw Anchor W-SA A4 12x100/10
2	Secupin SPA-20-01-300	Würth Fixanchor W-FAZ/A4 M12x110
2	Secupin SPA-20-01-400	Würth Fixanchor W-FAZ/A4 M12x110
2	Secupin SPA-20-01-500	Würth Fixanchor W-FAZ/A4 M12x110
3-4	Monopin SPA-16-08-300	Würth Injection Adhesive WIT-VM 250 or WIT-PE 500
3-4	Monopin SPA-20-08-500	Würth Injection Adhesive WIT-VM 250 or WIT-PE 500
3-4	Monopin SPA-24-08-750	Würth Injection Adhesive WIT-VM 250 or WIT-PE 500
5-6	Monopin SPA-16-09-300	Würth Injection Adhesive WIT-VM 100
7-8	Monopin SPA-20-05-500	Würth Injection Adhesive WIT-VM 100
9-10	Monopin SPA-20-00-300	Würth Injection Adhesive WIT-VM 250 or WIT-PE 500

9-10	Monopin SPA-20-00-400	Würth Injection Adhesive WIT-VM 250 or WIT-PE 500
9-10	Monopin SPA-20-00-500	Würth Injection Adhesive WIT-VM 250 or WIT-PE 500
11-12	Monopin SPA-16-06-300	this Monopin is an Fixanchor
11-12	Monopin SPA-16-06-400	this Monopin is an Fixanchor
11-12	Monopin SPA-20-06-500	this Monopin is an Fixanchor
11-12	Monopin SPA-20-06-600	this Monopin is an Fixanchor
13-14	D-Bolt AP-063-GE and AP-063-GPS	Würth Injection System W-VIZ/A4 M16
15-16	D-Bolt AP-063-GE and AP-063-GPS	Würth Injection System W-VIZ-IG/A4 M16X120

The components and the system setup of the product are given in Annex (1-17).

2 Specification of the intended use in accordance with the applicable EAD 33-1072-00-0601 – Anchor Devices for Fastening Personal Fall Protection Systems to Concrete Structures

The fall protection systems listed in Table 1 of this ETA is used to protect operators working at height (max. 3 persons), by arresting them in a fall. The operators attach themselves to the eye using e.g. ropes and karabiners. In the case of a fall the fall protection systems listed in Table 1 of this ETA prevent the fall and resulting physical damage assuming the correct usage by the operator. The fall protection systems listed in Table 1 of this ETA are designed for use in all areas of industry, construction and maintenance.

The fall protection systems listed in Table 1 of this ETA is intended to be used, fastened or inserted on flat roofs or other flat planes made of concrete only. The direction of force therefore shall be perpendicular (90° ±5 %) to the fastening element. Thus use at a (concrete-) wall is intended only when the direction of force still applies at a 90 ° angle to the fastening axis.

The performances given in Section 3 are only valid if the of the products listed in Table 1 of this ETA are used in compliance with the specifications and conditions given in Annexes 1 - 17.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the products listed in Table 1 of this ETA of at least 25 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 right 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
Not relevant	

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	No Performance assessed
Resistance to fire	No Performance assessed

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Not relevant	

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Static loading	Level (kN; see respective product in the Annexes 1-16), see Annex 17
Dynamic loading	Level (No. of users; see respective product in the Annexes 1-16)
Check of deformation capacity in case of constraining forces	Description (≤ 10 mm at 0.7 kN)
Durability	No performance assessed

3.5 Protection against noise (BWR 5)

Essential characteristic	Performance
Not relevant	

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Not relevant	

3.7 Sustainable use of natural resources (BWR 7)

Essential characteristic	Performance
Not relevant	

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

In accordance with EAD No. 16-33-1072-06.01, the applicable European legal act is: Decision 98/436/EC.

The system to be applied is: **3**

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 23 March 2017 by Deutsches Institut für Bautechnik

Uwe Bender
Head of Department

beglaubigt:
Hahn

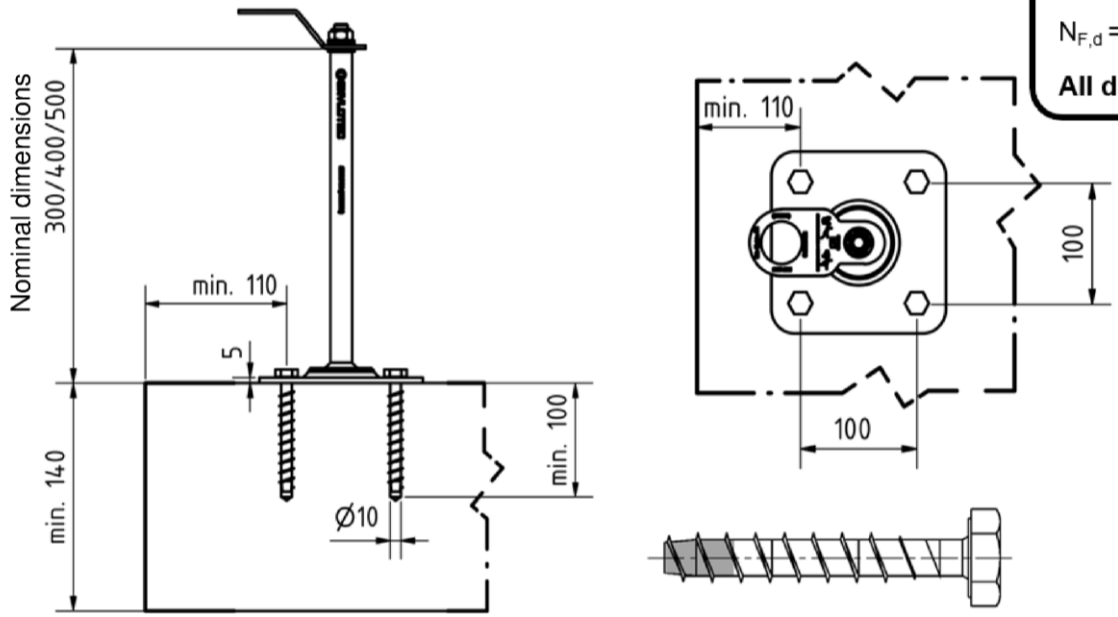
Deutsches Institut für Bautechnik DIBt

Anchor point Skylotec Secupin SPA-20-01-300/400/500, installed, with Würth Screw Anchor W-SA A4 12x100/10

Number of users: 3

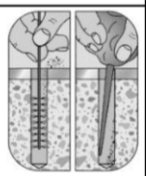
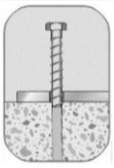
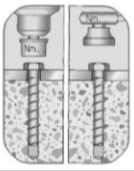
$N_{F,d} = N_{F,K} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions



All dimensions in mm.

Installation instructions for anchor point Skylotec Secupin SPA-20-01-300/400/500 with Würth Screw Anchor W-SA A4 12x100/10

1		**Pay attention to fixing installation instructions and approval (ETA-06/0277).** Using a hammer drill, create a bore hole with a drill nominal diameter of d_o=10 mm and bore hole depth of $h_1 \geq 100$ mm vertically to the surface of the anchor base
2		Remove the bore dust, e.g. by blowing it out.
3		Insert the screw anchor in the anchor base through the anchor point's 4 through-holes.
4		Manually, or using a tangential impact wrench, secure the screw anchor until the anchor point's base plate is pressed against the concrete base. Recommended torque: 55 Nm.

