



**MOCK-UP TEST REPORT**

**Rendered to:**  
**TUBELITE, INC.**  
**400SS Screw Spline**  
**Curtain Wall**

**Report No:** 01-46121.02  
**Report Date:** 02/03/04

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**MOCK-UP TEST REPORT**

Rendered to:

TUBELITE, INC  
4878 Mackinaw Trail  
Reed City, Michigan 49677

Report No: 01-46121.02  
Test Completion Date: 09/23/03  
Report Date: 02/03/04

Project: 400SS Screw Spline Curtain Wall

**Project Summary:** Architectural Testing, Inc. (ATI) was contracted by Tubelite, Inc. to conduct performance testing on a 400 Screw Spline Curtain Wall System mock-up. All testing was performed in accordance with the attached test procedure. This report includes a copy of "As-Built" mock-up drawings. Reference Report 01-46121.01 for a complete and comprehensive product evaluation.

**Drawing Reference:** Tubelite, Inc. Drawings T911, sheets numbered T911-1 through T911-8 last revision date 05/01/03. A copy of these drawings are attached to this report and represent "As Built" mock-up drawings.

**General Mock-up Description:**

**Type:** The mock-up was comprised of extruded aluminum framing members and insulating glass units. The vertical framing members employed a stack joint and split mullions with one exterior structurally glazed joint. The horizontal stack was a two piece mullion and located above the vertical stack joint. Wedge gaskets held-in-place the insulating glass units at the horizontal stack joint only. The referenced drawings delineate the mock-up configuration and construction.

**Overall Size:** 15' 6-1/2" wide x 27' 2" high

**Glazing:** 1" thick, sealed insulating glass comprised of 1/4" thick clear sheets and an aluminum metal spacer system. The glazing details can be seen on the referenced set of "As-Built" drawings.

**Sealant:** The sealant used was DOW 795 silicone sealant for the perimeter, gasket seals, structural glazing and for all internal seals. All sealant details are delineated on the "As-Built" drawings.

**Drainage:** All internal gutters and weep details are delineated on the referenced set of "As-Built" drawings.

**Anchorage:** The anchoring details are delineated on the referenced "As-Built" drawings.

**Test Methods:**

**Air Infiltration** - ASTM E283, *Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors*. Testing was conducted at 6.24 psf positive static air pressure difference.

**Static Pressure Water Resistance** - ASTM E331, *Standard Test Method for Metal Curtain Walls and Doors by Uniform Static Air Pressure Difference*. Testing was conducted at a pressure differential of 15.0 psf with positive static air pressure for a 15 minute duration. Water was applied to the mock-up at a minimum rate of 5 gal/ft<sup>2</sup>/hr.

**Dynamic Pressure Water Resistance** - AAMA 501.1-83, *Standard Test Method for Metal Curtain Walls for Water Penetration Using Dynamic Pressure*. Testing was conducted with a dynamic wind stream pressure of 15.0 psf for a 15 minute duration. Water was applied to the mock-up at a minimum rate of 5 gal/ft<sup>2</sup>/hr.

**Structural Performance** - ASTM E330, *Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference*. Testing was conducted at positive and negative design loads of 90.0 psf. Structural overloads were conducted at 1.5 times design pressures. Design Loads and overloads held for 10 seconds.

**Thermal Cycling of Exterior Walls** AAMA 501.5-98 *Test Method for Evaluation of Thermal Cycling Effects on Large Exterior Wall Mock-ups, Components and Cladding*. Reference should be made to Test No. 8 in the attached Test Procedure and to the Test Results.

**Witnesses:** The following representative witnessed all or part of the testing:

Steve DeYoung	Tubelite Inc.
Kirk Gostlin	Tubelite Inc.
David Smith	Hutt's Glass
Rob Gillingham	Hutt's Glass
Dennis Dougherty	Hutt's Glass
Eric Rock	Architectural Testing, Inc.
Tom Sands	Architectural Testing, Inc.

**FORMAL TEST RESULTS**

<u>Title of test</u>	<u>Measured</u>	<u>Allowed</u>
Preload at +50% Design Pressure (25.0 psf)	----	----
Static Pressure Air Infiltration @ 6.24 psf	PASSED 0.01 cfm/ft <sup>2</sup>	0.06 cfm/ft <sup>2</sup> max.
Static Pressure Water Resistance @ 15.0 psf	PASSED No uncontrolled leakage	No uncontrolled leakage
Dynamic Pressure Water Resistance @ 15.0 psf	PASSED No uncontrolled leakage	No uncontrolled leakage
Uniform Load Deflection @ Design Loads (+50 psf)	PASSED See Table #1 for results See Sketch #1 for indicator locations	L/240 See Table #1 for all other allowables
Repeat Static Pressure Air Infiltration @ 6.24 psf	PASSED 0.01 cfm/ft <sup>2</sup>	0.06 cfm/ft <sup>2</sup> max.
Repeat Static Pressure Water Resistance @ 15.0 psf	PASSED No uncontrolled leakage	No uncontrolled leakage
Thermal Cycling (AAMA 501.5) Three cycles Hot and Cold	PASSED See Note #1	No visible damage
Repeat Static Pressure Air Infiltration @ 6.24 psf	PASSED 0.01 cfm/ft <sup>2</sup>	0.06 cfm/ft <sup>2</sup> max.
Repeat Static Pressure Water Resistance @ 15.0 psf	PASSED No uncontrolled leakage	No uncontrolled leakage

*Note #1: The Thermal Cycles were conducted as described in Test No.8 of the attached Test Procedure. There were no detrimental effects observed during the Thermal Cycles Test.*

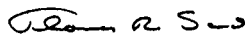
**FORMAL TEST RESULTS**

<u>Title of test</u>	<u>Measured</u>	<u>Allowed</u>
Interstory Differential Movement Test (3 Horizontal Cycles)	PASSED See Note #2	---
Repeat Static Pressure Air Infiltration @ 6.24 psf	PASSED 0.01 cfm/ft <sup>2</sup>	0.06 cfm/ft <sup>2</sup> max.
Repeat Static Pressure Water Resistance @ 15.0 psf	PASSED No uncontrolled leakage	No uncontrolled leakage
Repeat Dynamic Pressure Water Resistance @ 15.0 psf	PASSED No uncontrolled leakage	No uncontrolled leakage
Uniform Structural Overloads @ 150% Design Loads (+75.0 psf)	PASSED See Table #2 for results See Sketch #1 for indicator locations	0.2% Span See Table #2 for all other allowables

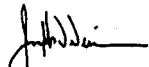
*Note #2: The movements were conducted as described in Test No. 11 of the attached Test Procedure. There were no detrimental effects observed during the Interstory Differential Movement Test.*

The "As Built" mock-up drawings and a copy of this report will be retained by ATI for a period of four years. This report is the exclusive property of the client so named herein and is applicable to the sample tested. Results obtained are tested values and do not constitute an opinion or endorsement by this laboratory.

