

# Technische Information Tauchmotor- rührwerke/Rezirkulationspumpen

## Zuordnung der Befestigungssätze Teil 1

# wilo

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| Typ                   | Anz. | Bewehrter und unbewehrter Normalbeton EN206-1:2000: C20/25 - C50/C60 | Bemerkungen                |
|-----------------------|------|--|----------------------------|
| AVU 50 / 60           | 1    | BS 2<br><b>6011006</b>   | für Führungskonsole (oben) |
|                       |      |  | für Bodenlager             |
| AVU 80 bis 140        | 1    | BS 7<br><b>6010954</b>   | für Führungskonsole (oben) |
|                       | 1    | BS 3<br><b>6011005</b>   | für Bodenlager             |
| AVMS                  | 3    | BS 7<br><b>6010954</b>   | für Bodenbefestigung       |
| AVUS / AVUS1          | 1    | BS 1<br><b>6011007</b>   | für Bodenbefestigung       |
| AVUSHH / AVUSHH1      | 1    | BS 7<br><b>6010954</b>   | für je einen Wandhalter    |
|                       | 1    | BS 1<br><b>6011007</b>   | für Bodenbefestigung       |
| AVMSH                 | 1    | BS 3<br><b>6011005</b>   | für Führungskonsole (oben) |
|                       | 3    | BS 7<br><b>6010954</b>   | für Bodenbefestigung       |
| AVMH / AVUSH / AVUSH1 | 1    | BS 3<br><b>6011005</b>   | für Führungskonsole (oben) |
|                       | 1    | BS 1<br><b>6011007</b>   | für Bodenbefestigung       |
| AVR                   | 1    | BS 2<br><b>6011006</b>   | für Führungsrohr           |
| AVRD                  | 1    | BS 2<br><b>6011006</b>   | für Führungsrohr           |
|                       | 1    | BS 15<br><b>6010965</b>  | für Distanzstück           |

# Technische Information Tauchmotor- rührwerke/Rezirkulationspumpen

## Zuordnung der Befestigungsätze Teil 2

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|--|------|--|--|
|  |      | Befestigungsatz / SAP#   |  |
| AVRZ                                       | 1    | <b>3 / 6011005</b>   | für Führungsrohr   |
| AVRZD                                      | 1    | <b>3 / 6011005</b>   | für Führungsrohr   |
|  | 1    | <b>16 / 6010964</b>  | für Distanzstück   |
| Aufnahmetasche für Hilfsaushebevorrichtung | 1    | <b>1 / 6011007</b>   | für Boden- oder Wandbefestigung<br>Beton   |
|  |      | <b>6 / 6011009</b>   | für Boden- oder Wandbefestigung<br>Stahlplatten                                  |
| Aufnahmetasche für Z, ZT1, ZT2             | 1    | <b>18 / 6011108</b>  | für Boden- oder Wandbefestigung<br>Beton   |
|  |      | <b>30 / 6087056</b>  | für Boden- oder Wandbefestigung<br>Stahlplatten                                  |
| Kabelführung<br>Seil / Beckenrand          | 1    | <b>19 / 6011093</b>  | Alternative zu BS 4 *  |
| Haltewinkel für<br>Wandmontage             | 1    | <b>3 / 6011005</b>   | für TR 14 / 16 / 21 / 28<br>TR 20-1 / 28-1 / TRE 20                              |
| Haltewinkel für<br>Bodenmontage            | 1    | <b>3 / 6011005</b>   | für TR 14 / 16 / 21 / 28 / 36 / 40<br>TR 20-1 / 28-1 / TRE 20                    |
| Haltewinkel für<br>Bodenmontage            | 1    | <b>2 / 6011005</b><br><b>7 / 6010954</b><br><b>10 / 6010974</b><br><b>20 / 6011065</b> | für TR 22 / 36 / 40<br>TR 30-1 / 40-1 / 50-2 / 50-3<br>TRE 30 / 40 / 50-2 / 50-3 |
| Haltewinkel für<br>Rohrmontage 1 1/4"      | 3    | <b>4 / 6011010</b>   | für TR 14 / 16 / 21 / 28<br>TR 20-1 / TRE 20                                     |
| Haltewinkel für Rohrmontage<br>2" / 50x50  | 1    | <b>3 / 6011005</b>   | für TR 14 / 16 / 21 / 28<br>TR 20-1 / 28-1 / TRE 20                              |
| Bodenmontage                               | 1    | <b>7 / 6010954</b>   | für TR 22 / 25 / 36  |
| Wandmontage                                | 1    | <b>2 / 6011006</b>   | für TR 22 / 25 / 36 / 40<br>TR 30-1 / 40-1 / TRE 30 / 40                         |
| Stativ – Bodenbefestigung<br>Uniprop 2     | 1    | <b>1 / 6011007</b>   | für TR 50-2 / 60-2 / 75-2 / 90-2<br>TR 50-3 / 60-3                               |

**Technische Information  
Einhängevorrichtungen /  
Kupplungsfuß**

**Zuordnung der Befestigungssätze Teil 3**

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| <b>Bezeichnung</b> | <b>Anzahl</b> | <b>Befestigungssatz</b> | <b>SAP</b> |
|--------------------|---------------|-------------------------|------------|
| G 2 / 1 R          | 1             | 9                       | 6010975    |
| DN 36 / 1 R        | 1             | 9                       | 6010975    |
| DN 50 / 1 R        | 1             | 9                       | 6010975    |
| DN 50 / 2 RK       | 1             | 11                      | 6010973    |
| DN 65 / 2 RK       | 1             | 11                      | 6010973    |
| DN 80 N / 1 TK     | 1             | 11                      | 6010973    |
| DN 80 / 1 R        | 1             | 9                       | 6010975    |
| DN 80 / 2 RK       | 1             | 9                       | 6010975    |
| DN 100 / 1 TK      | 1             | 11                      | 6010973    |
| DN 100 / 1 R       | 1             | 9                       | 6010975    |
| DN 100 / 2 RK      | 1             | 9                       | 6010975    |
| DN 100S / 2 RK     | 1             | 11                      | 6010973    |
| DN 150 / 1 R       | 1             | 10                      | 6010974    |
| DN 150 L / 2 RK    | 1             | 10                      | 6010974    |
| DN 150 S / 2 RK    | 1             | 21                      | 6011050    |
| DN 200 / 2 R       | 1             | 12                      | 6010972    |
| DN 250 / 2 R       | 1             | 12                      | 6010972    |
| DN 250 S / 2 RK    | 1             | 28                      | 6071290    |
| DN 300 N / 2 RK    | 1             | 23                      | 6038025    |
| DN 350 / 2 RK      | 1             | 23                      | 6038025    |
| DN 400 / 2 RK      | 1             | 23                      | 6038025    |
| DN 400 S / 2 RK    | 1             | 24                      | 6063016    |
| DN 500 N / 2 RK    | 1             | 23                      | 6038025    |
| DN 500 / 2 RK      | 1             | 24                      | 6063016    |
| DN 600 N / 2 RK    | 1             | 23                      | 6038025    |
| DN 600 / 2 RK      | 1             | 24                      | 6063016    |

# Technische Information Einhängevorrichtungen / Schachtbefestigung

## Zuordnung der Befestigungssätze Teil 4

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| Bezeichnung     | Anzahl |                                       |                                       |
|-----------------|--------|---------------------------------------|---------------------------------------|
| G 2 / 1 R       | 2      | 6002027 1 x Dübel D 12 PA GD 12*      |                                       |
| DN 36 / 1 R     |        |                                       |                                       |
| DN 50 / 1 R     |        |                                       |                                       |
| DN 80 N / 1 TK  |        |                                       |                                       |
| DN 80 / 1 R     |        |                                       |                                       |
| DN 80 / 2 RK    |        |                                       |                                       |
| DN 100 / 1 TK   |        |                                       |                                       |
| DN 100 / 1 R    |        |                                       |                                       |
| DN 100 / 2 RK   |        |                                       |                                       |
| DN 100S / 2 RK  |        |                                       | 6002349 1 x Schraube M10 x 70 DIN 571 |
| DN 150 / 1 R    |        |                                       | 6002140 1 x Scheibe 10,5 DIN 7349     |
| DN 150 L / 2 RK |        |                                       |                                       |
| DN 150 S / 2 RK |        |                                       |                                       |
| DN 200 / 2 R    |        |                                       |                                       |
| DN 250 / 2 R    |        |                                       |                                       |
| DN 250 S / 2 RK |        |                                       |                                       |
| DN 350 / 2 RK   | 3      | 6002026 1 x Dübel D 14 PA A 100*      |                                       |
| DN 400 / 2 RK   |        |                                       |                                       |
| DN 300 N / 2 RK |        |                                       |                                       |
| DN 400S / 2RK   |        |                                       |                                       |
| DN 500 N / 2 RK | 4      | 6002348 1 x Schraube M12 x 70 DIN 571 |                                       |
| DN 500 / 2 RK   |        |                                       |                                       |
| DN 600 N / 2 RK |        |                                       |                                       |
| DN 600 / 2 RK   |        |                                       | 6002523 1 x Scheibe 13 DIN 7349       |

# Technische Information

## Übersicht

### Befestigungssätze Teil 1 S.1

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| A4  |   |   |  |
|---|---|---|--|
| <b>Befestigungssatz 1-4xM16 Beton A4</b><br>SAP-Nr.6011007      | 4x Mörtelpatrone HVU2 M16x125<br>4x Ankerstange HAS-U A4 M16x190                            | <b>Befestigungssatz 2-4xM12 Beton A4</b><br>SAP-Nr.6011006      | 4x Mörtelpatrone HVU2 M12x110<br>4x Ankerstange HAS-U A4 M12x160   |
| <b>Befestigungssatz 3-2xM12 Beton A4</b><br>SAP-Nr.6011005      | 2x Mörtelpatrone HVU2 M12x110<br>2x Ankerstange HAS-U A4 M12x160                            | <b>Befestigungssatz 4-1xD.10 Beton A4</b><br>SAP-Nr.6011010     | 1x Universaldübel HUD 14*<br>1x Sechskant-Holzschraube 10x70<br>1x Scheibe 10,5 DIN7349                                |
| <b>Befestigungssatz 5-2xDSM12 Beton A4</b><br>SAP-Nr.6011004    | 2x Durchsteckanker HST-R M12-20*<br>2x Federring 12 DIN7980                                 | <b>Befestigungssatz 6-4xM16x70 Stahl A4</b><br>SAP-Nr.6011009   | 4x Schraube M16x70 DIN 933<br>4x Sechskantmutter M16 DIN934<br>4x Scheibe A17 DIN125                                   |
| <b>Befestigungssatz 7-2xM16 Beton A4</b><br>SAP-Nr.6010954      | 2x Mörtelpatrone HVU2 M16x125<br>2x Ankerstange HAS-U A4 M16x190                            | <b>Befestigungssatz 8-2xM12x70 Stahl A4</b><br>SAP-Nr.6010959   | 2x Schraube M12x70DIN 933<br>2x Scheibe 13 DIN7349<br>2x Sechskantmutter selbstsi.M12                                  |
| <b>Befestigungssatz 9-3xM12S Beton A4</b><br>SAP-Nr.6010975     | 3x Mörtelpatrone HVU2 M12x110<br>3x Ankerstange HAS-U A4 M12x160<br>3x Scheibe 13 DIN7349   | <b>Befestigungssatz 10-3xM16S Beton A4</b><br>SAP-Nr.6010974    | 3x Mörtelpatrone HVU2 M16x125<br>3x Ankerstange HAS-U A4 M16x190<br>3x Scheibe 17 DIN7349                              |
| <b>Befestigungssatz 11-4xM12S Beton A4</b><br>SAP-Nr.6010973    | 4x Mörtelpatrone HVU2 M12x110<br>4x Ankerstange HAS-U A4 M12x160<br>4x Scheibe 13 DIN7349   | <b>Befestigungssatz 12-4xM16S Beton A4</b><br>SAP-Nr.6010972    | 4x Mörtelpatrone HVU2 M16x125<br>4x Ankerstange HAS-U A4 M16x190<br>4x Scheibe 17 DIN7349                              |
| <b>Befestigungssatz 13-3xM12 Beton A4</b><br>SAP-Nr.6010981     | 3x Mörtelpatrone HVU2 M12x110<br>3x Ankerstange HAS-U A4 M12x160                            | <b>Befestigungssatz 14-3xM16 Beton A4</b><br>SAP-Nr.6010980     | 3x Mörtelpatrone HVU2 M16x125<br>3x Ankerstange HAS-U A4 M16x190   |
| <b>Befestigungssatz 15-4xM12x120 Stahl A4</b><br>SAP-Nr.6010965 | 4x Schraube M12x120 DIN 933<br>8x Scheibe B13 DIN125<br>4x Sechskantmutter selbstsi. M12    | <b>Befestigungssatz 16-2xM12x120 Stahl A4</b><br>SAP-Nr.6010964 | 2x Schraube M12x120 DIN 933<br>4x Scheibe B13 DIN125 A4<br>2x Sechskantmutter selbstsi.M12                             |
| <b>Befestigungssatz 17-2xM20S Beton A4</b><br>SAP-Nr.6010962    | 2x Mörtelpatrone HVU2 M20x170<br>2x Ankerstange HAS-E-R M20x170-48<br>2x Scheibe 21 DIN7349 | <b>Befestigungssatz 18-4xM20S Beton A4</b><br>SAP-Nr.6011108    | 4x Mörtelpatrone HVU2 M20x170<br>4x Ankerstange HAS-U A4 M20x240<br>Scheibe 21 DIN7349                                 |
| <b>Befestigungssatz 19-1xM8S Beton A4</b><br>SAP-Nr.6011093     | 1x Mörtelpatrone HVU2 M8x80<br>1x Ankerstange HSR M8x80/14<br>1x Scheibe 8,4 DIN 7349       | <b>Befestigungssatz 20-1xM16-l Beton A4</b><br>SAP-Nr.6011065   | 1x Mörtelpatrone HVU2 M20x170<br>1x Ankerstange HIS-RN M16x170<br>1x Sechskantschraube M16x45<br>1x Scheibe 17 DIN7349 |
| <b>Befestigungssatz 21-4xM16L Beton A4</b><br>SAP-Nr.6011050    | 4x Mörtelpatrone HVU2 M16x125<br>4x Ankerstange HAS-U A4 M16x260                            | <b>Befestigungssatz 22-2xM16x70 Stahl A4</b><br>SAP-Nr.6000710  | 2x Schraube M16x70 DIN 933<br>2x Scheibe B17 DIN125<br>2x Sechskantmutter selbstsi.M16                                 |
| <b>Befestigungssatz 23-4xM24 Beton A4</b><br>SAP-Nr.6038025     | 4x Mörtelpatrone HVU2 M24x210<br>4x Ankerstange HAS -U A4<br>M24x 300                       | <b>Befestigungssatz 24-6xM24 Beton A4</b><br>SAP-Nr. 6063016    | 6x Mörtelpatrone HVU2 M24x210<br>6x Ankerstange HAS -U A4<br>M24x 300  |

# Technische Information

## Übersicht

### Befestigungssätze Teil 1 S.2

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|   |   |
|---|---|
| <b>Befestigungssatz 28-4xM20 Beton A4</b><br>4x Mörtelpatrone HVU2 M20x170<br>4x Ankerstange HAS-E-R<br>M20x170-68 (A4)<br>SAP-Nr. 6071290                                    | <b>Befestigungssatz 30-4xM20x100 Stahl A4</b><br>4x Schraube M20x100 DIN 933<br>8x Scheibe A21 DIN 7349<br>4x Sechskantmutter M20 DIN 985<br>SAP-Nr.6087056                   |
| <b>Befestigungssatz 31 4xM16 Beton A4</b><br>4x Mörtelpatrone HIT-HY 200-A<br>M16x175<br>SAP-Nr. xy<br>Material: AISI 316 ??<br>4x Ankerstange HIT-Z-R<br>M16x175 (A4)        |   |
| <b>St., verzinkt</b>  |   |
| <b>Befestigungssatz 25-4xM20 Beton Stvz</b><br>4x Mörtelpatrone HVU2 M20x170<br>4x Ankerstange HAS-E<br>M20x170-68 (Stvz)<br>4x Scheibe 21 DIN7349 (Stvz)<br>SAP-Nr. 6065945  | <b>Befestigungssatz 26-4xM24 Beton Stvz</b><br>4x Mörtelpatrone HVU2 M24x210<br>4x Ankerstange HAS-U 5.8<br>M24x450 (Stvz)<br>4x Scheibe 25 DIN7349 (Stvz)<br>SAP-Nr. 6065943 |
| <b>Befestigungssatz 27-4xM16 Beton Stvz</b><br>4x Mörtelpatrone HVU2 M16x125<br>4x Ankerstange HAS-E<br>M16x125-108 (Stvz)<br>4x Scheibe 17 DIN7349 (Stvz)<br>SAP-Nr. 6065944 |   |
| <b>Hohe Korrosionsbeständigkeit</b>   |   |
| <b>Befestigungssatz 29-3xM12 Beton A5</b><br>3x Mörtelpatrone HVU2 M12x110<br>3x Ankerstange HAS-E-HCR<br>M12x110-28 A5<br>3x Scheibe 13 DIN7349 A5<br>SAP-Nr.6074948         |   |
| <b>Hohe Korrosionsbeständigkeit</b>   | + zulässig für gerissenen Beton   |
| <b>Befestigungssatz 3-2xM12 Beton A5</b><br>2x Mörtelpatrone HVU2-TZ M12<br>2x Ankerstange HAS-HCR-TZ<br>M12x95/25 A5<br>SAP-Nr. 6071206                                      | <b>Befestigungssatz 3-2xM12 Beton A5</b><br>2x Mörtelpatrone HVU2-TZ M16<br>2x Ankerstange HAS-HCR-TZ<br>M16x105/30 A5<br>SAP-Nr. 6071205                                     |

\* Nach GWT-Richtlinie sind in Österreich zur Beckenmontage nur Verbundanker zugelassen!  
 Ggf. alternativen HAS-Befestigungssatz verwenden.

