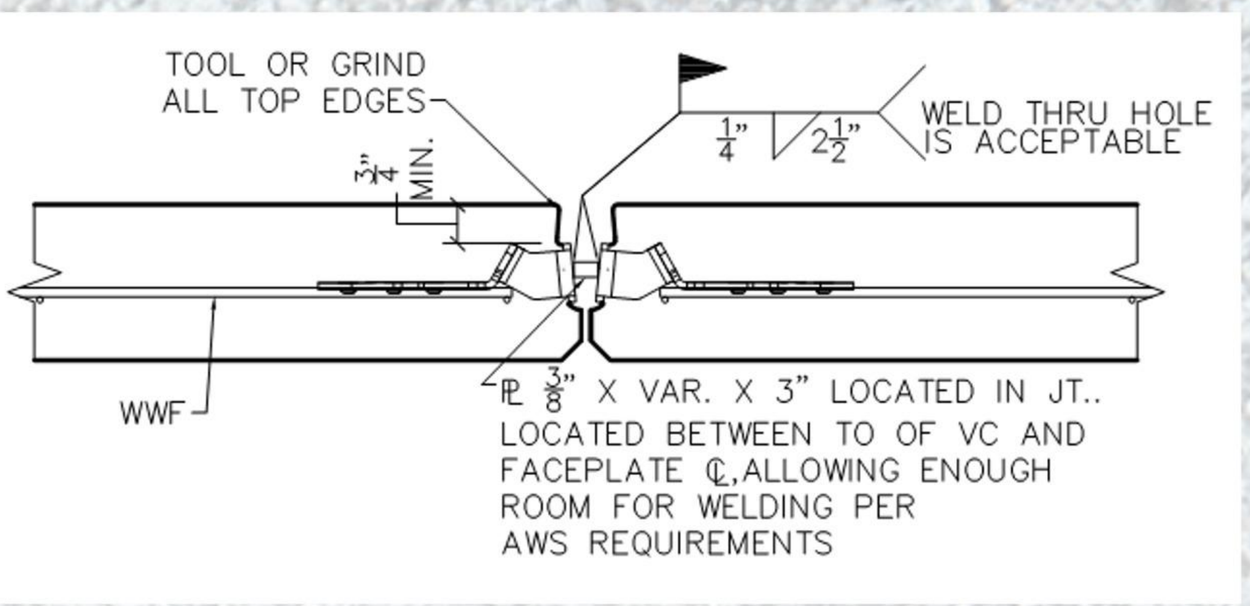
Vector Connector

Beginning with its introduction in 1998, the vector connector became, and remains the state-of-the art in weldable shear and alignment connectors for precast double tees, wall panels and slabs.

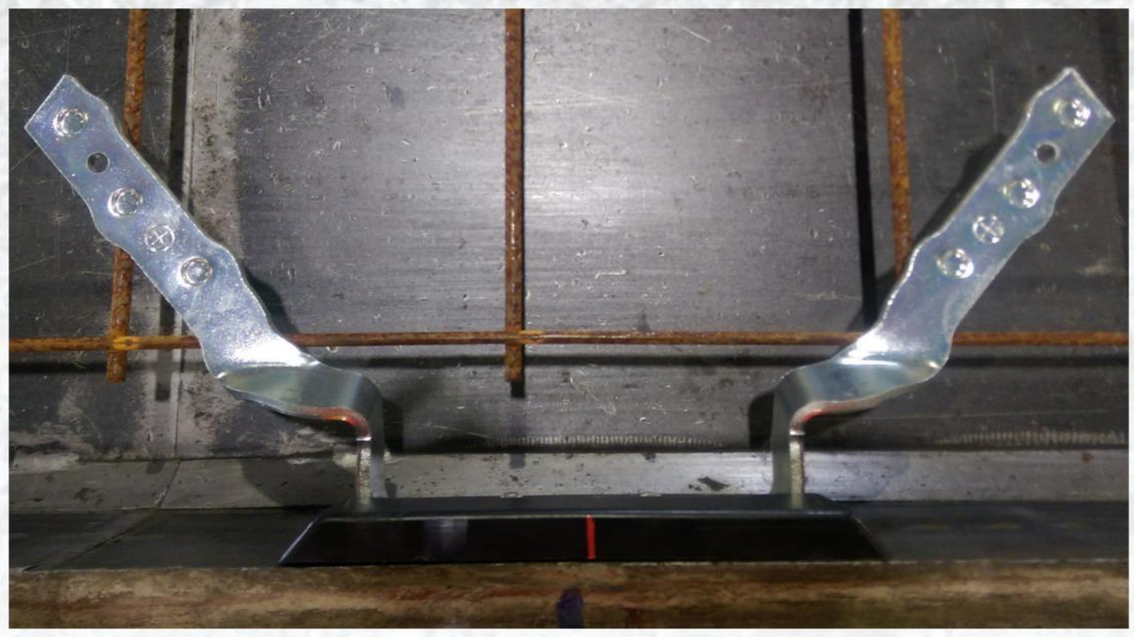
To date, more than 12 million vector connectors are in service in precast products throughout the world.



