JCP CONSTRUCTION PRODUCTS

# Ankerbolt

## NON-CRACKED CONCRETE - SHALLOW EMBEDMENT

| Performance Data (C20/25 non-cracked concrete) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Drill Diam ($d_0$) | Overall Embedment Depth ($h_{nom}$) | Minimum Concrete Thickness ($h_{min}$) | Characteristic Resistance | | Design Resistance | | Approved Resistance | | Design Spacing (s) | | Design Edge Distance (c) | |
| | | | Tensile ($N_{Rk}$) | Shear ($V_{Rk}$) | Tensile ($N_{Rd}$) | Shear ($V_{Rd}$) | Tensile($N_{Ra}$) | Shear ($V_{Ra}$) | Tensile | Shear | Tensile | Shear |
| mm | mm | mm | kN | kN | kN | kN | kN | kN | mm | mm | mm | mm |
| 5 | 25 | 100 | 3.1 | 3.2 | 1.7 | 2.0 | 1.2 | 1.4 | 50 | 50 | 30 | 40 |
| 6 | 30 | 100 | 3.9 | 3.8 | 2.1 | 2.5 | 1.5 | 1.7 | 60 | 60 | 40 | 40 |
| 8 | 40 | 100 | 6.3 | 6.3 | 3.4 | 4.2 | 2.4 | 3.0 | 70 | 80 | 50 | 50 |
| 10 | 50 | 100 | 9.3 | 9.1 | 5.0 | 6.0 | 3.5 | 4.2 | 100 | 100 | 60 | 70 |
| 12 | 60 | 100 | 12.5 | 12.7 | 6.9 | 8.4 | 4.9 | 6.0 | 120 | 120 | 70 | 90 |
| 14 | 70 | 100 | 15.3 | 15.2 | 8.4 | 10.3 | 6.0 | 7.3 | 130 | 140 | 80 | 110 |
| 16 | 80 | 105 | 19.0 | 18.9 | 10.3 | 12.4 | 7.3 | 8.8 | 160 | 160 | 110 | 120 |

## NON-CRACKED CONCRETE - DEEP EMBEDMENT

| Performance Data (C20/25 non-cracked concrete) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Drill Diam ($d_0$) | Overall Embedment Depth ($h_{nom}$) | Minimum Concrete Thickness ($h_{min}$) | Characteristic Resistance | | Design Resistance | | Approved Resistance | | Design Spacing (s) | | Design Edge Distance (c) | |
| | | | Tensile ($N_{Rk}$) | Shear ($V_{Rk}$) | Tensile ($N_{Rd}$) | Shear ($V_{Rd}$) | Tensile($N_{Ra}$) | Shear ($V_{Ra}$) | Tensile | Shear | Tensile | Shear |
| mm | mm | mm | kN | kN | kN | kN | kN | kN | mm | mm | mm | mm |
| 5 | 37 | 100 | 5.0 | 6.6 | 2.7 | 4.4 | 1.9 | 3.1 | 40 | 80 | 30 | 60 |
| 6 | 45 | 100 | 7.5 | 8.7 | 4.1 | 5.6 | 2.9 | 4.0 | 70 | 90 | 40 | 70 |
| 8 | 60 | 120 | 10.0 | 13.7 | 5.5 | 9.1 | 3.9 | 6.5 | 70 | 130 | 50 | 90 |
| 10 | 75 | 125 | 15.0 | 20.0 | 8.3 | 13.1 | 5.9 | 9.3 | 90 | 160 | 60 | 120 |
| 12 | 90 | 140 | 19.0 | 40.5 | 10.5 | 32.3 | 7.5 | 23.0 | 90 | 160 | 70 | 300 |
| 14 | 95 | 170 | 22.0 | 54.1 | 12.2 | 35.7 | 8.7 | 25.5 | 130 | 200 | 80 | 300 |
| 16 | 115 | 190 | 34.0 | 74.9 | 18.8 | 49.9 | 13.4 | 35.6 | 200 | 250 | 110 | 390 |

## SUPPLEMENTARY DATA

| Influence Of Concrete Strength (Non-cracked Concrete) | | | | | |
|---|---|---|---|---|---|
| Concrete strength | | C20/25 | C30/37 | C40/50 | C50/60 |
| Cylinder | N/mm² | 20 | 30 | 40 | 50 |
| Cube | N/mm² | 25 | 37 | 50 | 60 |
| Factor | M8, M10, M12 | 1.0 | 1.17 | 1.32 | 1.42 |
| | M14, M16 | 1.0 | 1.22 | 1.41 | 1.55 |

Important Note:
When using concrete factors ensure that loads do not exceed Steel Design Resistance.