For ARCHITECTURAL TESTING, INC.:



Digitally Signed by: Thomas R. Sands  
Thomas R. Sands  
Senior Technician



Digitally Signed by: Joseph W. Wise  
Joseph W. Wise  
Director - Project/Curtain Wall Testing

## Report No.: 01-46121.01

Requested by: Steve DeYoung, Tubelite, Inc.  
 Purpose: Comprehensive Product Evaluation Performance Testing  
 Issued Date: 10/20/03  
 Comments:

## Report No.: 01-46121.02

Requested by: Steve DeYoung, Tubelite, Inc.  
 Purpose: Marketing report.  
 Issued Date: 02/03/04  
 Comments:

**TABLE #1**  
**Uniform Load Deflection**  
 (Deflection in inches)

Location	Positive Deflection	Net	Negative Deflection	Net	Allowable
1.	0.040	0.145	0.040	0.090	0.454
2.	0.180		0.130		
3.	0.030		0.040		
4.	0.025	0.138	0.040	0.188	0.454
5.	0.210		0.250		
6.	0.120		0.085		
7A.	0.110	0.030	0.100	0.020	0.031
7B.	0.080		0.080		
8A.	0.020	0.010	0.015	0.015	0.031
8B.	0.030		0.030		
9.	0.030	0.075	0.060	0.060	0.454
10B.	0.110		0.110		
11.	0.040		0.040		
10A.	0.100	0.010	0.100	0.010	0.031
12.	0.160	0.435	0.190	0.435	(L/100) 0.575
13.	0.620		0.620		
14.	0.210		0.180		
15.	0.035	0.035	0.030	0.030	0.240

Note: Allowable amounts for metal framing members is based on L/240 of clear span or 3/4" and L/100 for glass. Indicators number 10A and 10B recorded vertical split mullion differential, the larger deflection was used to derive the net deflection. See Sketch #1 for indicator locations.

**TABLE #2**  
**Uniform Structural Overloads**  
 (Permanent Set in inches)

Location	Positive Perm Set	Net	Negative Perm Set	Net	Allowable
1.	0.010	0.010	0.010	0.010	0.218
2.	0.020		0.010		
3.	0.010		0.010		
4.	0.0	0.0	0.005	0.003	0.218
5.	0.0		0.010		
6.	0.0		0.010		
7A.	0.035	0.010	0.035	0.005	---
7B.	0.025		0.030		
8A.	0.0	0.0	0.0	0.0	---
8B.	0.0		0.0		
9.	0.020	0.010	0.015	0.003	0.218
10B.	0.025		0.020		
11.	0.010		0.010		
10A.	0.025	0.0	0.010	0.010	---
15.	0.0	0.0	0.0	0.0	0.115

*Note: Allowable amounts for metal framing members is based on 0.2% of clear span. Indicators #12, #13, and #14 were on glass and not applicable for permanent set. See Sketch #1 for indicator locations.*

**Curtain Wall Test Procedure**  
 for  
**400SS Series Curtain Wall**

Mock-up testing on a curtain wall mock-up designated 400SS Series Curtain Wall shall be performed in accordance with the referenced test methods.

The final test procedure shall be as follows:

- 1. Preload (ASTM E330):** Preload mock-up at 50% of the inward design pressure (50.0 psf) for a period of 10 seconds at 25.0 psf.
- 2. Static Pressure Air Infiltration (ASTM E283):** Air infiltration tests will be conducted at 6.24 psf. Allowable air leakage shall not exceed 0.06 cfm per sq ft of fixed area. A chamber tare shall be performed immediately prior to the air infiltration test.
- 3. Static Pressure Water Resistance (ASTM E 331):** A water penetration test will be conducted with a minimum water application rate of 5 gal/hr/ft<sup>2</sup> at a pressure differential of 15.0 psf.  
  
 Water penetration shall be defined as the appearance of uncontrolled water on the indoor face of any part of the work. Controlled water or condensation is that which is demonstrably drained to the exterior of the work without endangering or wetting adjacent surfaces or insulation, and not visible in the final construction. This definition of water penetration shall pertain to all of the following water resistance tests throughout this test procedure.
- 4. Dynamic Pressure Water Resistance (AAMA 501.1-94):** Water penetration tests will be conducted on the systems with a minimum water application rate of 5 gal/hr/ft<sup>2</sup> and dynamic air stream equivalent to static pressure of 15.0 psf. No uncontrolled water penetration is allowed.

5. **Uniform Load Deflection Test (ASTM E330):** Deflection of the system shall be measured at design pressure when held for ten seconds.

5a. The deflection of any framing member in a direction normal or perpendicular to the plane of the wall when subjected to a uniform and/or concentrated load, shall not exceed  $L/240$  of their clear span or  $3/4"$ , whichever is less. Cantilevered members shall not deflect more than  $2/175$  of the lesser cantilevered length or  $3/4"$ , whichever is less. The maximum offset at any vertical or horizontal splice ("split mullion") shall not exceed  $1/32"$ .

Each load shall be held as follows:

- +25.0 psf - 50% Positive Design Load (10 seconds)
- +50.0 psf - 100% Positive Design Load (10 seconds)
- 25.0 psf - 50% Negative Design Load (10 seconds)
- 50.0 psf - 100% Negative Design load (10 seconds)

6. **Static Pressure Air Infiltration (ASTM E283):** Air infiltration tests will be conducted at 6.24 psf. Allowable air leakage shall not exceed 0.06 cfm per sq ft of fixed area.

7. **Repeat Static Pressure Water Resistance (ASTM E 331):** A water penetration test will be conducted on the system with a minimum water application rate of 5 gal/hr/ft<sup>2</sup> at a pressure differential of 15.0 psf.

8. **Thermal Cycles and Condensation Resistance:** The entire mock-up shall be subjected to three thermal cycles; each cycle shall consist of:

1. Thermal Cycle Requirements

- a. Nominal exterior air temperature of 0°F and nominal interior air temperature of 55°F to 100°F for two hours after establishing equilibrium.
- b. Nominal exterior metal surface temperature of 180°F for dark colors (150°F for light colors) and nominal interior air temperature of 55°F to 100°F for two hours after establishing equilibrium.

9. **Static Pressure Air Infiltration (ASTM E283):** Air infiltration tests will be conducted at 6.24 psf. Allowable air leakage shall not exceed 0.06 cfm per sq ft of fixed area. A chamber tare shall be performed immediately prior to the air infiltration test.

10. **Repeat Static Pressure Water resistance (ASTM E 331):** A water penetration test will be conducted on the system with a minimum water application rate of 5 gal/hr/ft<sup>2</sup> at a pressure differential of 15.0 psf.