Skylotec Fall Protection Systems	**Annex 1**
SPA-20-01-300/400/500 with Würth Screw Anchor W-SA A4 12 X 100/10 Fitted state/ System components / Installation instructions	

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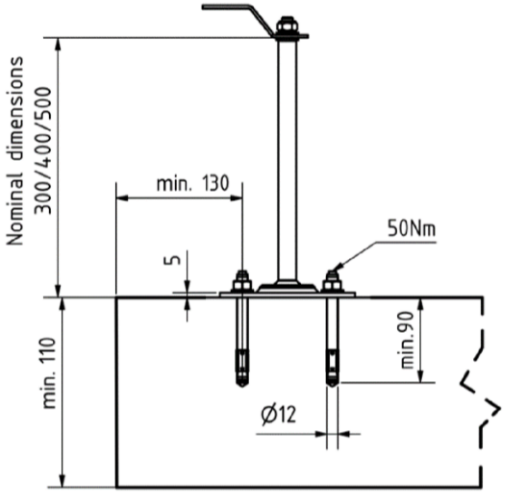
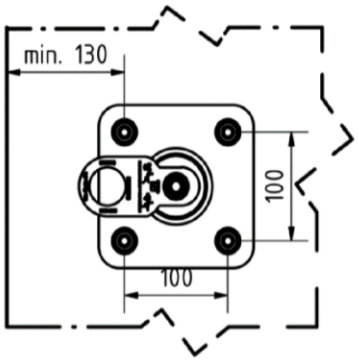
Anchor point Skylotec Secupin SPA-20-01-300/400/500, installed, with Würth Fixanchor W-FAZ/A4 M12x110

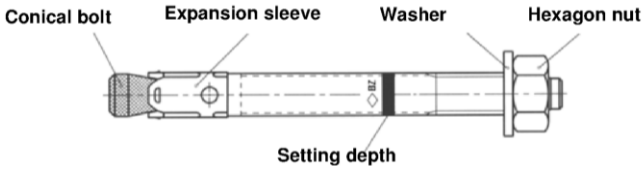
Number of users: 3

$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions

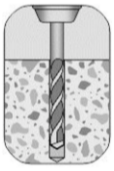
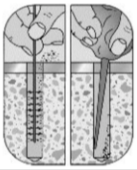
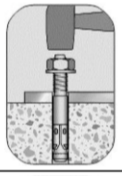
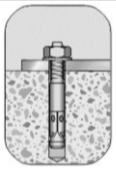
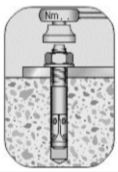






All dimensions in mm.

Installation instructions for anchor point Skylotec Secupin SPA-20-01-300/400/500 with Würth Fixanchor W-FAZ/A4 M12x110

1		**Pay attention to fixing installation instructions and approval (ETA-99/0011).** Create a bore hole with a drill nominal diameter of d_o=12 mm and bore hole depth of $h_1 \geq 90$ mm vertically to the surface of the anchor base.
2		Remove the bore dust, e.g. by blowing it out.
3		Using a hammer or machine setting tool, insert the anchor in the anchor base through the anchor point's 4 designated through-holes
4		Install the anchor point.
5		Apply torque of 50 Nm with a calibrated torque wrench.

Skylotec Fall Protection Systems

SPA-20-01-300/400/500 with Würth Fixanchor W-FAZ/A4 M12x110
Fitted state/ System components / Installation instructions

Annex 2

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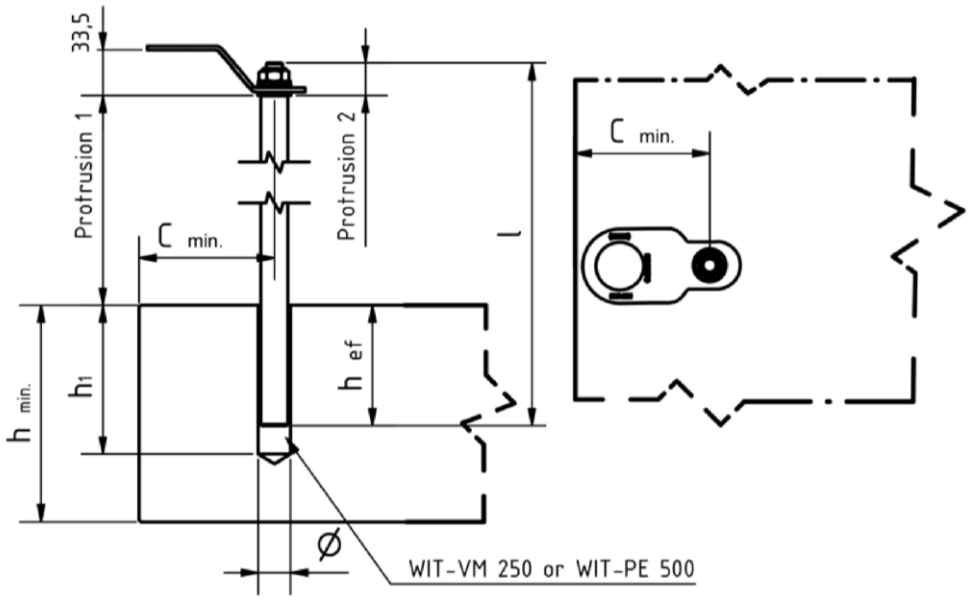
Anchor point Skylotec Monopin SPA-XX-08-XXX, installed, with Würth Injection Adhesive WIT-VM 250 or WIT-PE 500

Number of users : 1

$N_{F,d} = N_{F,k} \cdot \gamma_F = 6\ kN \cdot \gamma_F$

All directions



All dimensions in mm.

Anchor point SPA-XX-08-XXX characteristics

Type	SPA-16-08-300	SPA-20-08-500	SPA-24-08-750
Diameter Ø [mm]	16	20	24
Overall length l [mm]	424	624	874
Effective anchoring depth h_{ef} [mm] ≥	100	100	100
Nominal Ø, drill d_0 [mm]	18	24	28
Bore hole depth h_1=[mm] ≥	110	110	110
Protrusion 1 [mm]	300	500	750
Protrusion 2 [mm]	24	24	24
Total protrusion [mm]	324	524	774
Edge distance C_{min} [mm]	120	125	125
Centre distance S_{min} [mm]	650	678	706
Minimum component thickness h_{min} [mm]	130	150	155

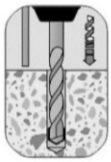
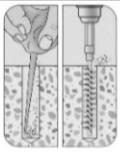
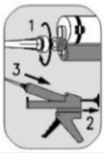
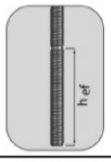
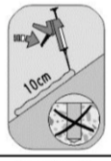
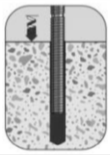
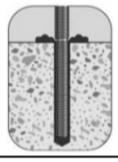
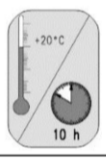
Skylotec Fall Protection Systems

