



# ETC Laboratories

*Measuring Up To Your Standards And More*

## Corporate Offices / Laboratories

297 Buell Road  
Rochester, NY 14624  
(585) 328-7668  
Fax: (585) 328-7777

### **Fenestration Structural Test Report**

Rendered To

Dove Industries  
767 Sans Souci Parkway  
Wilkes Barre, PA 18702

### **Series / Model**

6100/6200/6300 Slider (XX)

### **Report Number**

ETC-07-1081-19149.0

Report Number: ETC-07-1081-19149.0

Original Report: ETC-05-054-16665.0

Test Start Date: 08/09/05

Test Finish Date: 08/25/05

Report Date: 08/26/05

Expiration Date: 08/25/09

**Fenestration Structural Test Report**

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Dove Industries  
767 Sans Souci Parkway  
Wilkes Barre, PA 18702

**Series / Model**


6100/6200/6300 Slider (XX)

**Summary Description:** The tested product was a PVC Horizontal Sliding window with welded frame and sash corners. The IG unit was of 7/8 inch nominal thickness with double strength annealed glass. Two units were tested. The frame size of unit 1 was 71 inches wide by 56 inches high by 3-1/4 inches deep and unit 2 was 63 inches wide by 44 inches high by 3-1/4 inches deep.

**Specification:** The test specimen(s) was evaluated in accordance with ANSI/AAMA/WDMA 101/I.S.2/NAFS-02 "Voluntary Performance Specification for Windows, Skylights and Glass Doors".

**Summary of Results**

Overall Design Pressure – Unit 1	1440 Pa (30 psf)
Unit 2	1680 Pa (35 psf)
Maximum Operating Force – Unit 1&2	36 N (8 lbs)
Air Leakage Rate – Unit 1&2	0.71 L/sec/m <sup>3</sup> (0.14 scfm/ft <sup>2</sup> )
Maximum Water Pressure Achieved – Unit 1&2	260 Pa (5.25 psf)
Maximum Structural Pressure Achieved – Unit1	2160 Pa (45.0 psf)
Unit 2	2880 Pa (60.0 psf)
Forced Entry Resistance – ASTM F588 – Unit 1&2	Pass – Grade 10
<b>Product Designation - Unit 1</b>	<b>HS-LC30 1800 x 1400 (71 x 56)</b>
<b>Unit 2</b>	<b>HS-LC35 1100 x 1600 (63 x 44)</b>

  
Mark Sennett, Testing Technician

  
Ben Meunier, Director of Testing  
Person in Responsible Charge

### Gateway Performance Test Results

<u>Specification Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
5.3.1	<u>Operating Force – E2068:</u> Unit 1		
	Force to initiate motion	Maximum: 44.5 N (10 lbf)	135 N (30 lbf)
	Force to keep in motion	Maximum: 35.6 N (8 lbf)	90 N (20 lbf)
5.3.2	<u>Air Leakage Resistance – ASTM E28:</u> Unit 1		
	Test Pressure - 75 Pa (1.57 psf)	0.71 L/sec/m <sup>2</sup> (0.14 scfm/ft <sup>2</sup> )	1.5 L/sec/m <sup>2</sup> (0.30 scfm/ft <sup>2</sup> )
	The tested specimen exceeds the performance levels specified in NASF-1 for air leakage resistance.		
5.3.3	<u>Water Penetration Resistance – ASTM E547:</u> Unit 1		
	204 L/hr/m <sup>2</sup> (5 gal/hr-ft <sup>2</sup> ) – 4 Test cycles – 24 Minutes		
	Design Pressure – 1200 Pa (25 psf)		
	Test Pressure – 180 Pa (3.75 psf)	Pass	No Leakage
5.3.4.1	<u>Uniform Load Deflection - ASTM E330:</u> Unit 1		
	Design Pressure -1200 Pa (25 psf)		
	Test Pressure		
	Positive Load – 1200 Pa (25 psf)	16.5 mm (0.648in.)	N/A
	Negative Load – 1200 Pa (25 psf)	16.7 mm (0.656 in.)	N/A
	Note: Measurements taken under load from the center of the meeting stile.		
	<u>Uniform Load Deflection - ASTM E330:</u> Unit 2		
	Design Pressure -1200 Pa (25 psf)		
	Test Pressure		
	Positive Load – 1200 Pa (25 psf)	7.16 mm (0.282in.)	N/A
	Negative Load – 1200 Pa (25 psf)	7.06 mm (0.278 in.)	N/A
	Note: Measurements taken under load from the center of the meeting stile.		
5.3.4.2	<u>Uniform Load Structural - ASTM E330:</u> Unit 1		
	Design Pressure - 1200 Pa (25 psf)		
	Test Pressure		
	Positive Load – 1800 Pa (37.5) psf)	0.48 mm (0.019 in.)	5.13 mm (0.202 in.)
	Negative Load – 1800 Pa (37.5 psf)	0.71 mm (0.028 in.)	5.13 mm (0.202 in.)
	Note: Measurements taken after load from the center of the meeting stile.		

Uniform Load Structural - ASTM E330: Unit 2

Design Pressure - 1200 Pa (25 psf)

Test Pressure

Positive Load – 1800 Pa (37.5) psf                      0.13 mm (0.005 in.)    3.86 mm (0.152 in.)

Negative Load – 1800 Pa (37.5) psf                      0.10 mm (0.004 in.)    3.86 mm (0.152 in.)

Note: Measurements taken after load from the center of the meeting stile.

5.3.5 Forced Entry Resistance – ASTM F588: Unit 1

Tool/Lock Manipulation Test                      Pass                      No Entry

Tests A1 through A7                      Pass                      No Entry

Tool/Lock Manipulation Test                      Pass                      No Entry

**Auxiliary Tests:**

Specification

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
5.3.6.1	<u>Thermoplastic Corner Test – AAMA: Unit 1</u>		
	4 Corners - Frame	Pass	< 100%
	8 Corners - Sash	Pass	< 100%
5.3.6.2	<u>Deglazing Test – E987: Unit 1</u>		
	Left Sash		
	Left Stile 320 N (70 lbs)	13.0 %	<100%
	Right Stile 320 N (70 lbs)	11.8 %	<100%
	Top Rail 230 N (50 lbs)	21.8 %	<100%
	Bottom Rail 230 N (50 lbs)	5.8 %	<100%
	Right Sash		
	Left Stile 320 N (70 lbs)	12.2 %	<100%
	Right Stile 320 N (70 lbs)	10.8 %	<100%
	Top Rail 230 N (50 lbs)	17.8 %	<100%
	Bottom Rail 230 N (50 lbs)	9.0 %	<100%

**Optional Performance Tests**

The manufacturer specified herein has successfully achieved all the required criteria in section 8 of the referenced specification for the Gateway size of the achieved Performance Rating and has further successfully tested the product to higher performance levels as indicated below.

## Specification

<u>Paragraph</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
4.2.2.5	<u>Water Resistance - ASTM E 547: Unit 1</u> 204 L/hr/m <sup>2</sup> (5 gal/hr-ft <sup>2</sup> ) – 4 Test cycles – 24 Minutes		
	Design Pressure – 1680 Pa (35 psf)		
	Test Pressure – 260 Pa (5.25 psf)	Pass	No Leakage
	<u>Uniform Load Deflection - ASTM E330: Unit 1</u>		
	Design Pressure -1440 Pa (30 psf)		
	Test Pressure		
	Positive Load – 1440 Pa (30.0 psf)	19.3 mm (0.760 in.)	N/A
	Negative Load – 1440 Pa (30.0 psf)	20.2 mm (0.797 in.)	N/A
	Note: Measurements taken under load from the center of the meeting stile.		
	<u>Uniform Load Deflection - ASTM E330: Unit 2</u>		
	Design Pressure -1920 Pa (40 psf)		
	Test Pressure		
	Positive Load – 1920 Pa (40.0 psf)	9.70 mm (0.382 in.)	N/A
	Negative Load – 1920 Pa (40.0 psf)	10.69 mm (0.421 in.)	N/A
	Note: Measurements taken under load from the center of the meeting stile.		
	<u>Uniform Structural Load - ASTM E 330: Unit 1</u>		
	Design Pressure - 1440 Pa (30 psf)		
	Test Pressure		
	Positive Load – 2160 Pa (45.0 psf)	0.91 mm (0.036 in.)	5.13 mm (0.202 in.)
	Negative Load – 2160 Pa (45.0 psf)	0.81 mm (0.032 in.)	5.13 mm (0.202 in.)
	Note: Measurements taken after load from the center of the meeting stile.		
	<u>Uniform Structural Load - ASTM E 330: Unit 2</u>		
	Design Pressure - 1920 Pa (40 psf)		
	Test Pressure		
	Positive Load – 2880 Pa (60.0 psf)	0.53 mm (0.021 in.)	3.86 mm (0.152 in.)
	Negative Load – 2880 Pa (60.0 psf)	0.61 mm (0.024 in.)	3.86 mm (0.152 in.)
	Note: Measurements taken after load from the center of the meeting stile		