# Technische Information Tauchmotor- Rührwerke/Rezirkulationspumpen

## Übersicht Kabelführungen

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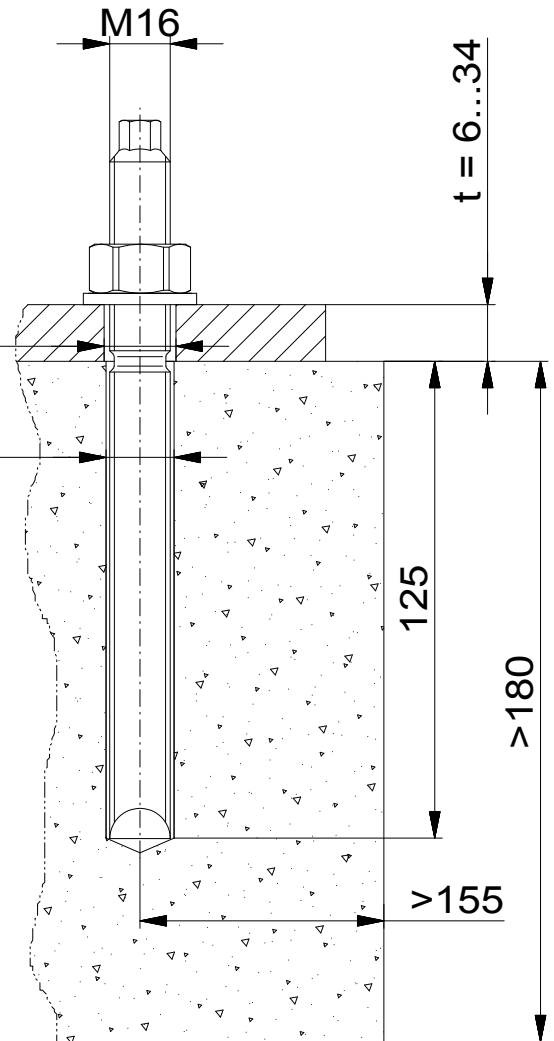
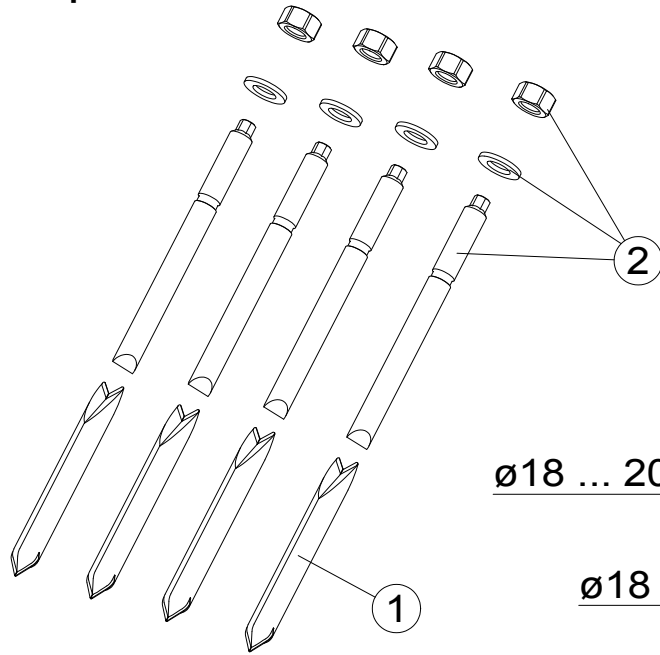
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|  |   |
|--|---|
| <p><b>Seil-1</b><br/>Artikel-Nr. 6010940</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>6x Kabelhalter TR Gr.1 (Ø10-17mm)</p>                                       | <p><b>Beckenrand-1</b><br/>Artikel-Nr. 6010947</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>1x Leitungshalter Gr. 1 (Ø10-17mm)<br/>1x Karabinerhaken 50x5 V4A<br/>10x Kabelbinder 337x8</p>  |
| <p><b>Seil-2</b><br/>Artikel-Nr. 6010939</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>6x Kabelhalter TR Gr.2 (Ø17-26mm)</p>                                       | <p><b>Beckenrand-2</b><br/>Artikel-Nr. 6010946</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>1x Leitungshalter Gr. 2 (Ø17-26mm)<br/>1x Karabinerhaken 50x5 V4A<br/>10x Kabelbinder 337x8</p>  |
| <p><b>Seil-3</b><br/>Artikel-Nr. 6010948</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>6x Kabelhalter TR Gr.3 (Ø26-36mm)</p>                                       | <p><b>Beckenrand-3</b><br/>Artikel-Nr. 6011029</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>1x Leitungshalter Gr. 3 (Ø26-36mm)<br/>1x Karabinerhaken 50x5 V4A<br/>10x Kabelbinder 337x8</p>  |
| <p><b>Seil-1+3</b><br/>Artikel-Nr. 6061713</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>6x Kabelhalter TR Gr.3 (Ø26-36mm)<br/>6x Leitungsklemme Gr.1 (Ø10-17)</p> | <p><b>Beckenrand-1+3</b><br/>Artikel-Nr. 6061714</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>1x Leitungshalter Gr. 3 (Ø26-36mm)<br/>1x Leitungshalter Gr. 1 (Ø10-17mm)<br/>1x Karabinerhaken 50x5 V4A<br/>10x Kabelbinder 337x8</p> |
| <p><b>Seil-2+3</b><br/>Artikel-Nr. 6061712</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>6x Kabelhalter TR Gr.3 (Ø26-36mm)<br/>6x Leitungsklemme Gr.2 (Ø17-26)</p> | <p><b>Beckenrand-1+3</b><br/>Artikel-Nr. 6061715</p> <p>1x Kabelbefestigung A4<br/>1x Befestigungssatz 4<br/>1x Leitungshalter Gr. 3 (Ø26-36mm)<br/>1x Leitungshalter Gr. 2 (Ø17-26mm)<br/>1x Karabinerhaken 50x5 V4A<br/>10x Kabelbinder 337x8</p> |
|  |   |

1 Europäische Technische Bewertung  
European Technical Assessment

3 ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete

EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 2    | 4        | Ankerstange / anchor bar HAS-R 6K | M16x125/38 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge  | HVU2 M16x125  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011007 | TYPE:<br>4xM16 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

|  |  |  |
|--|--|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |  |  |
|--|--|--|

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>1,31 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |  |  |               |  |
|----------------------------|--|--|---------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:2 |  |
|----------------------------|--|--|---------------|--|

|  |  |  |  |  |
|--|--|--|--|--|
| DESIGNATION:<br>fixation set 1 A4<br>Befestigungssatz 1 A4 |  |  |  |  |
|--|--|--|--|--|

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

**wilo**

REPLACEMENT FOR: 03A.05.001.02  
NUMBER.INDEX: PAGE: 1/1

03A.05.001.03

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1

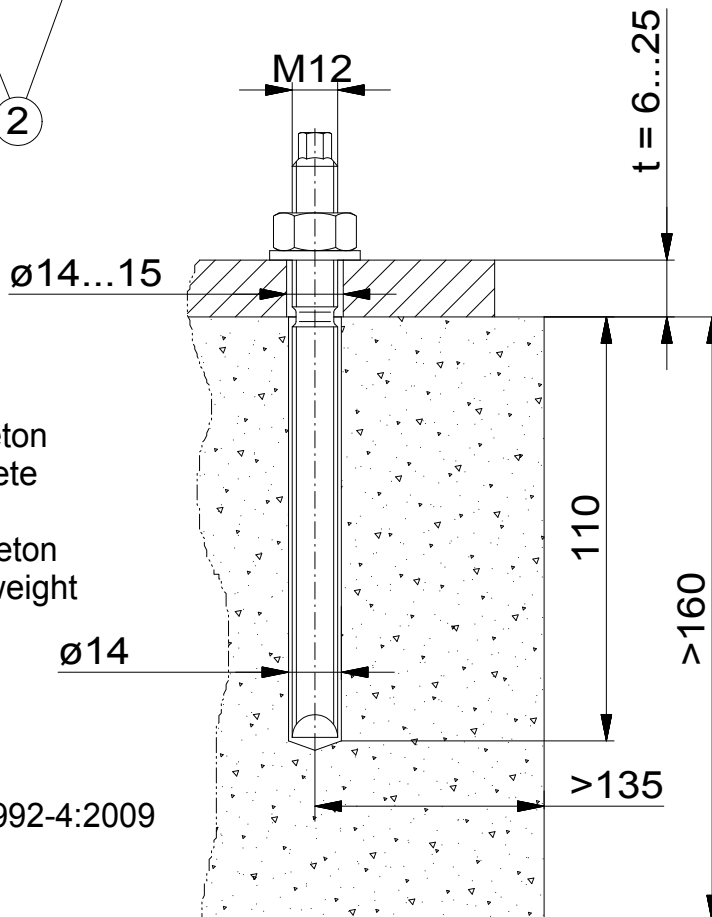
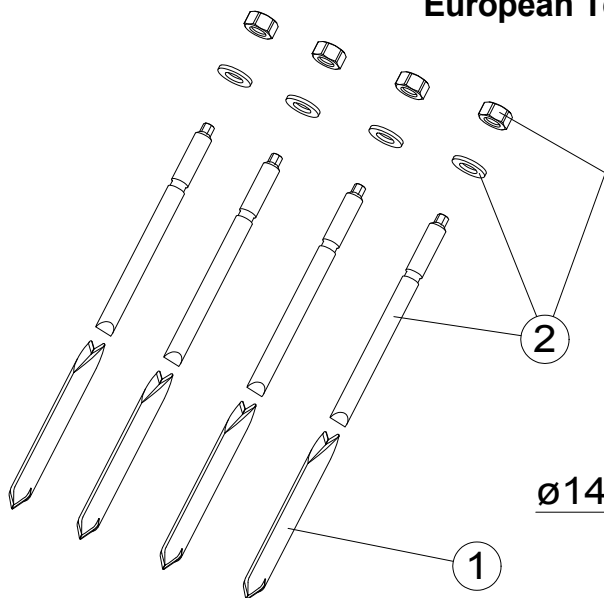
2

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Europäische Technische Bewertung  
European Technical Assessment

ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 2    | 4        | Ankerstange / anchor bar HAS-R 6K | M12x110/28 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge  | HVU2 M12x110  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011006 | TYPE:<br>4xM12 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,72 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |               |  |
|----------------------------|---------------|--|
| MATERIAL:<br>A4-70/AISI316 | SCALE:<br>1:2 |  |
|----------------------------|---------------|--|

DESIGNATION:  
**fixation set 2 A4**  
**Befestigungssatz 2 A4**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

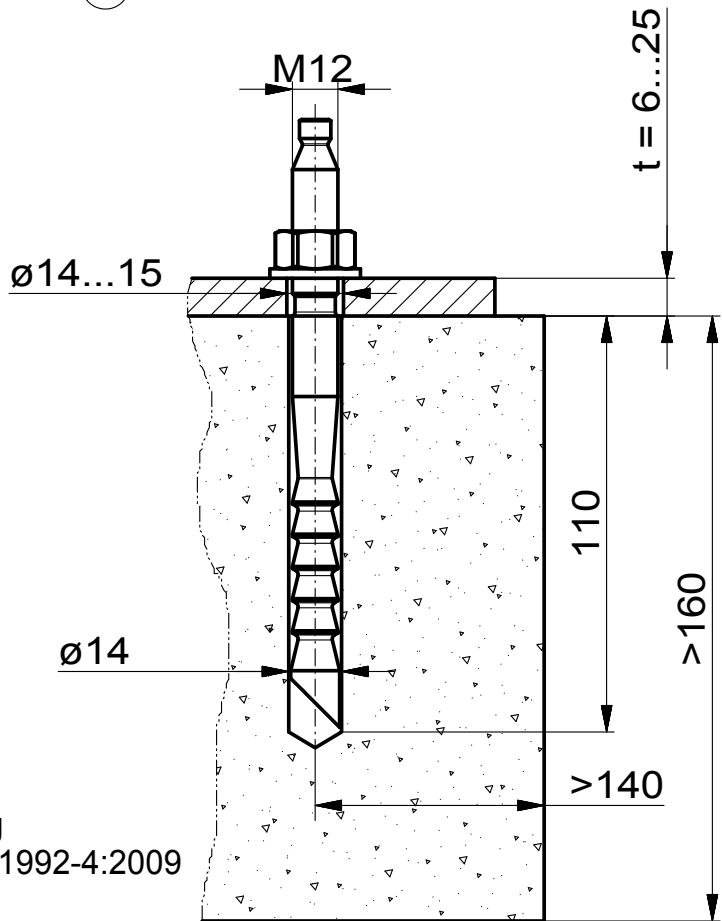
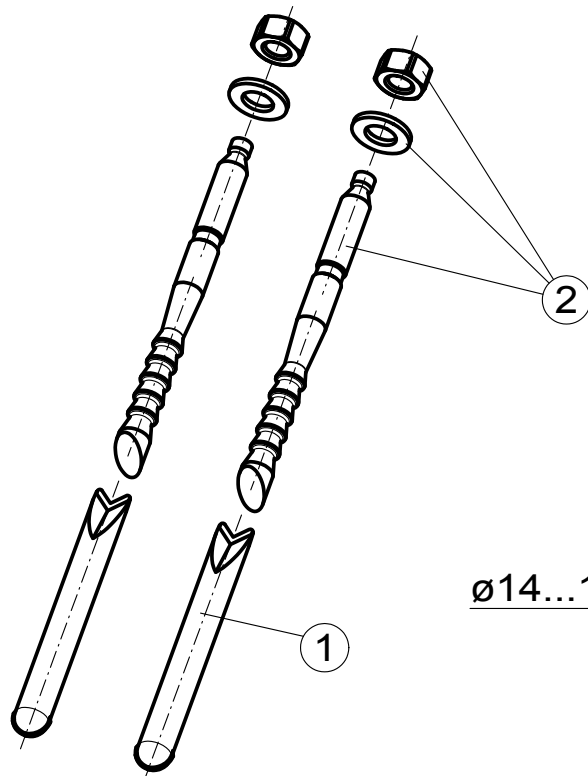
**wilo**

REPLACEMENT FOR: 03A.05.002.02  
NUMBER.INDEX: PAGE: 1/1

**03A.05.002.03**

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Für gerissenen und ungerissenen Beton  
 For fissured and fissure free concrete  
 EN206: 2000-12 >C20/25 <C50/60

Lastberechnungen nach  
 load capacity calculation according  
 technical report TR 029 + CEN/TS 1992-4:2009

**Montageblatt für Verbundanker beachten!**  
**Regard installation instruction for adhesive anchors!**

|      |          |                                     |              |
|------|----------|-------------------------------------|--------------|
| 2    | 2        | Ankerstange / anchor bar HAS-HCR-TZ | M12x95/25 A5 |
| 1    | 2        | Mörtelpatrone / mortar cartridge    | HVU-TZ M12   |
| Pos. | Anz.-pc. | Bezeichnung - Designation:          |              |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6071206 | TYPE:<br>2xM12 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
 DIN 7167

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,32 kg         | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>1.4462/DUPLEX |             |                         | SCALE:<br>1:2                                 |                                   |

DESIGNATION:  
 fixation set 3 A5  
 Befestigungssatz 3 A5

|                                  |           |
|----------------------------------|-----------|
| REPLACEMENT FOR: -               |           |
| NUMBER.INDEX:<br>03A.05.003-1.01 | PAGE: 1/1 |
|                                  |           |

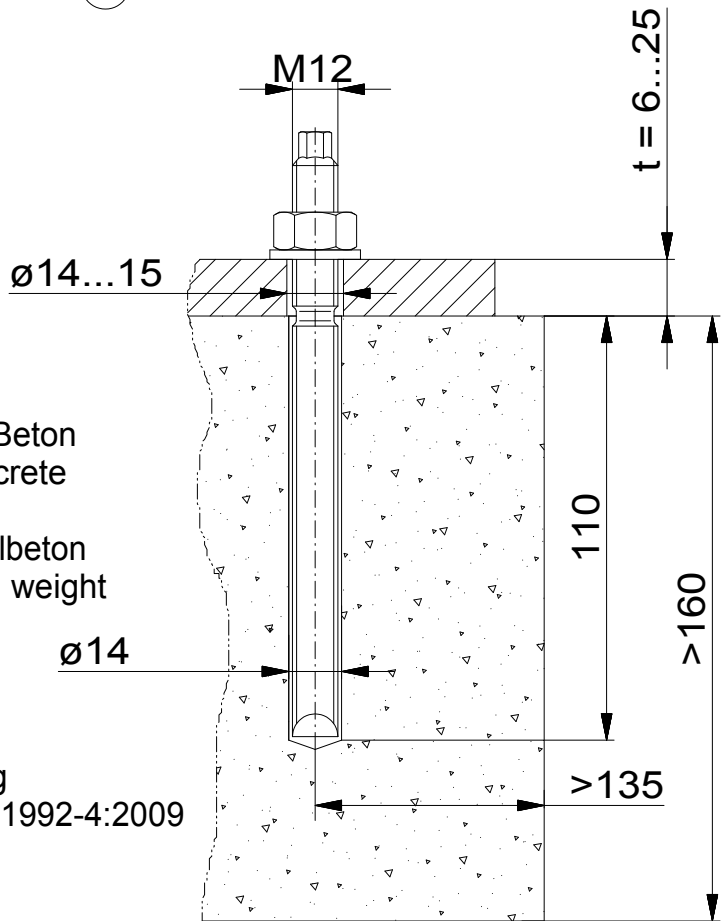
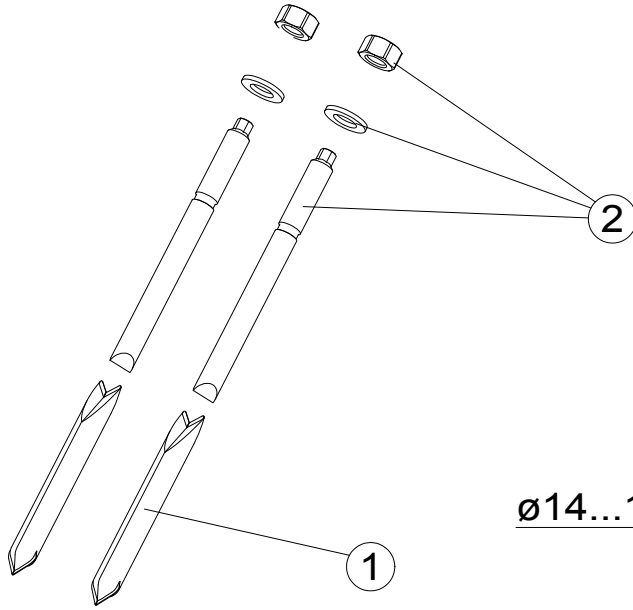
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|----------|------------|------------|------------|-------|
| 01       | 1440019    | 2014-01-21 | P. Rietsch |       |
| IND.     | TN NO.     | DATE       | NAME       | SIGN. |
| RELEASE: | 2014-01-21 | H. Spörl   |            |       |

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**Europäische Technische Bewertung**  
**European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete

EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 2    | 2        | Ankerstange / anchor bar HAS-R 6K | M12x110/28 A4 |
| 1    | 2        | Mörtelpatrone / mortar cartridge  | HVU2 M12x110  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011005 | TYPE:<br>2xM12 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,34 kg         | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2                                 |                                   |

DESIGNATION:  
**fixation set 3 A4**  
**Befestigungssatz 3 A4**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

**wilo**

REPLACEMENT FOR: 03A.05.003.02  
NUMBER.INDEX: PAGE: 1/1

**03A.05.003.03**

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1

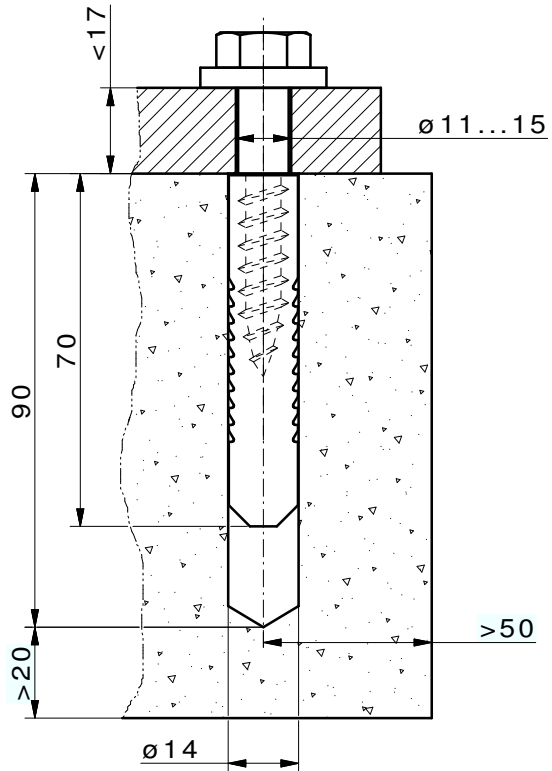
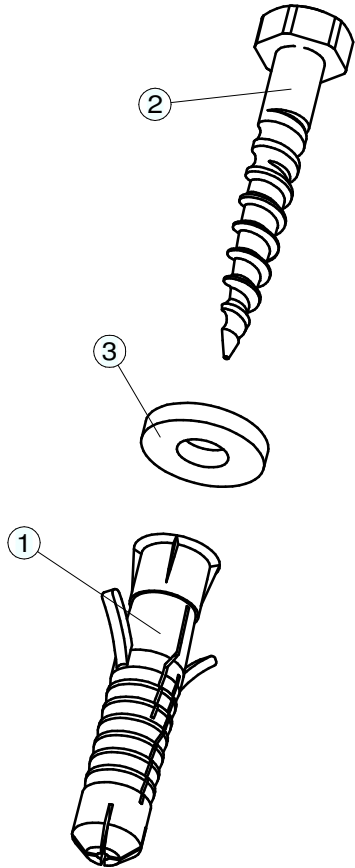
2

3

4

Nach GWT-Richtlinien in Österreich nicht zugelassen  
Ersatz: BS19

According to GWT directives not approved for Austria  
Replacement: Fixation set 19



EN206: 2000-12 >C15

|      |          |                            |        |
|------|----------|----------------------------|--------|
| 3    | 1        | Scheibe DIN7349            | 10,5   |
| 2    | 1        | Sechskant-Holzschraube     | 10x70  |
| 1    | 1        | Universaldübel             | HUD 14 |
| Pos. | Anz.-pc. | Bezeichnung - Designation: |        |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011010 | TYPE:<br>10x70 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

|  |
|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |
|--|

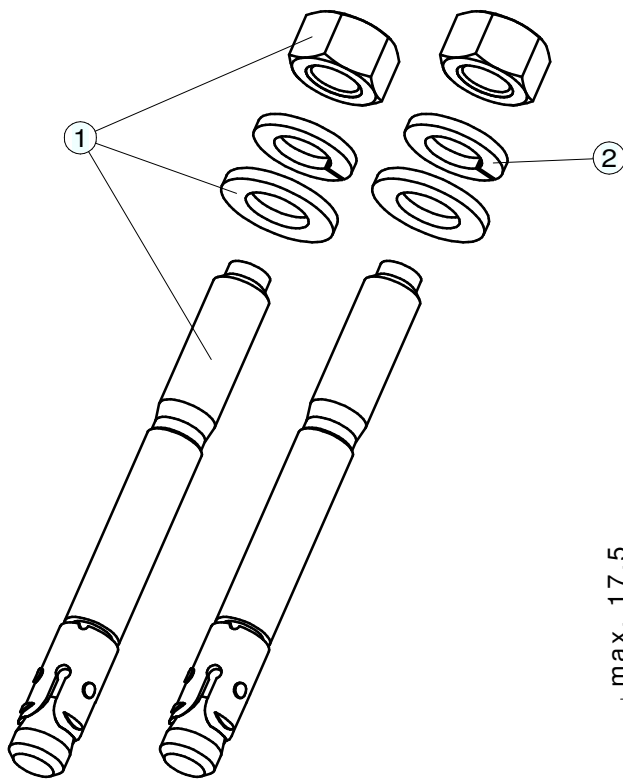
|                                   |             |                         |   |                                   |
|-----------------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,06 kg                | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70 / AISI316 - PA |             |                         | SCALE:<br>1:1,5                               |                                   |

|  |  |  |  |  |
|--|--|--|--|--|
| DESIGNATION:<br>fixation set 4<br>Befestigungssatz 4 |  |  |  |  |
|--|--|--|--|--|

|          |            |            |            |       |
|----------|------------|------------|------------|-------|
| 01       | 1240123    | 2012-03-30 | C. Worst   |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch |       |
| IND.     | TN NO.     | DATE       | NAME       | SIGN. |
| RELEASE: | 2013-04-19 | P. Rietsch |            |       |