Monopin SPA-XX-08-XXX with Würth WIT-VM 250 or WIT-PE 500
Fitted state/ System components

Annex 3

Deutsches Institut für Bautechnik DIBt

Installation instructions for anchor point Skylotec Monopin SPA-XX-08-XXX with Würth Injection Adhesive WIT-VM 250 or WIT-PE 500

1		**Pay attention to fixing installation instructions and approval (ETA-12/0164 /ETA-09/0040).** Using a hammer drill, make a bore hole vertically to the anchor base surface.
2		Clean the bore hole (at WIT PE 500 blow out 2x, brush out with machine 2x, blow out 2x; at WIT-VM 250 blow out 4x, brush out with machine 4x, blow out 4x). Drill holes larger than 20 mm must be cleaned mechanically.
3		Attach the mixer to the cartridge using the dispenser gun.
4		Pay attention to the setting depth.
5		Before use, dispense a strand of around 10 cm but do not inject it into the bore hole.
6		Checking the temperature of the anchor base: The temperature must be ≥ +5°C. Starting from the base of the bore hole, fill the hole with injection adhesive. About 2/3 of the bore hole has to be filled with injection adhesive.
7		Push in the Monopin SPA-XX-08-XXX with a slight turning movement down to the setting depth marking.
8		Visually check the amount of adhesive or setting depth marking respectively. The adhesive has to reach the surface. If no adhesive is visible at the surface, the Monopin SPA-XX-08-XXX must be removed immediately and WIT-VM 250 or WIT-PE 500 injection adhesive injected again.
9		Comply with the curing time of the injection adhesive. See the processing notes on the cartridge and the installation instructions.

Skylotec Fall Protection Systems

Monopin SPA-XX-08-XXX with Würth WIT-VM 250 or WIT-PE 500
Fitted state/ System components

Annex 4

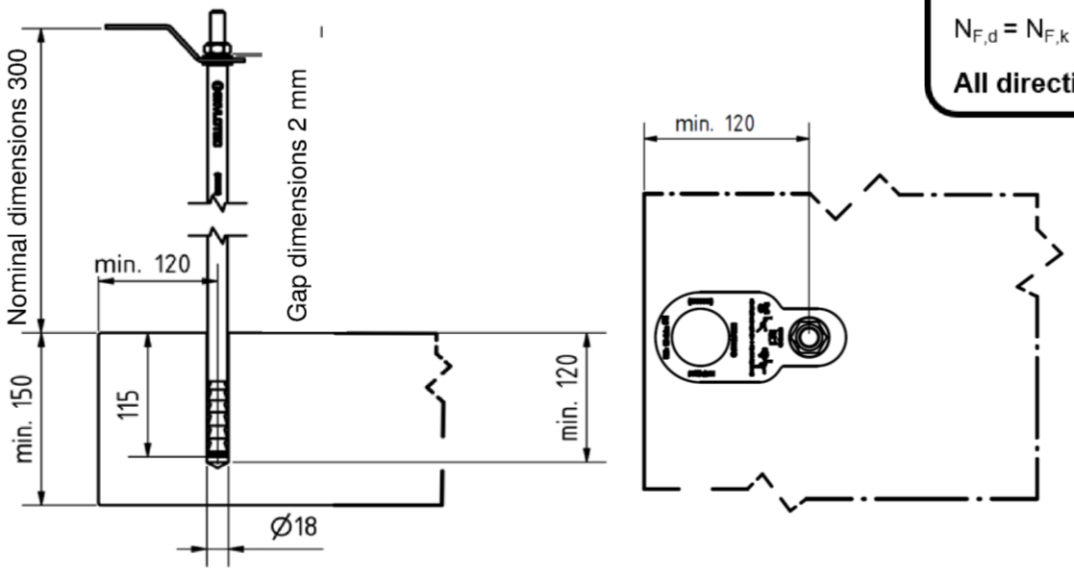
Deutsches Institut für Bautechnik DIBt

Anchor point Skylotec Monopin SPA-16-09-300, installed, with Würth Injection Adhesive WIT-VM 100

Number of users: 3

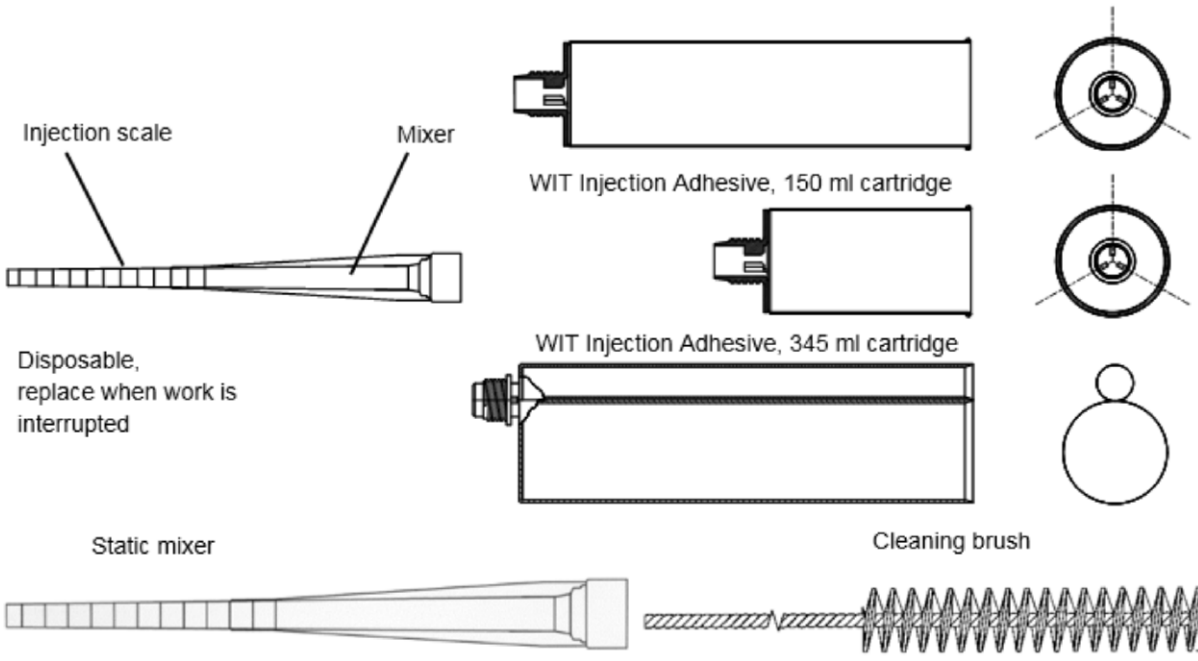
$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions



All dimensions in mm.