11. **Seismic and Wind Induced Interstory Drift Test:** Three complete cycles shall be performed. Movement shall be 1.090" to the left, back to zero, 1.090" to the right, back to zero (one cycle).

12. **Static Pressure Air Infiltration (ASTM E283):** Air infiltration tests will be conducted at 6.24 psf. Allowable air leakage shall not exceed 0.06 cfm per sq ft of fixed area. A chamber tare shall be performed immediately prior to the air infiltration test.

13. **Repeat Static Pressure Water Resistance (ASTM E 331):** A water penetration test will be conducted on the system with a minimum water application rate of 5 gal/hr/ft<sup>2</sup> at a pressure differential of 15.0 psf.

14. **Dynamic Pressure Water Resistance (AAMA 501.1-94):** Water penetration tests will be conducted on the systems with a minimum water application rate of 5 gal/hr/ft<sup>2</sup> and dynamic air stream equivalent to static pressure of 15.0 psf. No uncontrolled water penetration is allowed.

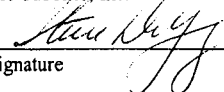
15. **Uniform Structural Overload (ASTM E 330):** Each load will be held for 10 seconds as follows:


- +37.5 psf - (75% of Positive Design Pressure) - to remove slack
- +75.0 psf - (150% of Positive Design Pressure) - positive overload
- 37.5 psf - (75% of Negative Design Pressure) - to remove slack
- 75.0 psf - (150% of Negative Design Pressure) - negative overload

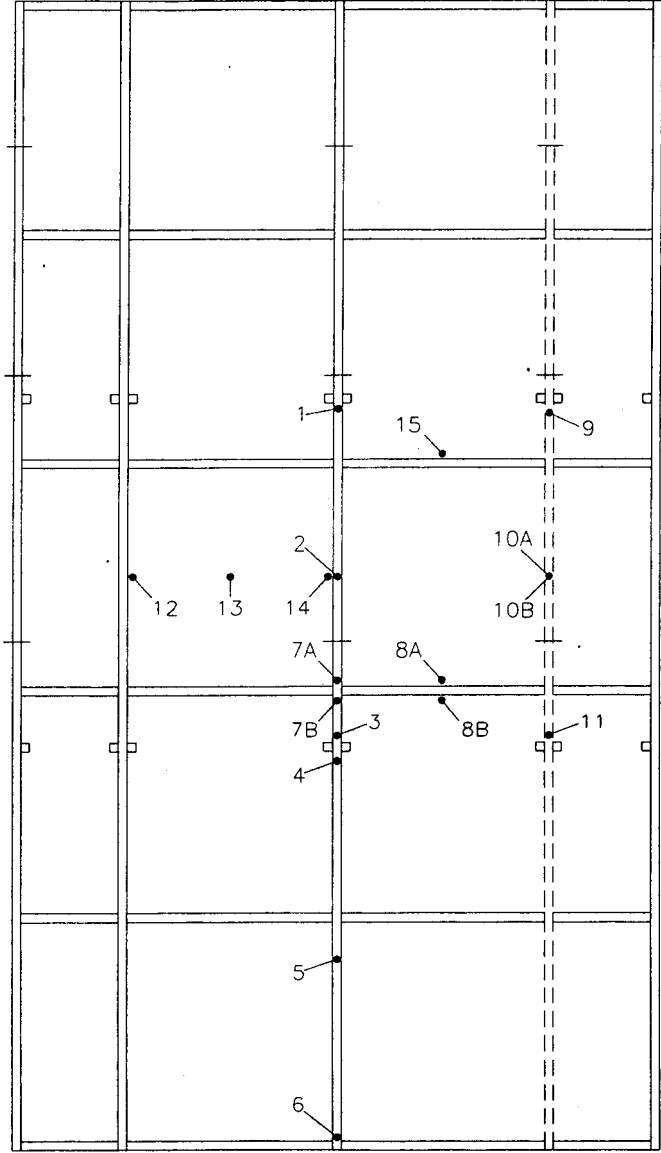
There shall be no glass breakage, permanent damage to fasteners or anchors. Main frame members shall have no permanent deformation in excess of 0.2% of their clear span. At the conclusion of this test, inspect the complete mock-up for any permanent set or any deformation of the panels.

This Test Procedure dated July 17, 2003 for Tubelite, Inc. is approved as written.

For Tubelite, Inc.

 1/28/03  
Signature Date

  
Please Print



PROJECT NO:  
46121

PROJECT NAME: 400 SS SCREW SPLINE CURTAINWALL  
CLIENT: TUBELITE INC.

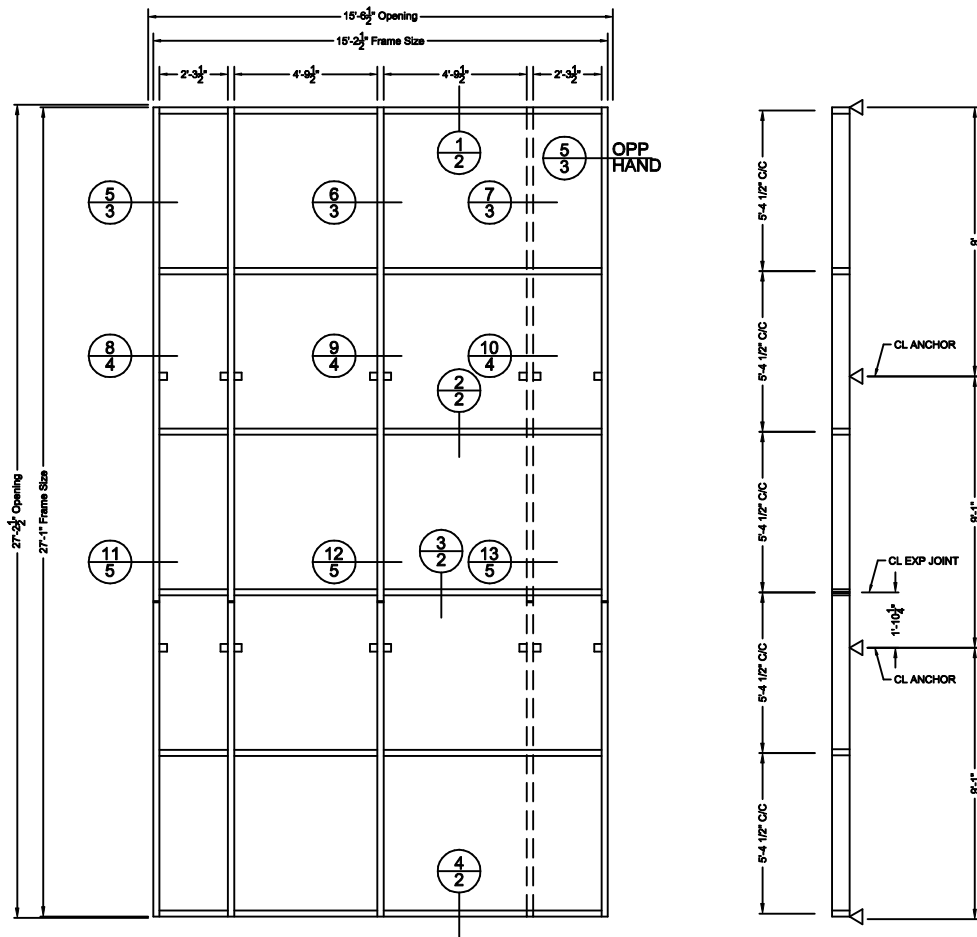


DRAWING

INDICATOR LOCATIONS  
SKETCH # 1

DWG. BY:  
DATE:

