

**Micah Swartz, P.E.**

Project Number: MS24-12006

Project Name: Premium Vinyl V-4500 - Pocket

Date: 9/8/2025

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**Product Approval Supporting Calculations  
Alternative Anchorage Analysis & Design  
R1 - Admin Update**

**Project Number:** MS24-12006

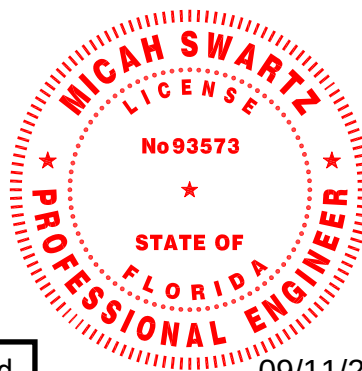
**Drawing Number:** D014682

**Reference Test Report:** G6547.02-301-44

**Product Name:** V-4500 Sliding Vinyl Door 191" x 120"

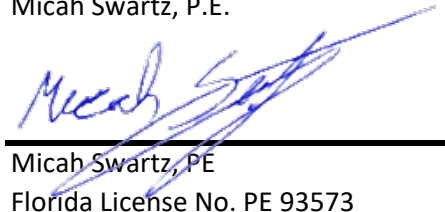
**Prepared for:**

Jeld-Wen Windows & Doors  
3737 Lakeport Blvd.  
Klamath Falls, OR



09/11/25

Prepared by:  
Micah Swartz, P.E.

  
Micah Swartz, PE  
Florida License No. PE 93573

This item has been digitally signed and sealed by Micah Swartz, P.E. on the date adjacent to the seal.

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|                           |                 |                               |
|---------------------------|-----------------|-------------------------------|
| <b>Micah Swartz, P.E.</b> | Project Number: | MS24-12006                    |
|                           | Project Name:   | Premium Vinyl V-4500 - Pocket |
|                           | Date:           | 9/8/2025                      |
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**Scope:**

Micah Swartz, P.E. is contracted by Jeld-Wen Windows & Doors to evaluate alternative anchorage for the product: V-4500 Sliding Vinyl Door 191" x 120". This evaluation is based on testing performed by Architectural Testing Inc. in Fresno, CA, test report no.: G6547.02-301-44 and dated 4/11/2017, revised on 4/28/17.

This evaluation does not include the air infiltration, water resistance or water penetration of the installation method or the installed product. In addition, the design of the building substrate to resist the superimposed loads is by others.

**Reference Standards:**

*Current edition of the Florida Building Code, Building*

*ANSI/AWC NDS - National Design Specification (NDS) for Wood Construction*

*AISI S100 North American Specification for the Design of Cold-Formed Steel Structural Members*

*ICC-ES Report ESR-1976 ITW Buildex TEKS Self-Drilling Fasteners*

*ICC-ES Report ESR-2196 Hilti Self Drilling Screws to connect cold-formed steel*

*NOA 24-0102.06 Tapcon Concrete and Masonry Anchors with Advanced Threadform Technology*

**Certification of Independence:**

In accordance with Rule 61G20-3 Florida Administrative Code, Micah Swartz, P.E. hereby certifies the following:

(1) Micah Swartz, P.E. does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products tested or labeled by the agency.

(2) Micah Swartz, P.E. is not owned, operated or controlled by any company manufacturing or distributing products it tests or labels.

(3) Micah Swartz, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.

(4) Micah Swartz, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

|                           |                 |                               |
|---------------------------|-----------------|-------------------------------|
| <b>Micah Swartz, P.E.</b> | Project Number: | MS24-12006                    |
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**Design Summary:**

The table below summarizes the product: V-4500 Sliding Vinyl Door 191" x 120" and their corresponding performance levels as established by testing.