**Product Description of Test Specimen(s)****Specimen Item****Laboratory Verification****Frame:****Unit 1**-71 in. W x 56 in. H x 3-1/4 in. D**Unit 2**-44 in. W x 63 in. H x 3-1/4 in. D

Vinyl, mitered and welded corners

**Drainage**

Interior slots – 7/8 in. W x 3/16 in. D located in corners of sill in the exterior and interior pockets

Exterior slots – 1-3/8 in. W x 5/16 in. H, 3-5/8 in. on center from the exterior corners with one more centered between them, with weep covers

**Method of Installation**

Perimeter stops and sealant

**Screen:**

Aluminum frame with mitered corners fastened using a corner key, held with spring clips, fiberglass cloth

**Sashes:****Unit 1-Lock sash:** 34-1/2 in. W x 52-1/8 in. H x 1-5/8 in. D

Keeper sash: 34-1/2 in. W x 52-1/8 in. H x 1-5/8 in. D

**Unit 2-Lock sash:** 30-1/2 in. W x 40-1/8 in. H x 1-5/8 in. D

Keeper sash: 30-1/2 in. W x 40-1/8 in. H x 1-5/8 in. D

Vinyl, mitered and welded corners

**Reinforcement**

Lock rail-Aluminum, 5/16 in. W x 1-1/2 in D

Keeper rail-Aluminum, 5/8 in. W x 1 in. D

**Drainage**

Holes, in the glazing bead pocket, 5/16 in. diameter, centered 3-7/8 in. from the interior corners, straight through.

**Weather-stripping****Qty (Rows)    Type                    Size in. (H x W)****Frame**

Head, jambs, sill

None

**Lock Sash**

Pull stile

2

Fin-pile

0.220 x 0.187

Lock stile

1

Fin-pile

0.350 x 0.187

Rails

2

Fin-pile

0.220 x 0.187

**Keeper Sash**

Pull stile

1

Fin-pile

0.350 x 0.187

1

Fin-pile

0.190 x 0.187

Keeper stile

1

Fin-pile

0.210 x 0.187

Rails

2

Fin-pile

0.250 x 0.187

**Hardware****Type****Materials****Fastening****Location****Lock**

Cam

Die-cast

2-#7x3/4 screws

fitted into extruded opening at center of stile's edge

**Keeper**

Cam

Die-Cast

2-#8x5/8 screw

opposite lock in an extruded pocket on the interior face of the stile

Night Latch	Spring out	Plastic	Press-in	5-1/4 in. on center from the exterior corner of the bottom rail
Rollers	Single roller	Brass & PVC	Press-in	2-1/4 in. on center from the exterior corners. 1/2 in diameter wheel

**Glazing:**

Overall Thickness	7/8 in. Nominal (0.923 in. actual)
Thickness of Glass(s)	2 – double strength annealed (0.122 / 0.116 in actual)
Spacer	Steel U shaped
Method of Glazing	Exterior Drop-in
Interior	Wet glazed with silicone
Exterior	Dual durometer snap in vinyl glazing bead

**Anchorage of Window Frame to Test Buck:**

Type	Perimeter screws and sealant
------	------------------------------

**Test Buck:**

Mounting Gap	1/8
Shims	None
Stops:	Exterior- 3/4 x 3/4 Pine, full perimeter Interior- 3/4 x 3/4 Pine, centered on sill, head and jambs cut 10 in. short of corners.
Sealant	Silicone
Buck Size	2 x 8
Material	SPF- #3

**Specimen Alterations:** None

**Documentation Submitted:** BOM (pp. 1, 2), 8000s002, 8004, 8006, 8009, 8014, 8015, 8016, 8047, 8042, 8043.

**Conditions, Terms, and General Notes Regarding These Tests**

The product tested **Has Been** compared to the detailed drawings, bill of materials and fabrication information supplied by the client & our analysis indicates the tested product and engineering information supplied by the client **“Are Equivalent”**. This report, in its original form contains product drawings and a Bill of Materials. The report and representative samples will be retained for four years from the report. These test results were obtained by employing all requirements of the designated test methods with no deviations. The test results and specimen supplied for testing are in compliance with the referenced specifications. These results are specific to the product tested by this laboratory. **This report does not constitute a certified product.** ETC Laboratories makes no opinions or endorsements regarding this product and its performance. This report may not be reproduced or quoted in partial form. ETC Laboratories test reports are for the exclusive use of the client so named herein and any other use is strictly prohibited.

**BILL OF MATERIALS**  
**Model 8000-HS-T000**  
**Replacement XX Slider**  
**August 3, 2005**

8000hst000.doc page 1 of 2

ITEM	DESCRIPTION	CBP PART #	QTY	MATERIAL/SOURCE	NOTES
1	Master Frame	8004	X 4	CBP	2
2	Pull Stile	8015	X 2	CBP	2
3	Lock Stile	8006	+ 1	CBP	2
4	Keeper Stile	8014	X 1	CBP	2
5	Top/ Bottom Rails	8009	+ 4	CBP	2
6	Glazing Bead	8066	8	CBP	2
7	Roller Track	8047	X 2	CBP	2
8	Weep Hole Cover		2	Ashland #60606	1,2
9	Aluminum Stiffener-L ock Stile	8042	X 1	Shapes Unlimited	1
10	Aluminum Stiffener-Ke eper Stile	8043	X 1	Shapes Unlimited	1
11	Roller		4	Ro-mai Tandem #110-2404-90	1
12	Silicone Glazing Sealant		AR	Dow Corning #1199	1
13	Glazing Block (1" x 2" x 1/8")		AR	Tremco	1
14	Installation Hole Plug		4	Ashland #9946	2
15	Keeper		1	Deco #678111	2,3,4
16	Lock Assembly		1	Deco #678205	2,3,4
<div style="border: 1px solid black; padding: 5px;"> <p><b>ETC Laboratories</b>  SCREWS (#110 Stainless Steel or Zinc Plated)  297 Buell Road  Rochester, NY 14624  (716) 328-7668</p> <p>Date Verified: _____  Verified By: _____  Report No: _____</p> </div>					
17	Lock		2	#7 x 3/4" PH Flat HD Type AB, SMS	2,3
18	Keeper		2	#7 x 3/4" PH Flat HD TEC	2,3
19	Installation		4	#8 x 2-1/2" PH Pan HD, Type AB, SMS	
20	Stiffener		AR	#6 x 1/2" PH Flat HD TEC (see detail drawing)	
<b>WEATHERSTRIPPING</b>					
21	Center Fin Pile (Lock Stile)		AR	.187 x .350	
22	Center Fin Pile (Keeper Stile)		AR	.187 x .190	
23	Center Fin Pile (Rail, Pull Stile)		AR	.187 x .220	
<b>OPTIONAL</b>					
24	Transom Clip	727	AR	CBP	2
25	Head Expander	761	1	CBP	2
26	Sill Angle	765	1	CBP	2

OPTIONAL					
27	1/2" Mullion Clip	749	AR	CBP	2
28	7/8" Glazing Bead	8016	4	CBP	2
29	Roller Assembly		4	Ashland #79522 OR #79523	1
30	Premium Vent Stop		AR	Vision #1750	2
31	Vent Latch		AR	Ashland #79601	2
32	Glazing Tape (1/16" x 3/8")		AR	Norton 992	1
33	3/8" Plug Button		AR	Ashland # 13034	1,2
34	Screen Frame		AR	5/16"	2

**NOTES:**

- 1 = Or Approved Equivalent
- 2 = Specify color (White, Beige, Brown)
- 3 = For windows over 32" double amount used
- 4 = Standard tooling made for 2-1/16" hole spacing on lock and keeper