SHEET  
OF



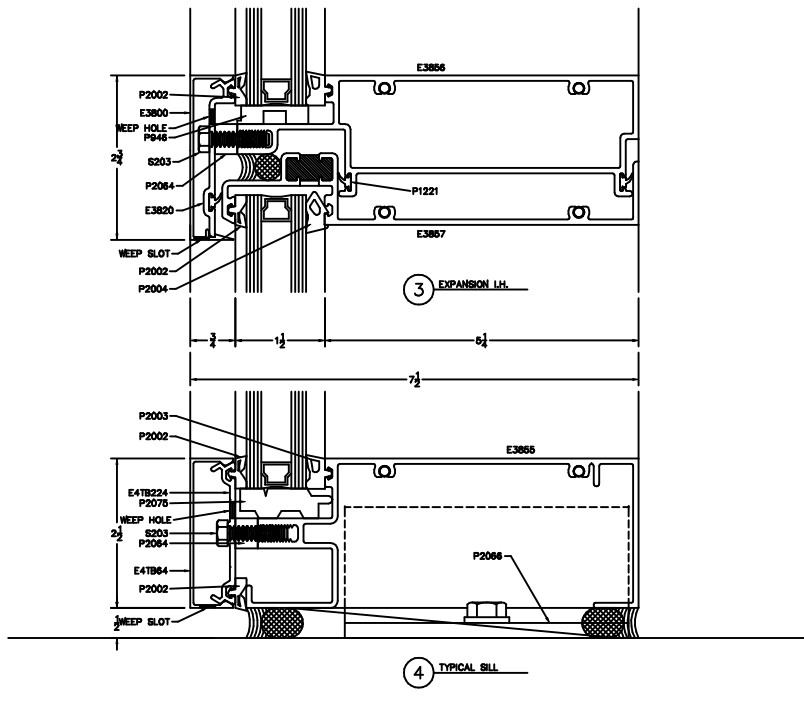
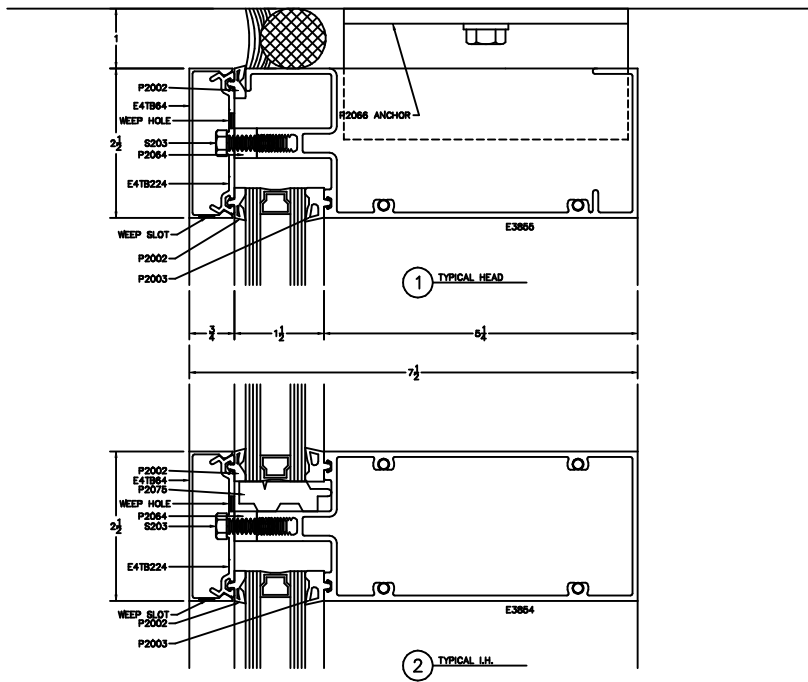
OPP  
HAND

**400SS SERIES CURTAINWALL TEST SPECIFICATIONS**

- Preload @ 50% Design Pressure (25 psf)
- Air Infiltration Per ASTM E283-91(1999) (6.24 psf)
- Static Water Penetration Per ASTM E331-00 (15 psf)
- Dynamic Water Penetration Per AAMA 501.1-94 (15 psf)
- Structural Performance Per ASTM E330-02 (50 psf)
- Repeat Air Infiltration
- Repeat Static Water Penetration
- Thermal Cycle Per AAMA 501.5-98
- Repeat Air Infiltration
- Repeat Static Water Penetration
- Seismic Test Per AAMA 501.4-00
- Repeat Air Infiltration
- Repeat Static Water Penetration
- Repeat Dynamic Water Penetration
- Preload @ 75% Design Pressure (37.5 psf)
- Structural Overload Per ASTM E330-02 (75 psf)

**UNIT 1 - PERFORMANCE TEST MOCK-UP**  
(1) REQD.

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NO. 1 NO. 2 NO. 3 NO. 4 NO. 5 NO. 6 NO. 7 NO. 8 NO. 9 NO. 10 NO. 11 NO. 12 NO. 13	SECTION NO. 1 NO. 2 NO. 3 NO. 4 NO. 5 NO. 6 NO. 7 NO. 8 NO. 9 NO. 10 NO. 11 NO. 12 NO. 13	
400SS SCREW SPLINE CURTAINWALL PERFORMANCE TEST MOCK-UP ELEVATION AND SECTION		1 OF 8 T911-1