**Table 1:** Summary of Test Results

| Series/Model                             | Test Report Number                                    | Size (W x H) | Performance       |
|------------------------------------------|-------------------------------------------------------|--------------|-------------------|
| V-4500 Sliding Vinyl Door<br>191" x 120" | G6547.02-301-44<br>(4/11/2017, revised on<br>4/28/17) | 191" x 120"  | +60 psf / -60 psf |

**As Tested Design:**

**Screw Information:**

Screw Size: 8 Screw Embed: 1.5 in Edge Distance: 3/4 in (minimum)

Wood Screw Lateral: 106 lbs

**Alternative Fasteners:**

**Screw Information:**

Screw Size: 8 Screw Embed: 1.5 in Edge Distance: 3/4 in (minimum)

Wood Screw Withdrawal: 197 lbs

Wood Screw Lateral: 106 lbs

**TEK Screw Information:**

Screw Size: 8-18

TEK Withdrawal: 125 lbs

TEK Lateral: 131 lbs

**Tapcon Information:**

Tapcon Size: 3/16 Embedment: 1-1/4 in (minimum) Edge Distance: 2-1/2 in (minimum)

Tapcon Lateral (Concrete): 155 lbs

Tapcon Lateral (CMU): 135 lbs

|                           |                                             |               |
|---------------------------|---------------------------------------------|---------------|
| <b>Micah Swartz, P.E.</b> | Project Number: MS24-12006                  |               |
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|                           |                                             |               |

Summary of Test Results - Plastics Checklist

Table 2: Summary of Test Results - Plastics Checklist

| Product                        | Test Report Number | Test Standard                     | Performance       |
|--------------------------------|--------------------|-----------------------------------|-------------------|
| SMC Skin (fiberglass material) | ESP010982P         | ASTM D638 (before and after G155) | -2.2% (averaged)  |
|                                |                    | ASTM D1929                        | 770 °F (410 °C)   |
|                                |                    | ASTM D2843                        | 62                |
|                                |                    | ASTM D635                         | Classification HB |

The testing summarized in the table above was conducted by Element Materials Technology in St Paul, MN on 02/26/13 and meets the requirements listed in Miami-Dade County Checklist #0445, For the approval of: Plastic and Foam Plastic.

|                                                |                                             |
|------------------------------------------------|---------------------------------------------|
| <h1 style="margin: 0;">Micah Swartz, P.E.</h1> | Project Number: MS24-12006                  |
|                                                | Project Name: Premium Vinyl V-4500 - Pocket |
|                                                | Date: 9/8/2025      Page: 5 of 13           |

**Subject:** As Tested - Wood Screw Lateral Design - Single Shear

Input:    
 Calculation:

**Screw Information:**

Screw Size: 8  
 Screw Embed: 1.5 in

Root Diameter: 0.131 in

Main Member Type: S-P-F    G: 0.42    F<sub>em</sub>: 3,350 psi    thickness (t<sub>m</sub>): 1.5 in

Side Member Type: PVC    G: N/A    F<sub>es</sub>: 13,750 psi    thickness (t<sub>s</sub>): 0.125 in

**Lateral Design Factors - Table 12.3.1A (NDS)**

|                   |                                                                             |                                      |
|-------------------|-----------------------------------------------------------------------------|--------------------------------------|
| D:                | <span style="border: 1px solid black; padding: 2px 10px;">0.131</span> in   | Diameter                             |
| F <sub>yb</sub> : | <span style="border: 1px solid black; padding: 2px 10px;">100</span> ksi    | Dowel Bending Yield Strength         |
| F <sub>em</sub> : | <span style="border: 1px solid black; padding: 2px 10px;">3,350</span> psi  | Main Member dowel bearing strength   |
| F <sub>es</sub> : | <span style="border: 1px solid black; padding: 2px 10px;">13,750</span> psi | Side Member dowel bearing strength   |
| l <sub>m</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">1.5</span> in     | Main Member dowel bearing length     |
| l <sub>s</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">0.125</span> in   | Side Member dowel bearing length     |
| R <sub>d</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">2.2</span>        | Reduction term - Table 12.3.1B (NDS) |
| R <sub>e</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">0.2436</span>     | = F <sub>em</sub> /F <sub>es</sub>   |
| R <sub>t</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">12.0</span>       | = l <sub>m</sub> /l <sub>s</sub>     |
| k <sub>1</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">1.135</span>      | See Table                            |
| k <sub>2</sub> :  | <span style="border: 1px solid black; padding: 2px 10px;">0.647</span>      | See Table                            |

**Reference Lateral Design Values - Table 12.3.1A (NDS)**

$Z_{Im} = \frac{D l_m F_{em}}{R_d} \text{ (EQ 12.3 - 1)}$ 
Z<sub>Im</sub>: 299 lbs