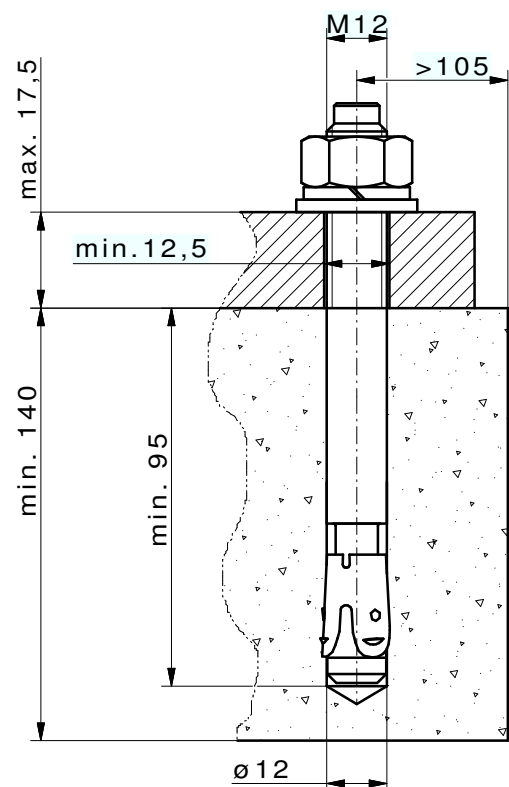


|                                |           |
|--------------------------------|-----------|
| REPLACEMENT FOR: 03A.05.004.01 |           |
| NUMBER.INDEX:                  | PAGE: 1/1 |
| <b>03A.05.004.02</b>           |           |



Für ungerissenen Beton  
 For fissure free concrete  
 EN206: 2000-12 >C20/25 <C50/60

Herstellervorgaben beachten  
 regard manufacturer informations



|      |          |                            |            |
|------|----------|----------------------------|------------|
| 2    | 2        | Federring 12               | DIN7980 A4 |
| 1    | 2        | Durchsteckanker HST-R      | M12/20 A4  |
| Pos. | Anz.-pc. | Bezeichnung - Designation: |            |

|                    |                             |                                 |
|--------------------|-----------------------------|---------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011004 | TYPE:<br>2xDSM12 Beton/concrete |
|--------------------|-----------------------------|---------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
 DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,22 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |  |  |                 |  |
|----------------------------|--|--|-----------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:1,5 |  |
|----------------------------|--|--|-----------------|--|

DESIGNATION:  
**fixation set 5 A4**  
**Befestigungssatz 5 A4**

|          |            |            |            |       |
|----------|------------|------------|------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst   |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch |       |
| IND.     | TN NO.     | DATE       | NAME       | SIGN. |
| RELEASE: | 2013-04-19 | P. Rietsch |            |       |



REPLACEMENT FOR: 03A.05.005.01  
 NUMBER.INDEX:      PAGE: 1/1  
**03A.05.005.02**

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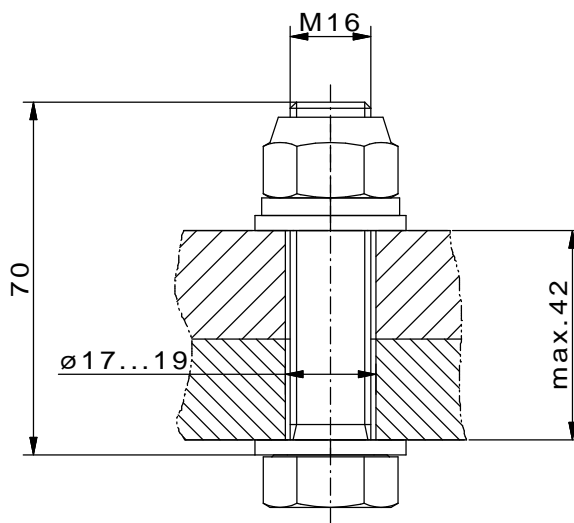
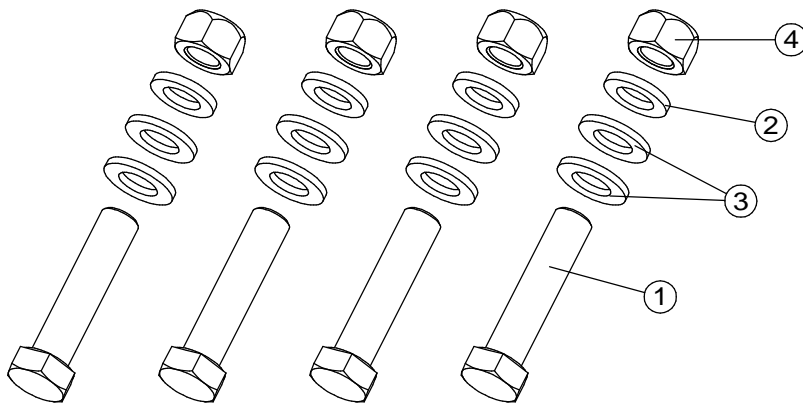
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**Material: A4 / Zugfestigkeit: 70**  
**material: AISI 316 / tensile strength: 70**

| Pos. | Anz.-pc. | Bezeichnung - Designation:  |        |
|------|----------|-----------------------------|--------|
| 4    | 4        | Mutter/nut DIN985 A4        | M16    |
| 3    | 8        | Scheibe/washer DIN7349 A4   | 17     |
| 2    | 4        | Scheibe/washer DIN125 A4    | A17    |
| 1    | 4        | Schraube/screw DIN933 A4-70 | M16x70 |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011009 | TYPE:<br>4xM16x70 Stahl/steel |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,74 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

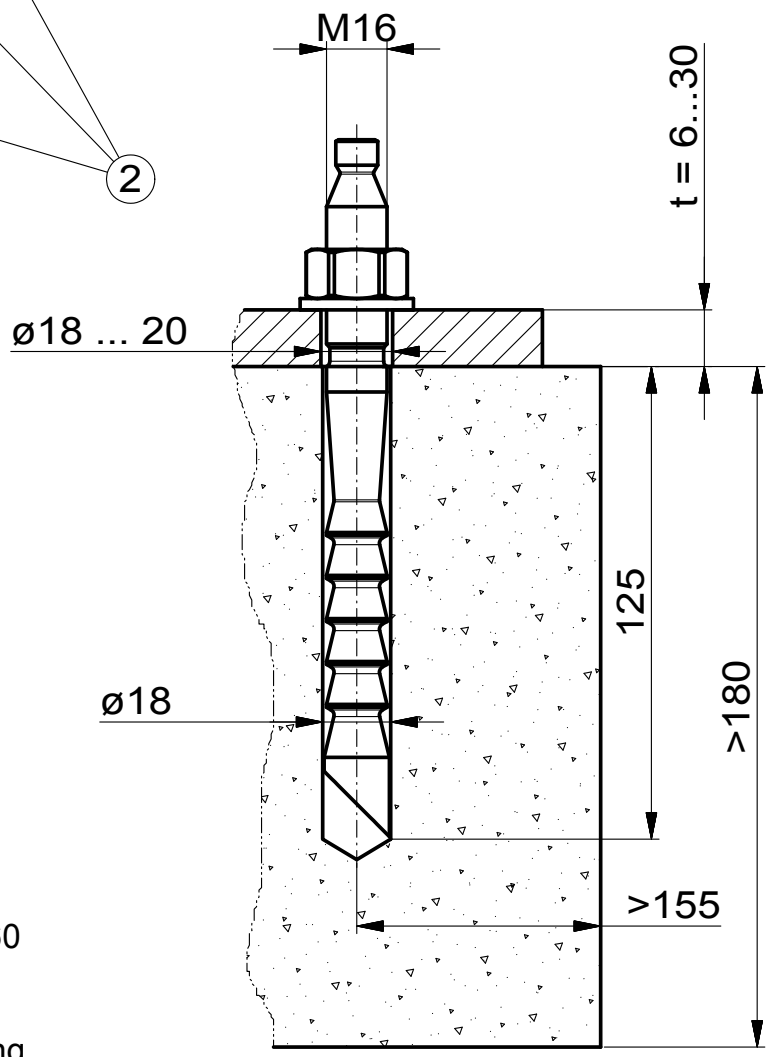
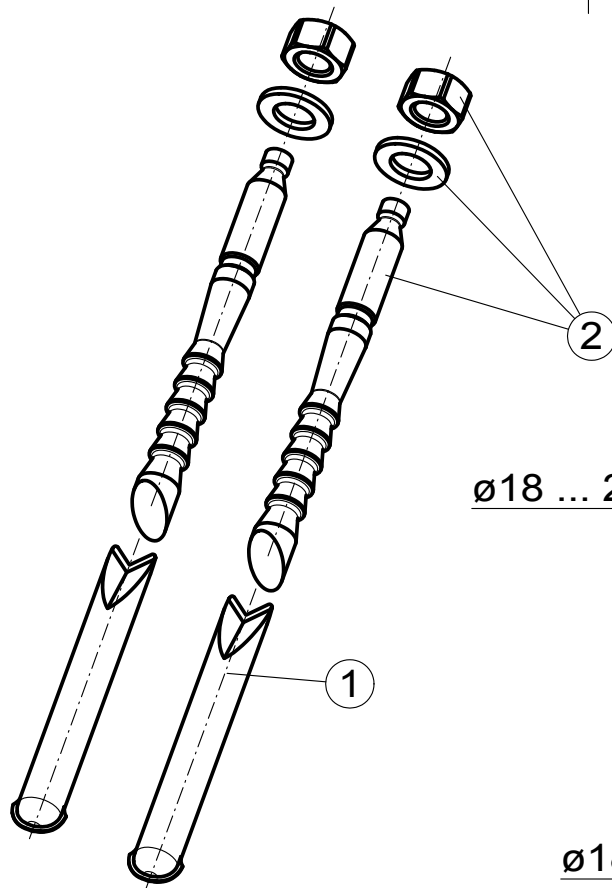
|                            |  |  |                 |  |
|----------------------------|--|--|-----------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:1,5 |  |
|----------------------------|--|--|-----------------|--|

DESIGNATION:  
**fixation set 6 A4**  
**Befestigungssatz 6 A4**

|          |         |            |            |       |
|----------|---------|------------|------------|-------|
| 01       | 1240123 | 2012-03-28 | C. Worst   |       |
| 02       | 1340203 | 2013-04-12 | T. Rietsch |       |
| 03       | 1840400 | 2018-10-26 | N. Porsch  |       |
| 04       | 1940034 | 2019-02-12 | N. Porsch  |       |
| IND.     | TN NO.  | DATE       | NAME       | SIGN. |
| RELEASE: |         | 2019-02-12 | P. Rietsch |       |



|                      |           |
|----------------------|-----------|
| REPLACEMENT FOR: .   | PAGE: 1/1 |
| NUMBER.INDEX:        |           |
| <b>03A.05.006.04</b> |           |



Für gerissenen und ungerissenen Beton  
 For fissured and fissure free concrete  
 EN206: 2000-12 >C20/25 <C50/60

Lastberechnungen nach  
 load capacity calculation according  
 technical report TR 029 + CEN/TS 1992-4:2009

**Montageblatt für Verbundanker beachten!**  
**Regard installation instruction for adhesive anchors!**

|      |          |                                     |               |
|------|----------|-------------------------------------|---------------|
| 2    | 2        | Ankerstange / anchor bar HAS-HCR-TZ | M16x105/30 A5 |
| 1    | 2        | Mörtelpatrone / mortar cartridge    | HVU-TZ M16    |
| Pos. | Anz.-pc. | Bezeichnung - Designation:          |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6071205 | TYPE:<br>2xM16 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
 DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,65 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                    |             |                         | MATERIAL:<br>1.4462 / DUPLEX                  | SCALE:<br>1:2                     |

fixation set 7 A5  
 Befestigungssatz 7 A5



REPLACEMENT FOR: -  
 NUMBER.INDEX: | PAGE: 1/1

03A.05.007-1.01

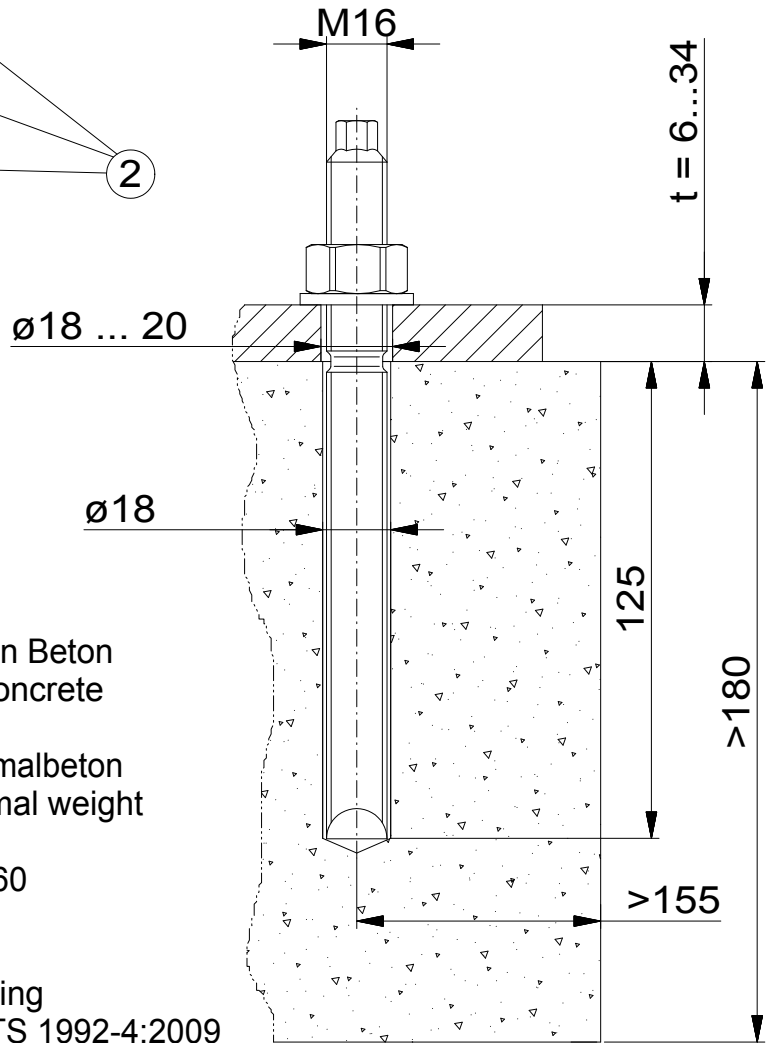
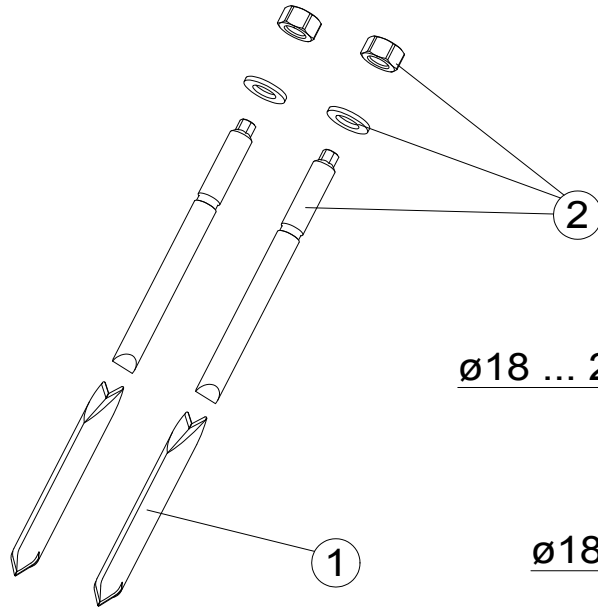
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|----------|------------|------------|------------|-------|
| 01       | 1440019    | 2014-01-21 | P. Rietsch |       |
| IND.     | TN NO.     | DATE       | NAME       | SIGN. |
| RELEASE: | 2014-01-21 | H. Spörl   |            |       |

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**European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 2    | 2        | Ankerstange / anchor bar HAS-R 6K | M16x125/38 A4 |
| 1    | 2        | Mörtelpatrone / mortar cartridge  | HVU2 M16x125  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010954 | TYPE:<br>2xM16 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,68 kg         | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2                                 |                                   |

DESIGNATION:  
**fixation set 7 A4**  
**Befestigungssatz 7 A4**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

**wilo**

REPLACEMENT FOR: 03A.05.007.02  
NUMBER.INDEX: PAGE: 1/1

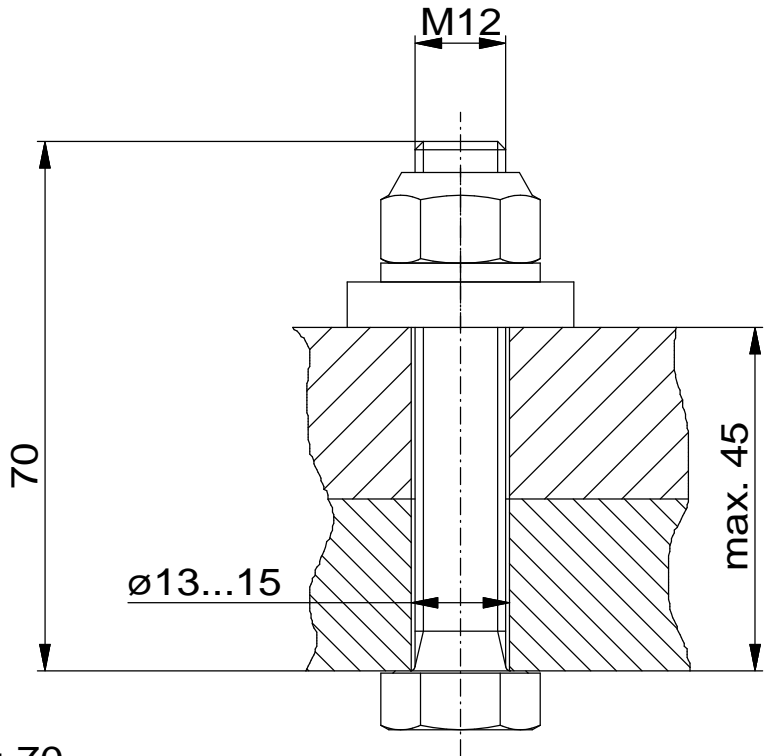
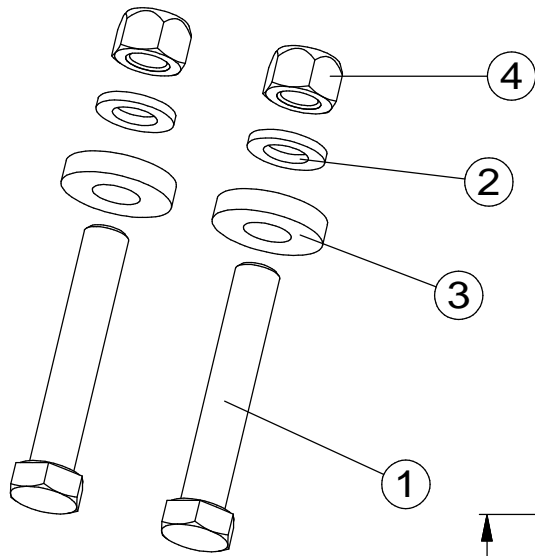
**03A.05.007.03**

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**Material: A4 / Zugfestigkeit: 70**  
**material: AISI 316 / tensile strength: 70**

| Pos. | Anz.-pc. | Bezeichnung - Designation:  |        |
|------|----------|-----------------------------|--------|
| 4    | 2        | Mutter/nut DIN985 A4        | M12    |
| 3    | 2        | Scheibe/washer DIN7349 A4   | 13     |
| 2    | 2        | Scheibe/washer DIN125 A4    | A13    |
| 1    | 2        | Schraube/screw DIN933 A4-70 | M12x70 |

|                    |                             |                             |
|--------------------|-----------------------------|-----------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010959 | TYPE:<br>2xM12S Stahl/steel |
|--------------------|-----------------------------|-----------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,22 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |  |  |               |  |
|----------------------------|--|--|---------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:1 |  |
|----------------------------|--|--|---------------|--|