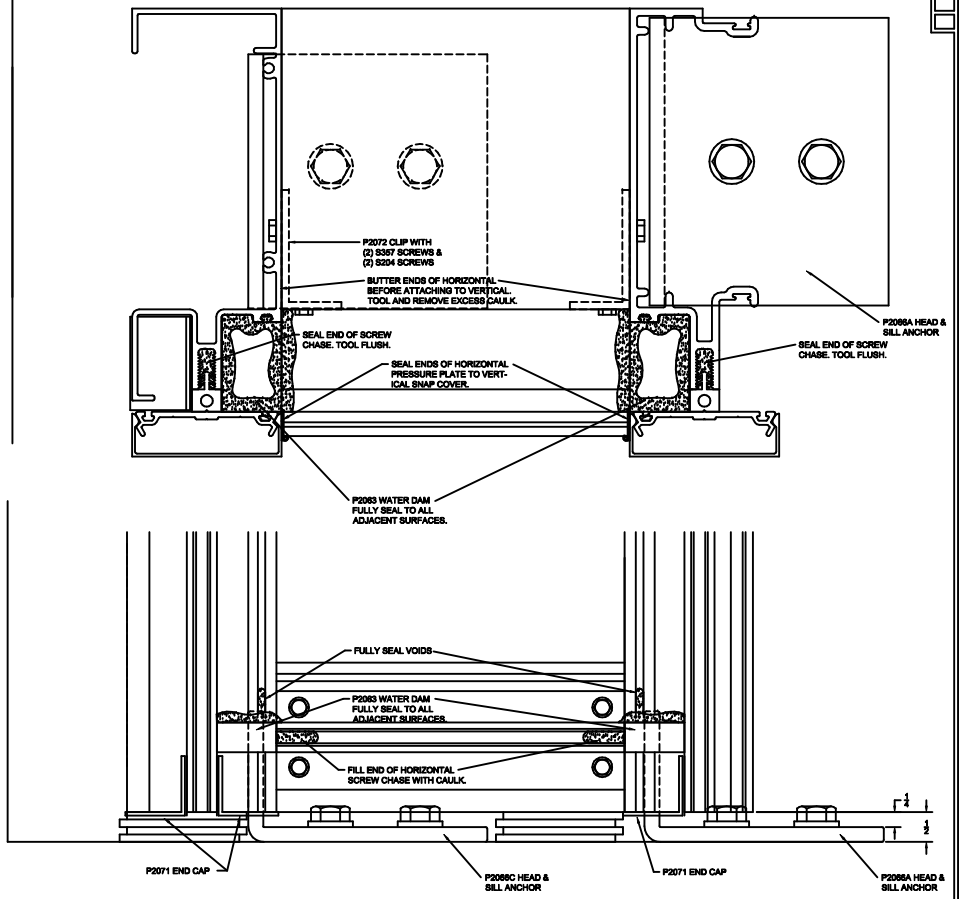
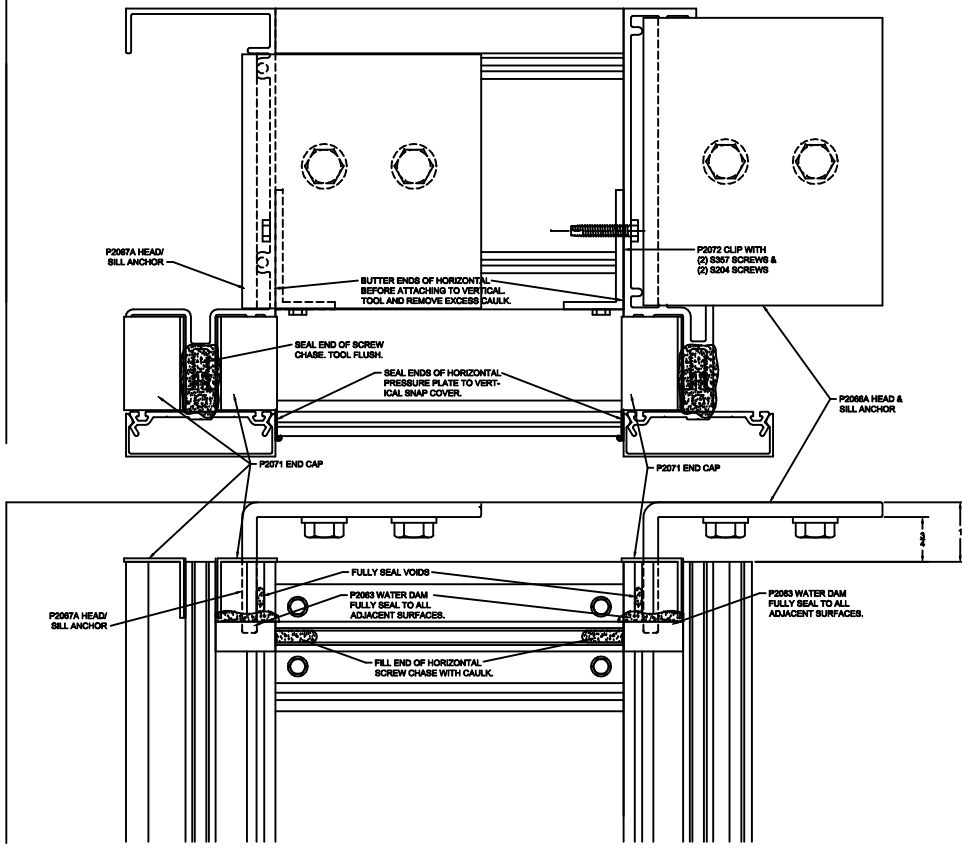
**NOTE:**  
 PUNCH THREE (3) WEEP HOLES/SLOTS  
 PER LITE. LOCATE ONE AT CENTER OF  
 LITE, AND ONE EACH BETWEEN SETTING  
 BLOCK AND VERTICAL.

<small>4068 Spline Kit, All Metals Standard</small> 4068 Spline Kit, All Metals Standard 4068 Spline Kit, All Metals Standard		<b>TUBELITE® DEPENDABLE</b> 4068 Spline Curtainwall PERFORMANCE TEST MOCK-UP HORIZONTAL DETAILS 05/01/05 280 T911-2
DATE: _____ BY: _____ CHECKED: _____ APPROVED: _____	SHEET NO.: _____ OF _____ SCALE: _____ PROJECT: _____	