Würth Injection Adhesive WIT-VM 100 (different container sizes)
WIT Injection Adhesive cartridge (different container sizes)

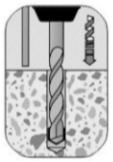
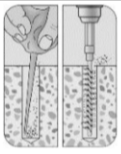
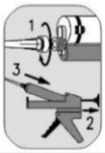
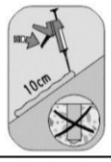


Cartridge imprint: Würth WIT-VM 100, processing data, storage life, batch no., hazard code, travel scale, curing and processing time

Skylotec Fall Protection Systems	**Annex 5**
Monopin SPA-16-09-300 with Würth WIT-VM 100 **Fitted state/ System components**	

Deutsches Institut für Bautechnik DIBt

Installation instructions for anchor point Skylotec Monopin SPA-16-09-300 with Würth Injection Adhesive WIT-VM 100

1		**Pay attention to fixing installation instructions and approval (ETA-04/0095).** Using a hammer drill, create a bore hole with a drill nominal diameter of d_o=18 mm and bore hole depth of $h_1 \geq 120$ mm vertically to the surface of the anchor base.
2		Clean the bore hole (blow out 2x, brush out 2x, blow out 2x).
3		Attach the mixer to the cartridge using the dispenser gun.
4		Before use, dispense a strand of around 10 cm but do not inject it into the bore hole.
5		Checking the temperature of the anchor base: The temperature must be ≥ +5°C. Starting from the base of the bore hole, fill the hole with injection adhesive. About 2/3 of the bore hole has to be filled with injection adhesive.
6		Push in the SPA-16-09-300 with a slight turning movement down to the bore hole base.
7		Visually check the amount of adhesive or setting depth marking respectively. The adhesive has to reach the surface. If no adhesive is visible at the surface, the anchor point must be removed immediately and WIT-VM100 injection adhesive injected again.
8		Comply with the curing time of the injection adhesive. Processing is possible only from a temperature of ≥ +5°C. See the processing notes on the cartridge and the installation instructions.

Skylotec Fall Protection Systems

Monopin SPA-16-09-300 with Würth WIT-VM 100
Fitted state/ System components

Annex 6

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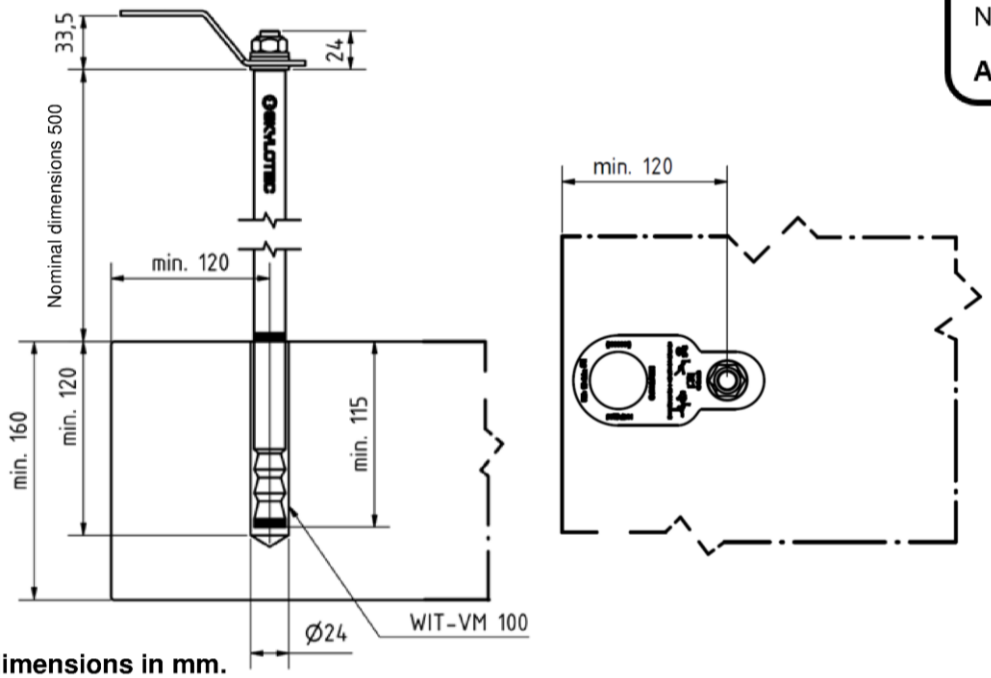
Anchor point Skylotec Monopin SPA-20-05-500, installed, with Würth Injection Adhesive WIT-VM 100

Number of users: 3

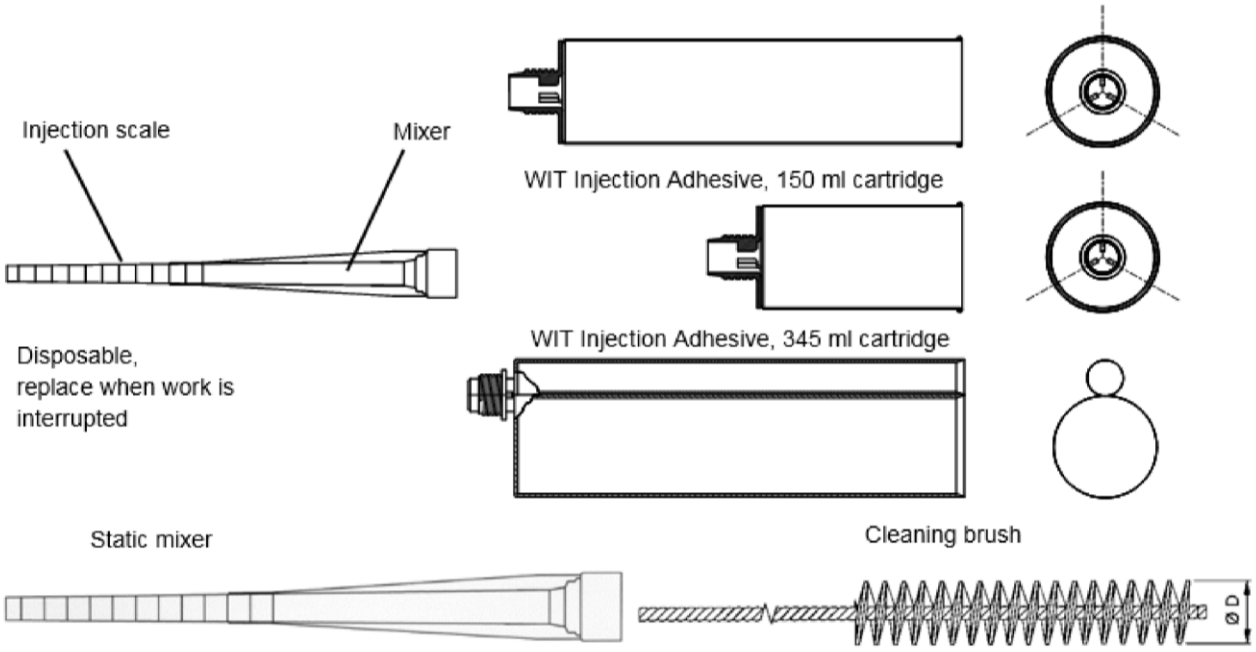
$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions



All dimensions in mm.