DESIGNATION:  
**fixation set 8 A4**  
**Befestigungssatz 8 A4**

|          |         |            |            |       |
|----------|---------|------------|------------|-------|
| 01       | 1240123 | 2012-03-28 | C. Worst   |       |
| 02       | 1340203 | 2013-04-12 | T. Rietsch |       |
| 03       | 1840400 | 2018-10-25 | N. Porsch  |       |
| 04       | 1940034 | 2019-02-12 | N. Porsch  |       |
| IND.     | TN NO.  | DATE       | NAME       | SIGN. |
| RELEASE: |         | 2019-02-12 | P. Rietsch |       |

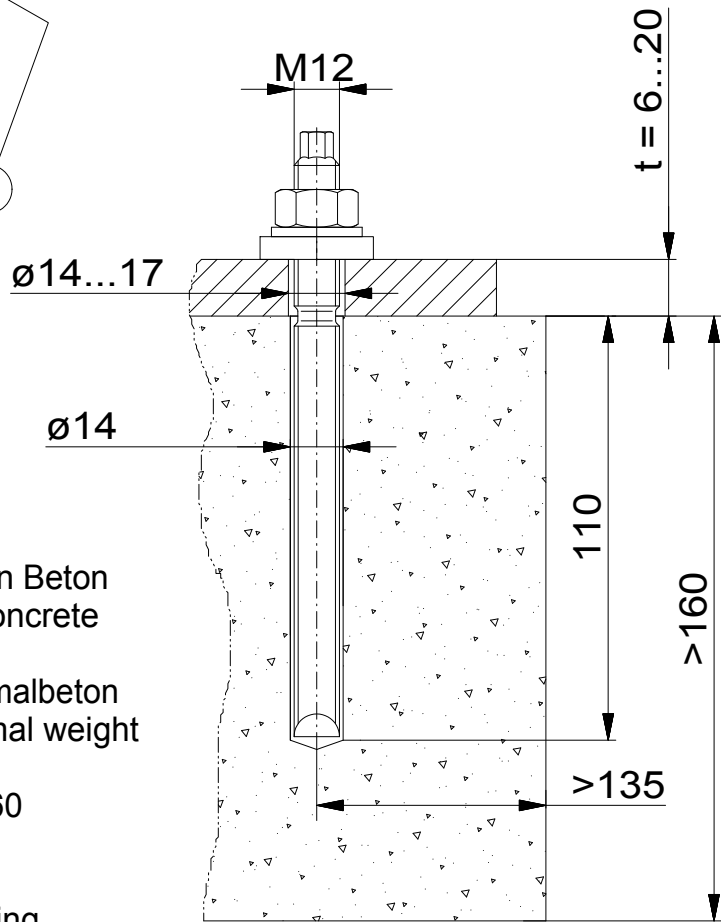
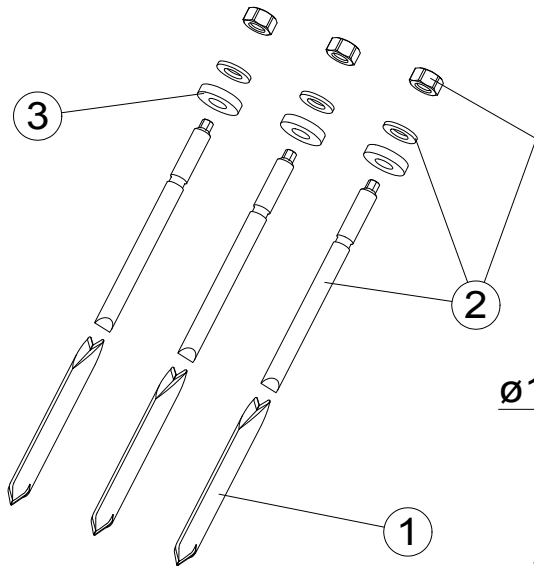
**wilo**

|                    |           |
|--------------------|-----------|
| REPLACEMENT FOR: . | PAGE: 1/1 |
| NUMBER.INDEX:      |           |

**03A.05.008.04**

**Europäische Technische Bewertung  
European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!  
Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 3    | 3        | Scheibe / washer                  | 13 DIN7349 A4 |
| 2    | 3        | Ankerstange / anchor bar HAS-R 6K | M12x110/28 A4 |
| 1    | 3        | Mörtelpatrone / mortar cartridge  | HVU2 M12x110  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010975 | TYPE:<br>3xM12S Beton/concrete |
|--------------------|-----------------------------|--------------------------------|

|  |  |  |
|--|--|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |  |  |
|--|--|--|

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,6 kg          | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2                                 |                                   |

|  |  |  |  |  |
|--|--|--|--|--|
| DESIGNATION:<br><b>fixation set 9 A4<br/>Befestigungssatz 9 A4</b> |  |  |  |  |
|--|--|--|--|--|

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

**wilo**

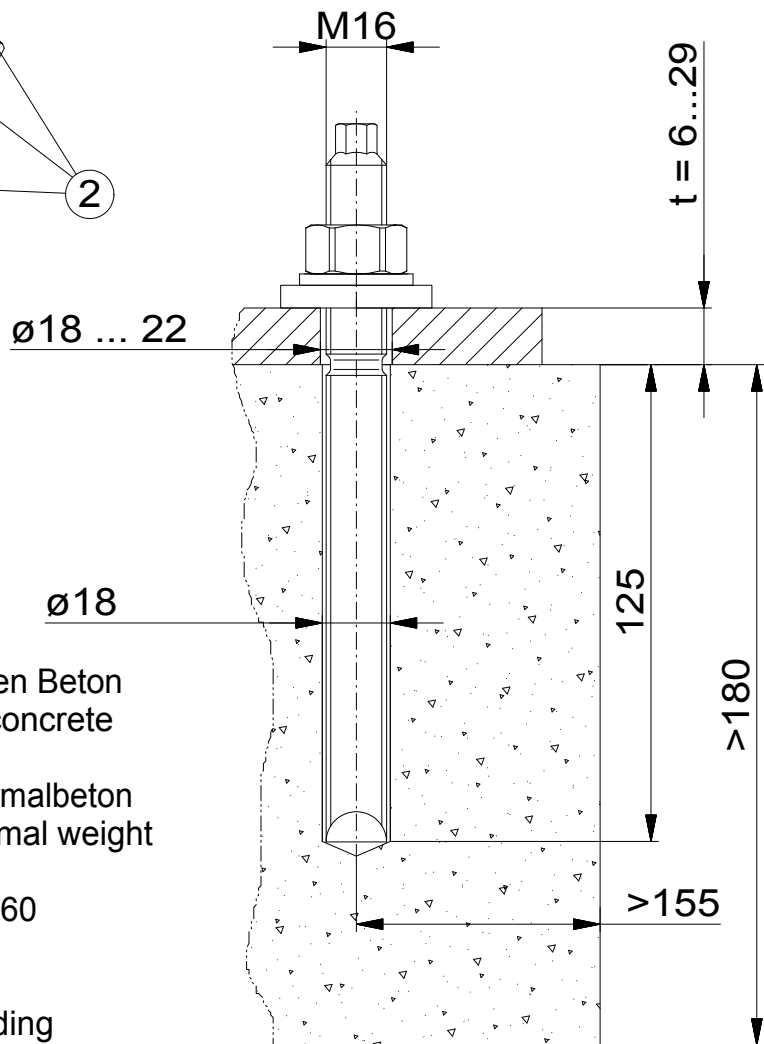
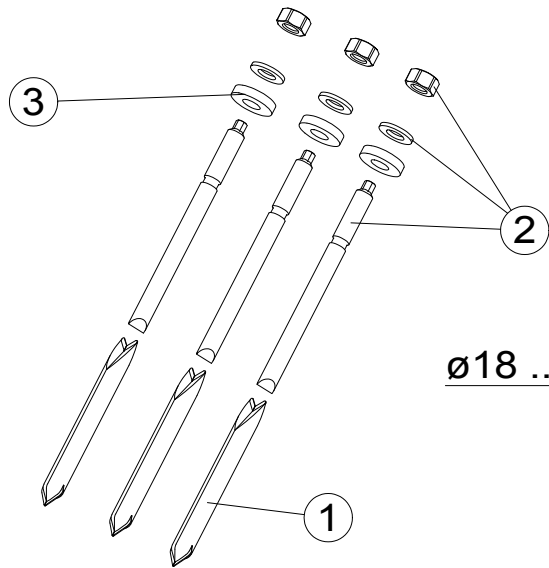
REPLACEMENT FOR: 03A.05.009.02  
NUMBER.INDEX: PAGE: 1/1

**03A.05.009.03**

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1 Europäische Technische Bewertung  
European Technical Assessment

3 ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 3    | 3        | Scheibe/washer                    | 17 DIN7349 A4 |
| 2    | 3        | Ankerstange / anchor bar HAS-R 6K | M16x125/38 A4 |
| 1    | 3        | Mörtelpatrone / mortar cartridge  | HVU2 M16x125  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010974 | TYPE:<br>3xM16S Beton/concrete |
|--------------------|-----------------------------|--------------------------------|

|  |  |  |
|--|--|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |  |  |
|--|--|--|

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>1,14 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |  |  |               |  |
|----------------------------|--|--|---------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:2 |  |
|----------------------------|--|--|---------------|--|

|  |  |  |  |  |
|--|--|--|--|--|
| DESIGNATION:<br>fixation set 10 A4<br>Befestigungssatz 10 A4 |  |  |  |  |
|--|--|--|--|--|

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

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|                                |           |
|--------------------------------|-----------|
| REPLACEMENT FOR: 03A.05.010.02 |           |
| NUMBER.INDEX:                  | PAGE: 1/1 |

03A.05.010.03

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1

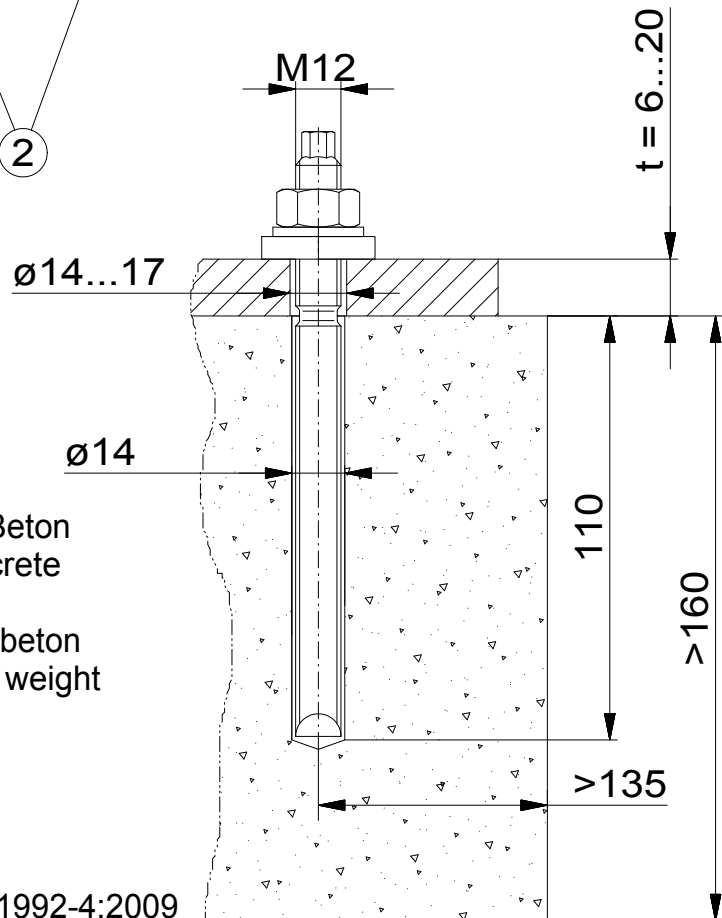
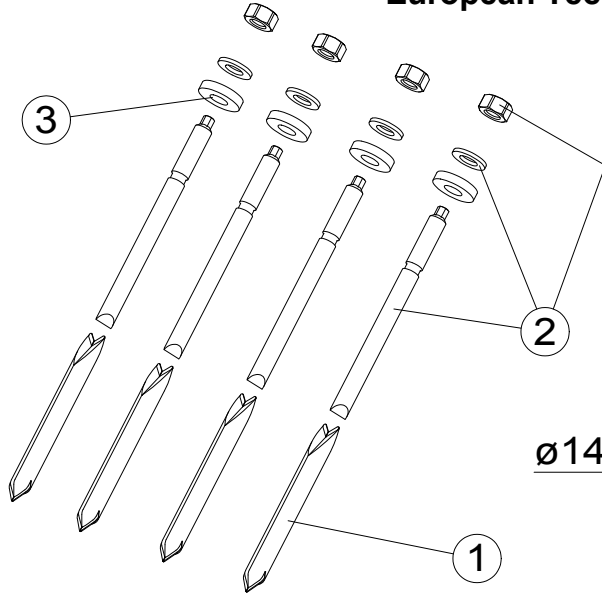
2

3

4

**Europäische Technische Bewertung  
European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete

EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!  
Observe installation instruction for adhesive anchors HVU2!**

| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |
|------|----------|-----------------------------------|---------------|
| 3    | 4        | Scheibe/washer 13                 | DIN7349 A4    |
| 2    | 4        | Ankerstange / anchor bar HAS-R 6K | M12x110/28 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge  | HVU2 M12x110  |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010973 | TYPE:<br>4xM12S Beton/concrete |
|--------------------|-----------------------------|--------------------------------|

|  |  |  |
|--|--|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |  |  |
|--|--|--|

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,74 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |  |  |               |  |
|----------------------------|--|--|---------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:2 |  |
|----------------------------|--|--|---------------|--|

|  |  |  |  |  |
|--|--|--|--|--|
| DESIGNATION:<br>fixation set 11 A4<br>Befestigungssatz 11 A4 |  |  |  |  |
|--|--|--|--|--|

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

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REPLACEMENT FOR: 03A.05.011.02  
NUMBER.INDEX: PAGE: 1/1

**03A.05.011.03**

1

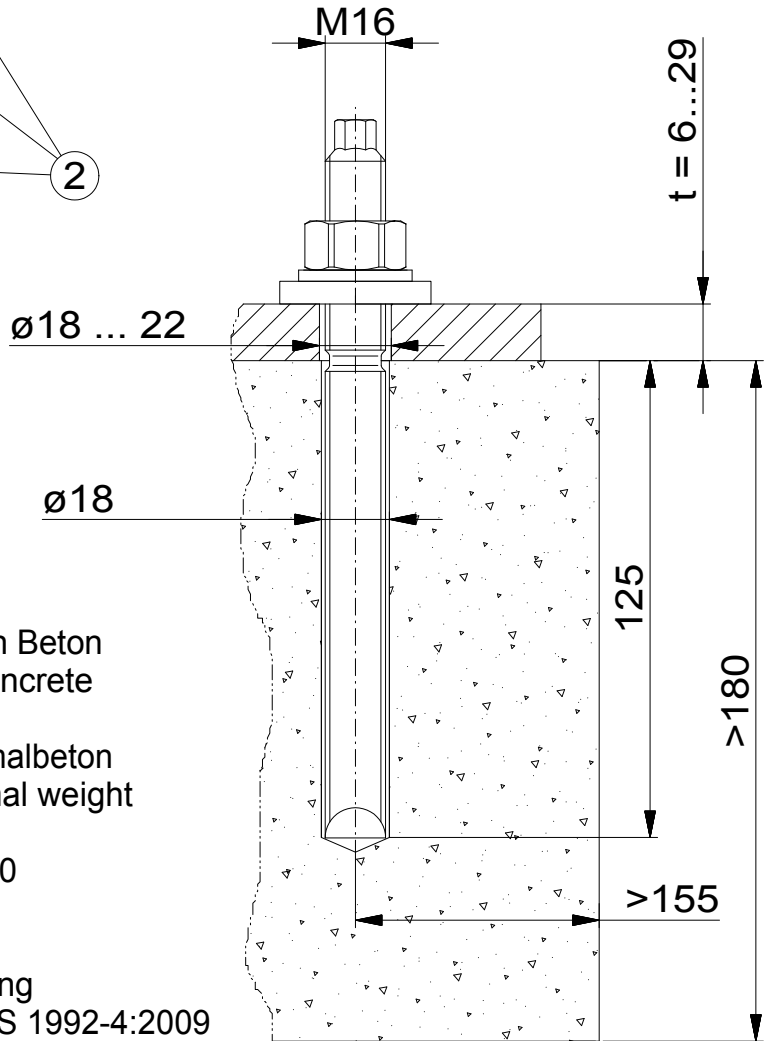
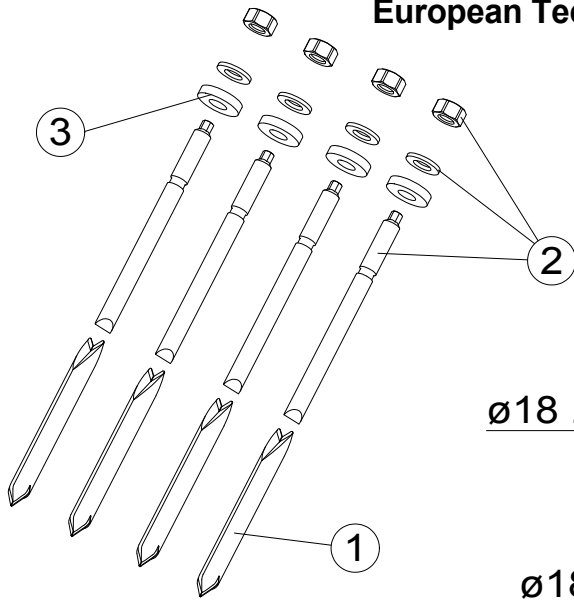
2

3

4

Europäische Technische Bewertung  
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ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

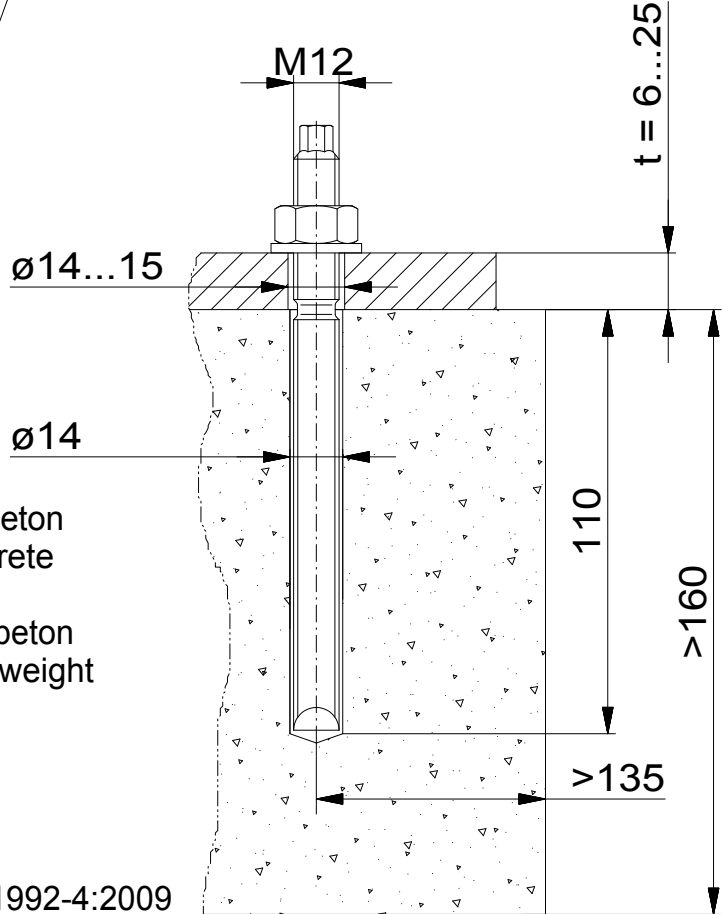
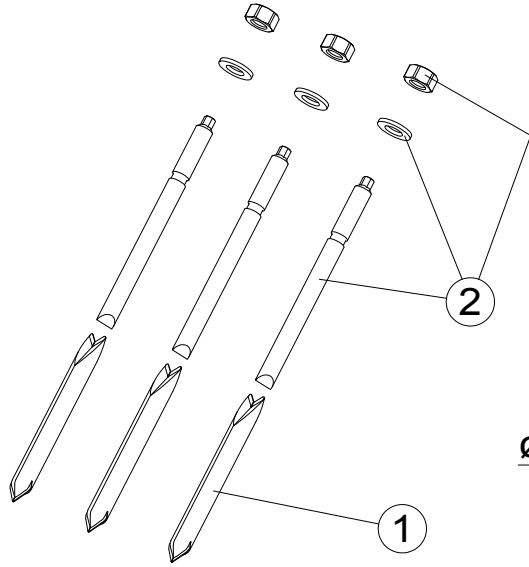
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |
|------|----------|-----------------------------------|---------------|
| 3    | 4        | Scheibe / washer                  | 17 DIN7349 A4 |
| 2    | 4        | Ankerstange / anchor bar HAS-R 6K | M16x125/38 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge  | HVU2 M16x125  |

|  |  |                             |                         |  |   |
|--|--|-----------------------------|-------------------------|--|---|
| MODEL NUMBER:<br>-                                       |  | MATERIAL NUMBER:<br>6010972 |                         | TYPE:<br>4xM16S Beton/concrete                               |   |
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |  |                             |                         |  |   |
| WEIGHT:<br>1,52 kg                                       |  | UNIT:<br>mm                 | DRAWING SIZE:<br>ISO A4 |  | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- |
|  |  |                             |                         | MATERIAL:<br>A4-70/AISI316                                   | SPECIFICATIONS FOR SURFACES:<br>-             |
|  |  |                             |                         | DESIGNATION:<br>fixation set 12 A4<br>Befestigungssatz 12 A4 | SCALE:<br>1:2                                 |
|  |  |                             |                         |  | REPLACEMENT FOR: 03A.05.012.02                |
|  |  |                             |                         |  | NUMBER.INDEX: PAGE: 1/1                       |
| 01 1240123 2012-03-28 C. Worst                           |  |                             |                         |  | 03A.05.012.03                                 |
| 02 1340203 2013-04-12 T. Rietsch                         |  |                             |                         |  |   |
| 03 1740297 2017-08-30 E. Haselmann                       |  |                             |                         |  |   |
| IND. TN NO. DATE NAME SIGN.                              |  |                             |                         |  |   |
| RELEASE: 2017-08-30 P. Rietsch                           |  |                             |                         |  |   |