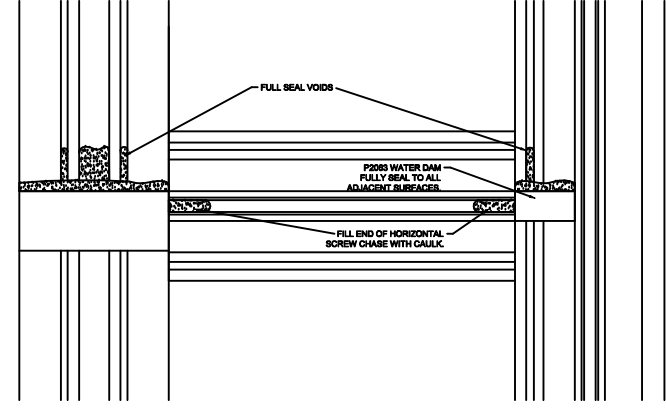
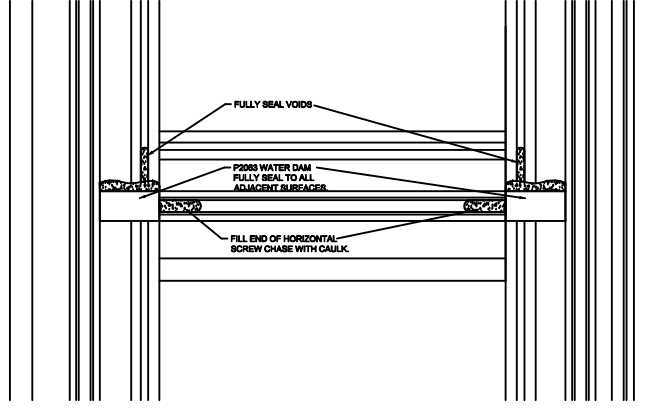
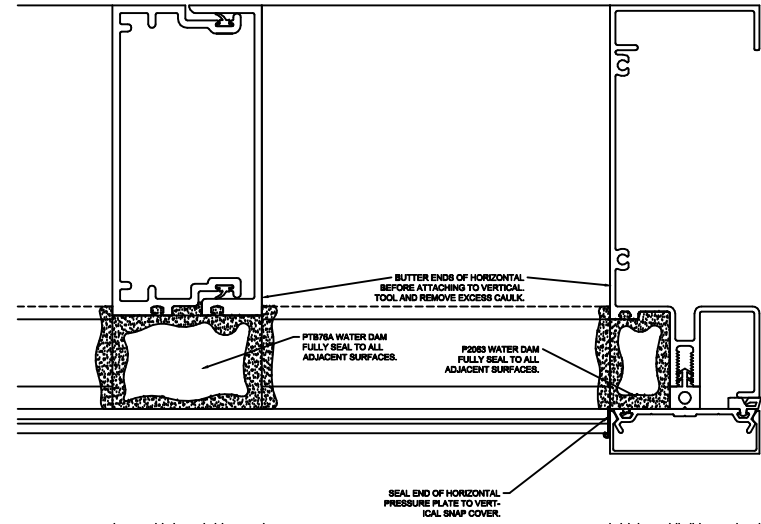
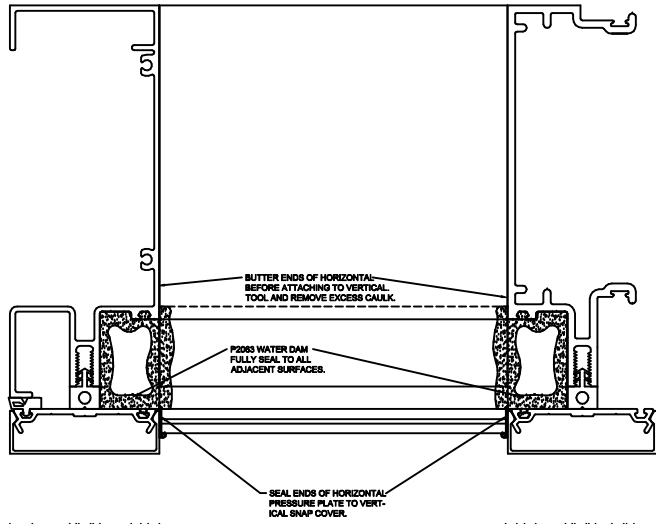




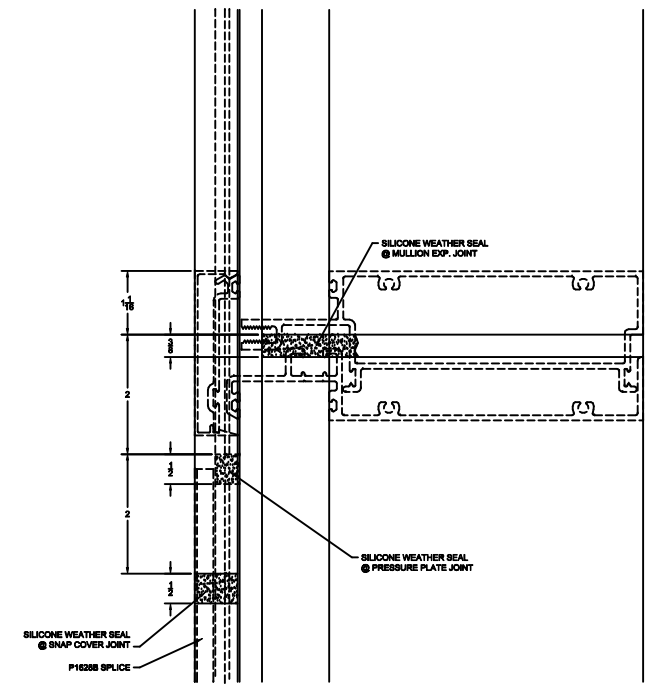
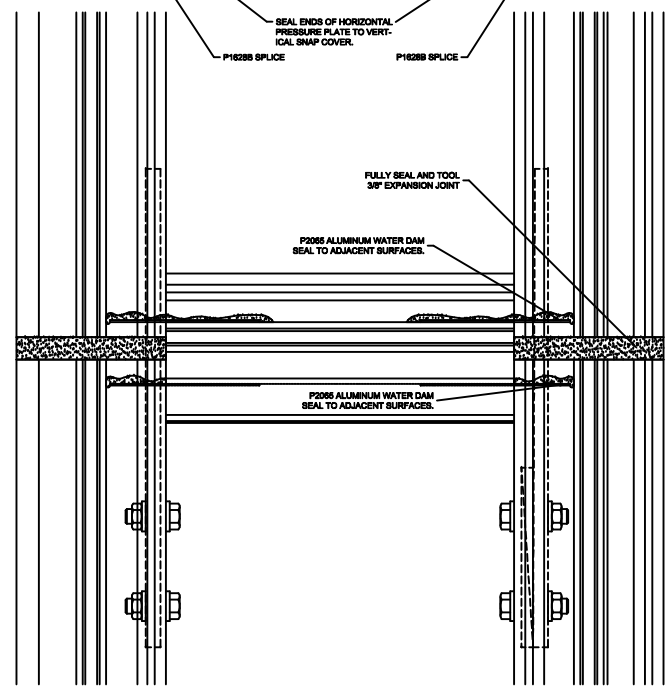
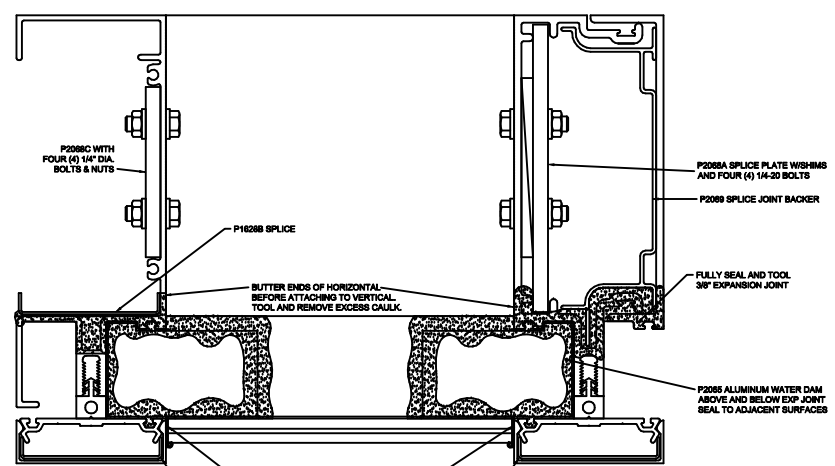