Würth Injection Adhesive WIT-VM 100 (different container sizes)
WIT Injection Adhesive cartridge (different container sizes)



Cartridge imprint: Würth WIT-VM 100, processing data, storage life, batch no., hazard code, travel scale, curing and processing time

Skylotec Fall Protection Systems	**Annex 7**
Monopin SPA-20-05-500 with Würth WIT-VM 100 Installation instructions	

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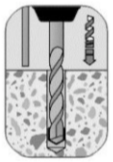
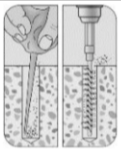
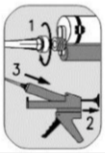
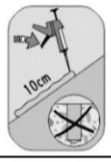
Installation instructions for Skylotec Monopin SPA-20-05-500 with Würth Injection Adhesive WIT-VM 100

1		**Pay attention to fixing installation instructions and approval (ETA-04/0095).** Using a hammer drill, create a bore hole with a drill nominal diameter of d_o=24 mm and bore hole depth of $h_1 \geq 120$ mm vertically to the surface of the anchor base.
2		Clean the bore hole (blow out 2x, brush out 2x, blow out 2x).
3		Attach the mixer to the cartridge using the dispenser gun.
4		Before use, dispense a strand of around 10 cm but do not inject it into the bore hole.
5		Checking the temperature of the anchor base: The temperature must be ≥ +5°C. Starting from the base of the bore hole, fill the hole with injection adhesive. About 2/3 of the bore hole has to be filled with injection adhesive.
6		Push in the SPA-20-05-500 with a slight turning movement down to the bore hole base.
7		Visually check the amount of adhesive or setting depth marking respectively. The adhesive has to reach the surface. If no adhesive is visible at the surface, the anchor point must be removed immediately and WIT-VM100 injection adhesive injected again.
8		Comply with the curing time of the injection adhesive. Processing is possible only from a temperature of ≥ +5°C. See the processing notes on the cartridge and the installation instructions.

Skylotec Fall Protection Systems	**Annex 8**
Monopin SPA-20-05-500 with Würth WIT-VM 100 **Installation instructions**	

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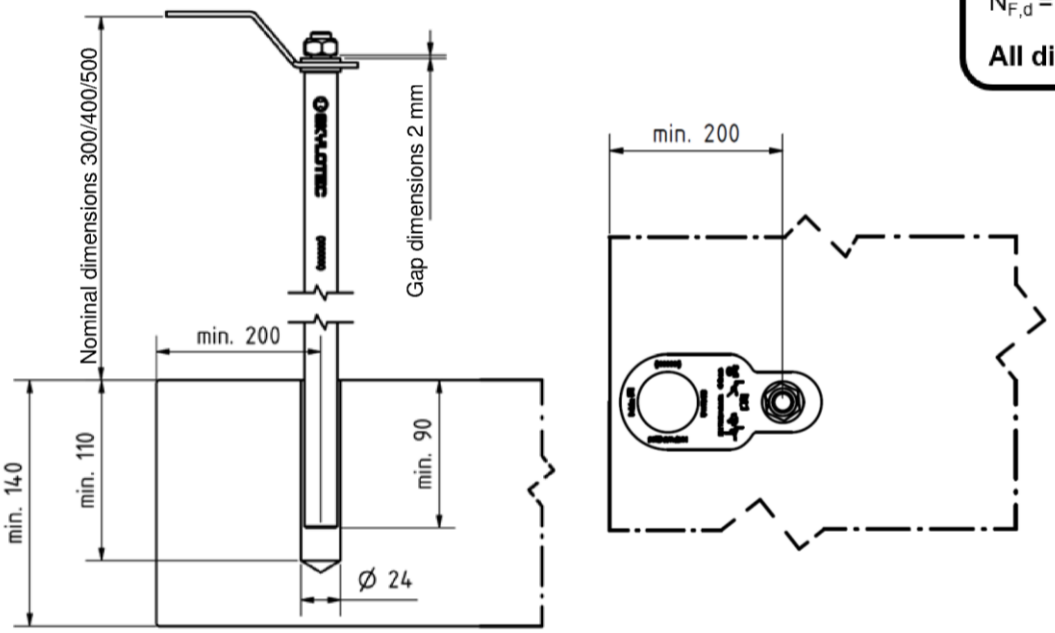
Anchor point Skylotec SPA-20-00-300/400/500, installed, with Würth Injection Adhesive WIT-VM 250 or WIT-PE 500

Number of users: 3

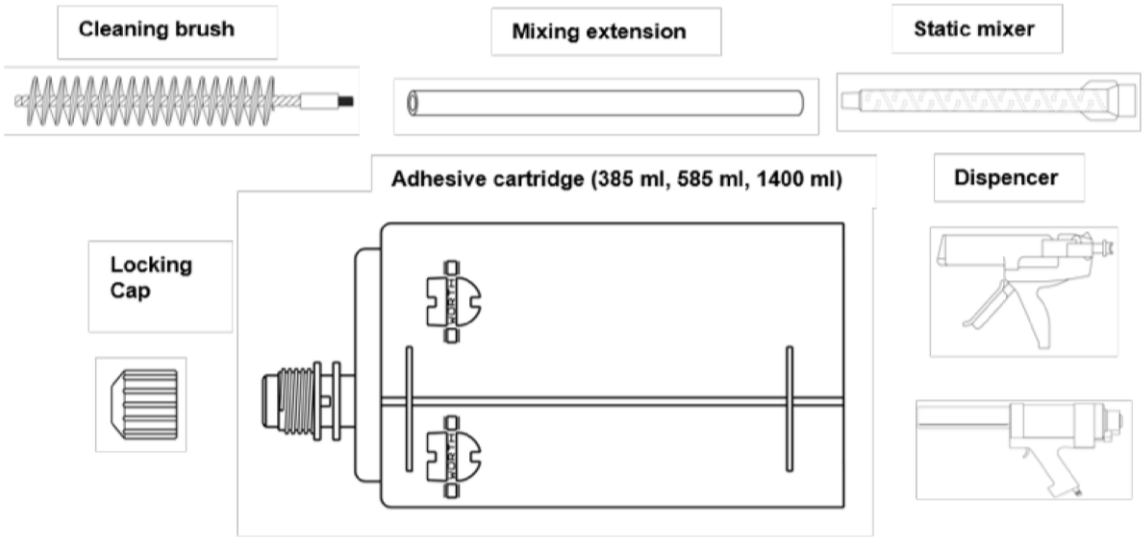
$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions



All dimensions in mm.

