Farabaugh Engineering and Testing Inc.

PERFORMANCE TEST REPORT

2000 SERIES
DOUBLE HUNG WINDOW

H-R30
(3'-8" X 5'-0")

FOR

DOVE INDUSTRIES
767 SAN SOUCI PARKWAY
WILKES BARRE, PA 18702

Project No. T218D-04

11/3/04

REVISED: 5/2/07

401 Wide Drive • McKeesport, PA 15135
(412) 751-4001 • FAX (412) 751-4003

PERFORMANCE TEST REPORT

Manufacturer: DOVE INDUSTRIES
767 SAN SOUCI PARKWAY
WILKES BARRE, PA 18702

Product Identification

Product Type: Double Hung Window

Series/Model #: 2000 Series

Specification: AAMA/NWWDA 101/I.S.2-97

Designation: H-R30 (44" X 60") AAMA/NWWDA 101/I.S.2-97
GRADE 30

Product Description: Attached

Test Results: Attached

Test Equipment: FET

Testing Date: 11/2/04

Detailed assembly drawings showing wall thickness of all members, corner construction and hardware application are on file and have been compared to the sample submitted. A copy of this report and test sample will be retained at FET for a period of 4 years. The results obtained apply only to the specimen tested. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn form this test.

The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the referenced specification. This report does not constitute certification of this product, which may only be granted by the certification program administrator.

Prepared by:
Paul G. Farabaugh

Approved by:
Patrick J. Farabaugh, PE

Product Description

General:
Test sample was comprised of Dove Industries, 2000 Series, Double Hung Vinyl Prime, one-over-one (tilt loading type) double hung window, with an overall master frame size measuring 44" wide X 60" high. The bottom sash measured 41-3/4" wide X 29-1/4" high overall. The top sash measured 40-3/4" wide X 29-1/4" high overall. The frame and sash corners were of a welded, mitered type construction. One extruded channel shaped steel reinforcement member filled the member hollow of the bottom locking sash meeting rail. The reinforcement was attached using the locking screws. Bottom window had an exterior screen.

Weather-stripping:

MEMBER	WEATHERSTIPPING	QUANTITY	WIDTH X HEIGHT (INCHES)	LOCATION
Frame Header	Center Fin Pile Seal	1	0.187 x .26" ht	Interior leg
Frame Sill	Center Fin Pile Seal	1	0.187 x .26" ht	Interior leg
Frame Jambs	none	0	-	none
Top sash – top rail (lift rail)	Center Fin Pile Seal	1	0.187" w x .26" ht	Exterior face
Top sash – bot rail (keeper rail)	Rubber Bulb	1	0.15" diameter	Interior face
* Top sash – jamb stiles *	Center Fin Pile Seal Center Fin Pile Seal	1 1	0.187" w x .26" ht 0.187" w x .26" ht	side face Exterior face
** Bot. sash – top rail ** (meeting rail)	Fin Pile Seal	1	0.187" w x .21" ht	Exterior face
Bottom sash – bot rail (lift rail)	Bulb Foam Seal with flap	1	0.30" ht	Bottom face
Bottom sash – jamb stiles	Center Fin Pile Seal Center Fin Pile Seal	1 1	0.187" w x .26" ht 0.187" w x .26" ht	side face Exterior face
Screen Top Rail	Rubber Flap	1	0.187" w x 0.45" ht.	top face
Screen Bottom Rail	Pile seal	1	0.187" w x 0.15" ht.	Bottom face

* - A ¾" x ¼" plastic pad was attached with one screw at the bottom interior face of the stile using a 0.187" w x 0.26" ht. pile seal slid into track of plastic pad. Weather-stripping pad was at bottom side face of the stiles of the top sash.
** - A ½" w x 5/8" long adhesive plastic pad with (2) 5/8" long x 0.375" ht. pile seal was at ends of the exterior face of the locking rail.

Operators and Other Hardware:
The operable sashes each had two coil balances with balance shoes on each jamb. Two cam-type sweep locks were attached to the bottom sash meeting rail with keepers on top sash meeting rail. Each lock located 7-1/2 from each end. One plastic (spring loaded) tilt latch with thumb actuator was housed at each end of the top rail of both sashes. The tilt latch housing was sided loaded into the top rail of both sashes. One (rectangular shaped) aluminum pivot bar was fastened with (2) screws at each end of the bottom horizontal rails of both sashes.

Glazing System:
Each lite were interior drop glazed with 3/4" thick (nominal) insulated glass that set on perimeter bead of silicone. Each lite utilized two (0.09" nominal) thick clear annealed glass lites with a 0.57" continuous metal spacer. The glazing was set on a bead of silicone along the perimeter of the frame. A interior snap-in rigid vinyl-glazing bead secured the glass.