<p>© 2011 TUBELITE® ALL RIGHTS RESERVED  <small>ORIGINATOR: METAL CURTAINWALL</small></p>		<p><b>TUBELITE®</b> <b>DEPENDABLE</b>  <small>4828 MACHENHAM TRAIL          HUNTSVILLE, ALABAMA 35894</small></p>	
<p>NO. 1</p>	<p>REV. 001</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 2</p>	<p>REV. 002</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 3</p>	<p>REV. 003</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 4</p>	<p>REV. 004</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 5</p>	<p>REV. 005</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 6</p>	<p>REV. 006</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 7</p>	<p>REV. 007</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 8</p>	<p>REV. 008</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 9</p>	<p>REV. 009</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 10</p>	<p>REV. 010</p>	<p>DATE</p>	<p>BY</p>
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<p>NO. 39</p>	<p>REV. 039</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 40</p>	<p>REV. 040</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 41</p>	<p>REV. 041</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 42</p>	<p>REV. 042</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 43</p>	<p>REV. 043</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 44</p>	<p>REV. 044</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 45</p>	<p>REV. 045</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 46</p>	<p>REV. 046</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 47</p>	<p>REV. 047</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 48</p>	<p>REV. 048</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 49</p>	<p>REV. 049</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 50</p>	<p>REV. 050</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 51</p>	<p>REV. 051</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 52</p>	<p>REV. 052</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 53</p>	<p>REV. 053</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 54</p>	<p>REV. 054</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 55</p>	<p>REV. 055</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 56</p>	<p>REV. 056</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 57</p>	<p>REV. 057</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 58</p>	<p>REV. 058</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 59</p>	<p>REV. 059</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 60</p>	<p>REV. 060</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 61</p>	<p>REV. 061</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 62</p>	<p>REV. 062</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 63</p>	<p>REV. 063</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 64</p>	<p>REV. 064</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 65</p>	<p>REV. 065</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 66</p>	<p>REV. 066</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 67</p>	<p>REV. 067</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 68</p>	<p>REV. 068</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 69</p>	<p>REV. 069</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 70</p>	<p>REV. 070</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 71</p>	<p>REV. 071</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 72</p>	<p>REV. 072</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 73</p>	<p>REV. 073</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 74</p>	<p>REV. 074</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 75</p>	<p>REV. 075</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 76</p>	<p>REV. 076</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 77</p>	<p>REV. 077</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 78</p>	<p>REV. 078</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 79</p>	<p>REV. 079</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 80</p>	<p>REV. 080</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 81</p>	<p>REV. 081</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 82</p>	<p>REV. 082</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 83</p>	<p>REV. 083</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 84</p>	<p>REV. 084</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 85</p>	<p>REV. 085</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 86</p>	<p>REV. 086</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 87</p>	<p>REV. 087</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 88</p>	<p>REV. 088</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 89</p>	<p>REV. 089</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 90</p>	<p>REV. 090</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 91</p>	<p>REV. 091</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 92</p>	<p>REV. 092</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 93</p>	<p>REV. 093</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 94</p>	<p>REV. 094</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 95</p>	<p>REV. 095</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 96</p>	<p>REV. 096</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 97</p>	<p>REV. 097</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 98</p>	<p>REV. 098</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 99</p>	<p>REV. 099</p>	<p>DATE</p>	<p>BY</p>
<p>NO. 100</p>	<p>REV. 100</p>	<p>DATE</p>	<p>BY</p>

4008S SCREW SPLINE CURTAINWALL  
 PERFORMANCE TEST MOCK-UP  
 SEALANT DETAILS  
 T911-6



<p>© 2011 TUBELITE®</p> <p>4008S SCREW SPLINE CURTAINWALL PERFORMANCE TEST MOCK-UP INTERNAL SEALANT DETAILS</p>		<p><b>TUBELITE®</b> <b>DEPENDABLE</b></p> <p>4828 MACHENHAM TRAIL P.O. BOX 100, MICHIGAN CITY, IN 46340</p>
<p>REV. NO.</p> <p>DATE</p> <p>DESCRIPTION</p> <p>BY</p> <p>CHECKED</p>	<p>REV. NO.</p> <p>DATE</p> <p>DESCRIPTION</p> <p>BY</p> <p>CHECKED</p>	<p>SCALE</p> <p>DATE</p> <p>PROJECT</p> <p>NO.</p> <p>T911-7</p>