Completed by	Date	Checked by	Date	Approved by

**ETC Laboratories**  
 297 Buell Road  
 Rochester, NY 14624  
 (716) 328-7668

Date Verified: \_\_\_\_\_

Verified By: \_\_\_\_\_

Report No: \_\_\_\_\_



QC PRINT NUMBER: 8004QC DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

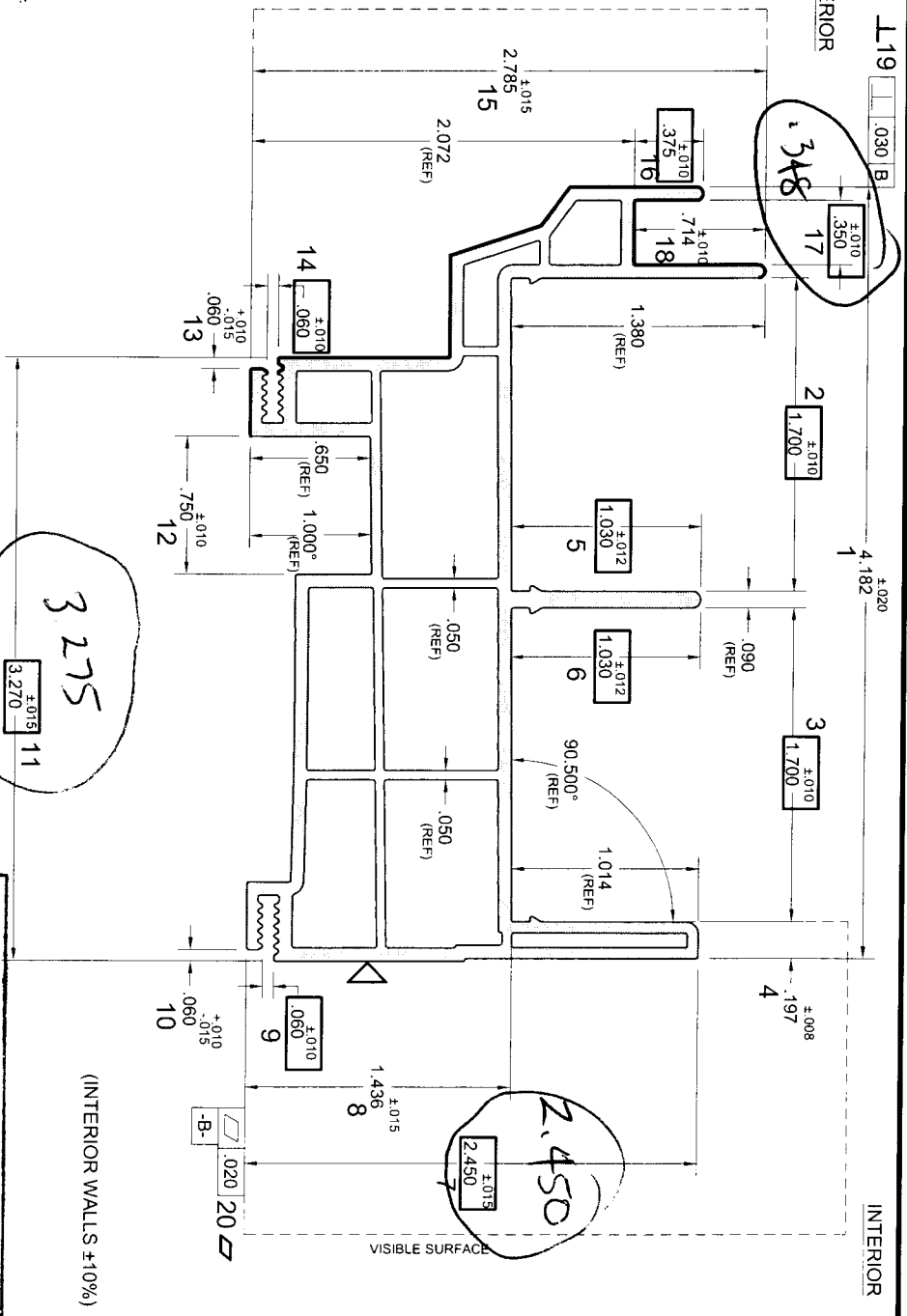
PART NAME: 8004 DESCRIPTION: SLIDER FRAME SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

CHELSEA BUILDING PRODUCTS, INC.  
 565 CEDAR WAY, GAKKONAT PA 15139  
 GAKKONAT 2003 THE SOLE PROPERTY OF CHELSEA BUILDING PRODUCTS, INC. ANY UNAUTHORIZED USE OR REPRODUCTION IS STRICTLY PROHIBITED.

NOTES:  
 1. MATERIAL = RIGID P.V.C.  
 2. FLEXIBLE P.V.C. = [XXXXXX]  
 3. EXTERIOR COATING = [XXXXXX]  
 4. LAMINATE = [ZZZZZZZZ]  
 5. THINNER INTERIOR WALLS = [ ]  
 6. WALL THICKNESS = .072  
 7. RADIUS = .010  
 8. LOCATION FOR IMPACT TEST [ ]  
 9. ANGULARITY = [ ]  
 10. PERPENDICULARITY = [ ]  
 11. PARALLELISM = [ ]  
 12. FLATNESS = [ ]  
 13. SPECIFICATION LENGTH TO ±.38"  
 14. ANGULARITY TO BE ± 1°  
 15. PROFILE MUST MEET Q.303 PER AAMA SPECIFICATIONS  
 16. PROFILE MUST MEET Q.304 PER AAMA SPECIFICATIONS  
 17. PROFILE MUST MEET Q.901 PER AAMA SPECIFICATIONS  
 18. PROFILE MUST MEET Q.902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

WEATHERSTRIP SPECIFICATION  
 POSITION SIZE WEATHERSTRIP TYPE  
 FUNCTIONAL CHECK  
 8047 SILL TRACK  
 727 TRANSONM CLIP  
 748 1/2" MULL CLIP

EXTERIOR  
 Verified By: ETC Laboratories  
 Report #: ETC-07-1081-19149  
 Date: 04/09/2007



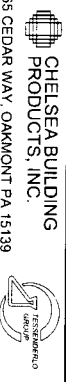
DRAWN DATE: 11-05-04  
 NO. REVISION  
 1 REVISED & REMOVED GEOMETRIC TOLS  
 CUSTOMER LENGTH  
 EAS 06-28-05 BY DATE  
 DATE VERIFIED: 8/26/05  
 REPORT NO: 05-054-16650

Use the caliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the caliper diagram:  
 Measure the following control points using #2 on the caliper diagram:  
 Measure the following control points using #3 on the caliper diagram:  
 Measure the following control points using #4 on the caliper diagram:  
 Frequency of sampling: Process Specialist: 3 samples per shift recorded every 4 hours.  
 Auditor: 1 sample per shift recorded 1 hour after shift start.  
 IF ANY CONTROL POINTS ARE NOT IN SPEC.  
 CORRECTIVE ACTION REQUIRED

ETC Laboratories  
 CHELSEA CUTTING TOLERANCE  
 297 Buell Road  
 Rochester NY 14624  
 (716) 328-7668

