

### **INJECTION SYSTEM WIT-PE 1000**



<u>ttiiitkiine</u>

| Cartridge s | izes         | Art. no.     | <b>Dispensing guns</b> |  |  |  |
|-------------|--------------|--------------|------------------------|--|--|--|
| 440 ml      | side-by-side | 5918 605 440 |                        |  |  |  |
| 585 ml      | side-by-side | 5918 605 585 | р. 48                  |  |  |  |
| 1400 ml     | side-by-side | 5918 605 140 |                        |  |  |  |

585 ml

### **Application references**









| Temperature of<br>base material | Gelling –<br>working time | Min. curing time –<br>dry conditions <sup>1)</sup> |
|---------------------------------|---------------------------|--|
| 5°C to 9°C                      | 80 min                    | 48 h   |
| 10°C to 14°C                    | 60 min                    | 28 h   |
| 15°C to 19°C                    | 40 min                    | 18 h   |
| 20°C to 24°C                    | 30 min                    | 12 h   |
| 25°C to 34°C                    | 12 min                    | 9 h  |
| 35°C to 39°C                    | 8 min                     | 6 h  |
| +40°C                           | 8 min                     | 4 h  |

1) for wet base material the curing time must be doubled



| Threaded<br>rod | Internal<br>threaded rod | Rebar                    |  |  |  |  |  |
|-----------------|--------------------------|--------------------------|--|--|--|--|--|
|                 |                          |                          |  |  |  |  |  |
|                 |                          |                          |  |  |  |  |  |
| t               |                          |                          |  |  |  |  |  |
| 1               | -                        | 1                        |  |  |  |  |  |
| p. 34-36        | р. 36                    | not supplied<br>by Würth |  |  |  |  |  |

| Type of installation   |               |                    |  |  |
|------------------------|---------------|--------------------|--|--|
| Pre-positioned         | In-place      | Stand-off          |  |  |
| 1                      | -             | 1                  |  |  |
|                        |               |                    |  |  |
| Installation condition |               |                    |  |  |
| Dry concrete           | Wet concrete  | Flooded drill hole |  |  |
| 1                      | 1             | 1                  |  |  |
| Drilling method        |               |                    |  |  |
| Hammer drill           | Diamond drill | Hollow drill       |  |  |
| ✓                      | 1             | $\checkmark$       |  |  |
|                        |               |                    |  |  |

Rotary drilling in masonry required for some types of bricks and blocks



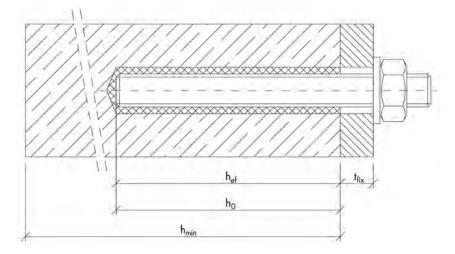
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### Loads – concrete

| Thread size                                    |          |                    | M8   | M10  | M12  | M16  | M20  | M24  | M27  | M30   |       |
|--|----------|--------------------|------|------|------|------|------|------|------|-------|-------|
| Effective anchorage depth h <sub>ef</sub> [mm] |          | 80                 | 90   | 110  | 125  | 170  | 210  | 240  | 270  |       |       |
| Non-cracked                                    | Concrete |                    |      |      |      |      |      |      |      |       |       |
|  | 5.8      |                    |      | 8.7  | 13.8 | 20.1 | 32.7 | 51.9 | 71.3 | 87.1  | 103.9 |
| Tension  | 8.8      | N <sub>rec</sub>   | [kN] | 13.8 | 20.0 | 27.0 | 32.7 | 51.9 | 71.3 | 87.1  | 103.9 |
|  | A4-70    |                    |      | 9.9  | 15.7 | 22.5 | 32.7 | 51.9 | 71.3 | 57.4  | 70.2  |
|  | 5.8      |                    | [kN] | 6.3  | 9.9  | 14.5 | 26.9 | 42.0 | 60.5 | 78.7  | 96.2  |
| Shear  | 8.8      | V <sub>rec</sub>   |      | 8.6  | 13.1 | 19.4 | 36.0 | 56.0 | 80.6 | 105.1 | 128.0 |
|  | A4-70    |                    |      | 6.0  | 9.2  | 13.7 | 25.2 | 39.4 | 56.8 | 34.5  | 42.0  |
| Cracked Con                                    | crete    | ·                  |      |      |      |      |      |      |      |       | ·     |
| <b>.</b>                                       | 5.8/8.8  | N                  |      | 6.7  | 9.4  | 16.8 | 22.9 | 36.3 | 49.9 | 61.0  | 72.7  |
| Tension  | A4-70    | - N <sub>rec</sub> | [kN] | 6.7  | 9.4  | 16.8 | 22.9 | 36.3 | 49.9 | 57.4  | 70.2  |
|  | 5.8      |                    |      | 6.3  | 9.9  | 14.5 | 26.9 | 42.0 | 60.5 | 78.7  | 96.2  |
| Shear  | 8.8      | V <sub>rec</sub>   | [kN] | 8.6  | 13.1 | 19.4 | 36.0 | 56.0 | 80.6 | 105.1 | 128.0 |
|  | A4-70    |                    |      | 6.0  | 9.2  | 13.7 | 25.2 | 39.4 | 56.8 | 34.5  | 42.0  |