Weep Holes:
Two (5/16" diameter) weep holes were located down through (full height) the bottom glazing track of both operable sash, each one 3" from each end. Two (1-3/8" w x 5/16" h reduced to 1-3/16"w x 1/8"h) weeps with flaps were located on the exterior face of the sill, one 2-3/4" from each end. The top of sill corner ends just below interior operable track in jamb had weep opening ½" x 1-1/4" at each corner. The sill exterior leg used for the screen was cut 1/2" from each end. The sill interior leg used for the screen was cut 1/4" from each end. Two (1/4" side x ¼" side x 5/16" side) triangular weeps at each end of sill on center wall of sill.

Sealant:
Silicone sealant was applied to all the following areas:
- Perimeter of the glazing was set in continuous bead of silicone.
- Exterior and interior face of frame to buck intersection.

Anchorage:
Silicone sealant was used around the exterior and interior perimeter of the frame to buck intersections. Two (#8 x 1-1/4" long) screws were used for each jamb to secure the frame to the buck. The anchor screws at the top end of the jambs were located 1-3/8" down from the top. The screws at the bottom end of the jambs were located 3" up from the bottom. A 3/8" diameter pre-drilled hole guide with plastic cap was used at bottom of jamb anchor location only.

2000 SERIES DOUBLE HUNG WINDOW
Test Results

Paragraph	Test Title / Referenced Test Method	Test Results	Allowable
	Gateway Performance Requirements		
2.1.2	**Air Infiltration Test** (ASTM E-283-91) @ 1.57 psf	0.267 cfm/sf	0.30 cfm/sf
	The test specimen meets the performance levels specified in AAMA/NWWDA 101/I.S.2-97 for Air Infiltration.		

2000 SERIES DOUBLE HUNG WINDOW
Test Results (cont.)

Paragraph	Test Title / Referenced Test Method	Test Results	Allowable
2.1.3	**Water Resistance Test** (ASTM E547-96) @ 2.86 psf (w/wo screen)	No penetration	No penetration
2.1.4.2	**Uniform Load Structural Test** (see optional performance results)		
2.1.7	**Welded Corner Test**	Meets	As Stated
2.1.8	**Forced Entry Resistance** (ASTM F588-97) Performance Level 10 Type A (Section 10)		
	Sec. 10.1 Lock Manipulation Test	No Failure	As Stated
	Sec. 10.2.1.1 Test A1	No Failure	As Stated
	Sec. 10.2.1.2 Test A2	No Failure	As Stated
	Sec. 10.2.1.3 Test A3	No Failure	As Stated
	Sec. 10.2.1.4 Test A4	No Failure	As Stated
	Sec. 10.2.1.5 Test A5	No Failure	As Stated
	Sec. 10.2.1.6 Test A6	No Failure	As Stated
	Sec. 10.2.1.7 Test A7	No Failure	As Stated
	Sec. 10.2.1.8 Lock Manipulation Test	No Failure	As Stated