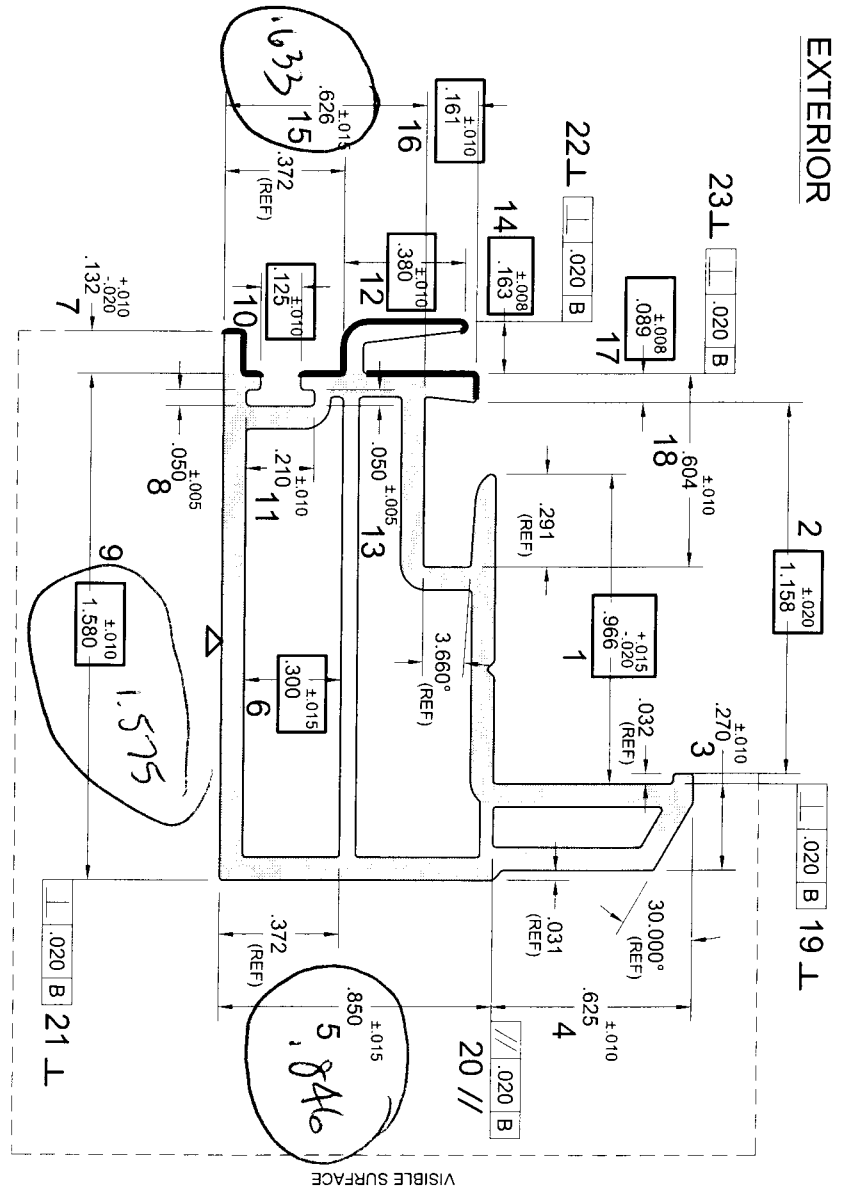
QC PRINT NUMBER: 8006qc DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8006 DESCRIPTION: LOCK STYLE SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS



665 CEDAR WAY, OAKMONT PA 15139  
 GARRAMONT 2003 THE SOLE PROPERTY OF CHELSEA BUILDING PRODUCTS, INC. ANY UNAUTHORIZED USE OR REPRODUCTION IS STRICTLY PROHIBITED

- NOTES:**
- MATERIAL = RIGID P.V.C.
  - FLEXIBLE P.V.C. = [Symbol]
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  - LAMINATE = [Symbol]
  - THINNER INTERIOR WALLS = [Symbol]
  - WALL THICKNESS = .072
  - RADIUS = .010
  - LOCATION FOR IMPACT TEST [Symbol]
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  - PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS



ETC Laboratories Report #: ETC-07-1081-19149  
 Verified By: Date: 04/09/2007

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
.187 WOOLPILE		
8066 GLAZING BEAD		
1" GLASS BLOCK		

NO.	REVISION
3	REVISED DIMS 2 & 6
2	REVISED DIMS 1 & 2 TO MATCH PRODUCTION PROFILE
1	WIDTH WAS 1.570; WO #5069

NO.	REVISION	DATE	BY
2		05-26-05	JPP
1		04-26-05	JPP
1		03-18-05	EAS

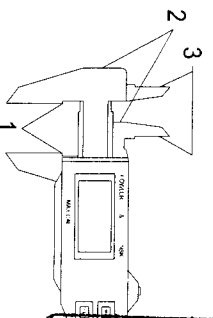
CUSTOMER LENGTH CHELSEA BUILDING PRODUCTS  
 297 Bull Road  
 Rochester, NY 14624  
 (716) 328-7668

DRAWN DATE: 11-04-04

Use the caliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the caliper diagram:  
 Measure the following control points using #2 on the caliper diagram:  
 Measure the following control points using #3 on the caliper diagram:  
 Measure the following control points using #4 on the caliper diagram:  
 Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours;  
 Auditor- 1 sample per shift recorded 1 hour after shift start.

**IF ANY CONTROL POINTS ARE NOT IN SPEC. CORRECTIVE ACTION REQUIRED**

ETC Laboratories  
 Date Verified: 8/26/05  
 Verified By: MS  
 Report No: 05-054-1650



4

QC PRINT NUMBER: 8009qc DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8009 DESCRIPTION: SLIDER RAIL SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

**CHELSEA BUILDING PRODUCTS, INC.**  
 565 CEDAR WAY, OAKMONT PA 15139

THIS DRAWING AND ITS CONTENTS ARE THE SOLE PROPERTY OF CHELSEA BUILDING PRODUCTS, INC. ANY UNAUTHORIZED USE OR REPRODUCTION IS STRICTLY PROHIBITED.

**NOTES:**

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. = [Symbol]
3. EXTERIOR COATING = [Symbol]
4. LAMINATE = [Symbol]
5. THINNER INTERIOR WALLS = [Symbol]
6. WALL THICKNESS = .072
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST [Symbol]
9. ANGULARITY = [Symbol]
10. PERPENDICULARITY = [Symbol]
11. PARALLELISM = [Symbol]
12. FLATNESS = [Symbol]
13. SPECIFICATION LENGTH TO ±.38"
14. ANGULARITY TO BE ± 1°
15. PROFILE MUST MEET Q.303 PER AAMA SPECIFICATIONS
16. PROFILE MUST MEET Q.304 PER AAMA SPECIFICATIONS
17. PROFILE MUST MEET Q.901 PER AAMA SPECIFICATIONS
18. PROFILE MUST MEET Q.902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

