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| PART NUMBER: | DATE: |
| PROJECT #: | TYPE: |
| PREPARED BY: | |

MASONRY SCREWS TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

These blue concrete screws provide the ultimate pull-out strength. They feature a hex head with a slot driver for added flexibility. Flat head also available.



FEATURES

- Blue-coated steel
- Hex head

APPLICATIONS

- Concrete
- Brick
- Block

STANDARDS & SPECIFICATIONS

MADE IN CHINA

PULL OUT STRENGTH

ULTIMATE LOAD VALUES IN 2000 PSI CONCRETE

| SIZE | MINIMUM EMBEDMENT | DRILL BIT | PULL-OUT (LBS.) | SHEAR (LBS.) |
|-------|-------------------|-----------|-----------------|--------------|
| 3/16" | 1" | 5/32" | 600 | 720 |
| 1/4" | 1" | 3/16" | 750 | 900 |

ULTIMATE LOAD VALUES IN LIGHT WEIGHT BLOCK

| SIZE | MINIMUM EMBEDMENT | DRILL BIT | PULL-OUT (LBS.) | SHEAR (LBS.) |
|-------|-------------------|-----------|-----------------|--------------|
| 3/16" | 1" | 5/32" | 220 | 400 |
| 1/4" | 1" | 3/16" | 250 | 620 |

ULTIMATE LOAD VALUES IN MEDIUM WEIGHT BLOCK

| SIZE | MINIMUM EMBEDMENT | DRILL BIT | PULL-OUT (LBS.) | SHEAR (LBS.) |
|-------|-------------------|-----------|-----------------|--------------|
| 3/16" | 1" | 5/32" | 340 | 730 |
| 1/4" | 1" | 3/16" | 500 | 100 |

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.



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ULTIMATE TENSION AND SHEAR VALUES (LBS/KN) IN CONCRETE

| ANCHOR DIA IN.(MM) | MIN. DEPTH OF EMBEDMENT IN.(MM) | F' C = 2000 PSI [13.8 MPA] | | F' C = 3000 PSI [20.7 MPA] | | F' C = 4000 PSI [27.6 MPA] | | F' C = 5000 PSI [34.5 MPA] | |
|-----------------------|---------------------------------------|-------------------------------|-------------|-------------------------------|-------------|-------------------------------|-------------|-------------------------------|-------------|
| | | TENSION | SHEAR | TENSION | SHEAR | TENSION | SHEAR | TENSION | SHEAR |
| | | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) |
| 3/16 (4.8) | 1 (25.4) | 600 (2.7) | 720 (3.2) | 625 (2.8) | 720 (3.2) | 650 (2.9) | 720 (3.2) | 800 (3.6) | 860 (3.8) |
| | 1-1/4 (31.8) | 845 (3.7) | 720 (3.2) | 858 (3.8) | 720 (3.2) | 870 (3.9) | 720 (3.2) | 1,010 (4.5) | 860 (3.8) |
| | 1-1/2 (38.1) | 1,090 (4.8) | 860 (3.8) | 1,090 (4.8) | 860 (3.8) | 1,090 (4.8) | 860 (3.8) | 1,220 (4.8) | 860 (3.8) |
| | 1-3/4 (44.5) | 1,450 (6.5) | 870 (3.9) | 1455 (6.5) | 870 (3.9) | 1,460 (6.5) | 990 (4.4) | 1,730 (7.7) | 990 (4.4) |
| 1/4 (6.4) | 1 (25.4) | 750 (3.3) | 900 (4.0) | 775 (3.4) | 900 (4.0) | 800 (3.6) | 1,360 (6.1) | 950 (4.2) | 1,440 (6.4) |
| | 1-1/4 (31.8) | 1,050 (4.7) | 900 (4.0) | 1,160 (5.2) | 900 (4.0) | 1,270 (5.6) | 1,360 (6.1) | 1,515 (6.7) | 1,440 (6.4) |
| | 1-1/2 (38.1) | 1,380 (6.1) | 1,200 (5.3) | 1,600 (7.2) | 1,200 (5.3) | 1,820 (8.1) | 1,380 (6.1) | 2,170 (9.7) | 1,670 (7.4) |
| | 1-3/4 (44.5) | 2,020 (9.0) | 1,670 (7.4) | 2,200 (9.8) | 1,670 (7.4) | 2,380 (10.6) | 1,670 (7.4) | 2,770 (12.3) | 1,670 (7.4) |

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.

