

## FA4 **Foundation Anchor**





## **Features:**

- Tested to meet the requirements of for uncracked and cracked cocrete.
- Use as a replacement for 5/8" or 1/2" anchor bolts with cut or plate washers and nuts.
- Embedded leg with flow-thru design reduces spalling by minimizing the size of the concrete fracture plane.

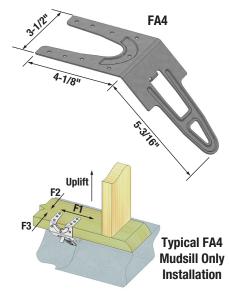
The FA4 foundation anchors can be installed as a replacement for the 5/8" diameter anchor bolts or also the commonly used 1/2" diameter anchor bolts while achieving the same or higher load resistance.

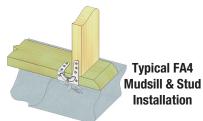
Materials: 16 gauge Finish: G90 galvanizing

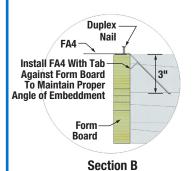
**Options:** FA4 is available in Triple Zinc. To order, add TZ to stock number, as in FA4-TZ.

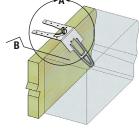
## **Installation:**

- The FA4 can be mounted to the form board before placing the concrete or inserted into the wet concrete after it is poured. See Detail A installation.
- Place the mudsill in position after the concrete cures. Secure the FA4 to the mudsill (and stud, if applicable) by bending the flanges as needed for a tight fit and nailing into place with the size and quantity of fasteners specified in the chart.

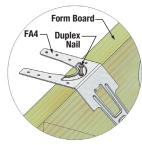








**FA4 Form Board** Installation



**Detail A** 

**USP** supplies quality products to build **Stronger Safer Structures** 

## **Customer Service:**

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|                      |                        |                              |      | Fastener Schedule <sup>6</sup> |     |     |             |                       |      | DF                                 |            |                    |      |                           |                                      |            | S-P-F |                                  |      |            |            |                             |            |            |      |            |
|----------------------|------------------------|------------------------------|------|--------------------------------|-----|-----|-------------|-----------------------|------|------------------------------------|------------|--------------------|------|---------------------------|--------------------------------------|------------|-------|----------------------------------|------|------------|------------|-----------------------------|------------|------------|------|------------|
|                      |                        | Sill Plate <sup>4</sup> Stud |      |                                |     |     |             |                       |      | ored Re                            | sistanc    | e <sup>1,2,5</sup> |      |                           | Factored Resistance <sup>1,2,5</sup> |            |       |                                  |      |            |            |                             |            |            |      |            |
|                      |                        | Side Top                     |      |                                |     |     |             |                       |      | Wind and $I_E F_a S_a(0.2) < 0.35$ |            |                    |      | $I_EF_aS_a(0.2) \ge 0.35$ |                                      |            |       | Wind and $I_EF_aS_a(0.2) < 0.35$ |      |            |            | $I_E F_a S_a(0.2) \ge 0.35$ |            |            |      |            |
| Plate<br>Size        | USP<br>Stock No.       | Ref.                         | Ga.  | Qty                            | Qty | Qty | Туре        | Concrete <sup>3</sup> | Unit | Uplift                             | F1<br>115% | F2                 | F3   | Uplift<br>115%            | F1                                   | F2<br>115% | F3    | Uplift                           |      | F2<br>115% | F3<br>115% | Uplift                      | F1<br>115% | F2<br>115% | F3   | Ctn<br>Otv |
| 2 x 4<br>or<br>2 x 6 | FA4<br>Mudsill<br>Only | · MASA                       | 16 - | 3                              | 6   |     | 10d x 1-1/2 | Uncracked             | Lbs  | 1615                               | 2265       | 1825               | 990  | 1395                      | 2035                                 | 1395       | 990   | 1450                             | 2030 | 1635       | 885        | 1395                        | 2030       | 1395       | 885  |            |
|                      |                        |                              |      |                                |     |     |             |                       | kN   | 7.18                               | 10.08      | 8.12               | 4.40 | 6.21                      | 9.05                                 | 6.21       | 4.40  | 6.45                             | 9.03 | 7.27       | 3.94       | 6.21                        | 9.03       | 6.21       | 3.94 |            |
|                      |                        |                              |      |                                |     |     |             | Cracked               | Lbs  | 1340                               | 1900       | 1340               | 975  | 1005                      | 1425                                 | 1005       | 730   | 1340                             | 1900 | 1340       | 885        | 1005                        | 1425       | 1005       | 730  |            |
|                      |                        |                              |      |                                |     |     |             |                       | kN   | 5.96                               | 8.45       | 5.96               | 4.34 | 4.47                      | 6.34                                 | 4.47       | 3.25  | 5.96                             | 8.45 | 5.96       | 3.94       | 4.47                        | 6.34       | 4.47       | 3.25 | 50         |
|                      |                        |                              |      | 3                              | 3   | 3   | 10d x 1-1/2 | Uncracked             | Lbs  | 1395                               | 1485       | 1915               | 780  | 1395                      | 1485                                 | 1395       | 780   | 1250                             | 1335 | 1915       | 700        | 1250                        | 1335       | 1395       | 700  | 1          |
|                      |                        |                              |      |                                |     |     |             |                       | kN   | 6.21                               | 6.61       | 8.52               | 3.47 | 6.21                      | 6.61                                 | 6.21       | 3.47  | 5.56                             | 5.94 | 8.52       | 3.11       | 5.56                        | 5.94       | 6.21       | 3.11 |            |
|                      |                        |                              |      |                                |     |     |             | Cracked -             | Lbs  | 1340                               | 1485       | 1340               | 780  | 1005                      | 1425                                 | 1005       | 730   | 1250                             | 1335 | 1340       | 700        | 1005                        | 1335       | 1005       | 700  |            |
|                      |                        |                              |      |                                |     |     |             |                       | kN   | 5.96                               | 6.61       | 5.96               | 3.47 | 4.47                      | 6.34                                 | 4.47       | 3.25  | 5.56                             | 5.94 | 5.96       | 3.11       | 4.47                        | 5.94       | 4.47       | 3.11 |            |

- 1) Short-term load duration factor 115% for wind and earthquake has been taken into consideration; no further increased is allowed.
- 2) Factored resistances are based on a minimum stemwall thickness of 6-inches, minimum end distance of 5-1/2" and minimum spacing of 7 inches.

  3) Minimum 28-day concrete compressive strength f'c = 2500 psi (17.25 MPa).

- 4) Factored resistances are based on using a single-ply 2x sill plate. Sill plate may be treated lumber.

  5) When loads in more than one direction are present, interaction effects shall be considered using the unity equation Refer to USP catalog Design Notes (1).

  6) NAILS: 10d x 1-1/2" nails are 0.148" dia. x 1-1/2" long.