<sup>1)</sup> Loads are valid for single anchors. Normal spaced reinforcement in  $\geq$  C20/25. Material safety factor  $\gamma_{M}$  and safety factor for action  $\gamma_{L} = 1.4$  are included. The material safety factor depends on the failure mode. <sup>2)</sup> Loads for anchorages close to edge and/or with small spacing have to be reduced and should be calculated based on performance data given in the ETA.

| Clearance-hole<br>in fixture            | Pre-<br>positioned | d                | [mm] | 9   | 12  | 14  | 18  | 22  | 26  | 30  | 33  |
|---|--------------------|------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|
|   | Push through       | d <sub>f</sub>   | [mm] | 12  | 14  | 16  | 20  | 24  | 30  | 33  | 40  |
| Drill depth                             | Drill depth        |                  | [mm] | 80  | 90  | 110 | 125 | 170 | 210 | 240 | 270 |
| Minimum thickness of<br>concrete member |                    | h <sub>min</sub> | [mm] | 110 | 120 | 140 | 161 | 214 | 266 | 300 | 340 |
| Minimum edge distance                   |                    | C <sub>min</sub> | [mm] | 35  | 40  | 45  | 50  | 60  | 65  | 75  | 80  |







# **INJECTION SYSTEM WIT-PE 1000**

#### Loads – REBAR

| Rebar size                                     | Ø 8   | Ø 10             | Ø 12 | Ø 14 | Ø 16 | Ø 20 | Ø 25 | Ø 28 | Ø 32 |      |       |       |
|--|-------|------------------|------|------|------|------|------|------|------|------|-------|-------|
| Effective anchorage depth h <sub>ef</sub> [mm] |       |                  | 80   | 90   | 110  | 125  | 125  | 170  | 210  | 270  | 300   |       |
| Non-cracked Concrete                           |       |                  |      |      |      |      |      |      |      |      |       |       |
| Tension  | В500В | N <sub>rec</sub> | [kN] | 14.0 | 20.0 | 27.0 | 32.7 | 32.7 | 51.9 | 71.3 | 103.9 | 121.7 |
| Shear  | взоов | V                | [kN] | 6.5  | 10.3 | 14.8 | 20.2 | 26.3 | 41.1 | 64.3 | 80.7  | 105.3 |
| Cracked Conc                                   | rete  |                  |      |      |      |      |      |      |      |      |       |       |
| Tension  | В500В | N <sub>rec</sub> | [kN] | 6.7  | 9.4  | 16.8 | 22.3 | 22.9 | 36.3 | 49.9 | 72.7  | 85.2  |
| Shear  | DOUR  | V                | [kN] | 6.5  | 10.3 | 14.8 | 20.2 | 26.3 | 41.1 | 64.3 | 80.7  | 105.3 |

<sup>1)</sup> Loads are valid for single anchors. Normal spaced reinforcement in ≥ C20/25. Material safety factor γ<sub>μ</sub> and safety factor for action γ<sub>L</sub> = 1.4 are included. The material safety factor depends on the failure mode. <sup>2)</sup> Loads for anchorages close to edge and/or with small spacing have to be reduced and should be calculated based on performance data given in the ETA.

| Nominal hole diameter                   | d <sub>0</sub>      | [mm] | 10  | 12  | 14  | 18  | 20  | 25  | 32  | 35  | 40  |
|---|---------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Effective anchorage depth               | h <sub>ef,min</sub> | [mm] | 60  | 60  | 70  | 75  | 80  | 90  | 100 | 112 | 128 |
|   | h <sub>ef,max</sub> | [mm] | 160 | 200 | 240 | 280 | 320 | 400 | 500 | 560 | 640 |
| Minimum thickness of<br>concrete member | h <sub>min</sub>    | [mm] | 110 | 120 | 140 | 161 | 165 | 220 | 274 | 340 | 380 |
| Minimum spacing                         | S <sub>min</sub>    | [mm] | 40  | 50  | 60  | 70  | 75  | 95  | 120 | 130 | 150 |
| Minimum edge distance                   | C <sub>min</sub>    | [mm] | 35  | 40  | 45  | 50  | 50  | 60  | 70  | 75  | 85  |