ULTIMATE TENSION AND SHEAR VALUES (LBS/KN) IN HOLLOW BLOCK

| ANCHOR DIA IN.(MM) | ANCHOR EMBEDMENT IN.(MM) | MEDIUM WEIGHT BLOCK | | MEDIUM WEIGHT BLOCK | |
|-----------------------|--------------------------------|---------------------|-----------|---------------------|-------------|
| | | TENSION | SHEAR | TENSION | SHEAR |
| | | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) | Lbs. (kN) |
| 3/16 (4.8) | 1 (25.4) | 220 (1.0) | 400 (1.8) | 340 (1.5) | 730 (3.2) |
| 1/4 (6.4) | 1 (25.4) | 250 (1.1) | 620 (1.8) | 500 (2.2) | 1,000 (4.4) |

Safe working loads for single installation under static loading should not exceed 25% of the ultimate load capacity.

NOTE: 3/16" Tapcon requires 5/32" bit, 1/4" Tapcon requires 3/16" bit.

ALLOWABLE EDGE AND SPACING DISTANCES

| PARAMETER | ANCHOR DIA. IN.(MM) | NORMAL WEIGHT CONCRETE | | | CONCRETE MASONRY UNITS (CMU) | | |
|--------------------------------------|---------------------------|----------------------------|-----------------------|-----------------------------|------------------------------|-----------------------|-----------------------------|
| | | FULL CAPACITY | REDUCED CAPACITY | LOAD REDUCTION FACTOR | FULL CAPACITY | REDUCED CAPACITY | LOAD REDUCTION FACTOR |
| | | (Critical Distance In.) | (Min Distance In.) | | (Critical Distance In.) | (Min Distance In.) | |
| Spacing Between Anchors - Tension | 3/16 | 3 | 1-1/2 | 0.73 | 3 | 1-1/2 | 1.00 |
| | 1/4 | 4 | 2 | 0.66 | 4 | 2 | 0.84 |
| Spacing Between Anchors - Shear | 3/16 | 3 | 1-1/2 | 0.83 | 3 | 1-1/2 | 1.00 |
| | 1/4 | 4 | 2 | 0.82 | 4 | 2 | 0.81 |
| Edge Distance - Tension | 3/16 | 1-7/8 | 1 | 0.83 | 3 | 2 | 0.91 |
| | 1/4 | 2-1/2 | 1-1/4 | 0.82 | 4 | 2 | 0.81 |
| Edge Distance - Shear | 3/16 | 2-1/4 | 1-1/8 | 0.70 | 3 | 2 | 0.93 |
| | 1/4 | 3 | 1-1/2 | 0.59 | 4 | 2 | 0.80 |

For SI: 1 inch = 25.4 mm



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ORDERING INFORMATION

| PART NUMBER | STOCK CODE | SIZE | LENGTH | MATERIAL | HEAD TYPE | PACK QTY | CASE QTY |
|-------------|------------|-------|--------|-------------------|-----------|----------|----------|
| CES3802J | 0222-6513 | 3/16" | 1-1/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3803J | 0250-0359 | 3/16" | 1-3/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3804J | 0262-3362 | 3/16" | 2-1/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3805J | 0262-3365 | 3/16" | 2-3/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3808J | 0240-2124 | 3/16" | 4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3811J | 0246-7191 | 3/16" | 1-3/4" | BLUE-COATED STEEL | FLAT | 100 | 6 |
| CES3902J | 0211-0302 | 1/4" | 1-1/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3903J | 0211-0305 | 1/4" | 1-3/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3904J | 0211-0308 | 1/4" | 2-1/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3905J | 0242-2275 | 1/4" | 2-3/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3906J | 0255-0921 | 1/4" | 3-1/4" | BLUE-COATED STEEL | HEX | 100 | 6 |
| CES3910J | 0261-5133 | 1/4" | 1-1/4" | BLUE-COATED STEEL | FLAT | 100 | 6 |
| CES3911J | 0261-5136 | 1/4" | 1-3/4" | BLUE-COATED STEEL | FLAT | 100 | 6 |
| CES3912J | 0274-0245 | 1/4" | 2-3/4" | STAINLESS STEEL | FLAT | 100 | 6 |

RESOURCES

MSDS/EDS/PRODUCT DATA SHEETS: f4p-usa.com

CUSTOMER SERVICE: 772-408-5211

DISCLAIMER

Recommendations for use of this product are based on tests we believe to be reliable. Manufacturer and seller are not responsible for results where this product is used under conditions beyond our control. If when applied as directed, this material peels, cracks or separates, it will be replaced without charge upon presentation of proof of purchase and used cartridge. This limited warranty only applies to residential use and damages including consequential damage and other remedies. No other warranties apply, including fitness for a particular purpose.