**wilo**

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European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!  
Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 2    | 3        | Ankerstange / anchor bar HAS-R 6K | M12x110/28 A4 |
| 1    | 3        | Mörtelpatrone / mortar cartridge  | HVU2 M12x110  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010981 | TYPE:<br>3xM12 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

|  |
|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |
|--|

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,48 kg         | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2                                 |                                   |

|  |  |  |  |  |
|--|--|--|--|--|
| DESIGNATION:<br><b>fixation set 13 A4<br/>Befestigungssatz 13 A4</b> |  |  |  |  |
|--|--|--|--|--|

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

**wilo**

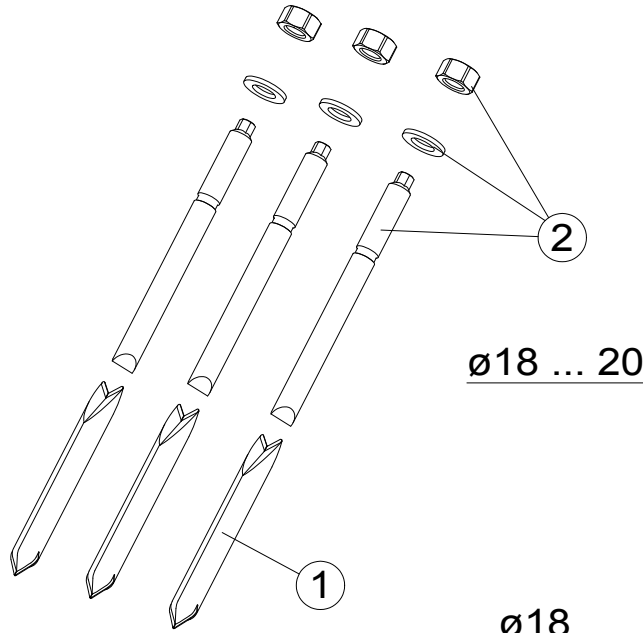
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NUMBER.INDEX: PAGE: 1/1

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Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!  
Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |               |
|------|----------|-----------------------------------|---------------|
| 2    | 3        | Ankerstange / anchor bar HAS-R 6K | M16x125/38 A4 |
| 1    | 3        | Mörtelpatrone / mortar cartridge  | HVU2 M16x125  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010980 | TYPE:<br>3xM16 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>1,0 kg          | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2                                 |                                   |

DESIGNATION:  
**fixation set 14 A4  
Befestigungssatz 14 A4**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

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REPLACEMENT FOR: 03A.05.014.02  
NUMBER.INDEX: PAGE: 1/1

**03A.05.014.03**

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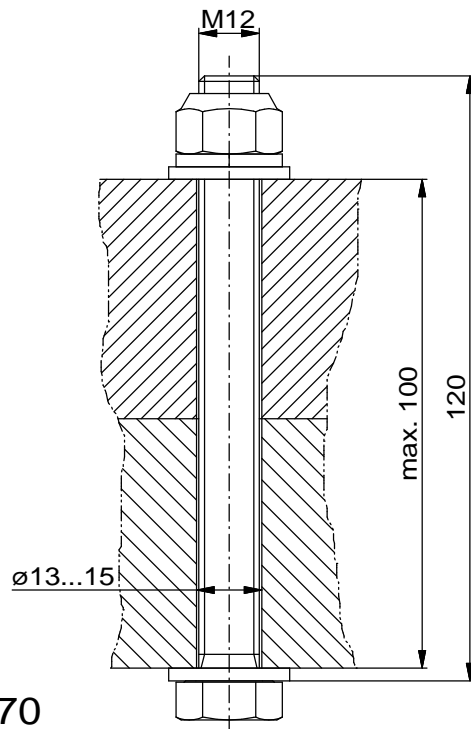
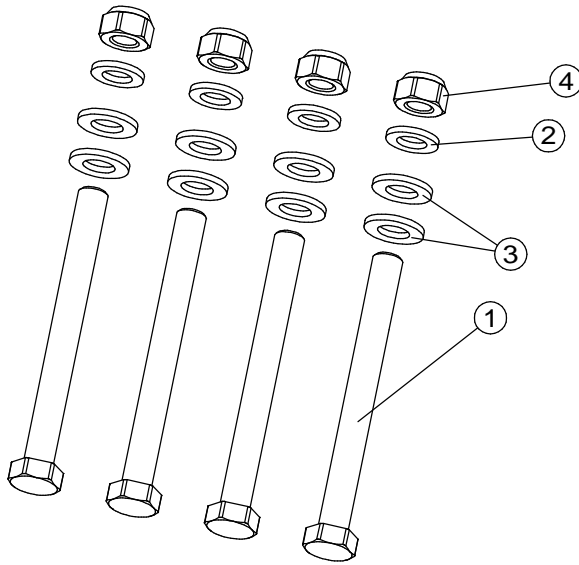
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1

2

3

4



Material: A4 / Zugfestigkeit: 70  
 material: AISI 316 / tensile strength: 70

|      |          |                             |         |
|------|----------|-----------------------------|---------|
| 4    | 4        | Mutter/nut DIN985 A4        | M12     |
| 3    | 8        | Scheibe/washer DIN7349 A4   | 13      |
| 2    | 4        | Scheibe/washer DIN125 A4    | A13     |
| 1    | 4        | Schraube/screw DIN933 A4-70 | M12x120 |
| Pos. | Anz.-pc. | Bezeichnung - Designation:  | .       |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010965 | TYPE:<br>4xM12x120 Stahl/steel |
|--------------------|-----------------------------|--------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
 DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,52 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                    |             |                         | MATERIAL:<br>A4-70/AISI316                    | SCALE:<br>1:1,5                   |

DESIGNATION:  
 fixation set 15 A4  
 Befestigungssatz 15 A4

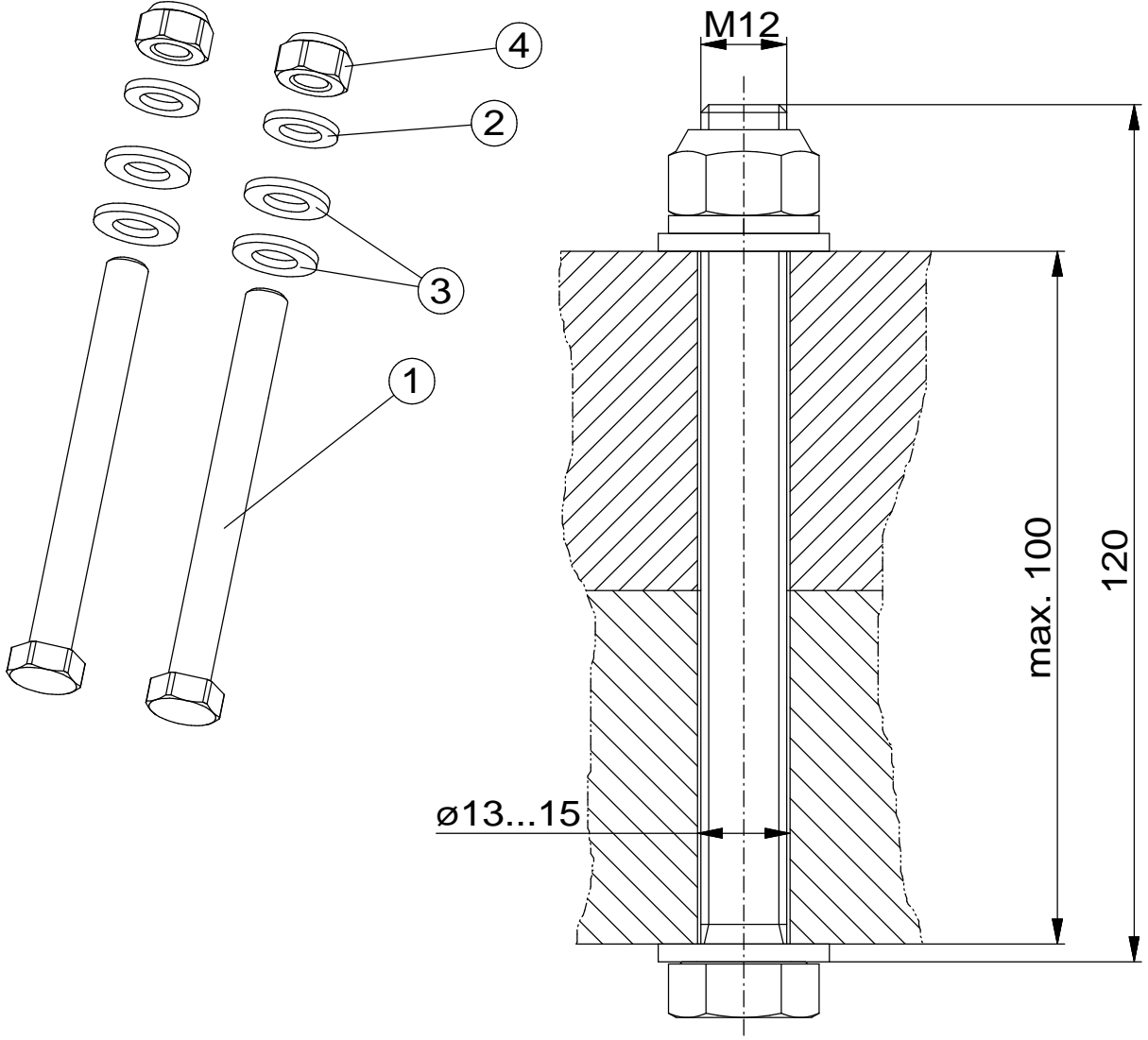
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|----------|---------|------------|------------|-------|
| 01       | 1240123 | 2012-03-28 | C. Worst   |       |
| 02       | 1340203 | 2013-04-12 | T. Rietsch |       |
| 03       | 1840400 | 2018-10-25 | N. Porsch  |       |
| 04       | 1940034 | 2019-02-12 | N. Porsch  |       |
| IND.     | TN NO.  | DATE       | NAME       | SIGN. |
| RELEASE: |         | 2019-02-12 | P. Rietsch |       |



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**Material: A4 / Zugfestigkeit: 70**  
**material: AISI 316 / tensile strength: 70**

| Pos. | Anz.-pc. | Bezeichnung - Designation:  |         |
|------|----------|-----------------------------|---------|
| 4    | 2        | Mutter/nut DIN985 A4        | M12     |
| 3    | 4        | Scheibe/washer DIN7349 A4   | 13      |
| 2    | 2        | Scheibe/washer DIN125 A4    | A13     |
| 1    | 2        | Schraube/screw DIN933 A4-70 | M12x120 |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6010964 | TYPE:<br>2M12x120 Stahl/steel |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,26 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                    |             |                         | MATERIAL:<br>A4-70/AISI316                    | SCALE:<br>1:1                     |

DESIGNATION:  
**fixation set 16 A4**  
**Befestigungssatz 16 A4**

|          |         |            |            |       |
|----------|---------|------------|------------|-------|
| 01       | 1240123 | 2012-03-28 | C. Worst   |       |
| 02       | 1340203 | 2013-04-12 | T. Rietsch |       |
| 03       | 1840400 | 2018-10-25 | N. Porsch  |       |
| 04       | 1940034 | 2019-02-12 | N. Porsch  |       |
| IND.     | TN NO.  | DATE       | NAME       | SIGN. |
| RELEASE: |         | 2019-02-12 | P. Rietsch |       |

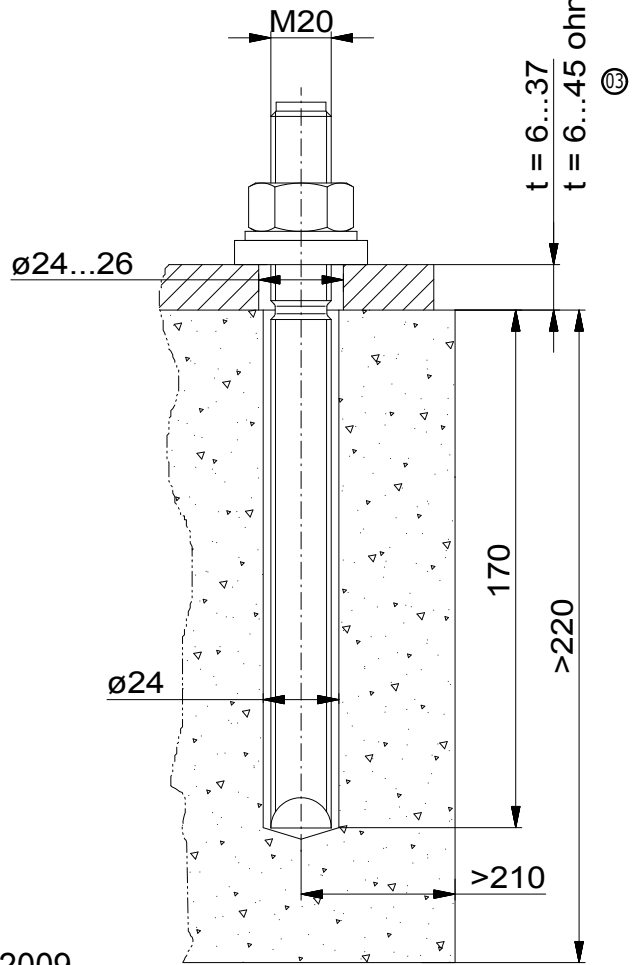
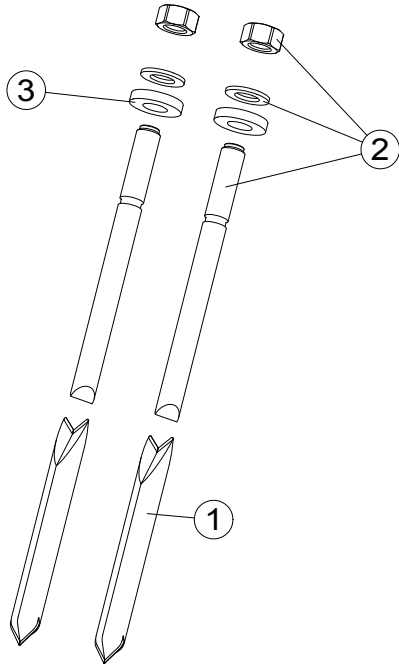


|                      |           |
|----------------------|-----------|
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| NUMBER.INDEX:        |           |
| <b>03A.05.016.04</b> |           |

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3  
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**Europäische Technische Bewertung**  
**European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |                |
|------|----------|----------------------------------|----------------|
| 3    | 2        | Scheibe/washer                   | 21 DIN 7349 A4 |
| 2    | 2        | Ankerstange / anchor bar HAS-E-R | M20x170/48 A4  |
| 1    | 2        | Mörtelpatrone / mortar cartridge | HVU2 M20x170   |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |                |

|  |             |                             |   |                                   |           |
|--|-------------|-----------------------------|---|-----------------------------------|-----------|
| MODEL NUMBER:<br>-   |             | MATERIAL NUMBER:<br>6010962 |   | TYPE:<br>2xM20S Beton/concrete    |           |
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167     |             |                             |   |                                   |           |
| WEIGHT:<br>1,45 kg   | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4     | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |           |
| MATERIAL:<br>A4-70/AISI316                                   |             |                             | SCALE:<br>1:2,5                               |                                   |           |
| DESIGNATION:<br>fixation set 17 A4<br>Befestigungssatz 17 A4 |             |                             |   |                                   |           |
| 01   | 1240123     | 2012-03-28                  | C. Worst                                      | REPLACEMENT FOR: 03A.05.017.03    |           |
| 02   | 1340203     | 2013-04-12                  | T. Rietsch                                    | NUMBER.INDEX:                     | PAGE: 1/1 |
| 03   | 1640209     | 2016-06-20                  | B. Ott  | 03A.05.017.04                     |           |
| 04   | 1740297     | 2017-08-30                  | E. Haselmann                                  |                                   |           |
| IND.   | TN NO.      | DATE                        | NAME  | SIGN.                             |           |
| RELEASE:   | 2017-08-30  | P. Rietsch                  |   |                                   |           |

**wilo**

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1

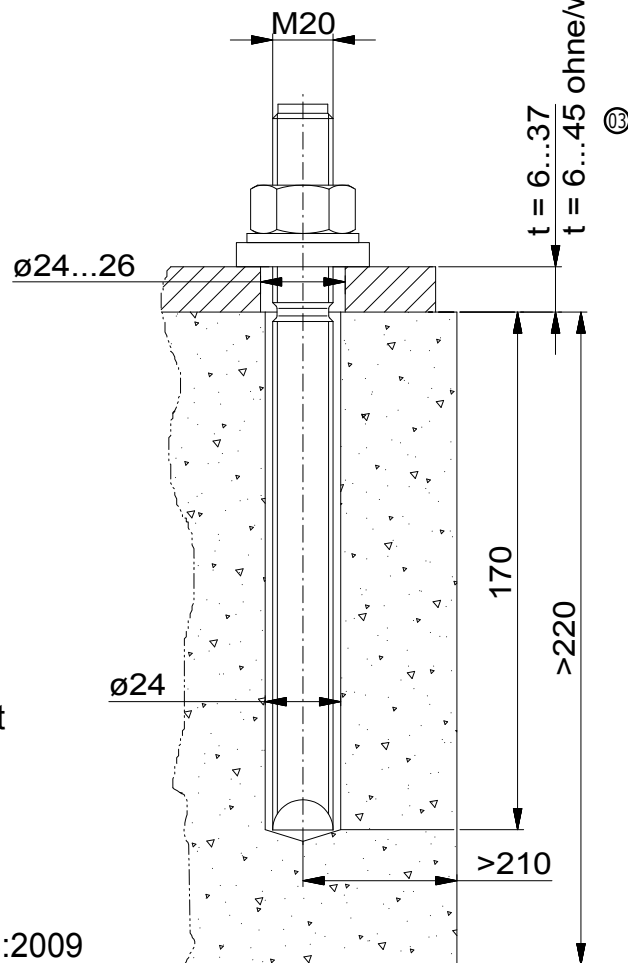
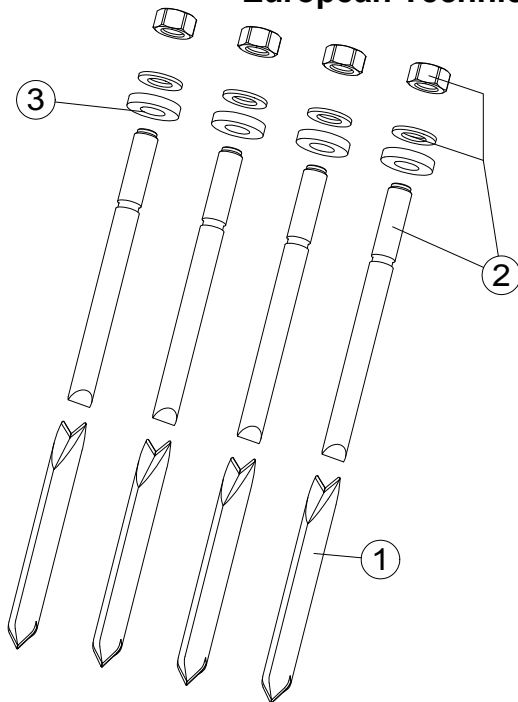
2