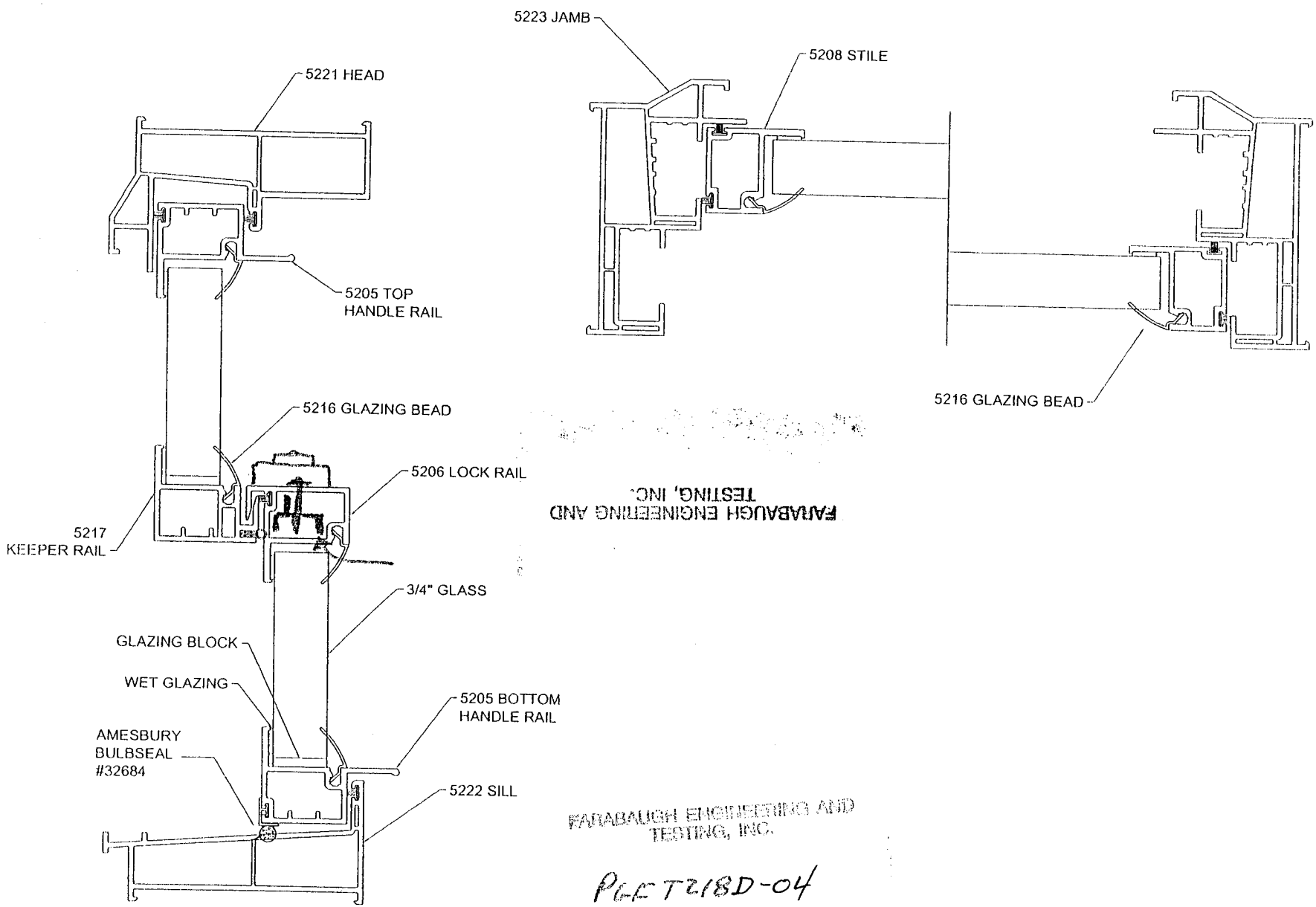
Specific Window Performance Results

2.2.1.6.1	**Operating Force Test**		
	top sash	17 lb up, 29 lb dn	30 lb
	bottom sash	24 lb up, 24 lb dn	30 lb

2000 SERIES DOUBLE HUNG WINDOW
Test Results (cont.)

Paragraph	Test Title / Referenced Test Method	Test Results	Allowable
2.2.1.6.2	**Deglazing Test** (ASTM E987-88, Method B)		
	Top sash		
	left stile @ 50 lbf	6 %	<100%
	right stile @ 50 lbf	6 %	<100%
	top rail @ 70 lbf	13 %	<100%
	bottom rail @ 70 lbf	13 %	<100%
	Bottom sash		
	left stile @ 50 lbf	6 %	<100%
	right stile @ 50 lbf	6 %	<100%
	top rail @ 70 lbf	13 %	<100%
	bottom rail @ 70 lbf	13 %	<100%
	Optional Performance Results		
4.3	**Water Resistance Test** (ASTM E547-96)		
	@ 4.5 psf (w/wo screen)	No penetration	No penetration
4.4.2	**Uniform Load Structural Test** (ASTM E-330-97)		(0.4%xL)
	@ 45 psf positive	0.022" *	0.167"
	@ 45 psf negative	0.023" *	0.167"
	@ 45 psf positive	0.009" *	0.117" (stile)
	@ 45 psf negative	0.007" *	0.167" (bot. rail)

* - Maximum Permanent Deformations.



PLCT218D-04

No.	REVISION	BY	DATE
1	REPLACED 5266 BEAD W/5216 BEAD. V/O #0202	EAS	07-30-02

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

PRELIMINARY PART #

TITLE: 5200 SERIES
REPLACEMENT DOUBLE HUNG

DRAWN BY:	DESIGNED BY:	DATE	SCALE
EAS		04-03-01	NTS-1
CHECKED BY:	APPROVED BY:	DRAWING No.	
		5200S005	

PRIN[redacted]MBE[redacted]	DRA[redacted]Y:	APPROVED BY:	DATE:	DEVELOP	INPROCESS	PRODUCTION
5221w02qc	JPP					