$Z_{II} = \frac{k_1 D l_s F_{es}}{R_d} \text{ (EQ 12.3 - 3)}$ 
Z<sub>II</sub>: 116 lbs

$Z_{III_m} = \frac{k_2 D l_m F_{em}}{(1 + 2R_e) R_d} \text{ (EQ 12.3 - 4)}$ 
Z<sub>III\_m</sub>: 130 lbs

$Z_{IV} = \frac{D^2}{R_d} \sqrt{\frac{2 F_{em} F_{yb}}{3(1 + R_e)}} \text{ (EQ 12.3 - 6)}$ 
Z<sub>IV</sub>: 105 lbs

$Z_{MIN} = \text{105 lbs}$

Note: Side member is part of the Jeld-Wen assembly and verified during testing. Modes Z<sub>Is</sub> and Z<sub>III<sub>s</sub></sub> are not applicable to the calculation.

**Subject:** As Tested - Wood Screw Lateral Design - Single Shear Cont.**Adjusted Lateral Design Values**

$$Z' = Z * C_D * C_M * C_t * C_g * C_{\Delta} - \text{As per table 11.3.1 NDS}$$

|                |     |                                            |
|----------------|-----|--------------------------------------------|
| $C_D$ :        | 1.6 | Load Duration Factor - Table 2.3.2 (NDS)   |
| $C_M$ :        | 1.0 | Wet Service Factor - Table 11.3.3 (NDS)    |
| $C_t$ :        | 1.0 | Temperature Factor - Table 11.3.4 (NDS)    |
| $C_g$ :        | 1.0 | Group Action Factor - Section 11.3.6 (NDS) |
| $C_{\Delta}$ : | 1.0 | Geometry Factor - Section 12.5.1.1 (NDS)   |

$$Z': \boxed{167} \text{ lbs}$$

**Fastener Bending Across Shim Space**

|            |       |                                  |
|------------|-------|----------------------------------|
| $\Omega$ : | 1.67  |                                  |
| L:         | 0.25  | in Maximum Shim Gap              |
| D:         | 0.131 | in Diameter                      |
| $F_{yb}$ : | 100   | ksi Dowel Bending Yield Strength |

$$\frac{F_{yb}}{\Omega} = \frac{M}{S} = \frac{16ZL}{\pi D^3} \Leftrightarrow Z = \frac{F_{yb} \pi D^3}{16 \Omega L}$$

$$\text{Where } M = \frac{ZL}{2} \text{ (Guided Bending)}$$

$$Z_n/\Omega: \boxed{106} \text{ lbs}$$

**Bearing on Masonry Strap**

|            |       |                               |
|------------|-------|-------------------------------|
| $\Omega$ : | 3.00  |                               |
| $F_u$ :    | 33    | ksi Tensile Strength of strap |
| t:         | 20    | GA                            |
| t:         | 0.036 | in thickness of strap         |
| D:         | 0.131 | in                            |

$$\frac{P_{nv}}{\Omega} = 2.7 * t * D * F_u - (EQ.J4.3.1 - 4, AISI S100)$$

$$P_{nv}/\Omega: \boxed{140} \text{ lbs}$$

|                           |                 |                               |
|---------------------------|-----------------|-------------------------------|
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|                           | Project Name:   | Premium Vinyl V-4500 - Pocket |
|                           | Date:           | 9/8/2025                      |

|          |                       |              |  |
|----------|-----------------------|--------------|--|
| Subject: | Wood Screw Withdrawal | Input:       |  |
|          |                       | Calculation: |  |

|                           |       |                |       |                   |       |     |
|---------------------------|-------|----------------|-------|-------------------|-------|-----|
| <b>Screw Information:</b> |       |                |       |                   |       |     |
| Screw Size:               | 8     | Root Diameter: | 0.131 | in                |       |     |
| Screw Embed:              | 1.5   |                |       | in                |       |     |
| Main Member Type:         | S-P-F | G:             | 0.42  | F <sub>em</sub> : | 3,350 | psi |