Benefits:

- 1 1/2" tall faceplate with labeled weld zone.
- Successfully tested to full capacity with 2 1/2" weld
- Patented face sweep and bend to promote flexibility in tension
- Extensive, published test reports to validate recommended capacities
- Strategic leg deformations gradually distribute forces from the leg to the concrete
- Horizontal legs at installation eliminates reinforcing interferences & centers the legs
- User guidelines available for engineering, purchasing, production and erection procedures.

MADE IN THE USA FLANGE CONNECTOR



VC401J
High Strength Low Alloy Steel
with J-Finish

VC4112
201L Stainless Steel

Flush Blockout

1/4" Blockout

3/4" Blockout

1" Blockout

Your Connection Connection

7131 North Ridgeway Avenue • Lincolnwood, IL 60712 USA
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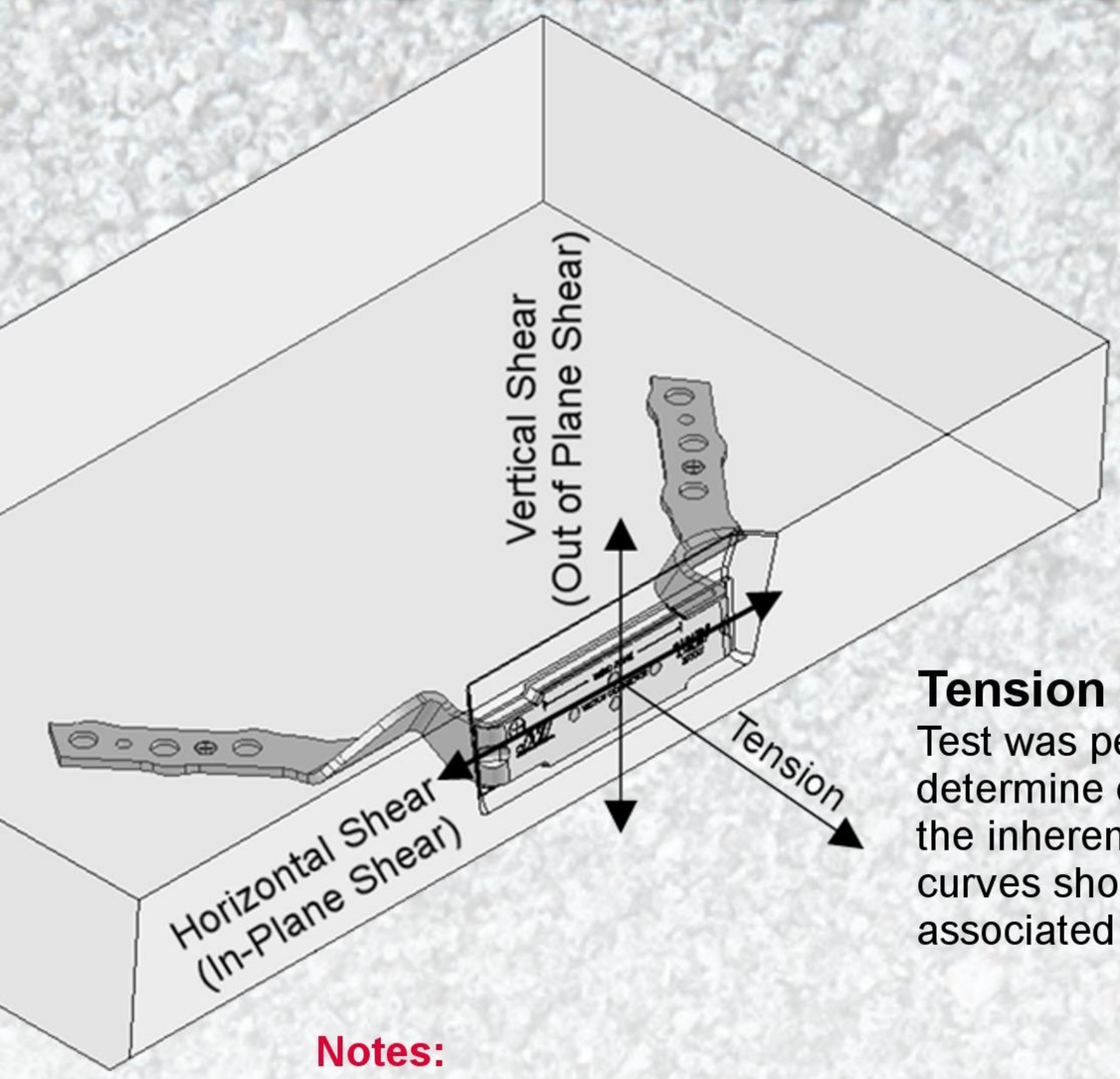
Vector Connector