3

4

# Europäische Technische Bewertung European Technical Assessment

ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

| Pos. | Anz.-pc. | Bezeichnung - Designation:       |               |
|------|----------|----------------------------------|---------------|
| 3    | 4        | Scheibe/washer                   | 21 DIN7349 A4 |
| 2    | 4        | Ankerstange / anchor bar HAS-E-R | M20x170/48 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU2 M20x170  |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011108 | TYPE:<br>4xM20S Beton/concrete |
|--------------------|-----------------------------|--------------------------------|

|  |  |
|--|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |  |
|--|--|

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>2,87 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|  |                            |                 |  |
|--|----------------------------|-----------------|--|
|  | MATERIAL:<br>A4-70/AISI316 | SCALE:<br>1:2,5 |  |
|--|----------------------------|-----------------|--|

|  |  |
|--|--|
|  | DESIGNATION:<br>fixation set 18 A4<br>Befestigungssatz 18 A4 |
|--|--|

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1640209    | 2016-06-20 | B. Ott       |       |
| 04       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

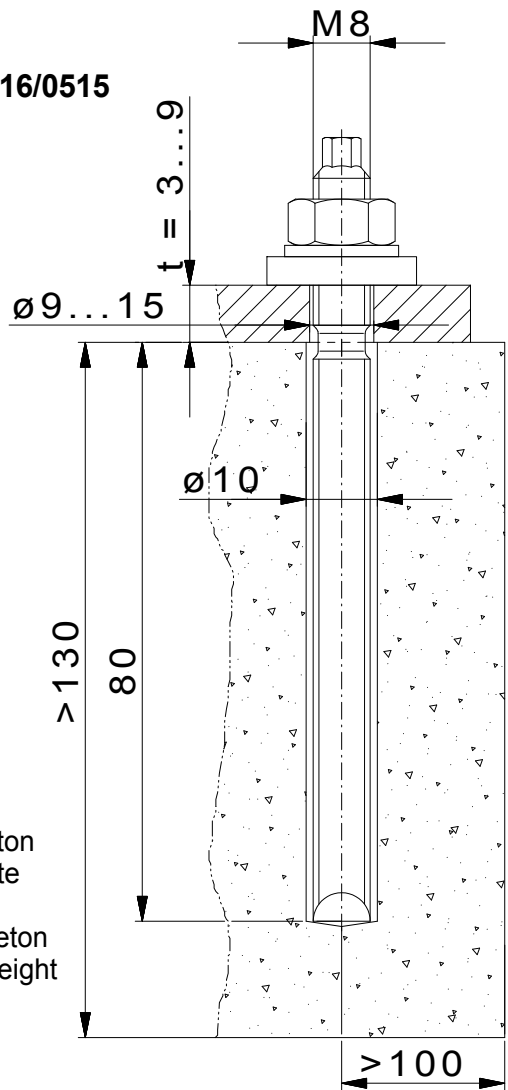
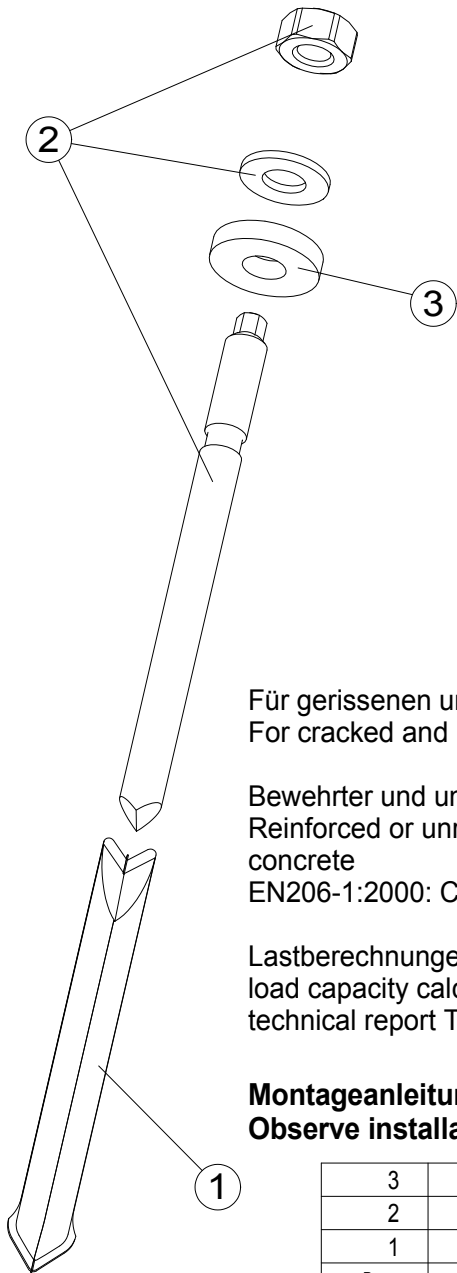
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NUMBER.INDEX: PAGE: 1/1

## 03A.05.018.04

1 Europäische Technische Bewertung  
European Technical Assessment

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Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |            |
|------|----------|----------------------------------|------------|
| 3    | 1        | Scheibe/washer DIN7349           | 8,4 A4     |
| 2    | 1        | Ankerstange/anchor bolt HAS-R 6k | M8x80/14   |
| 1    | 1        | Mörtelpatrone/mortar cartridge   | HVU2 M8x80 |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |            |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011093 | TYPE:<br>1xM8S Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,05 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                    |             |                         | MATERIAL:<br>A4-70/AISI316                    | SCALE:<br>1:1                     |

DESIGNATION:  
**fixation set 19 A4**  
**Befestigungssatz 19 A4**

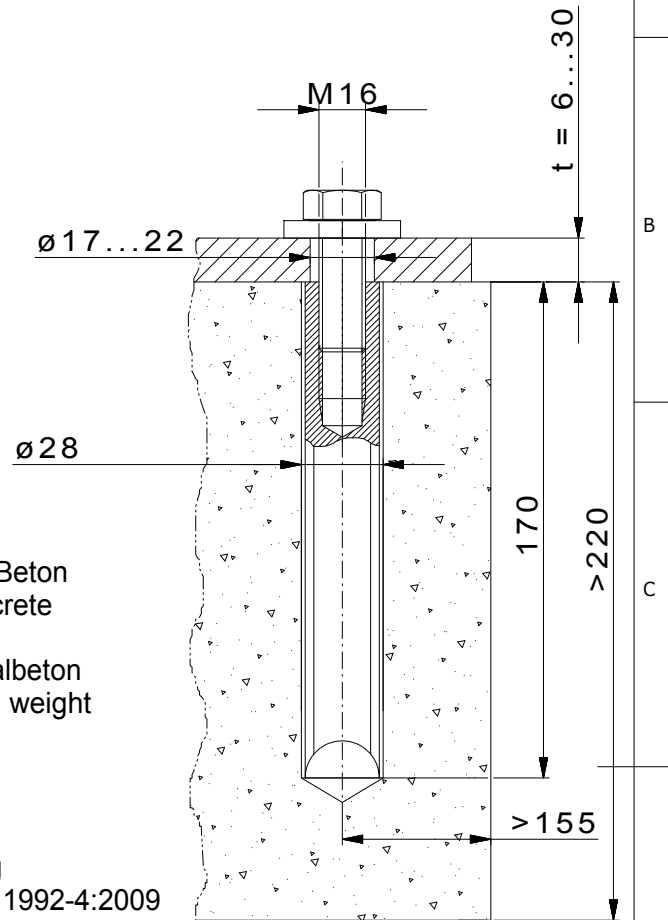
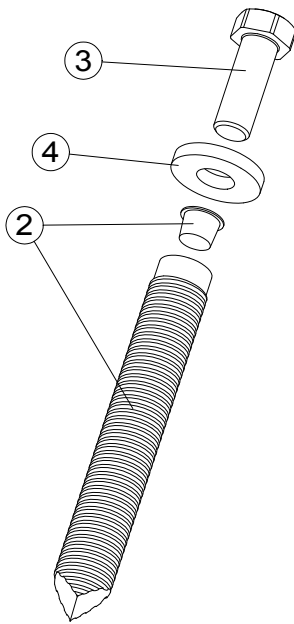
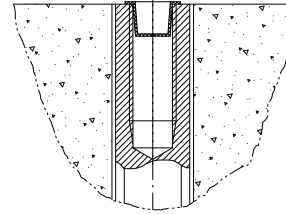
|             |            |            |              |  |                                |
|-------------|------------|------------|--------------|--|--------------------------------|
| 01          | 1240123    | 2012-03-28 | C. Worst     |  | REPLACEMENT FOR: 03A.05.019.02 |
| 02          | 1340203    | 2013-04-12 | T. Rietsch   |  |                                |
| 03          | 1740297    | 2017-08-30 | E. Haselmann |  |                                |
| IND. TN NO. | DATE       | NAME       | SIGN.        |  | NUMBER.INDEX:   PAGE: 1/1      |
| RELEASE:    | 2017-08-30 | P. Rietsch |              |  | <b>03A.05.019.03</b>           |

**wilo**

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ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                |              |
|------|----------|--------------------------------|--------------|
| 4    | 1        | Scheibe/washer DIN7349         | 17 A4        |
| 3    | 1        | Schraube/screw DIN933          | M16x45 A4-70 |
| 2    | 1        | Ankerstange/anchor bar HIS-RN  | M16x170 A4   |
| 1    | 1        | Mörtelpatrone/mortar cartridge | HVU2 M20x170 |
| Pos. | Anz.-pc. | Bezeichnung - Designation:     |              |

|                    |                             |                                 |
|--------------------|-----------------------------|---------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011065 | TYPE:<br>1xM16-I Beton/concrete |
|--------------------|-----------------------------|---------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,75 kg         | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2,5                               |                                   |

DESIGNATION:  
**fixation set 20 A4**  
**Befestigungssatz 20 A4**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-30 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

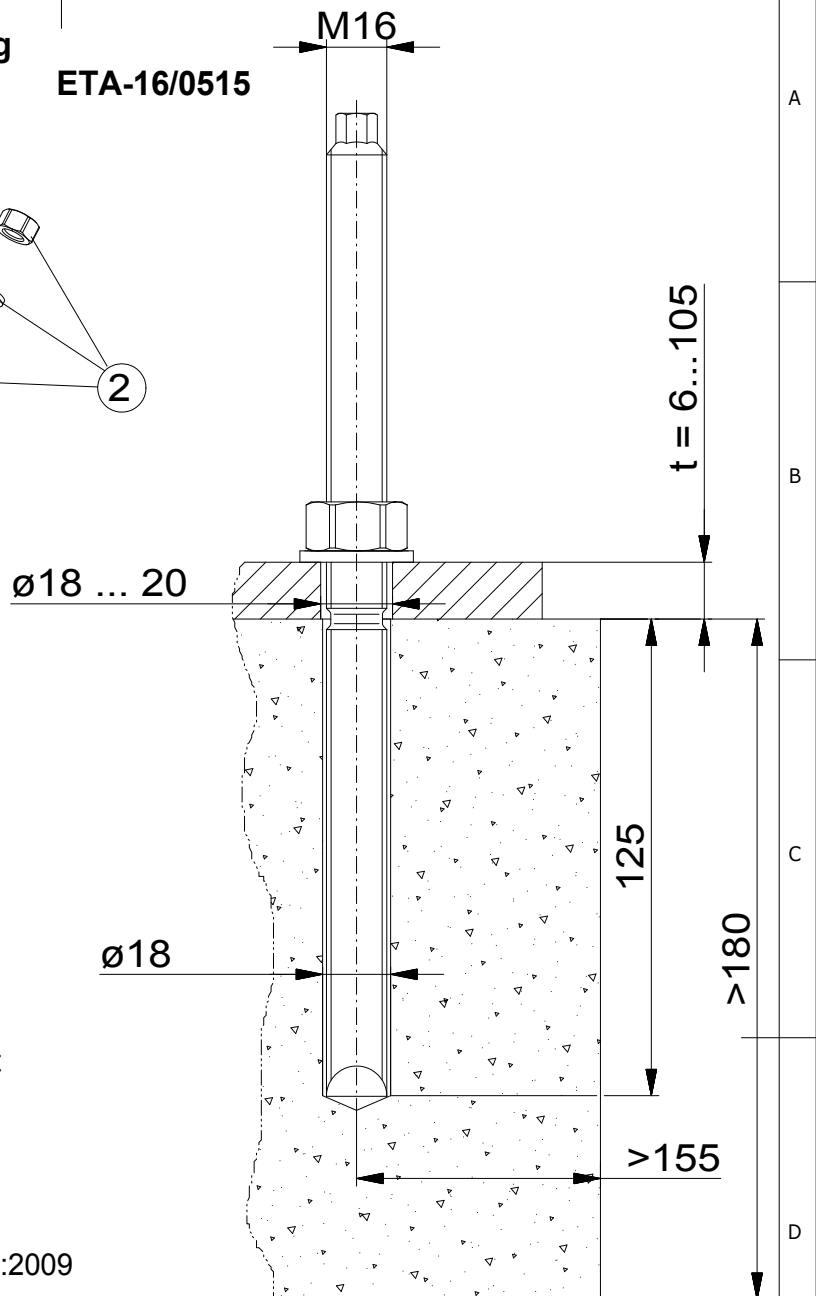
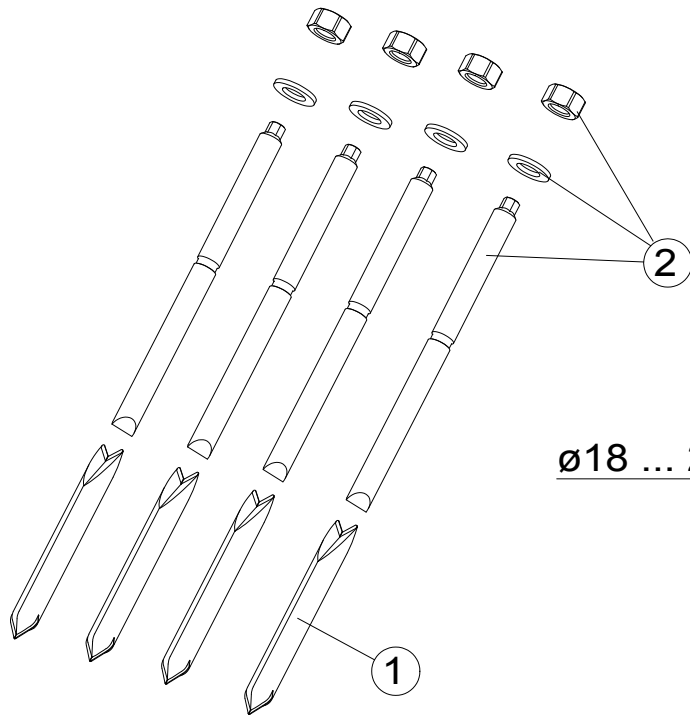
**wilo**

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European Technical Assessment

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Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                   |                |
|------|----------|-----------------------------------|----------------|
| 2    | 4        | Ankerstange / anchor bar HAS-R 6K | M16x260/108 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge  | HVU2 M16x125   |
| Pos. | Anz.-pc. | Bezeichnung - Designation:        |                |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6011050 | TYPE:<br>4xM16L Beton/concrete |
|--------------------|-----------------------------|--------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                            |             |                         |   |                                   |
|----------------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>1,95 kg         | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A4-70/AISI316 |             |                         | SCALE:<br>1:2                                 |                                   |

DESIGNATION:  
fixation set 21 A4  
Befestigungssatz 21 A4

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1240123    | 2012-03-28 | C. Worst     |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

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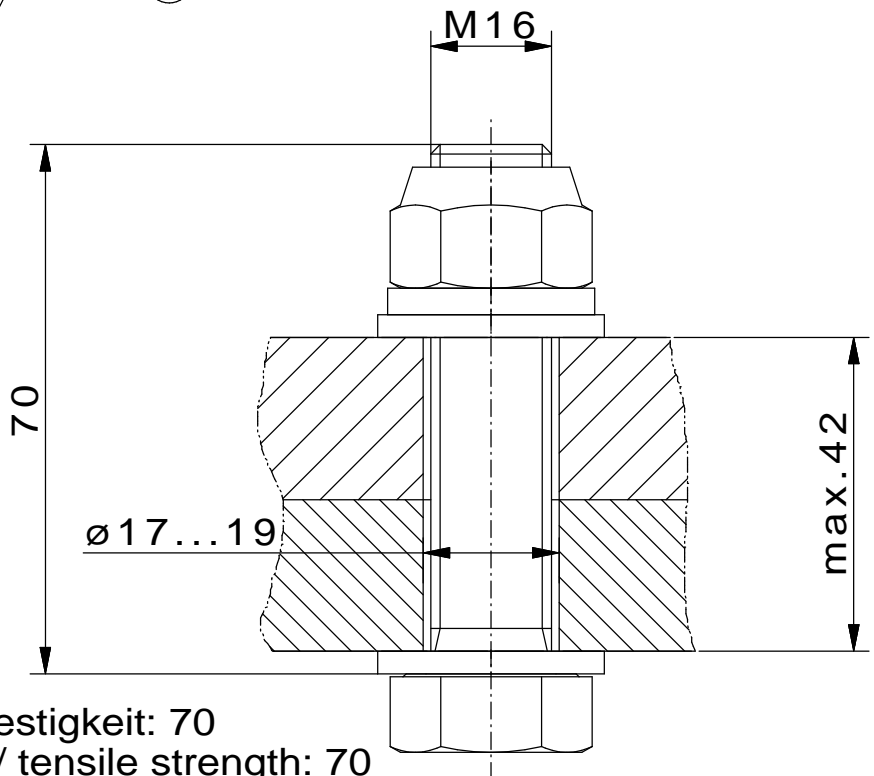
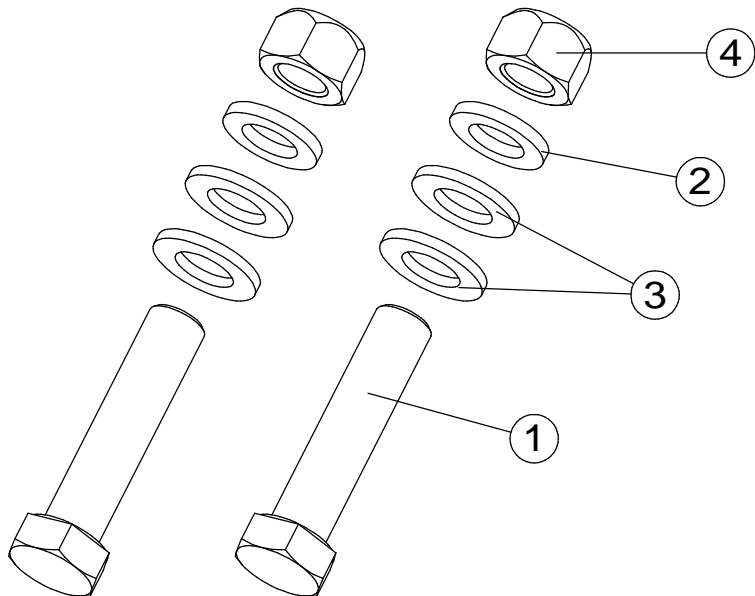
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COMMUNICATION, USE, ADAPTION AND COPY FORBIDDEN WITHOUT ANY WRITTEN AUTHORIZATION.



