



Product Information

The Shield Anchor is an all steel, internally threaded expansion anchor for general purpose applications
 Suitable for fixing into
 Concrete, Solid Brick, Dense Blockwork
 Some Natural Stone
 Finish available :-
 Zinc Plated and Yellow Passivated min 5µm
 Stainless Steel Grade A4 - 316 (Shield only)

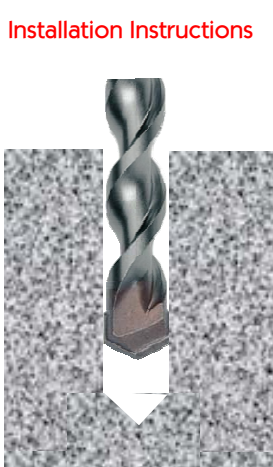
Features

1. All Steel anchor
2. High degree of expansion
3. High Tensile Bolt
4. Stainless Steel Shield available

Range Data

| Part Number | | Anchor Length | | | (Figures in brackets are for Stainless Steel Shields) | | | | | | |
|-------------------|----------------|---------------|----------------|----------------------|---|--------------------|-----------------------|---------------|---------------------------|----------------------------|---------------------|
| Shield Only BZP | Shield Only SS | Thread Diam | Shield Only mm | Length Under Head mm | Maximum Fixture Thickness mm | Drill Hole Diam mm | Minimum Hole Depth mm | Emb. Depth mm | Fixture Clearance Hole mm | Min Structure Thickness mm | Rec Tight Torque Nm |
| ASHOM06 | PSM06SS | 6 | 45(40) | | - | 12(10) | 50(45) | 45(40) | 8 | 80 | 6 |
| ASHOM08 | PSM08SS | 8 | 50 | | - | 14 | 55 | 50 | 10 | 100 | 14 |
| ASHOM10 | PSM10SS | 10 | 60 | | - | 16 | 65 | 60 | 12 | 120 | 27 |
| ASHOM12 | PSM12SS | 12 | 75(80) | | - | 20 | 85(90) | 75(80) | 14 | 160 | 46 |
| ASHOM16 | | 16 | 110 | | - | 25 | 120 | 110 | 18 | 200 | 110 |
| Loose Bolt | | | | | | | | | | | |
| | ALB0610 | 6 | | 55 | 10 | 12 | 50 | 45 | 8 | 80 | 6 |
| | ALB0625 | | 70 | 25 | | | | | | | |
| | ALB0640 | | 85 | 40 | | | | | | | |
| | ALB0810 | 8 | | 60 | 10 | 14 | 55 | 50 | 10 | 100 | 14 |
| | ALB0825 | | 75 | 25 | | | | | | | |
| | ALB0840 | | 90 | 40 | | | | | | | |
| | ALB1010 | 10 | | 70 | 10 | 16 | 65 | 60 | 12 | 120 | 27 |
| | ALB1025 | | 85 | 25 | | | | | | | |
| | ALB1050 | | 110 | 50 | | | | | | | |
| | ALB1075 | | 135 | 75 | | | | | | | |
| | ALB1210 | 12 | | 85 | 10 | 20 | 85 | 75 | 14 | 160 | 46 |
| | ALB1225 | | 100 | 25 | | | | | | | |
| | ALB1240 | | 115 | 40 | | | | | | | |
| | ALB1260 | | 135 | 60 | | | | | | | |
| | ALB1615 | 16 | | 135 | 15 | 25 | 120 | 110 | 18 | 200 | 110 |
| | ALB1630 | | 150 | 30 | | | | | | | |
| | ALB1660 | | 180 | 60 | | | | | | | |

Installation Instructions



Drill correct diameter hole to correct depth



Clean hole by brushing and blowing to remove all dust and drilling debris



Insert shield into concrete



Position fixture, insert bolt and tighten to Recommended Torque



| Performance Data (Grade 8.8 Bolt) C20/25 Concrete | | | | | | | | | |
|---|------------------------------|-------|----------------------|-------|---------------------------|-------|-----------------|------------------|-------|
| Thread Diam mm | Characteristic Resistance kN | | Design Resistance kN | | Recommended Resistance kN | | Spacing mm | Edge Distance mm | |
| | Tensile | Shear | Tensile | Shear | Tensile | Shear | Tensile & Shear | Tensile | Shear |
| 6 | 7.2 | 8.8 | 4.0 | 4.9 | 2.9 | 3.5 | 140 | 70 | 100 |
| 8 | 12.7 | 15.8 | 7.1 | 8.8 | 5.0 | 6.3 | 150 | 75 | 120 |
| 10 | 20.3 | 25.1 | 11.3 | 13.9 | 8.1 | 10.0 | 180 | 90 | 150 |
| 12 | 28.6 | 36.6 | 15.9 | 20.3 | 11.3 | 14.5 | 230 | 120 | 180 |
| 16 | 48.9 | 69.2 | 27.2 | 38.4 | 19.4 | 27.5 | 330 | 170 | 250 |