DRAWN DATE: 11-04-04

FUNCTIONAL CHECK  
 .187 WOOLPILE  
 8066 GLAZING BEAD  
 1" GLASS BLOCK

WEATHERSTRIP SPECIFICATION

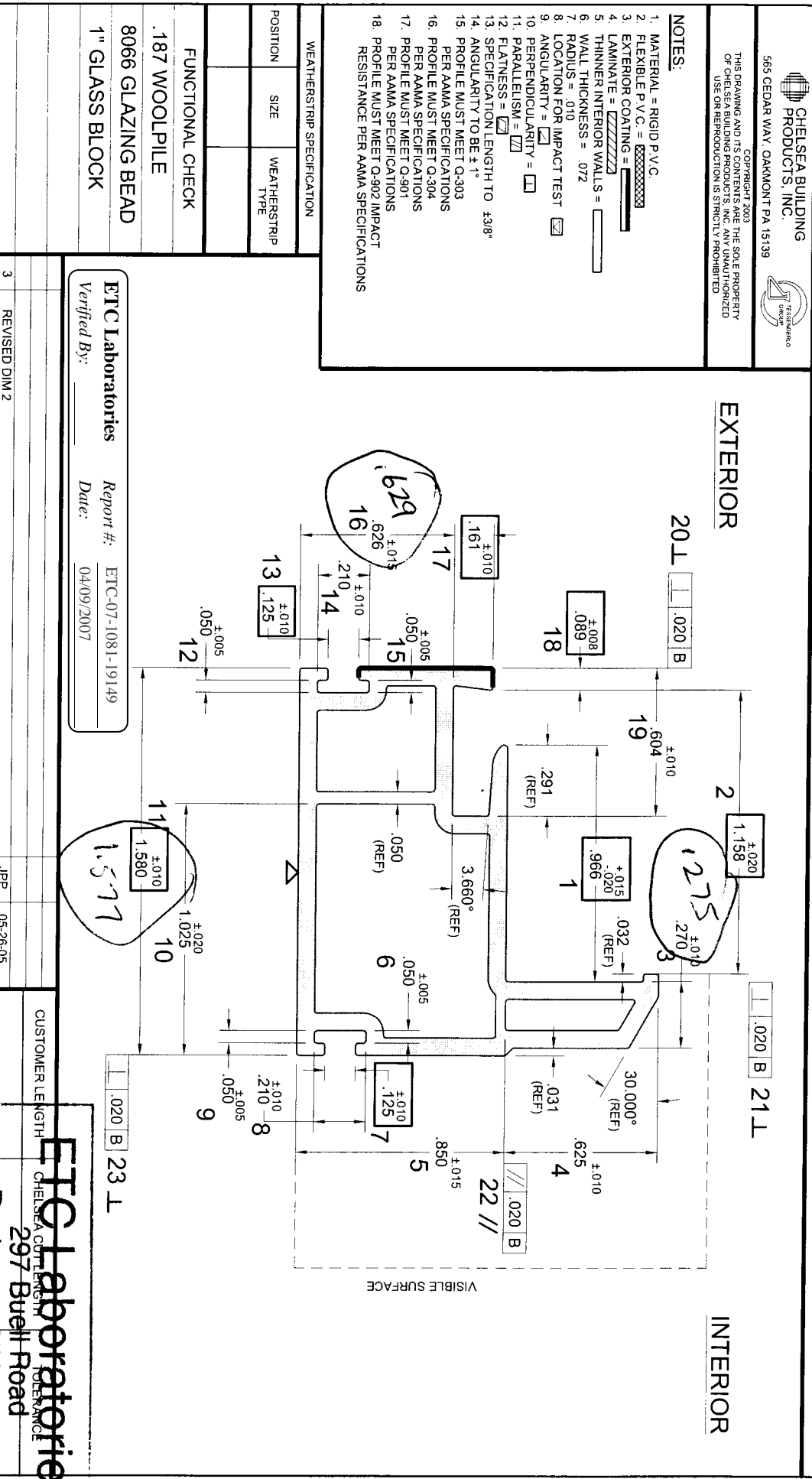
POSITION	SIZE	WEATHERSTRIP TYPE

REVISIONS

NO.	REVISION	DATE	BY
1	WIDTH WAS 1.570; WO #5069		
2	REVISED DIM 2		
3	REVISED DIMS 1 & 2 TO MATCH PRODUCTION PROFILE		

Use the caliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the caliper diagram:  
 Measure the following control points using #2 on the caliper diagram:  
 Measure the following control points using #3 on the caliper diagram:  
 Measure the following control points using #4 on the caliper diagram:  
 Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours;  
 Auditor - 1 sample per shift recorded 1 hour after shift start.

EXTERIOR INTERIOR



ETC Laboratories  
 Verified By: \_\_\_\_\_  
 Report #: ETC-07-1081-19149  
 Date: 04/09/2007

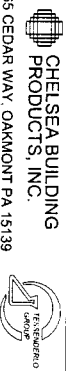
CUSTOMER LENGTH  
 CHELSEA BUILDING PRODUCTS  
 297 Buell Road  
 Rochester, NY 14624  
 (716) 328-7668

ETC Laboratories  
 Date Verified: 8/26/05  
 Verified By: JMS  
 Report No: 05-054-16650

IF ANY CONTROL POINTS ARE NOT IN SPEC.  
 CORRECTIVE ACTION REQUIRED

QC PRINT NUMBER: 8014qc DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8014 DESCRIPTION: KEEPER STYLE SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

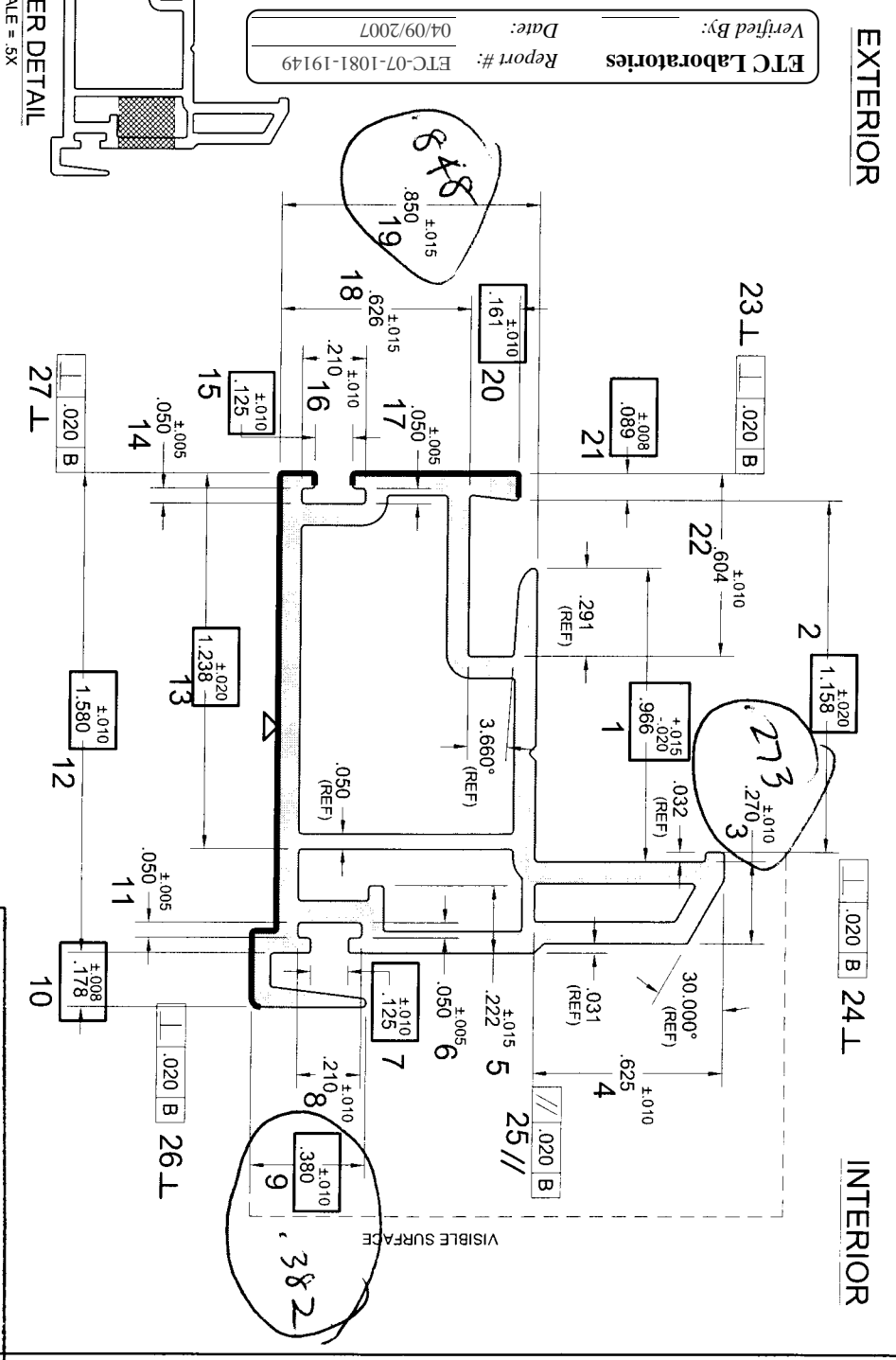


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- NOTES:**
- MATERIAL = RIGID P.V.C.
  - FLEXIBLE P.V.C. = [hatched pattern]
  - EXTERIOR COATING = [hatched pattern]
  - LAMINATE = [hatched pattern]
  - THINNER INTERIOR WALLS = [hatched pattern]
  - WALL THICKNESS = .072
  - RADIUS = .010
  - LOCATION FOR IMPACT TEST [checkmark]
  - ANGULARITY = [checkmark]
  - PERPENDICULARITY = [checkmark]
  - PARALLELISM = [checkmark]
  - FLATNESS = [checkmark]
  - SPECIFICATION LENGTH TO ±.3/8"
  - ANGULARITY TO BE ± 1°
  - PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q-301 PER AAMA SPECIFICATIONS
  - PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
.187 WOOLPILE		
8066 GLAZING BEAD		
1" GLASS BLOCK		



ETC Laboratories  
 Report #: ETC-07-1081-19149  
 Date: 04/09/2007  
 Verified By: [Signature]

DRAWN DATE: 11-04-04

NO.	REVISION
1	WIDTH WAS 1.570; WO #5068
2	REVISED DIM 2
3	REVISED DIMS 1 & 2 TO MATCH PRODUCTION PROFILE

CUSTOMER LENGTH	DATE	BY
297 Buell Road	05-26-05	JPP
Rochester, NY 14624	04-26-05	JPP
(716) 328-7668	03-18-05	EAS

Use the caliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the caliper diagram:  
 Measure the following control points using #2 on the caliper diagram:  
 Measure the following control points using #3 on the caliper diagram:  
 Measure the following control points using #4 on the caliper diagram:  
 Frequency of sampling: Process Specialist: 3 samples per shift recorded every 4 hours.  
 Auditor: 1 sample per shift recorded 1 hour after shift start.