Material: A4 / Zugfestigkeit: 70  
 material: AISI 316 / tensile strength: 70

| Pos. | Anz.-pc. | Bezeichnung - Designation:  |        |
|------|----------|-----------------------------|--------|
| 4    | 2        | Mutter/nut DIN985 A4        | M16    |
| 3    | 4        | Scheibe/washer DIN7349 A4   | 17     |
| 2    | 2        | Scheibe/washer DIN125 A4    | A17    |
| 1    | 2        | Schraube/screw DIN933 A4-70 | M16x70 |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6000710 | TYPE:<br>2xM16x70 Stahl/steel |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
 DIN 7167

|                     |             |                         |   |                                   |
|---------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,038 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                     |             |                         | MATERIAL:<br>A4-70/AISI316                    | SCALE:<br>1:1                     |

DESIGNATION:  
**fixation set 22**  
**Befestigungssatz 22**

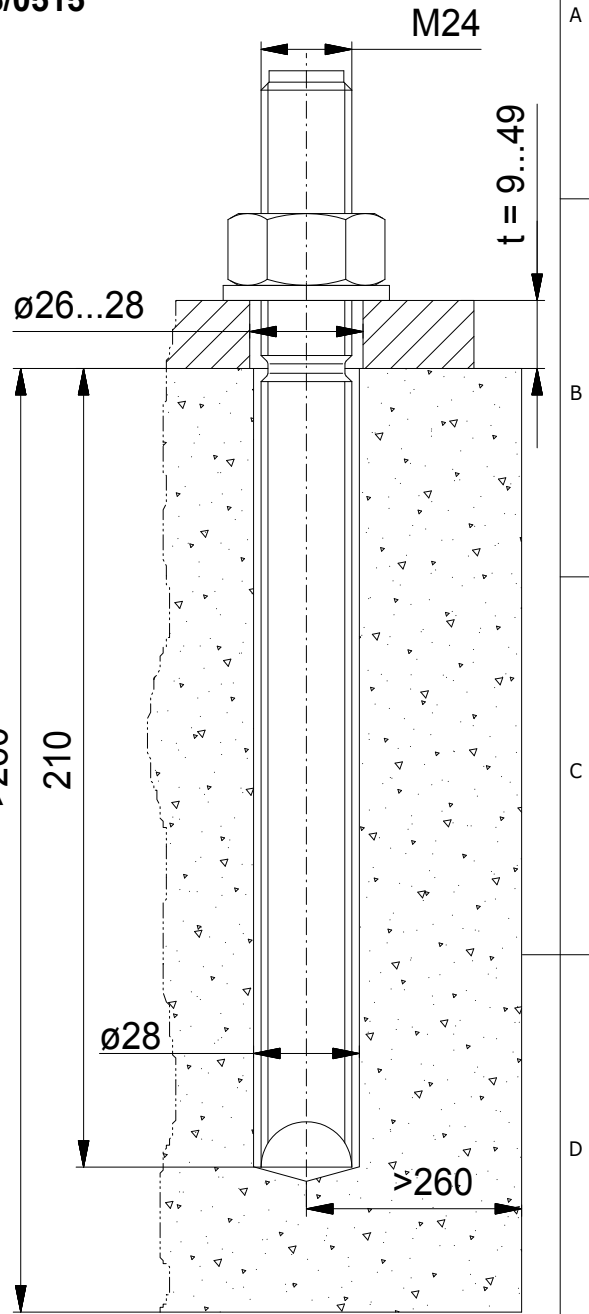
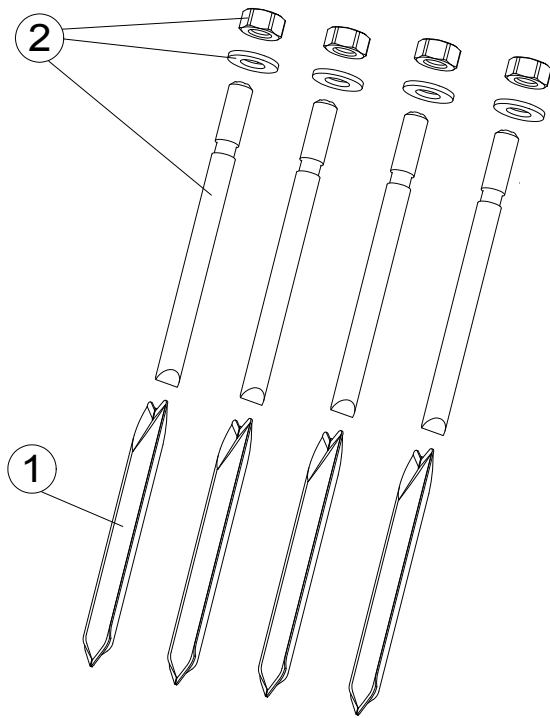
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|-------------|------------|------------|------------|--|
| 01          | 1240123    | 2012-03-28 | C. Worst   |  |
| 02          | 1340203    | 2013-04-12 | T. Rietsch |  |
| 03          | 1840440    | 2018-11-08 | N. Porsch  |  |
| 04          | 1940034    | 2019-02-12 | N. Porsch  |  |
| IND. TN NO. | DATE       | NAME       | SIGN.      |  |
| RELEASE:    | 2019-02-12 | P. Rietsch |            |  |



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| NUMBER.INDEX:        | PAGE: 1/1 |
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**Europäische Technische Bewertung  
European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |               |
|------|----------|----------------------------------|---------------|
| 2    | 4        | Ankerstange / anchor bar HAS-E-R | M24x210/54 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU2 M24x210  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6038025 | TYPE:<br>4xM24 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>4,44 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                    |             |                         | MATERIAL:<br>A4-70/AISI316                    | SCALE:<br>1:2                     |

fixation set 23 A4  
Befestigungssatz 23 A4

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1040529    | 2010-12-08 | VM           |       |
| 02       | 1240123    | 2012-03-28 | C. Worst     |       |
| 03       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 04       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

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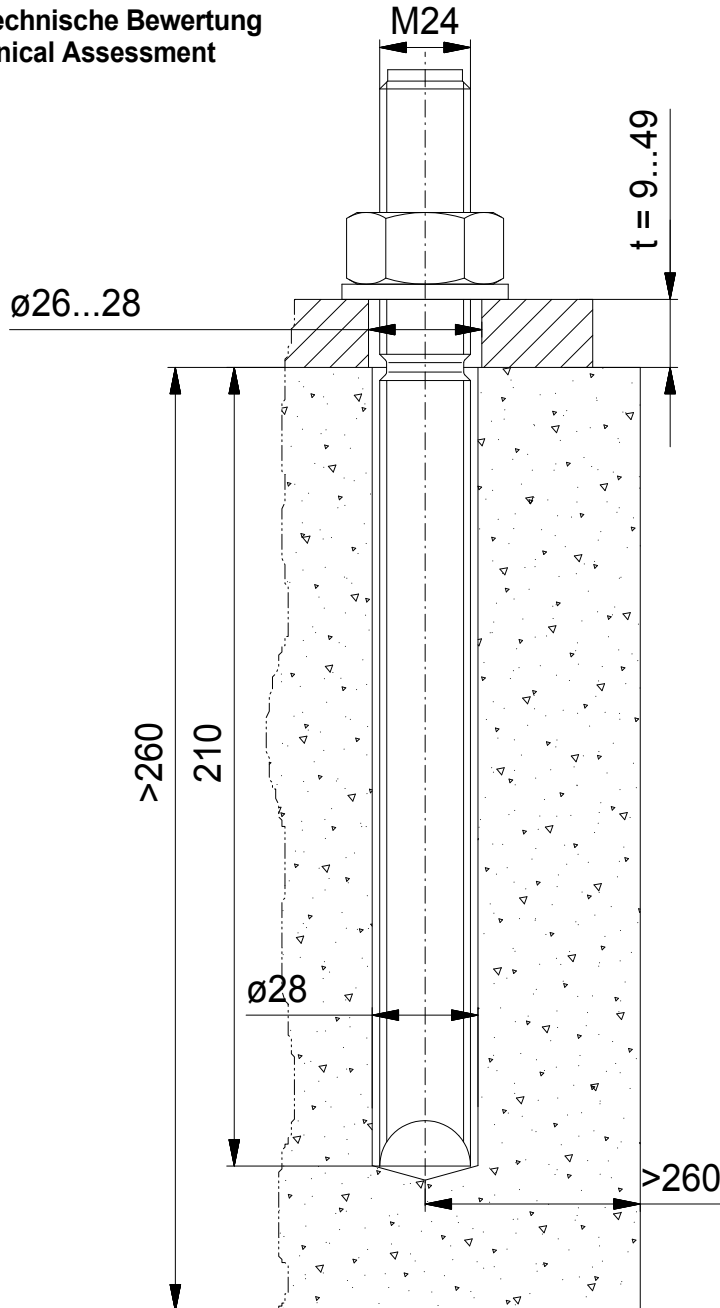
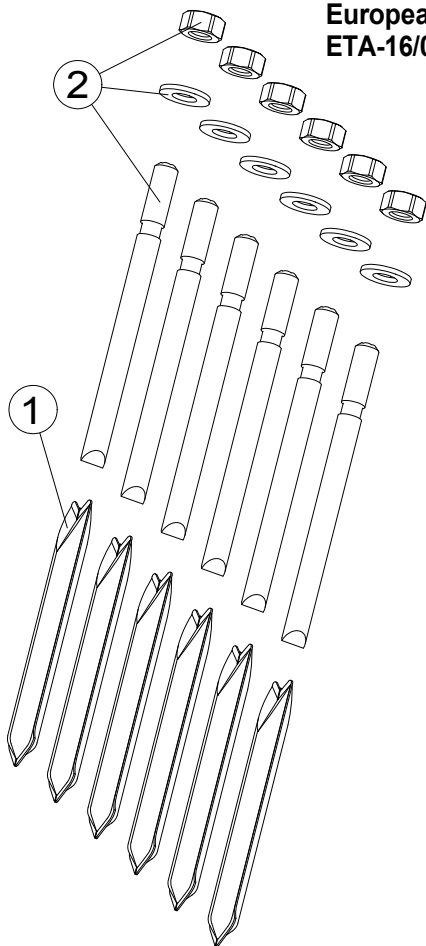
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Europäische Technische Bewertung  
European Technical Assessment  
ETA-16/0515



A

B

C

D

Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete  
Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60  
Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |               |
|------|----------|----------------------------------|---------------|
| 2    | 6        | Ankerstange / anchor bar HAS-E-R | M24x210/54 A4 |
| 1    | 6        | Mörtelpatrone / mortar cartridge | HVU2 M24x210  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |               |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6063016 | TYPE:<br>6xM24 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>6,98 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|                    |             |                         | MATERIAL:<br>A4-70/AISI316                    | SCALE:<br>1:2                     |

DESIGNATION:  
**fixation set 24 A4**  
**Befestigungssatz 24 A4**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1040528    | 2010-12-07 | Rie          |       |
| 02       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

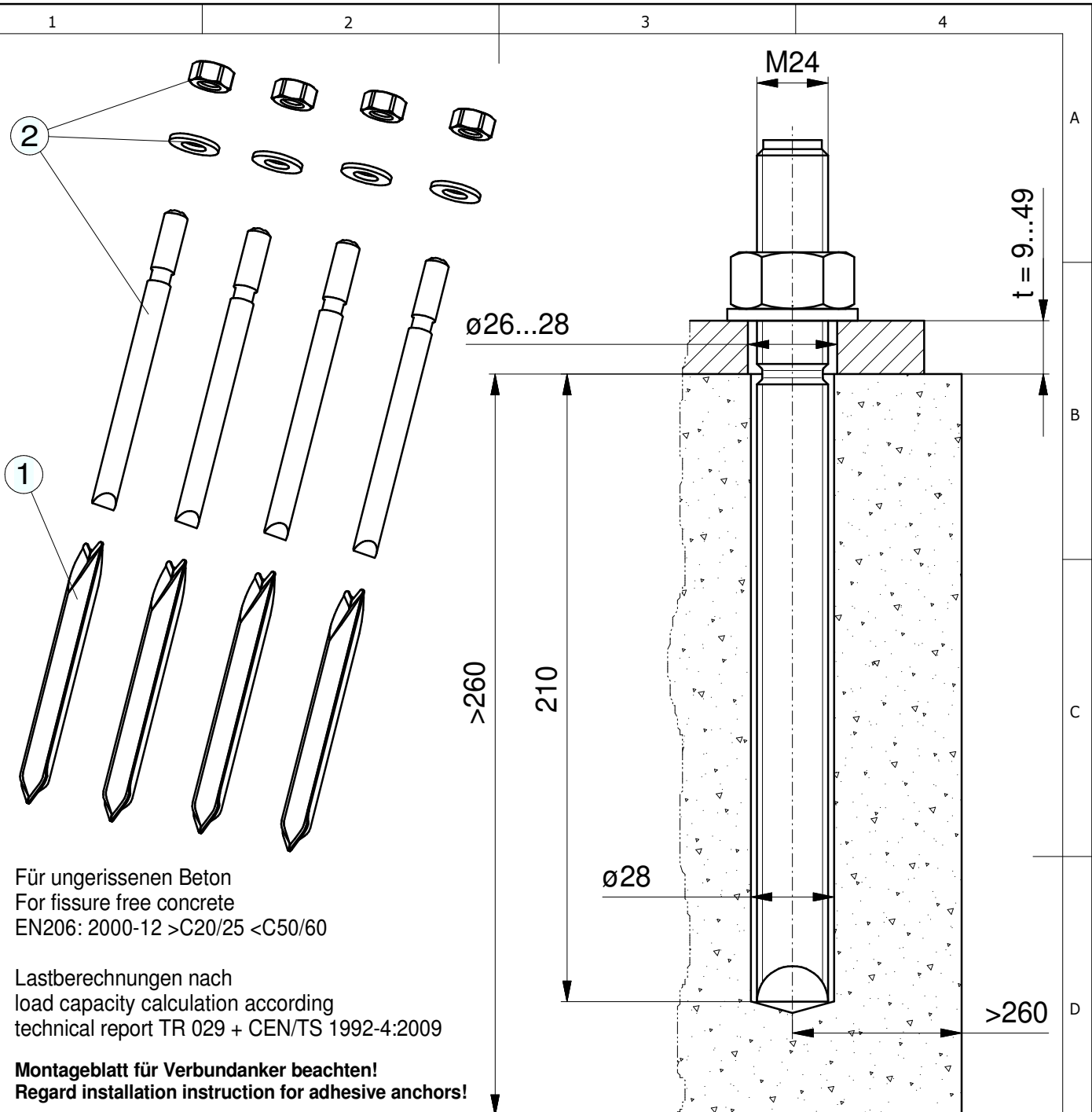
**wilo**

REPLACEMENT FOR: 03A.05.024.02  
NUMBER.INDEX: PAGE: 1/1

**03A.05.024.03**

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Für ungerissenen Beton  
For fissure free concrete  
EN206: 2000-12 >C20/25 <C50/60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageblatt für Verbundanker beachten!**  
**Regard installation instruction for adhesive anchors!**

|      |          |                                  |                  |
|------|----------|----------------------------------|------------------|
| 2    | 4        | Scheibe/washer                   | 25 DIN7349 Stvz  |
| 2    | 4        | Ankerstange / anchor bar HAS-E   | M24x210/114 Stvz |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU M24x210      |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |                  |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6065943 | TYPE:<br>4xM24 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|   |             |                         |   |                                   |
|---|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>5,4 kg                       | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>St 5.8 / steel, galvanized |             |                         | SCALE:<br>1:2                                 |                                   |

DESIGNATION:  
**fixation set 26 St vz**  
**Befestigungssatz 26 St vz**

|                    |            |            |            |
|--------------------|------------|------------|------------|
| REPLACEMENT FOR: - |            | PAGE: 1/1  |            |
| NUMBER.INDEX:      |            | 6050698.01 |            |
| 01                 | 1340203    | 2013-04-12 | T. Rietsch |
| IND.               | TN NO.     | DATE       | NAME       |
| RELEASE:           | 2013-04-19 | P. Rietsch | SIGN.      |

**wilo**

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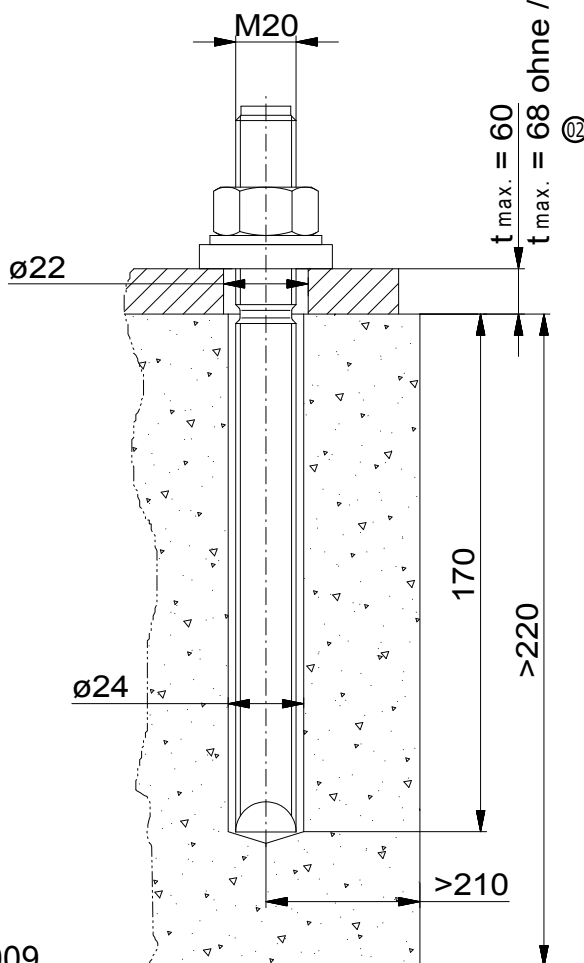
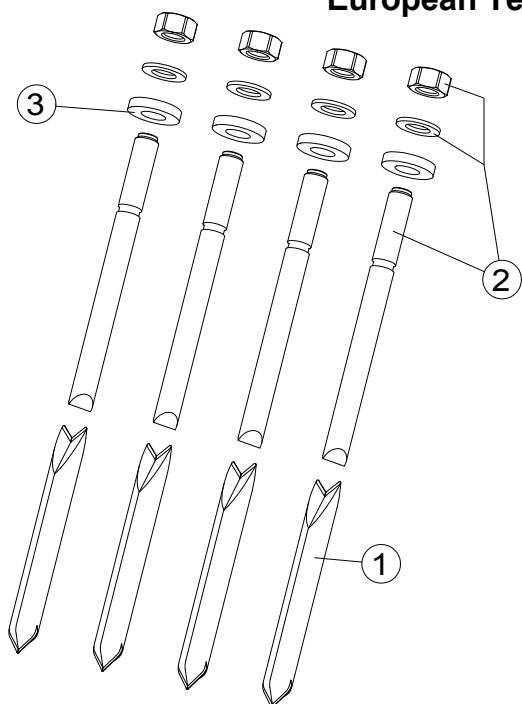
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European Technical Assessment

ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete

EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |                 |
|------|----------|----------------------------------|-----------------|
| 3    | 4        | Scheibe/washer                   | 21 DIN7349 Stvz |
| 2    | 4        | Ankerstange / anchor bar HAS-E   | M20x170/68 Stvz |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU2 M20x170    |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |                 |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6065945 | TYPE:<br>4xM20 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>3,02 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|   |                 |  |
|---|-----------------|--|
| MATERIAL:<br>St 5.8 / steel, galvanized | SCALE:<br>1:2,5 |  |
|---|-----------------|--|

DESIGNATION:  
**fixation set 25 St vz**  
**Befestigungssatz 25 St vz**

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1340203    | 2013-04-12 | T. Rietsch   |       |
| 02       | 1640209    | 2016-06-20 | B. Ott       |       |
| 03       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

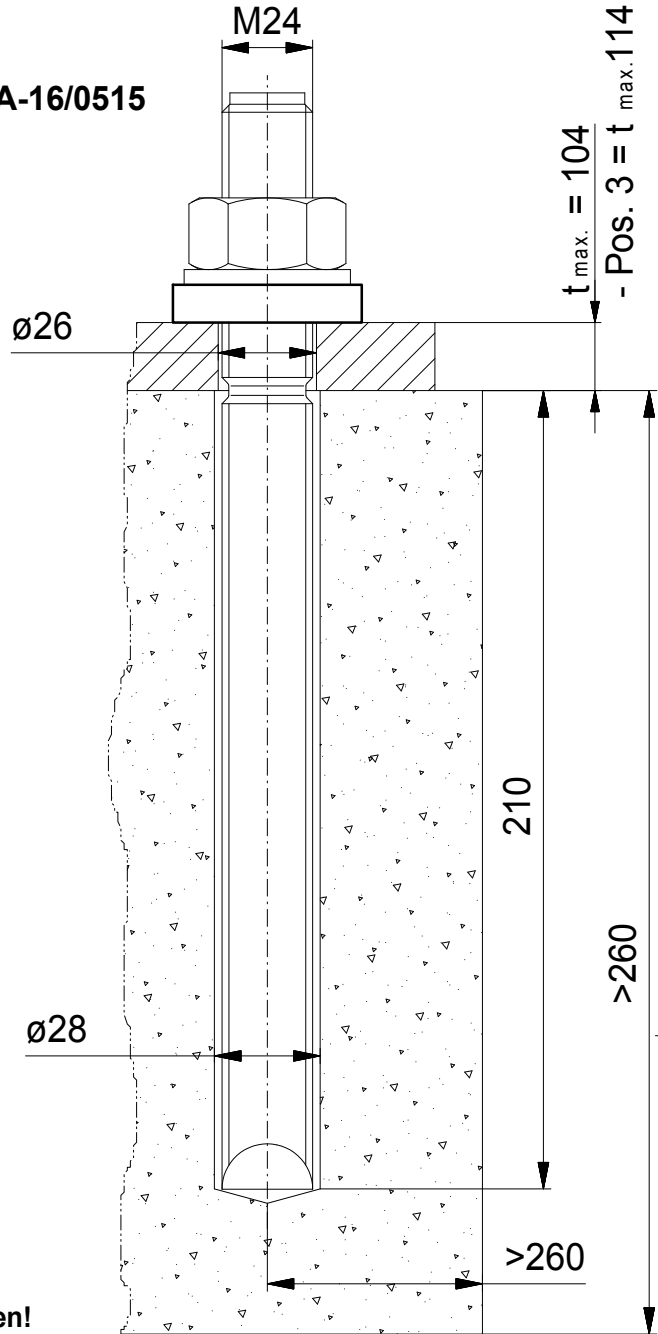
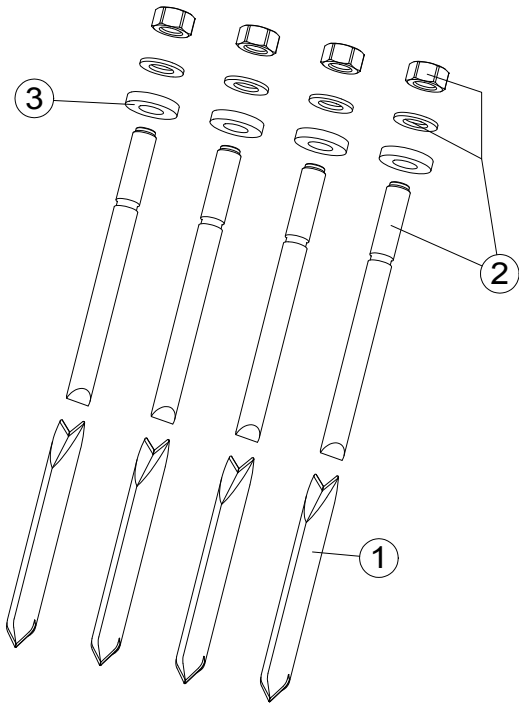
**wilo**