$W' = W * C_D * C_M^2 * C_t$  – As per table 11.3.1 NDS

|                  |     |                                          |
|------------------|-----|------------------------------------------|
| C <sub>D</sub> : | 1.6 | Load Duration Factor - Table 2.3.2 (NDS) |
| C <sub>M</sub> : | 1.0 | Wet Service Factor - Table 11.3.3 (NDS)  |
| C <sub>t</sub> : | 1.0 | Temperature Factor - Table 11.3.4 (NDS)  |

|    |     |                            |
|----|-----|----------------------------|
| W: | 82  | lbs/in - Table 12.2B (NDS) |
| W: | 123 | lbs                        |

|     |     |     |
|-----|-----|-----|
| W': | 197 | lbs |
|-----|-----|-----|

|                                                |                 |                               |
|------------------------------------------------|-----------------|-------------------------------|
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**Subject:** Wood Screw Lateral Design - Single Shear

Input:   
 Calculation:

**Screw Information:**  
 Screw Size: 8  
 Screw Embed: 1.5 in

Root Diameter: 0.131 in

Main Member Type: S-P-F

G: 0.42

F<sub>em</sub>: 3,350 psi

thickness (t<sub>m</sub>): 1.5 in

Side Member Type: PVC

G: N/A

F<sub>es</sub>: 13,750 psi

thickness (t<sub>s</sub>): 0.125 in

| Lateral Design Factors - Table 12.3.1A (NDS) |                                                                             |                                      |
|----------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------|
| D:                                           | <span style="border: 1px solid black; padding: 2px 10px;">0.131</span> in   | Diameter                             |
| F <sub>yb</sub> :                            | <span style="border: 1px solid black; padding: 2px 10px;">100</span> ksi    | Dowel Bending Yield Strength         |
| F <sub>em</sub> :                            | <span style="border: 1px solid black; padding: 2px 10px;">3,350</span> psi  | Main Member dowel bearing strength   |
| F <sub>es</sub> :                            | <span style="border: 1px solid black; padding: 2px 10px;">13,750</span> psi | Side Member dowel bearing strength   |
| l <sub>m</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">1.5</span> in     | Main Member dowel bearing length     |
| l <sub>s</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">0.125</span> in   | Side Member dowel bearing length     |
| R <sub>d</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">2.2</span>        | Reduction term - Table 12.3.1B (NDS) |
| R <sub>e</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">0.2436</span>     | = F <sub>em</sub> /F <sub>es</sub>   |
| R <sub>t</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">12.0</span>       | = l <sub>m</sub> /l <sub>s</sub>     |
| k <sub>1</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">1.135</span>      | See Table                            |
| k <sub>2</sub> :                             | <span style="border: 1px solid black; padding: 2px 10px;">0.647</span>      | See Table                            |

**Reference Lateral Design Values - Table 12.3.1A (NDS)**

Z<sub>I<sub>m</sub></sub>: 299 lbs

$Z_{I_m} = \frac{D l_m F_{em}}{R_d} \text{ (EQ 12.3 - 1)}$

Z<sub>II</sub>: 116 lbs

$Z_{II} = \frac{k_1 D l_s F_{es}}{R_d} \text{ (EQ 12.3 - 3)}$

Z<sub>III<sub>m</sub></sub>: 130 lbs

$Z_{III_m} = \frac{k_2 D l_m F_{em}}{(1 + 2R_e) R_d} \text{ (EQ 12.3 - 4)}$

Z<sub>IV</sub>: 105 lbs

$Z_{IV} = \frac{D^2}{R_d} \sqrt{\frac{2 F_{em} F_{yb}}{3(1 + R_e)}} \text{ (EQ 12.3 - 6)}$

Z<sub>MIN</sub>: 105 lbs

Note: Side member is part of the Jeld-Wen assembly and verified during testing. Modes Z<sub>I<sub>s</sub></sub> and Z<sub>III<sub>s</sub></sub> are not applicable to the calculation.