Würth Injection Adhesive WIT-VM 250 or WIT-PE 500 (different container sizes)



Cartridge imprint: Würth WIT-VM 250 or WIT-PE 500, processing data, storage life, batch no., hazard code, travel scale, curing and processing time

Skylotec Fall Protection Systems	**Annex 9**
SPA-20-00-300/400/500 with Würth WIT-VM 250 or WIT-PE 500 Fitted state/ System components	

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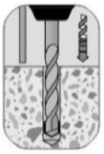
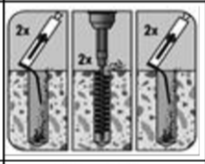
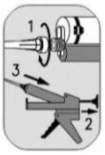
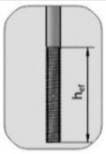
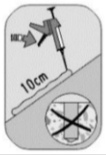
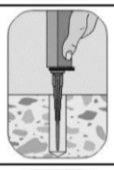
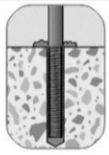
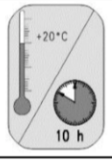
Installation instructions for anchor point Skylotec SPA-20-00-300/400/500 with Injection Adhesive WIT-VM 250 or WIT-PE 500

1		**Pay attention to fixing installation instructions and approval (ETA-12/0164 /ETA-09/0040).** Using a hammer drill, create a bore hole with a drill nominal diameter of d_o=24 mm and bore hole depth of $h_1 \geq$ 110 mm vertically to the surface of the anchor base.
2		Clean the bore hole (at WIT PE 500 blow out 2x, brush out with machine 2x, blow out 2x; at WIT-VM 250 blow out 4x, brush out with machine 4x, blow out 4x). Drill holes larger than 20 mm must be cleaned mechanically.
3		Attach the mixer to the cartridge using the dispenser gun.
4		Pay attention to the setting depth.
5		Before use, dispense a strand of around 10 cm but do not inject it into the bore hole.
6		Checking the temperature of the anchor base: The temperature must be ≥ +5°C. Starting from the base of the bore hole, fill the hole with injection adhesive. About 2/3 of the bore hole has to be filled with injection adhesive.
7		Push in the SPA-20-00-300/400/500with a slight turning movement down to the bore hole base.
8		Visually check the amount of adhesive or setting depth marking respectively. The adhesive has to reach the surface. If no adhesive is visible at the surface, the anchor point must be removed immediately and WIT-VM 250 or WIT-PE 500 injection adhesive injected again.
9		Comply with the curing time of the injection adhesive. Processing is possible only from a temperature of ≥ +5°C. See the processing notes on the cartridge and the installation instructions.

Skylotec Fall Protection Systems	**Annex 10**
SPA-20-00-300/400/500 with Würth WIT-VM 250 or WIT-PE 500 **Fitted state/ System components**	

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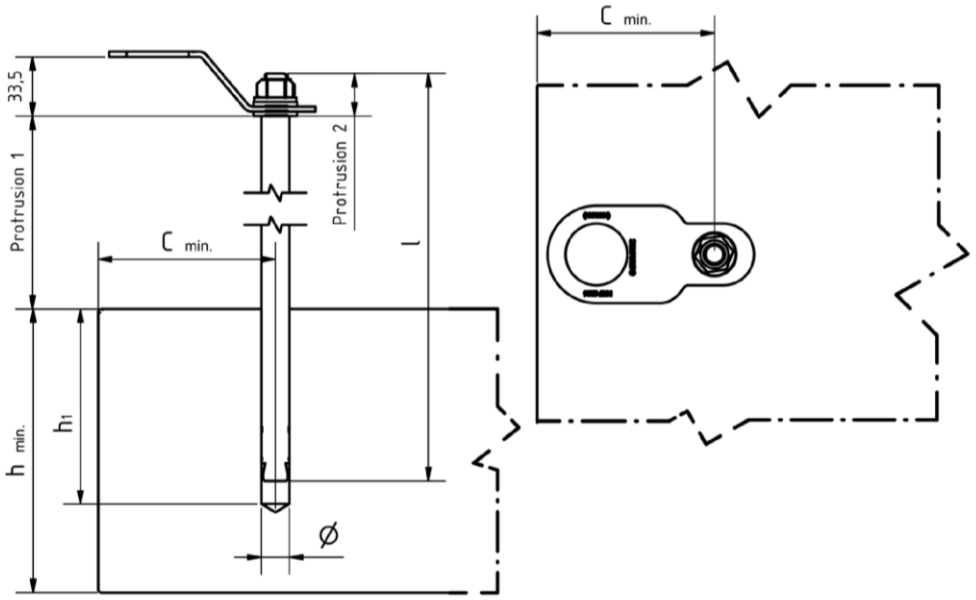
Anchor point Skylotec SPA-16-06-XXX and SPA-20-06-XXX, installed



Number of users: 3

$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions

All dimensions in mm.

Anchor point SPA-16-06-XXX and SPA-20-06-XXX characteristics

Type	SPA-16-06-300	SPA-16-06-400	SPA-20-06-500	SPA-20-06-600
Diameter Ø [mm]	16	16	20	20
Overall length l [mm]	421	521	638	738
Nominal Ø, drill d_0 [mm]	16	16	20	20
Bore hole depth h_1 [mm] ≥	110	110	130	130
Protrusion 1 [mm]	300	400	500	600
Protrusion 2 [mm]	24	24	24	24
Total protrusion [mm]	324	424	524	624
Edge distance C_{min} [mm]	135	135	135	135
Centre distance S_{min} [mm]	255	255	300	300
Minimum component thickness h_{min} [mm]	140	140	200	200

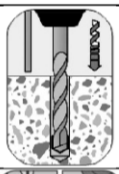
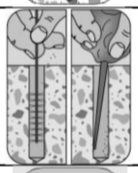
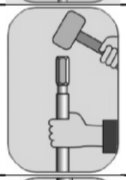
Skylotec Fall Protection Systems

Monopin SPA-16-06-XXX and SPA-20-06-XXX
Fitted state/ System components

Annex 11

Deutsches Institut für Bautechnik DIBt

Installation instructions for anchor point Skylotec SPA-16-06-XXX and SPA-20-06-XXX

1		**Pay attention to the installation instructions.** Using a hammer drill, make a bore hole vertically to the anchor base surface.
2		Remove the bore dust, e.g. by blowing it out.
3		Fit the spacer sleeve on anchor point SPA-XX-06-XXX. Without the spacer sleeve the thread can become damaged.
4		Hold the SPA-XX-06-XXX with your hand whilst knocking it in.
5		Knock in the SPA-XX-06-XXX anchor point.
6		Visual check: The anchor point has to be inserted down to the setting depth marking.
7		Remove the spacer sleeve by unscrewing it.