Shear Resistance towards a free edge is for single anchors where Spacing ≥ 3 x Edge Distance

Reduced Design Resistance (kN) • Divide Loads by 1.4 for Recommended Resistance

| Edge Distance (C20/25Concrete) for single anchors | | | | | | | | | | |
|---|--------------------|-----|------|------|------|------------------|-----|------|------|------|
| Edge mm | Tensile Resistance | | | | | Shear Resistance | | | | |
| | M6 | M8 | M10 | M12 | M16 | M6 | M8 | M10 | M12 | M16 |
| 50 | 3.2 | | | | | | | | | |
| 60 | 3.6 | 6.1 | | | | | | | | |
| 70 | 4.0 | 6.8 | 9.5 | | | 3.4 | | | | |
| 75 | | 7.1 | 10.0 | | | 3.7 | 5.5 | | | |
| 80 | | | 10.4 | 12.2 | | 3.9 | 5.9 | | | |
| 90 | | | 11.3 | 13.1 | | 4.4 | 6.6 | 8.3 | | |
| 100 | | | | 14.0 | | 4.9 | 7.3 | 9.3 | | |
| 110 | | | | 15.0 | 20.5 | | 8.1 | 10.2 | 12.4 | |
| 120 | | | | 15.9 | 21.6 | | 8.8 | 11.1 | 13.5 | |
| 125 | | | | | 22.2 | | | 11.6 | 14.1 | |
| 130 | | | | | 22.7 | | | 12.0 | 14.7 | |
| 150 | | | | | 25.0 | | | 13.9 | 16.9 | |
| 170 | | | | | 27.2 | | | | 19.2 | 26.1 |
| 180 | | | | | | | | | 20.3 | 27.6 |
| 210 | | | | | | | | | | 32.3 |
| 250 | | | | | | | | | | 38.4 |

| Spacing (C20/25Concrete) | | | | | |
|--------------------------|--|------|------|------|------|
| Spacing mm | Tensile Resistance per Pair of Anchors | | | | |
| | M6 | M8 | M10 | M12 | M16 |
| 70 | 6.0 | | | | |
| 90 | 6.6 | 11.4 | | | |
| 110 | 7.1 | 12.3 | | | |
| 130 | 7.7 | 13.3 | 19.5 | | |
| 140 | 8.0 | 13.7 | 20.1 | | |
| 145 | | 14.0 | 20.4 | | |
| 150 | | 14.2 | 20.7 | 26.3 | |
| 160 | | | 21.3 | 27.0 | |
| 170 | | | 22.0 | 27.7 | |
| 180 | | | 22.6 | 28.3 | 42.0 |
| 200 | | | | 29.7 | 43.7 |
| 220 | | | | 31.1 | 45.3 |
| 230 | | | | 31.8 | 46.2 |
| 270 | | | | | 49.5 |
| 300 | | | | | 51.9 |
| 330 | | | | | 54.4 |

Influence of concrete strength

| Concrete Strength | | C20/25 | C25/30 | C30/37 | C40/50 | C45/55 | C50/60 |
|-------------------|-------------------|---|--------|--------|--------|--------|--------|
| Cylinder | N/mm ² | Increased concrete strength factors cannot be used with this anchor | | | | | |
| Cube | N/mm ² | | | | | | |
| Factor | | | | | | | |

When using concrete factors check all other information to ensure Steel Tensile and Shear Resistance is not exceeded

Steel design resistance for single anchor

| | | M6 | M8 | M10 | M12 | M16 |
|---------|----|------|------|------|------|------|
| Tension | kN | 10.7 | 19.3 | 30.7 | 44.7 | 84.0 |
| Shear | kN | 6.1 | 11.3 | 17.9 | 26.1 | 49.4 |

Anchor mechanical properties

| | | M6 | M8 | M10 | M12 | M16 |
|------------------|-------------------|------|------|------|------|------|
| Tensile Strength | N/mm ² | 800 | 800 | 800 | 800 | 800 |
| Yield Strength | N/mm ² | 640 | 640 | 640 | 640 | 640 |
| Nut A/F | mm | 10.0 | 13.0 | 17.0 | 19.0 | 24.0 |
| Washer Diam. | mm | 12.0 | 17.0 | 21.0 | 24.0 | 30.0 |

Resistance for solid Brickwork (20.5N/mm²)

| Thread Diam | Recommended Load kN |
|-------------|---------------------|
| M6 | 1.8 |
| M8 | 2.3 |
| M10 | 2.9 |
| M12 | 4.3 |

Due to the variable nature of brickwork these loads are for guidance only
 Where loading is critical a site test is recommended
 Loads are for both Tension & Shear but Combined Loads must not exceed quoted figures
 Anchors above 12mm are not recommended in Brickwork