**Subject:** Wood Screw Lateral Design - Single Shear Cont.**Adjusted Lateral Design Values**

$$Z' = Z * C_D * C_M * C_t * C_g * C_{\Delta} - \text{As per table 11.3.1 NDS}$$

|                |     |                                            |
|----------------|-----|--------------------------------------------|
| $C_D$ :        | 1.6 | Load Duration Factor - Table 2.3.2 (NDS)   |
| $C_M$ :        | 1.0 | Wet Service Factor - Table 11.3.3 (NDS)    |
| $C_t$ :        | 1.0 | Temperature Factor - Table 11.3.4 (NDS)    |
| $C_g$ :        | 1.0 | Group Action Factor - Section 11.3.6 (NDS) |
| $C_{\Delta}$ : | 1.0 | Geometry Factor - Section 12.5.1.1 (NDS)   |

$$Z': \boxed{167} \text{ lbs}$$

**Fastener Bending Across Shim Space**

|            |       |                                  |
|------------|-------|----------------------------------|
| $\Omega$ : | 1.67  |                                  |
| $L$ :      | 0.25  | in Maximum Shim Gap              |
| $D$ :      | 0.131 | in Diameter                      |
| $F_{yb}$ : | 100   | ksi Dowel Bending Yield Strength |

$$\frac{F_{yb}}{\Omega} = \frac{M}{S} = \frac{16ZL}{\pi D^3} \Leftrightarrow Z = \frac{F_{yb} \pi D^3}{16 \Omega L}$$

$$\text{Where } M = \frac{ZL}{2} \text{ (Guided Bending)}$$

$$Z_n/\Omega: \boxed{106} \text{ lbs}$$

**Bearing on Masonry Strap**

|            |       |                               |
|------------|-------|-------------------------------|
| $\Omega$ : | 3.00  |                               |
| $F_u$ :    | 33    | ksi Tensile Strength of strap |
| $t$ :      | 20    | GA                            |
| $t$ :      | 0.036 | in thickness of strap         |
| $D$ :      | 0.131 | in                            |

$$\frac{P_{nv}}{\Omega} = 2.7 * t * D * F_u - (EQ.J4.3.1 - 4, AISI S100)$$

$$P_{nv}/\Omega: \boxed{140} \text{ lbs}$$

**Micah Swartz, P.E.**

Project Number: MS24-12006

Project Name: Premium Vinyl V-4500 - Pocket

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Subject: TEK Withdrawal

Input:

Calculation:

**Shear Strength of Fastener - ESR 2196**

Screw Size: 8-18

$P_{nv}/\Omega$ : 335 lbs See ESR 2196

**Tensile Pullout - ESR 2196**

Screw Size: 8-18

$F_u$ : 45 ksi

t: 16 GA

t: 0.0598 in

Tensile Strength of material NOT in contact with screw head

Thickness of material NOT in contact with screw head

$P_{nv}/\Omega$ : 125 lbs See ESR 2196

**Tensile Pullover**

Note: The tensile pullover analysis checks the material IN contact with the screw head. This material is part of the Jeld-Wen assembly and has been verified by testing. Below is a check to ensure the head size of the TEK screw is equal to or larger than the head of the tested fastener, ensuring compliance.

*Tested Fastener Head Size:*

Screw Size: 8

Head Size: 0.312 in

Tested fastener is a

*TEK Screw Head Size:*

Screw Size: 8-18

Head Size: 0.335 in

|                           |                 |                               |
|---------------------------|-----------------|-------------------------------|
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|          |                    |              |  |
|----------|--------------------|--------------|--|
| Subject: | TEK Lateral Design | Input:       |  |
|          |                    | Calculation: |  |

Shear Strength of Fastener - ESR 2196

Screw Size: 8-18

$P_{nv}/\Omega$ : 390 lbs      See ESR 2196

Bearing Strength of Material NOT in Contact with Screw Head - AISI S100

|             |           |                                                             |      |
|-------------|-----------|-------------------------------------------------------------|------|
| Screw Size: | 8-18      | $\Omega$ :                                                  | 3.00 |
| D:          | 0.123 in  | Root Diameter of TEK Screw                                  |      |
| $F_u$ :     | 45 ksi    | Tensile Strength of material NOT in contact with screw head |      |
| t:          | 18 GA     |                                                             |      |
| t:          | 0.0478 in | Thickness of material NOT in contact with screw head        |      |

$$\frac{P_{nv1}}{\Omega} = 2.7 * t * D * F_u - (EQ.J4.3.1 - 3, AISI S100)$$

$$\frac{P_{nv2}}{\Omega} = 4.2 \sqrt{t^3 * D} * F_u - (EQ.J4.3.1 - 1, AISI S100)$$

$P_{nv1}/\Omega$ : 238 lbs

$P_{nv2}/\Omega$ : 231 lbs

$P_{nv}/\Omega$ : 231 lbs       $\frac{P_{nv}}{\Omega} = \text{smallest of } \frac{P_{nv1}}{\Omega} \text{ and } \frac{P_{nv2}}{\Omega}$

Bearing Strength of Material IN in Contact with Screw Head

Note: Material IN contact with the screw head is part of the Jeld-Wen assembly and has been verified by testing.