**IF ANY CONTROL POINTS ARE NOT IN SPEC. CORRECTIVE ACTION REQUIRED**

ETC Laboratories  
 297 Buell Road  
 Rochester, NY 14624  
 (716) 328-7668

Date Verified: 8/26/05  
 Verified By: MS  
 Report No: 05-054-16650

QC PRINT NUMBER: 8015qc DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8015 DESCRIPTION: PULL RAIL SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

CHELSEA BUILDING PRODUCTS, INC.  
665 CEDAR WAY, OAKMONT PA 15139

CONTRACT #200  
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NOTES:

- MATERIAL = RIGID P.V.C.
- FLEXIBLE P.V.C. = [Symbol]
- EXTERIOR COATING = [Symbol]
- LAMINATE = [Symbol]
- THINNER INTERIOR WALLS = [Symbol]
- WALL THICKNESS = .072
- RADIUS = .010
- LOCATION FOR IMPACT TEST [Symbol]
- ANGULARITY = [Symbol]
- PERPENDICULARITY = [Symbol]
- PARALLELISM = [Symbol]
- FLATNESS = [Symbol]
- SPECIFICATION LENGTH TO ±.38"
- ANGULARITY TO BE ± 1°
- PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
- PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
- PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
- PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK  
.187 WOOLPILE  
8066 GLAZING BEAD  
1" GLASS BLOCK

DRAWN DATE: 11-04-04

NO.	REVISION
3	REVISED DIM 2
2	REVISED DIMS 1 & 2 TO MATCH PRODUCTION PROFILE
1	WIDTH WAS 1.570; WO #5069

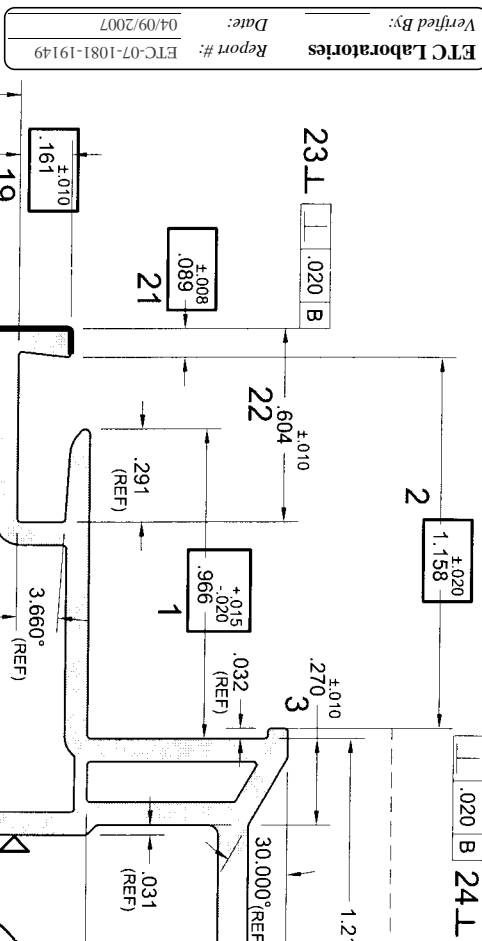
Use the caliper diagram as your guide to measure the following control points.

Measure the following control points using #1 on the caliper diagram:  
Measure the following control points using #2 on the caliper diagram:  
Measure the following control points using #3 on the caliper diagram:  
Measure the following control points using #4 on the caliper diagram:

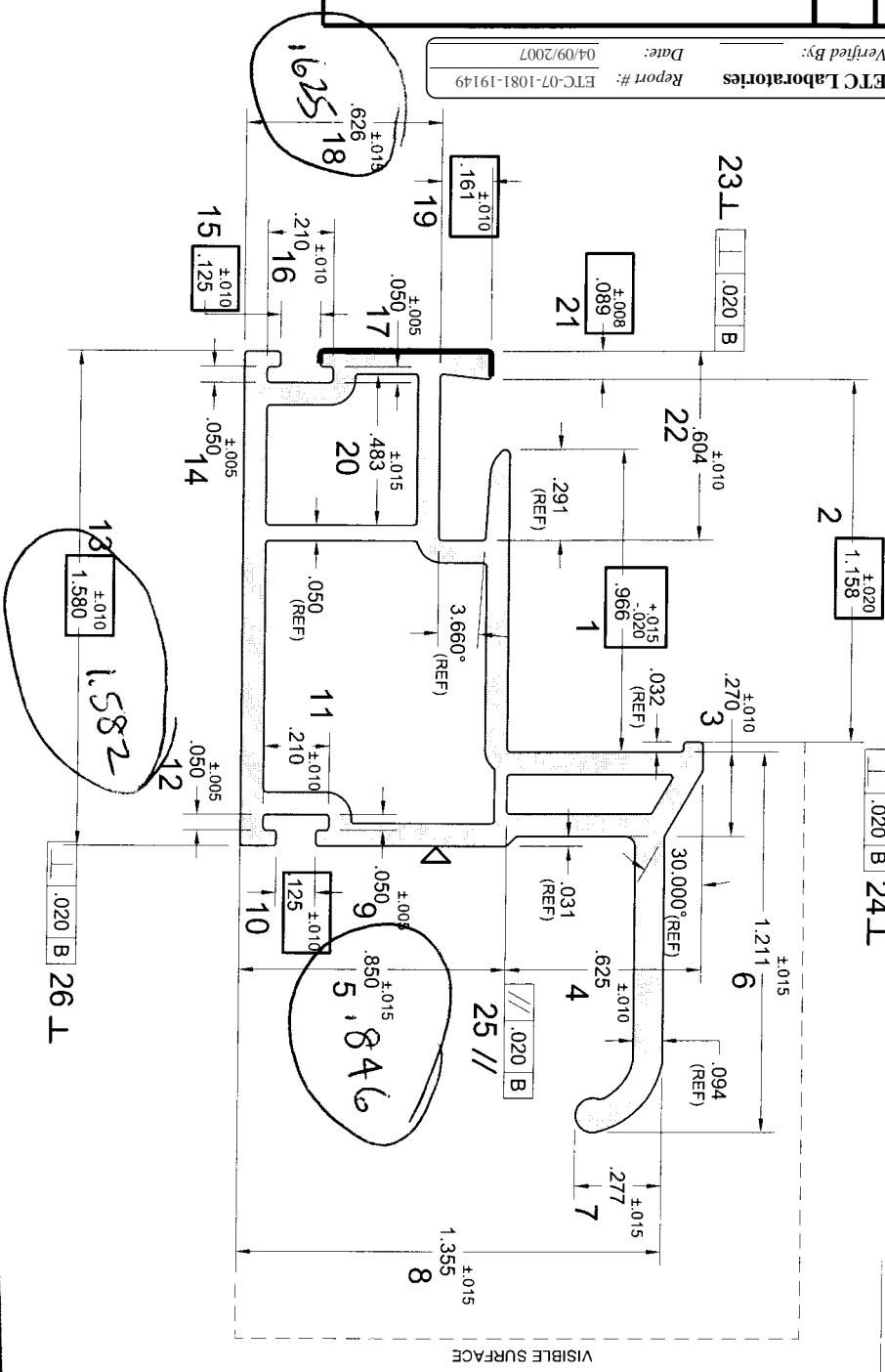
Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.  
Auditor- 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.  
CORRECTIVE ACTION REQUIRED

EXTERIOR



INTERIOR



CUSTOMER LENGTH  
ETC LABORATORIES  
297 Buell Road  
Rochester NY 14624  
(716) 328-7668

Date Verified: 8/26/05

Verified By: [Signature]