<p><b>TUBELITE® DEPENDABLE</b>  <small>4828 MACHENHAM TRAIL          HENRI CITY, MICHIGAN 48129</small></p>			
<p>4008S SCREW SPLINE CURTAINWALL          PERFORMANCE TEST MOCK-UP          INTERNAL SEALANT DETAILS</p>	<p>REV. 01</p>	<p>REV. 02</p>	<p>REV. 03</p>
<p>DATE FULL</p>	<p>DATE</p>	<p>DATE</p>	<p>DATE</p>
<p>REV. 04</p>	<p>REV. 05</p>	<p>REV. 06</p>	<p>REV. 07</p>
<p>REV. 08</p>	<p>REV. 09</p>	<p>REV. 10</p>	<p>REV. 11</p>
<p>REV. 12</p>	<p>REV. 13</p>	<p>REV. 14</p>	<p>REV. 15</p>
<p>REV. 16</p>	<p>REV. 17</p>	<p>REV. 18</p>	<p>REV. 19</p>
<p>REV. 20</p>	<p>REV. 21</p>	<p>REV. 22</p>	<p>REV. 23</p>
<p>REV. 24</p>	<p>REV. 25</p>	<p>REV. 26</p>	<p>REV. 27</p>
<p>REV. 28</p>	<p>REV. 29</p>	<p>REV. 30</p>	<p>REV. 31</p>
<p>REV. 32</p>	<p>REV. 33</p>	<p>REV. 34</p>	<p>REV. 35</p>
<p>REV. 36</p>	<p>REV. 37</p>	<p>REV. 38</p>	<p>REV. 39</p>
<p>REV. 40</p>	<p>REV. 41</p>	<p>REV. 42</p>	<p>REV. 43</p>
<p>REV. 44</p>	<p>REV. 45</p>	<p>REV. 46</p>	<p>REV. 47</p>
<p>REV. 48</p>	<p>REV. 49</p>	<p>REV. 50</p>	<p>REV. 51</p>
<p>REV. 52</p>	<p>REV. 53</p>	<p>REV. 54</p>	<p>REV. 55</p>
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<p>REV. 68</p>	<p>REV. 69</p>	<p>REV. 70</p>	<p>REV. 71</p>
<p>REV. 72</p>	<p>REV. 73</p>	<p>REV. 74</p>	<p>REV. 75</p>
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<p>REV. 100</p>	<p>REV. 101</p>	<p>REV. 102</p>	<p>REV. 103</p>
<p>REV. 104</p>	<p>REV. 105</p>	<p>REV. 106</p>	<p>REV. 107</p>
<p>REV. 108</p>	<p>REV. 109</p>	<p>REV. 110</p>	<p>REV. 111</p>
<p>REV. 112</p>	<p>REV. 113</p>	<p>REV. 114</p>	<p>REV. 115</p>
<p>REV. 116</p>	<p>REV. 117</p>	<p>REV. 118</p>	<p>REV. 119</p>
<p>REV. 120</p>	<p>REV. 121</p>	<p>REV. 122</p>	<p>REV. 123</p>
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<p>REV. 132</p>	<p>REV. 133</p>	<p>REV. 134</p>	<p>REV. 135</p>
<p>REV. 136</p>	<p>REV. 137</p>	<p>REV. 138</p>	<p>REV. 139</p>
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<p>REV. 144</p>	<p>REV. 145</p>	<p>REV. 146</p>	<p>REV. 147</p>
<p>REV. 148</p>	<p>REV. 149</p>	<p>REV. 150</p>	<p>REV. 151</p>
<p>REV. 152</p>	<p>REV. 153</p>	<p>REV. 154</p>	<p>REV. 155</p>
<p>REV. 156</p>	<p>REV. 157</p>	<p>REV. 158</p>	<p>REV. 159</p>
<p>REV. 160</p>	<p>REV. 161</p>	<p>REV. 162</p>	<p>REV. 163</p>
<p>REV. 164</p>	<p>REV. 165</p>	<p>REV. 166</p>	<p>REV. 167</p>
<p>REV. 168</p>	<p>REV. 169</p>	<p>REV. 170</p>	<p>REV. 171</p>
<p>REV. 172</p>	<p>REV. 173</p>	<p>REV. 174</p>	<p>REV. 175</p>
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<p>REV. 188</p>	<p>REV. 189</p>	<p>REV. 190</p>	<p>REV. 191</p>
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<p>REV. 220</p>	<p>REV. 221</p>	<p>REV. 222</p>	<p>REV. 223</p>
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<p>REV. 240</p>	<p>REV. 241</p>	<p>REV. 242</p>	<p>REV. 243</p>
<p>REV. 244</p>	<p>REV. 245</p>	<p>REV. 246</p>	<p>REV. 247</p>
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<p>REV. 408</p>	<p>REV. 409</p>	<p>REV. 410</p>	<p>REV. 411</p>
<p>REV. 412</p>	<p>REV. 413</p>	<p>REV. 414</p>	<p>REV. 415</p>
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<p>REV. 468</p>	<p>REV. 469</p>	<p>REV. 470</p>	<p>REV. 471</p>
<p>REV. 472</p>	<p>REV. 473</p>	<p>REV. 474</p>	<p>REV. 475</p>
<p>REV. 476</p>	<p>REV. 477</p>	<p>REV. 478</p>	<p>REV. 479</p>
<p>REV. 480</p>	<p>REV. 481</p>	<p>REV. 482</p>	<p>REV. 483</p>
<p>REV. 484</p>	<p>REV. 485</p>	<p>REV. 486</p>	<p>REV. 487</p>
<p>REV. 488</p>	<p>REV. 489</p>	<p>REV. 490</p>	<p>REV. 491</p>
<p>REV. 492</p>	<p>REV. 493</p>	<p>REV. 494</p>	<p>REV. 495</p>
<p>REV. 496</p>	<p>REV. 497</p>	<p>REV. 498</p>	<p>REV. 499</p>
<p>REV. 500</p>	<p>REV. 501</p>	<p>REV. 502</p>	<p>REV. 503</p>
<p>REV. 504</p>	<p>REV. 505</p>	<p>REV. 506</p>	<p>REV. 507</p>
<p>REV. 508</p>	<p>REV. 509</p>	<p>REV. 510</p>	<p>REV. 511</p>
<p>REV. 512</p>	<p>REV. 513</p>	<p>REV. 514</p>	<p>REV. 515</p>
<p>REV. 516</p>	<p>REV. 517</p>	<p>REV. 518</p>	<p>REV. 519</p>
<p>REV. 520</p>	<p>REV. 521</p>	<p>REV. 522</p>	<p>REV. 523</p>
<p>REV. 524</p>	<p>REV. 525</p>	<p>REV. 526</p>	<p>REV. 527</p>
<p>REV. 528</p>	<p>REV. 529</p>	<p>REV. 530</p>	<p>REV. 531</p>
<p>REV. 532</p>	<p>REV. 533</p>	<p>REV. 534</p>	<p>REV. 535</p>
<p>REV. 536</p>	<p>REV. 537</p>	<p>REV. 538</p>	<p>REV. 539</p>
<p>REV. 540</p>	<p>REV. 541</p>	<p>REV. 542</p>	<p>REV. 543</p>
<p>REV. 544</p>	<p>REV. 545</p>	<p>REV. 546</p>	<p>REV. 547</p>
<p>REV. 548</p>	<p>REV. 549</p>	<p>REV. 550</p>	<p>REV. 551</p>
<p>REV. 552</p>	<p>REV. 553</p>	<p>REV. 554</p>	<p>REV. 555</p>
<p>REV. 556</p>	<p>REV. 557</p>	<p>REV. 558</p>	<p>REV. 559</p>
<p>REV. 560</p>	<p>REV. 561</p>	<p>REV. 562</p>	<p>REV. 563</p>
<p>REV. 564</p>	<p>REV. 565</p>	<p>REV. 566</p>	<p>REV. 567</p>
<p>REV. 568</p>	<p>REV. 569</p>	<p>REV. 570</p>	<p>REV. 571</p>
<p>REV. 572</p>	<p>REV. 573</p>	<p>REV. 574</p>	<p>REV. 575</p>
<p>REV. 576</p>			