Fastener Bending Across Shim Space

|            |          |                             |            |      |
|------------|----------|-----------------------------|------------|------|
| L:         | 0.25 in  | Maximum Shim Gap            | $\Omega$ : | 3.00 |
| D:         | 0.123 in | Root Diameter of TEK Screw  |            |      |
| $F_{yb}$ : | 100 ksi  | Yield Strength of TEK Screw |            |      |

$$\frac{F_{yb}}{\Omega} = \frac{M}{S} = \frac{16P_n L}{\pi D^3} \Leftrightarrow P_n = \frac{F_{yb} \pi D^3}{16 \Omega L}$$

Where  $M = \frac{P_n L}{2}$  (Guided Bending)

$P_n/\Omega$ : 146 lbs

|                           |                 |                               |
|---------------------------|-----------------|-------------------------------|
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|                           | Date:           | 9/8/2025                      |

**Bearing Strength of Masonry Straps - AISI S100**

|                  |        |           |                                   |      |
|------------------|--------|-----------|-----------------------------------|------|
| Screw Size:      | 8-18   | TEK Screw | Ω:                                | 3.00 |
| D:               | 0.123  | in        | Root Diameter of TEK Screw        |      |
| F <sub>u</sub> : | 33     | ksi       | Tensile Strength of Masonry Strap |      |
| t:               | 20     | GA        |                                   |      |
| t:               | 0.0359 | in        | Thickness of Masonry Strap        |      |

$$\frac{P_{nv}}{\Omega} = 2.7 * t * D * F_u - (EQ.J4.3.1 - 3, AISI S100)$$

P<sub>nv</sub>/Ω: 131 lbs

|                                                |                                                                  |
|------------------------------------------------|------------------------------------------------------------------|
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|                                                | Project Name: Premium Vinyl V-4500 - Pocket                      |
|                                                | Date: 9/8/2025 <span style="float: right;">Page: 13 of 13</span> |

Subject: Tapcon Lateral Design

Input:

Calculation:

**Tapcon Size:**

Size: 3/16  
 D: 0.1875 in  
 D<sub>sh</sub>: 0.145 in

Nominal Diameter  
 Shank Diameter

**Fastener Shear Capacity - 3,000 psi Concrete**

P<sub>nv</sub>/Ω: 181 lbs

See Table 1B of NOA 24-0102.06

**Fastener Shear Capacity - Medium-Weight CMU**

P<sub>nv</sub>/Ω: 135 lbs

See Table 3 of NOA 24-0102.06

- Note:
- Critical anchor spacing is 16D
  - Minimum Anchor Embedment is 1-1/4"
  - Minimum Edge Distance is 2-1/4"

**Fastener Bending Across Shim Space**

L: 0.25 in  
 D<sub>sh</sub>: 0.145 in  
 F<sub>yb</sub>: 100 ksi

Maximum Shim Gap  
 Shank Diameter of Tapcon  
 Yield Strength of Tapcon

Ω: 3.00

$$\frac{F_{yb}}{\Omega} = \frac{M}{S} = \frac{16P_n L}{\pi D^3} \Leftrightarrow P_n = \frac{F_{yb} \pi D^3}{16 \Omega L}$$

Where  $M = \frac{P_n L}{2}$  (Guided Bending)

P<sub>n</sub>/Ω: 239 lbs

**Bearing Strength of Masonry Straps - AISI S100**

Size: 3/16  
 D<sub>sh</sub>: 0.145 in  
 F<sub>u</sub>: 33 ksi  
 t: 20 GA  
 t: 0.0359 in

Tapcon Size  
 Shank Diameter of Tapcon Screw  
 Tensile Strength of Masonry Strap  
 Thickness of Masonry Strap

Ω: 3.00

$$\frac{P_{nv}}{\Omega} = 2.7 * t * D * F_u - (EQ. J4.3.1 - 3, AISI S100)$$

P<sub>nv</sub>/Ω: 155 lbs