Skylotec Fall Protection Systems	**Annex 12**
Monopin SPA-16-06-XXX and SPA-20-06-XXX **Fitted state/ System components**	

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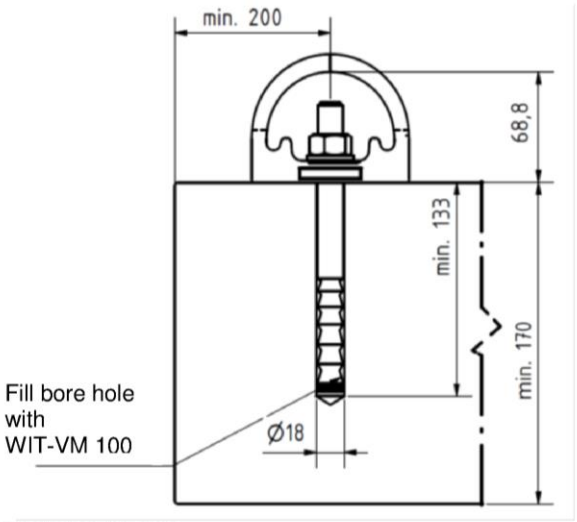
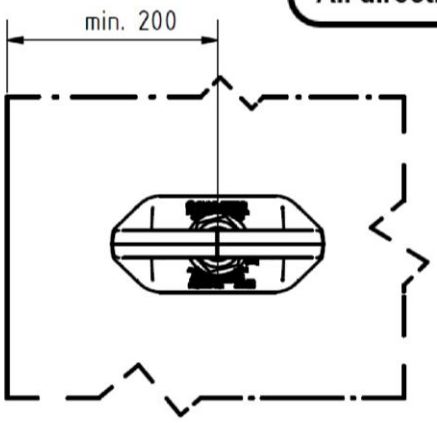
Anchor point Skylotec D-Bolt AP-063-GE and AP-063-GPS, installed, with Würth Injection System W-VIZ/A4 M16 (h_{ef} 125)

Number of users: 3

$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

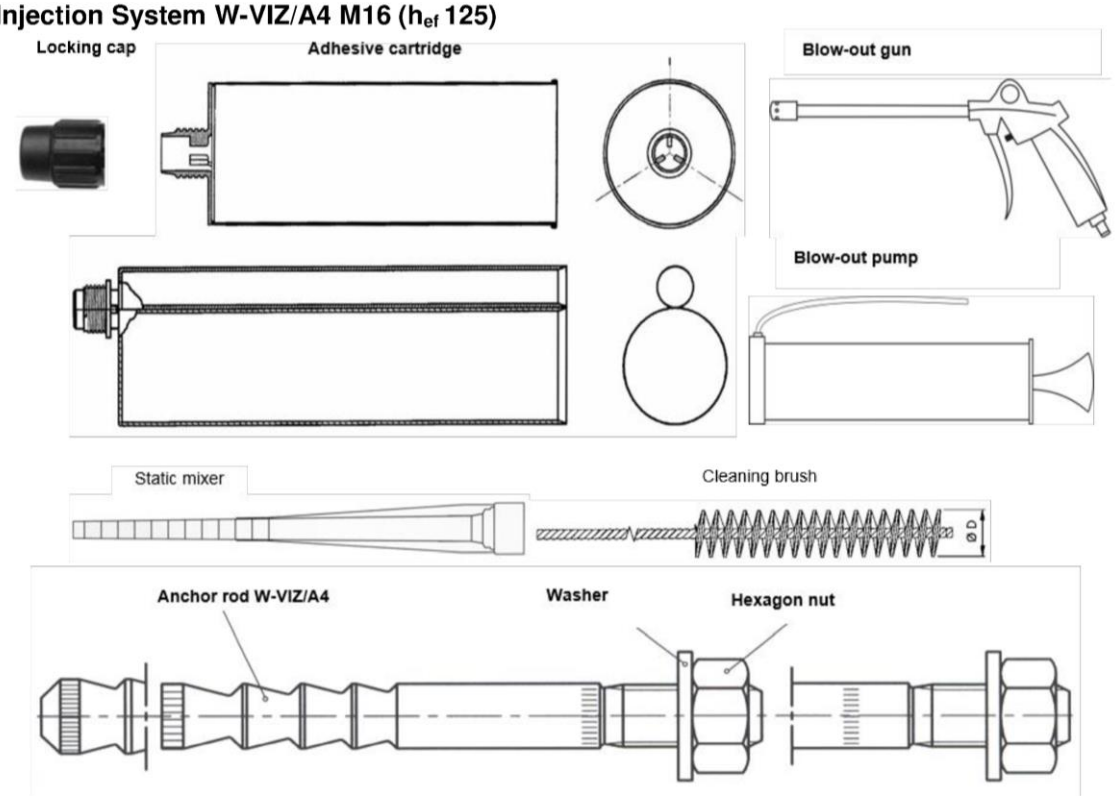
All directions





All dimensions in mm.

Würth Injection System W-VIZ/A4 M16 (h_{ef} 125)



Cartridge imprint: Würth WIT-VM 100, processing data, storage life, batch no., hazard code, travel scale, curing and processing time

Skylotec Fall Protection Systems	**Annex 13**
D-Bolt AP-063-GE and AP-063-GPS with Würth W-VIZ/A4 System Fitted state/ System components	

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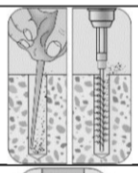
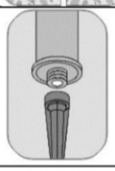
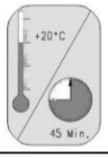
Installation instructions for anchor point Skylotec D-Bolt AP-063-GE and AP-063-GPS with Würth Injection System W-VIZ/A4 M16 (h_{ef} 125)

1		**Pay attention to fixing installation instructions and approval (ETA-04/0095).** Using a hammer drill, create a bore hole with a drill nominal diameter of d_o=18 mm and bore hole depth of $h_1 \geq$ 130 mm vertically to the surface of the anchor base.
2		Clean the bore hole (blow out 2x oilfree, brush out 2x, blow out 2x oilfree).
3		Attach the mixer to the cartridge using the dispenser gun.
4		Before use, dispense a strand of around 10 cm but do not inject it into the bore hole.
5		Checking the temperature of the anchor base: The temperature must be ≥ +5°C. Starting from the base of the bore hole, fill the hole with injection adhesive. About 2/3 of the bore hole has to be filled with injection adhesive.
6		Push in the anchor rod with a slight turning movement down to the bore hole base.
7		Visually check the amount of adhesive or setting depth marking respectively. The adhesive has to reach the surface. If no adhesive is visible at the surface, the anchor rod must be removed immediately and WIT-VM 100 injection adhesive injected again.
8		Comply with the curing time of the injection adhesive. Processing is possible only from a temperature of ≥ +5°C. See the processing notes on the cartridge and the installation instructions.
9		Install AP-063-GE or AP-063-GPS, do not exceed max. torque of 50 Nm.

Skylotec Fall Protection Systems	**Annex 14**
D-Bolt AP-063-GE and AP-063-GPS with Würth W-VIZ/A4 System Fitted state/ System components	