REPLACEMENT FOR: 6050697.02  
NUMBER.INDEX: PAGE: 1/1

**6050697.03**

**Europäische Technische Bewertung  
European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |                  |
|------|----------|----------------------------------|------------------|
| 3    | 4        | Scheibe/washer                   | 25 DIN7349 Stvz  |
| 2    | 4        | Ankerstange / anchor bar HAS-E   | M24x210/114 Stvz |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU2 M24x210     |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |                  |

|                    |                             |                               |
|--------------------|-----------------------------|-------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6065943 | TYPE:<br>4xM24 Beton/concrete |
|--------------------|-----------------------------|-------------------------------|

|  |
|--|
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |
|--|

|                   |             |                         |   |                                   |
|-------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>5,4 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|-------------------|-------------|-------------------------|---|-----------------------------------|

|   |               |  |
|---|---------------|--|
| MATERIAL:<br>St 5.8 / steel, galvanized | SCALE:<br>1:2 |  |
|---|---------------|--|

|  |
|--|
| DESIGNATION:<br><b>fixation set 26 St vz</b><br><b>Befestigungssatz 26 St vz</b> |
|--|

|                                    |                             |
|------------------------------------|-----------------------------|
| 01 1340203 2013-04-12 T. Rietsch   | REPLACEMENT FOR: 6050698.02 |
| 02 1640209 2016-06-20 B. Ott       |                             |
| 03 1740297 2017-08-30 E. Haselmann |                             |
| IND. TN NO. DATE NAME SIGN.        | NUMBER.INDEX: 6050698.03    |
| RELEASE: 2017-08-30 P. Rietsch     | PAGE: 1/1                   |

**wilo**

**6050698.03**

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1

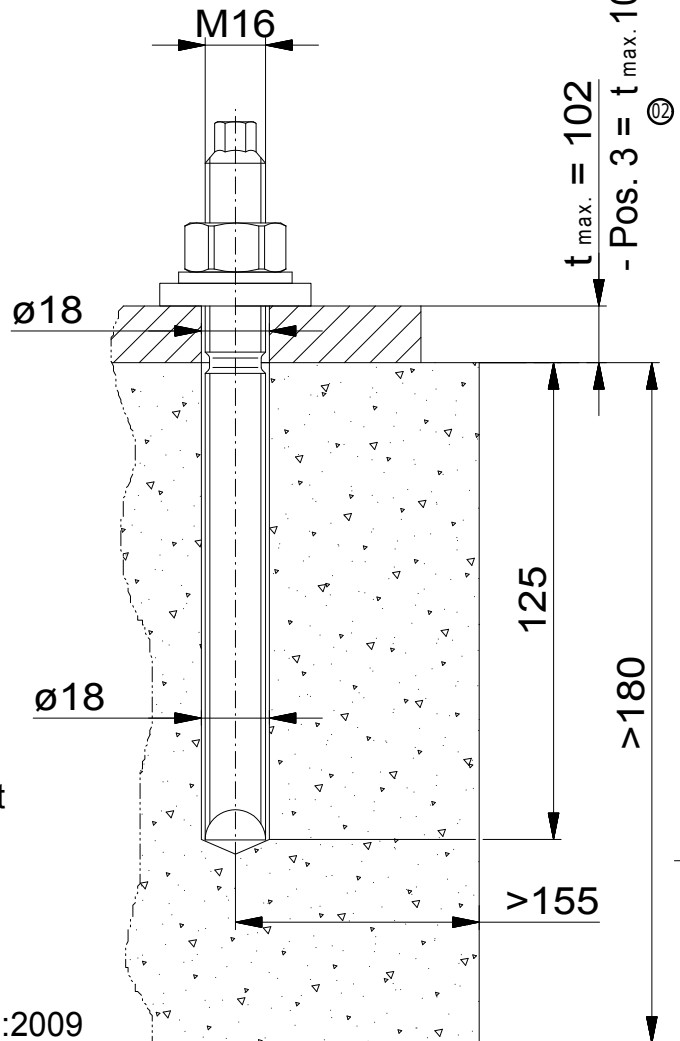
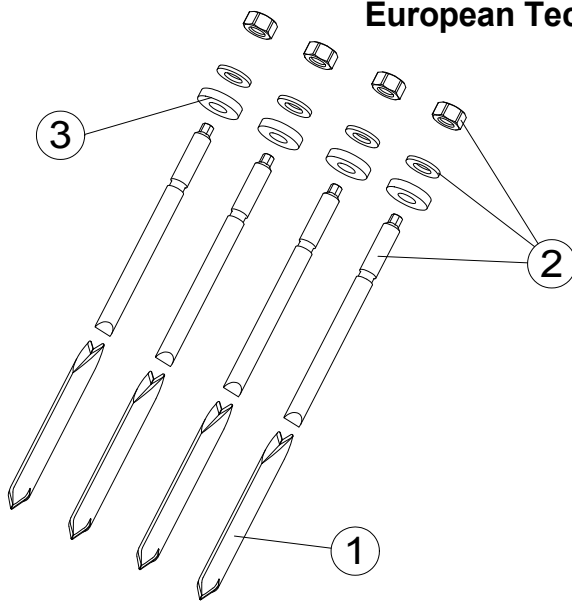
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European Technical Assessment

ETA-16/0515



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

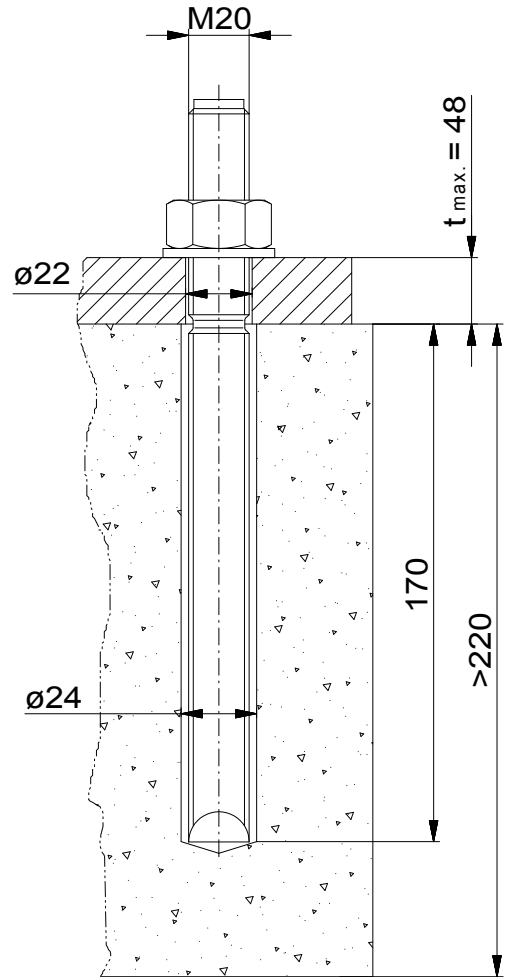
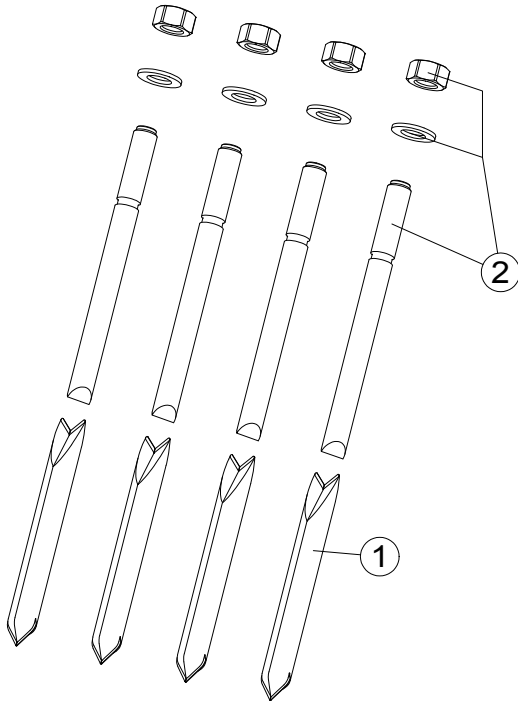
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |                  |
|------|----------|----------------------------------|------------------|
| 3    | 4        | Scheibe / washer                 | 17 DIN7349 Stvz  |
| 2    | 4        | Ankerstange / anchor bar HAS     | M16x125/108 Stvz |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU2 M16x125     |

|  |             |                             |  |                               |                                   |
|--|-------------|-----------------------------|--|-------------------------------|-----------------------------------|
| MODEL NUMBER:<br>-                                       |             | MATERIAL NUMBER:<br>6065944 |  | TYPE:<br>4xM16 Beton/concrete |                                   |
| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |             |                             |  |                               |                                   |
| WEIGHT:<br>kg  | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4     | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>-                      |                               | SPECIFICATIONS FOR SURFACES:<br>- |
|  |             |                             | MATERIAL:<br>St 5.8 / steel galvanized                             |                               | SCALE:<br>1:2                     |
|  |             |                             | DESIGNATION:<br>fixation set 27 St vz<br>Befestigungssatz 27 St vz |                               |                                   |
| 01   | 1340203     | 2013-04-12                  | T. Rietsch   |                               | REPLACEMENT FOR: 6050699.02       |
| 02   | 1640209     | 2016-06-20                  | B. Ott   |                               | NUMBER.INDEX:   PAGE: 1/1         |
| 03   | 1740297     | 2017-08-30                  | E. Haselmann   |                               |                                   |
| IND. TN NO.  | DATE        | NAME                        | SIGN.  |                               |                                   |
| RELEASE:   | 2017-08-30  | P. Rietsch                  |  |                               |                                   |
| <b>wilo</b>  |             |                             |  | <b>6050699.03</b>             |                                   |

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**Europäische Technische Bewertung**  
**European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!**  
**Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                  |               |
|------|----------|----------------------------------|---------------|
| 2    | 4        | Ankerstange / anchor bar HAS-E-R | M20x170/48 A4 |
| 1    | 4        | Mörtelpatrone / mortar cartridge | HVU2 M20x170  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:       |               |

|                    |                             |                                    |
|--------------------|-----------------------------|------------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6071290 | TYPE:<br>4 x M20 Beton/concrete A4 |
|--------------------|-----------------------------|------------------------------------|

|  |
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| STANDARDS VALID FOR / REFERENCED ON DRAWING:<br>DIN 7167 |
|--|

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>2,75 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |                 |  |
|----------------------------|-----------------|--|
| MATERIAL:<br>A4-70/AISI316 | SCALE:<br>1:2,5 |  |
|----------------------------|-----------------|--|

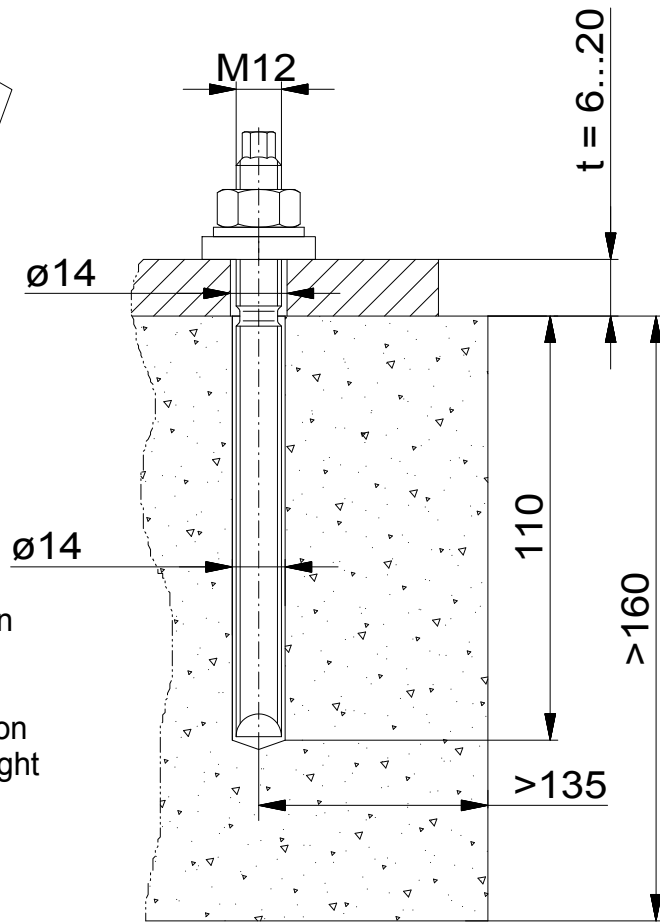
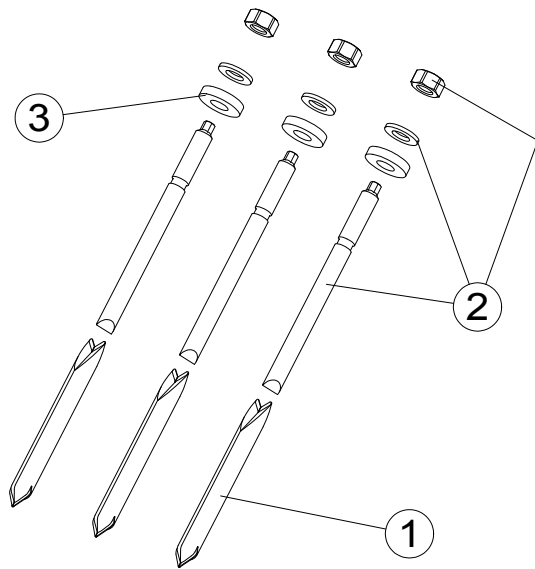
|  |
|--|
| DESIGNATION:<br><b>fixation set 28 A4</b><br><b>Befestigungssatz 28 A4</b> |
|--|

|                                    |             |                             |
|------------------------------------|-------------|-----------------------------|
| 01 1440078 2014-02-11 B. Ott       | <b>wilo</b> | REPLACEMENT FOR: 6051669.01 |
| 02 1740297 2017-08-30 E. Haselmann |             | NUMBER.INDEX: PAGE: 1/1     |
| IND. TN NO. DATE NAME SIGN.        |             | <b>6051669.02</b>           |
| RELEASE: 2017-08-30 P. Rietsch     |             |                             |

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European Technical Assessment**

**ETA-16/0515**



Für gerissenen und ungerissenen Beton  
For cracked and non-cracked concrete

Bewehrter und unbewehrter Normalbeton  
Reinforced or unreinforced normal weight  
concrete  
EN206-1:2000: C20/25 - C50/C60

Lastberechnungen nach  
load capacity calculation according  
technical report TR 029 + CEN/TS 1992-4:2009

**Montageanleitung für Verbundanker HVU2 beachten!  
Observe installation instruction for adhesive anchors HVU2!**

|      |          |                                    |               |
|------|----------|------------------------------------|---------------|
| 3    | 3        | Scheibe / washer                   | 13 DIN7349 A5 |
| 2    | 3        | Ankerstange / anchor bar HAS-E-HCR | M12x110/28 A5 |
| 1    | 3        | Mörtelpatrone / mortar cartridge   | HVU2 M12x110  |
| Pos. | Anz.-pc. | Bezeichnung - Designation:         |               |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6074948 | TYPE:<br>3xM12S Beton/concrete |
|--------------------|-----------------------------|--------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
DIN 7167

|                   |             |                         |   |                                   |
|-------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>0,6 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
| MATERIAL:<br>A5   |             |                         | SCALE:<br>1:2                                 |                                   |

fixation set 29 A5  
Befestigungssatz 29 A5

|          |            |            |              |       |
|----------|------------|------------|--------------|-------|
| 01       | 1440694    | 2014-12-10 | B. Ott       |       |
| 02       | 1740297    | 2017-08-30 | E. Haselmann |       |
| IND.     | TN NO.     | DATE       | NAME         | SIGN. |
| RELEASE: | 2017-08-30 | P. Rietsch |              |       |

**wilo**

REPLACEMENT FOR: 6052155.01  
NUMBER.INDEX: PAGE: 1/1  
**6052155.02**

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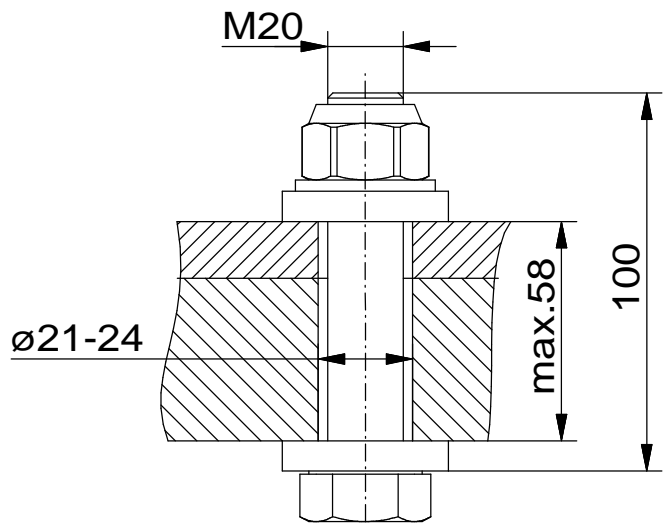
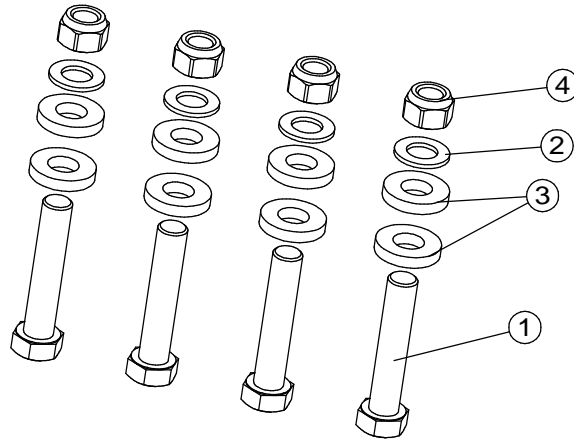
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Material: A4 / Zugfestigkeit: 70  
 material: AISI 316 / tensile strength: 70

| Pos. | Anz.-pc. | Bezeichnung - Designation: |         |
|------|----------|----------------------------|---------|
| 4    | 4        | Mutter/nut DIN985 A4       | M20     |
| 3    | 8        | Scheibe/washer DIN7349 A4  | 21      |
| 2    | 4        | Scheibe/washer DIN125 A4   | A21     |
| 1    | 4        | Schraube/screw DIN933 A4   | M20x100 |

|                    |                             |                                |
|--------------------|-----------------------------|--------------------------------|
| MODEL NUMBER:<br>- | MATERIAL NUMBER:<br>6087056 | TYPE:<br>4xM20x100 Stahl/steel |
|--------------------|-----------------------------|--------------------------------|

STANDARDS VALID FOR / REFERENCED ON DRAWING:  
 DIN 7167

|                    |             |                         |   |                                   |
|--------------------|-------------|-------------------------|---|-----------------------------------|
| WEIGHT:<br>1,91 kg | UNIT:<br>mm | DRAWING SIZE:<br>ISO A4 | DIMENSIONS WITHOUT TOLERANCE INDICATION:<br>- | SPECIFICATIONS FOR SURFACES:<br>- |
|--------------------|-------------|-------------------------|---|-----------------------------------|

|                            |  |  |               |  |
|----------------------------|--|--|---------------|--|
| MATERIAL:<br>A4-70/AISI316 |  |  | SCALE:<br>1:2 |  |
|----------------------------|--|--|---------------|--|

DESIGNATION:  
 fixation set 30 A4  
 Befestigungssatz 30 A4

|   |  |  |               |           |
|---|--|--|---------------|-----------|
| REPLACEMENT FOR: .  |  |  | NUMBER.INDEX: | PAGE: 1/1 |
| 01 1840400 2018-10-25 N. Porsch<br>02 1940034 2019-02-21 N. Porsch<br>IND. TN NO. DATE NAME SIGN.<br>RELEASE: 2019-02-21 P. Rietsch |  |  | 6053665.02    |           |