Recommended Nominal Strengths



Cyclic In-Plane Shear With Tension (Gap = 0.1") **11.0 kips**
Reported value considers test yield load

Monotonic In-Plane Shear with No Tension **10.7 kips**
Reported value conservatively considers test "first-cracking" load

Out-of-Plane Shear with No Tension **4.3 kips**
Reported value considers test breaking load

Tension Normal to Face Plate (Welded top and bottom of slug)
Test was performed for validation of concrete bond capacity of legs and to determine deformation characteristics. Tension capacity is not reported due to the inherent ductility of the connection loaded in tension. Load displacement curves should be investigated for a tension capacity with an acceptable associated displacement.

Notes:

1. Nominal Strengths are 5% fractile strengths calculated using the average ultimate load, and standard deviation of full-scale test results. A 5% fractile strength is the nominal strength for which there is a 90% confidence that there is a 95% probability of the actual strength exceeding the nominal strength. Please reference ACI 318 Appendix D for additional information
2. Strength Reduction Factors applied to the nominal strength to determine design strength are at the discretion of the Engineer. Consideration should be given to the failure mode, application and additional reinforcing as described in PCI Handbook, 7th Edition, 6.2.
3. VC4 configuration is the same as the VC3 (Mid V) with the exception of a slight modification to the faceplate corners. The modification is immaterial and does not impact nominal capacities.
4. All values are based on a 3/8" thick x 1" wide flat bar slug. All welds were located on the top, horizontal plane of the slug, with the exception of the tension normal to faceplate configuration.
5. A ¼" x 2 1/2" long weld is recommended, unless otherwise determined by design
6. Available in, ASTM 201LN stainless steel, A36 carbon steel with a "J" Finish
7. Reported values can be assumed valid for both ASTM 201LN stainless steel and A36 carbon steel.
8. With respect to volume changes, the vector connector is classified as a flexible connection.

References:

1. Ghorbanpoor, A (2009), Testing of the JVI Mid V in 4" slabs. University of Wisconsin-Milwaukee (UWM) Mid_V_Test_Report_Final_021810Final.pdf
2. Ghorbanpoor, A (2010) Additional Testing of the JVI Mid V in 4" Slabs. University of Wisconsin-Milwaukee (UWM) MidVTestReport0410.PDF
3. Ghorbanpoor, A (2012) Testing of the JVI Vector Connector 4 in 4" Slabs. University of Wisconsin-Milwaukee (UWM) VC4ReportNo113012.pdf
4. Klien, G & Lindenberg, R (2009), Volume Change Response of Precast Concrete Buildings. PCI Journal, Fall 2009, 112-131

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