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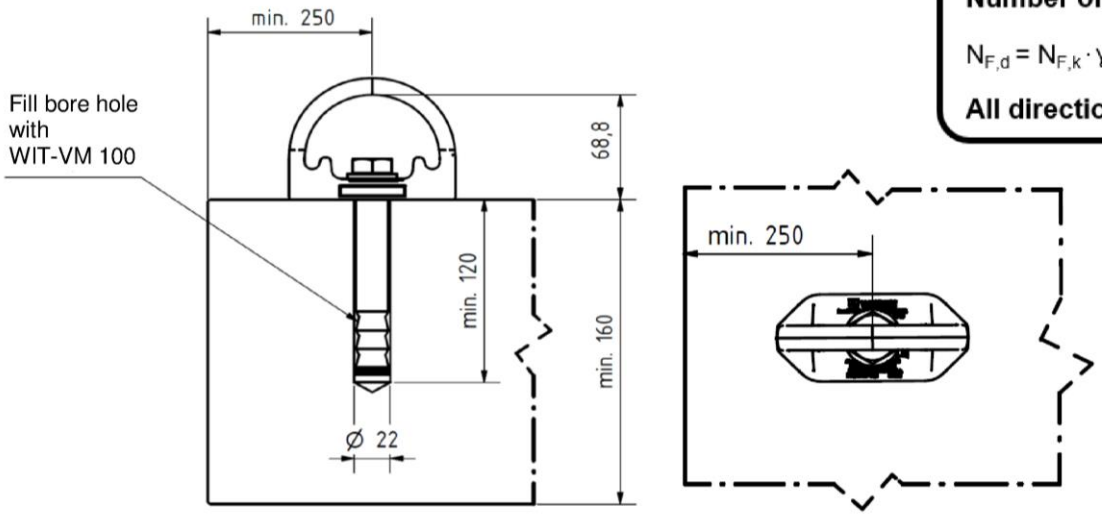
Anchor point Skylotec D-Bolt AP-063-GE and AP-063-GPS, installed, with Würth Injection System W-VIZ-IG/A4 M16X120

Number of users: 3

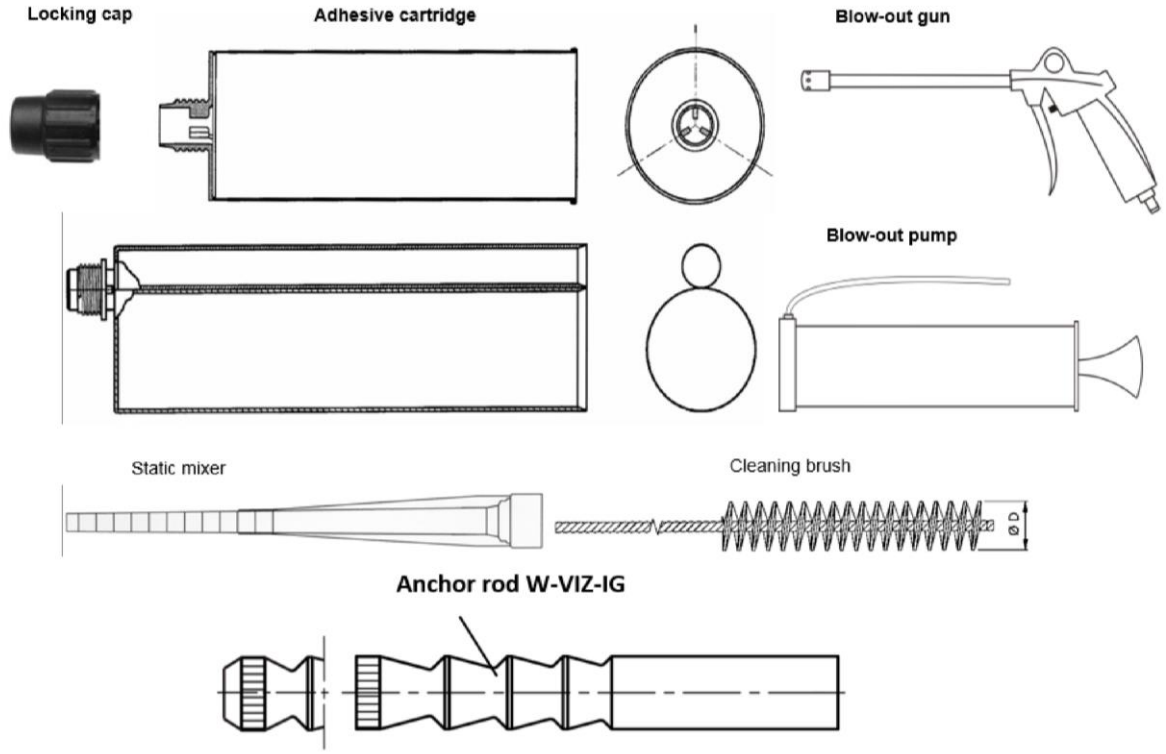
$N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot \gamma_F$

All directions



All dimensions in mm.

Würth Injection System W-VIZ-IG/A4 M16X120

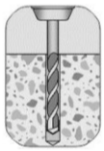
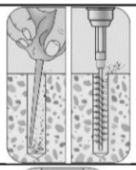
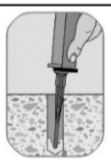
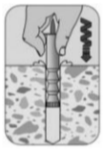
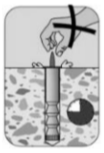
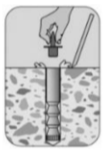


Cartridge imprint: Würth WIT-VM 100, processing data, storage life, batch no., hazard code, travel scale, curing and processing time

Skylotec Fall Protection Systems	**Annex 15**
D-Bolt AP-063-GE and AP-063-GPS with Würth W-VIZ-IG/A4 System Fitted state/ System components	

Deutsches Institut für Bautechnik DIBt

Installation instructions for anchor point Skylotec D-Bolt AP-063-GE and AP-063-GPS with Würth Injection System W-VIZ-IG/A4 M16X120

1		**Pay attention to fixing installation instructions and approval (ETA-04/0095).** Using a hammer drill, create a bore hole with a drill nominal diameter of d_o=22 mm and bore hole depth of $h_1 \geq 120$ mm vertically to the surface of the anchor base.
2		Clean the bore hole (blow out 2x oilfree, brush out 2x, blow out 2x oilfree).
3		Attach the mixer to the cartridge using the dispenser gun.
4		Before use, dispense a strand of around 10 cm but do not inject it into the bore hole.
5		Checking the temperature of the anchor base: The temperature must be ≥ +5°C. Starting from the base of the bore hole, fill the hole with injection adhesive. About 2/3 of the bore hole has to be filled with injection adhesive.
6		Push in the anchor with internal thread with a slight turning movement down to the bore hole base.
7		Visually check the amount of adhesive or setting depth marking respectively. The adhesive has to reach the surface. If no adhesive is visible at the surface, the anchor with internal thread must be removed immediately and WIT-VM 100 injection adhesive injected again. Comply with the curing time of the injection adhesive.
8		Remove excess adhesive and protective cap.
9		Install AP-063-GE or AP-063-GPS, do not exceed max. torque of 50Nm

Skylotec Fall Protection Systems	**Annex 16**
D-Bolt AP-063-GE and AP-063-GPS with Würth W-VIZ-IG/A4 System Fitted state/ System components	

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Design values at impact

$N_{F,d} = N_{F,k} \cdot \gamma_F$

For Germany a partial safety factor γ_F of 1.5 is recommend.

The recommended partial safety factor is used in order to determine the corresponding design resistances, provided no values are given in national regulations of the member state in which the products of this ETA are used. That leads to the following values:

Example: for one Person: $N_{F,d} = N_{F,k} \cdot \gamma_F = 6\ kN \cdot 1.5 = 9\ kN$

for two Persons: $N_{F,d} = N_{F,k} \cdot \gamma_F = (6+1)\ kN \cdot 1.5 = 10.5\ kN$

for three Persons: $N_{F,d} = N_{F,k} \cdot \gamma_F = (6+2)\ kN \cdot 1.5 = 12\ kN$