Report No: DS-054-1650

QC PRINT NUMBER: 8016QC DRAWN BY: JPP APPROVED BY: DATE: DEVELOP INPROCESS PRODUCTION

PART NAME: 8016 DESCRIPTION: GLAZING BEAD 7/8" GLASS SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

CHELSEA BUILDING PRODUCTS, INC.  
565 CEDAR WAY, OAKMONT PA 15139

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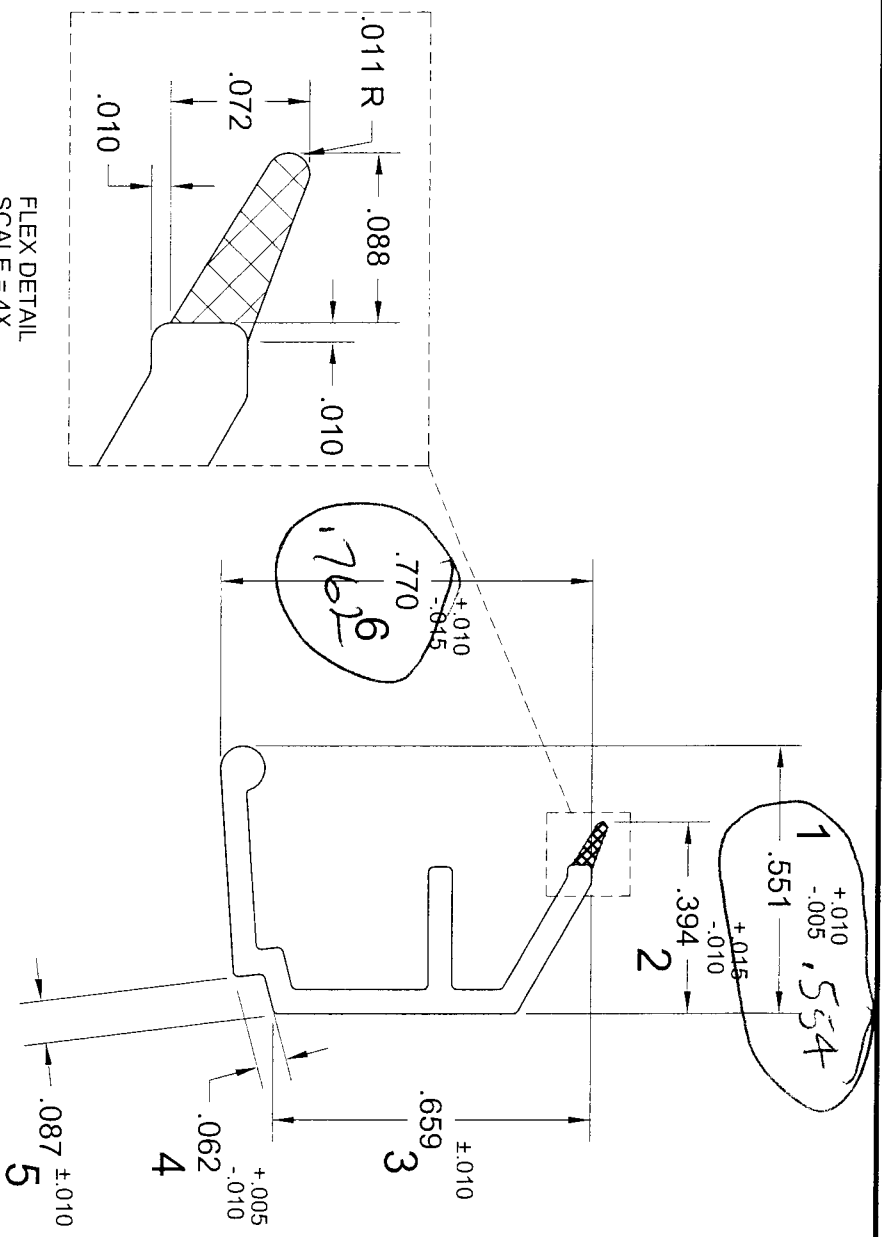
NOTES:

- MATERIAL = RIGID P.V.C.
- FLEXIBLE P.V.C. = [Symbol]
- EXTERIOR COATING = [Symbol]
- LAMINATE = [Symbol]
- THINNER INTERIOR WALLS = [Symbol]
- WALL THICKNESS = .050
- RADIUS = .010
- LOCATION FOR IMPACT TEST [Symbol]
- ANGULARITY = [Symbol]
- PERPENDICULARITY = [Symbol]
- PARALLELISM = [Symbol]
- FLATNESS = [Symbol]
- SPECIFICATION LENGTH TO ±3/8"
- ANGULARITY TO BE ±1°
- PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
- PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
- PROFILE MUST MEET Q-301 PER AAMA SPECIFICATIONS
- PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
8000 SERIES SASH		

ETC Laboratories Report #: ETC-07-1081-19149  
Verified By: Date: 04/09/2007

FLEX DETAIL  
SCALE = 4X

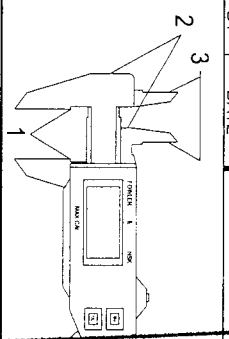


NO.	REVISION	REVISED DIM. 1 AND 5	CUSTOMER LENGTH
1			

DRAWN DATE: 11-05-04

Use the calliper diagram as your guide to measure the following control points:  
Measure the following control points using #1 on the calliper diagram:  
Measure the following control points using #2 on the calliper diagram:  
Measure the following control points using #3 on the calliper diagram:  
Measure the following control points using #4 on the calliper diagram:  
Frequency of sampling: Process Specialist: 3 samples per shift recorded every 4 hours.  
Auditor: 1 sample per shift recorded 1 hour after shift start.

IF ANY CONTROL POINTS ARE NOT IN SPEC.  
CORRECTIVE ACTION REQUIRED

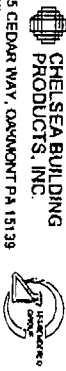


ETC Laboratories  
297 Buell Road  
Rochester, NY 14624  
(716) 328-7668

Date Verified: 8/26/05  
Verified By: MS  
Report No: 05-054-16650

QC PRINT NUMBER: 8047QC DRAWN BY: jpp APPROVED BY: DATE: DEVELOP INPROCESS PRODUCT

PART NAME: 8047 DESCRIPTION: SILL TRACK SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS



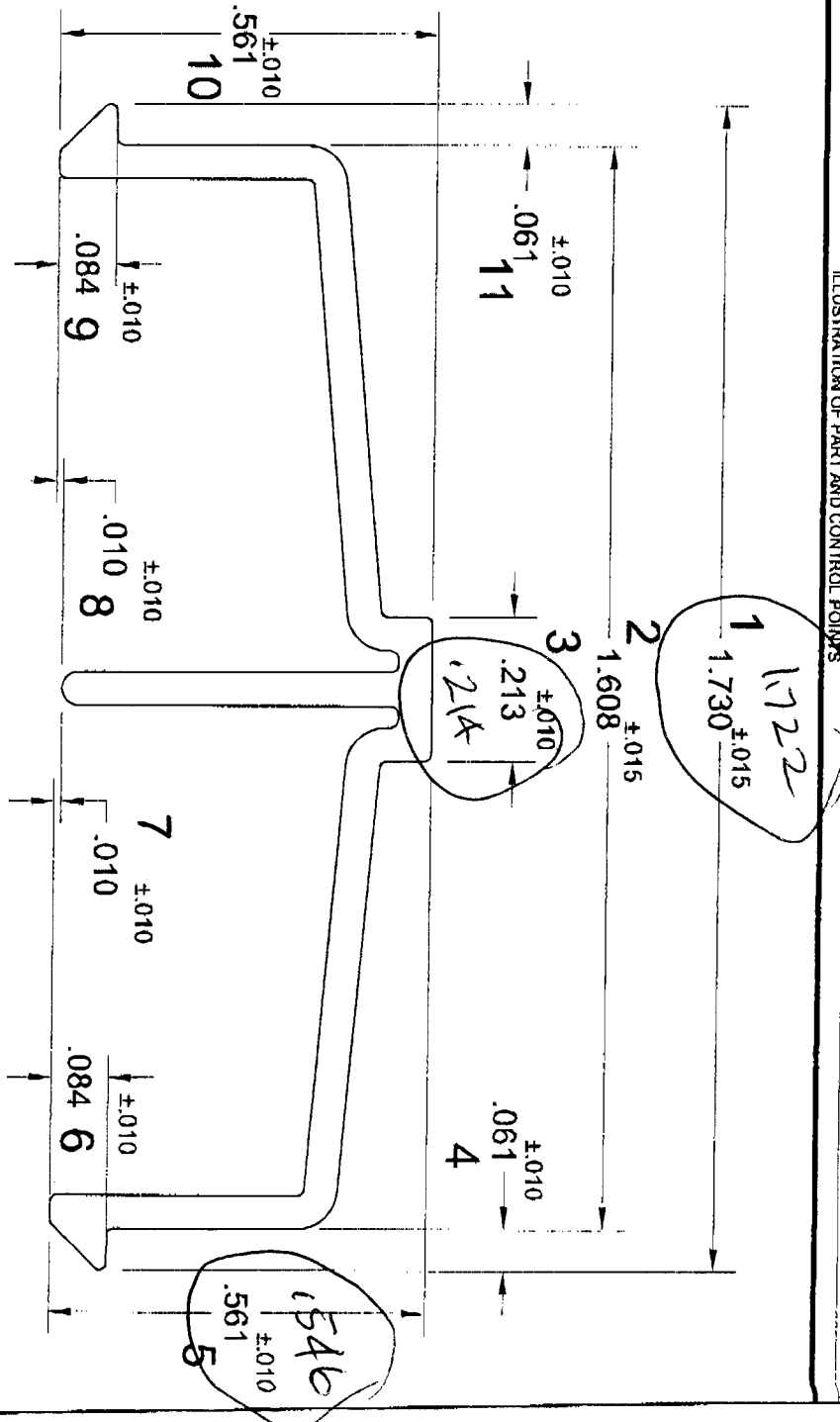
565 CEDAR WAY, OAKMONT PA 15139  
CORPORATE 204  
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NOTES:

- 1. MATERIAL = RIGID P.V.C.
- 2. FLEXIBLE P.V.C. = ~~XXXXXXXXXXXX~~
- 3. EXTERIOR COATING = ~~XXXXXXXXXXXX~~
- 4. LAMINATE = ~~XXXXXXXXXXXX~~
- 5. THINNER INTERIOR WALLS = ~~XXXXXXXXXXXX~~
- 6. WALL THICKNESS = .045
- 7. RADIUS = .010 R
- 8. LOCATION FOR IMPACT TEST
- 9. ANGULARITY =
- 10. PERPENDICULARITY =
- 11. PARALLELISM =
- 12. FLATNESS =
- 13. SPECIFICATOR LENGTH TO  $\pm 3/8"$
- 14. ANGULARITY TO BE  $\pm 1"$
- 15. PROFILE MUST MEET Q-303 PER AAMA SPECIFICATIONS
- 16. PROFILE MUST MEET Q-304 PER AAMA SPECIFICATIONS
- 17. PROFILE MUST MEET Q-901 PER AAMA SPECIFICATIONS
- 18. PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS

POSITION	SIZE	WEATHERSTRIP TYPE
FUNCTIONAL CHECK		
8004 SLIDER FRAME		
8034 SLIDER FRAME		

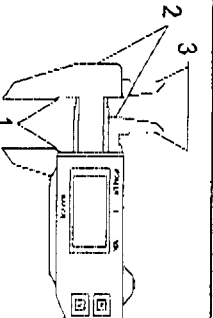
ETC Laboratories  
Verified By: \_\_\_\_\_  
Report #: ETC-07-1081-19149  
Date: 04/09/2007



DRAWN DATE:	NO.	REVISION	BY	DATE	CUSTOMER LENGTH
11-05-04					

Use the caliper diagram as your guide to measure the following control points:  
 Measure the following control points using #1 on the caliper diagram: 1, 2, 3, & 9  
 Measure the following control points using #2 on the caliper diagram: 4, 10  
 Measure the following control points using #3 on the caliper diagram:  
 Measure the following control points using #4 on the caliper diagram:  
 Frequency of sampling: Process Specialist- 3 samples per shift recorded every 4 hours.  
 Auditor: 1 sample per shift recorded 1 hour after shift start.

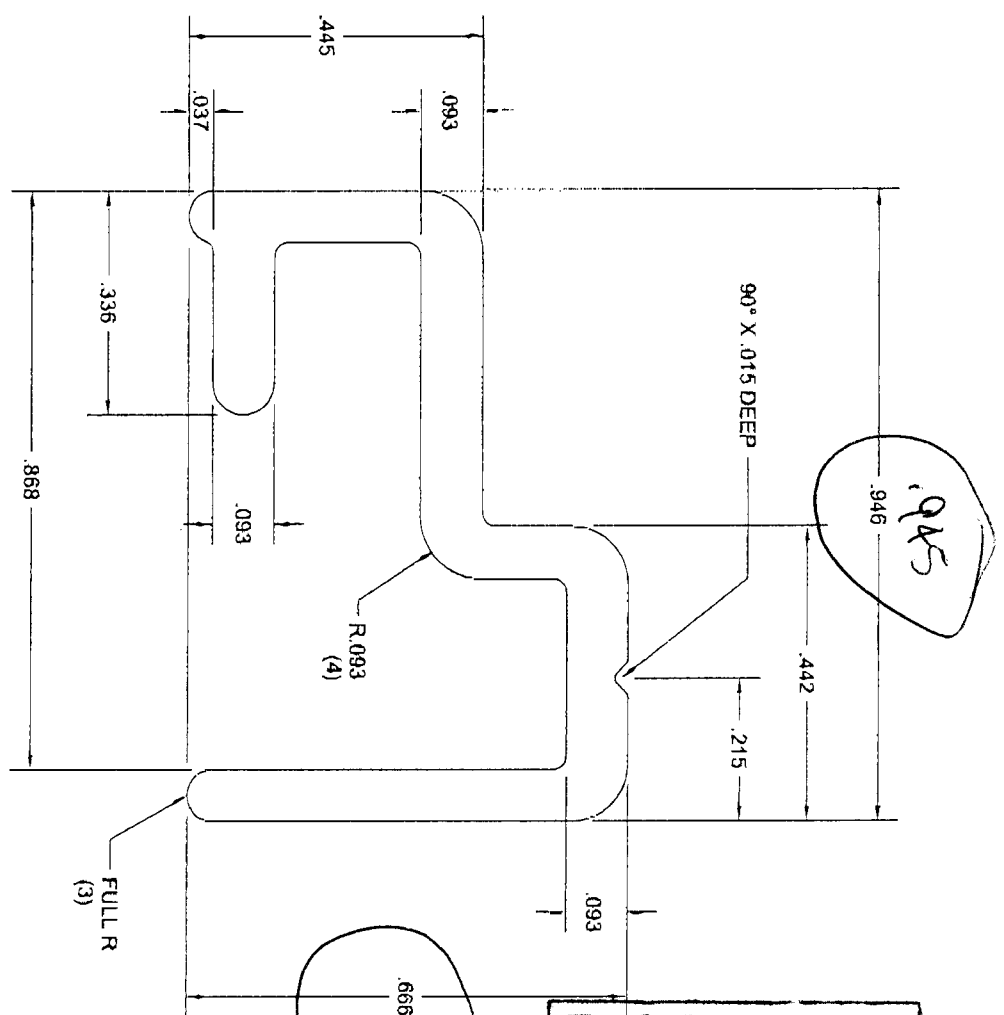
IF ANY CONTROL POINTS ARE NOT IN SPEC. CORRECTIVE ACTION REQUIRED



ETC Laboratories  
297 Buell Road  
Rochester NY 14624  
(716) 328-7668  
Date Verified: 8/26/05  
Verified By: MDS  
Report No: 05-054 16650



ETC Laboratories  
 Report #: ETC-07-1081-19149  
 Date: 04/09/2007  
 Verified By:



**ETC Laboratories**  
 297 Buell Road  
 Rochester, NY 14624  
 (716) 328-7668  
 Date Verified: 8/26/05  
 Verified By: MS  
 Report No: DS-054-16650

NO.	REVISION	BY	DATE
1	HORIZONTAL WALL THICKNESS .093 WAS 078	BLG	07/26/05

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MATERIAL: 6063 T5 ALUMINUM			
PRELIMINARY PART #			
UNLESS OTHERWISE SPECIFIED			
MATERIAL	ALUMINUM	WALLS	.078
EXTERIOR COATING	XXXXXXXXXXXX	RADII	.015 R
FLEXIBLE P.V.C.	1923	ANGULARITY	±1°
TOTAL AREA	2261		
STANDARD W/T/FT			
TITLE: KEEPER RAIL ALUMINUM STIFFENER			
DRAWN BY:	DESIGNED BY:	DATE	SCALE
BLG	BLG	11/06/04	NTS-1
CHECKED BY:	APPROVED BY:	DATE	DRAWING NO.
		04/03	8043