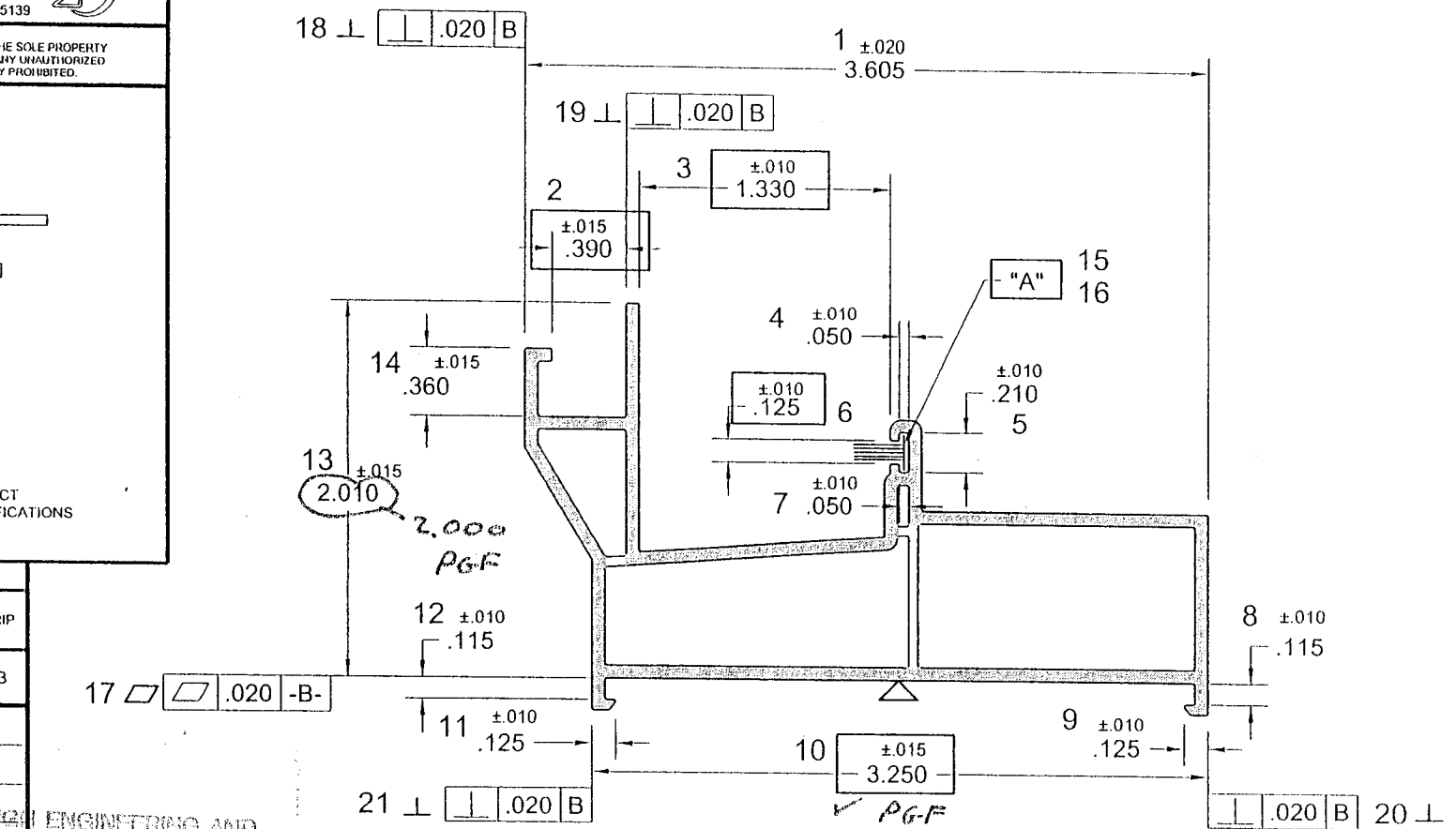
PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5221	W02 DOUBLE HUNG HEAD	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

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

NOTES:

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .070
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO±3/8"
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
A	.187 X .270	ULTRA FAB

FUNCTIONAL CHECK

5284 MULLION

FARABAUGH ENGINEERING AND TESTING, INC.
PGF T2180-04

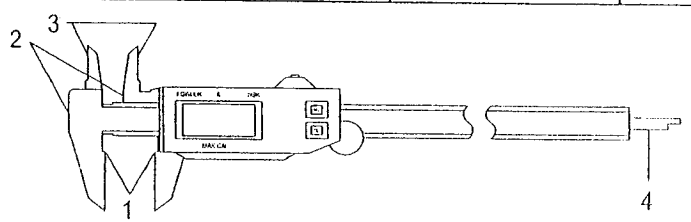
NO.	REVISION	BY	DATE
1	WOOLPILE HEIGHT WAS .260; DESIGNATION WAS W07	EAS	03-26-04

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

DRAWN DATE: 03-22-04

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 1,9,10,11,13
Measure the following control points using #2 on the caliper diagram: 14
Measure the following control points using #3 on the caliper diagram: 2,3,4,5,6,7,8,12
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



PRINT NUMBER:	DRAWN BY:	APPROVED BY:	DATE:	
5222QC	J.S.			DEVELOP / INPROCESS / PRODUCTION

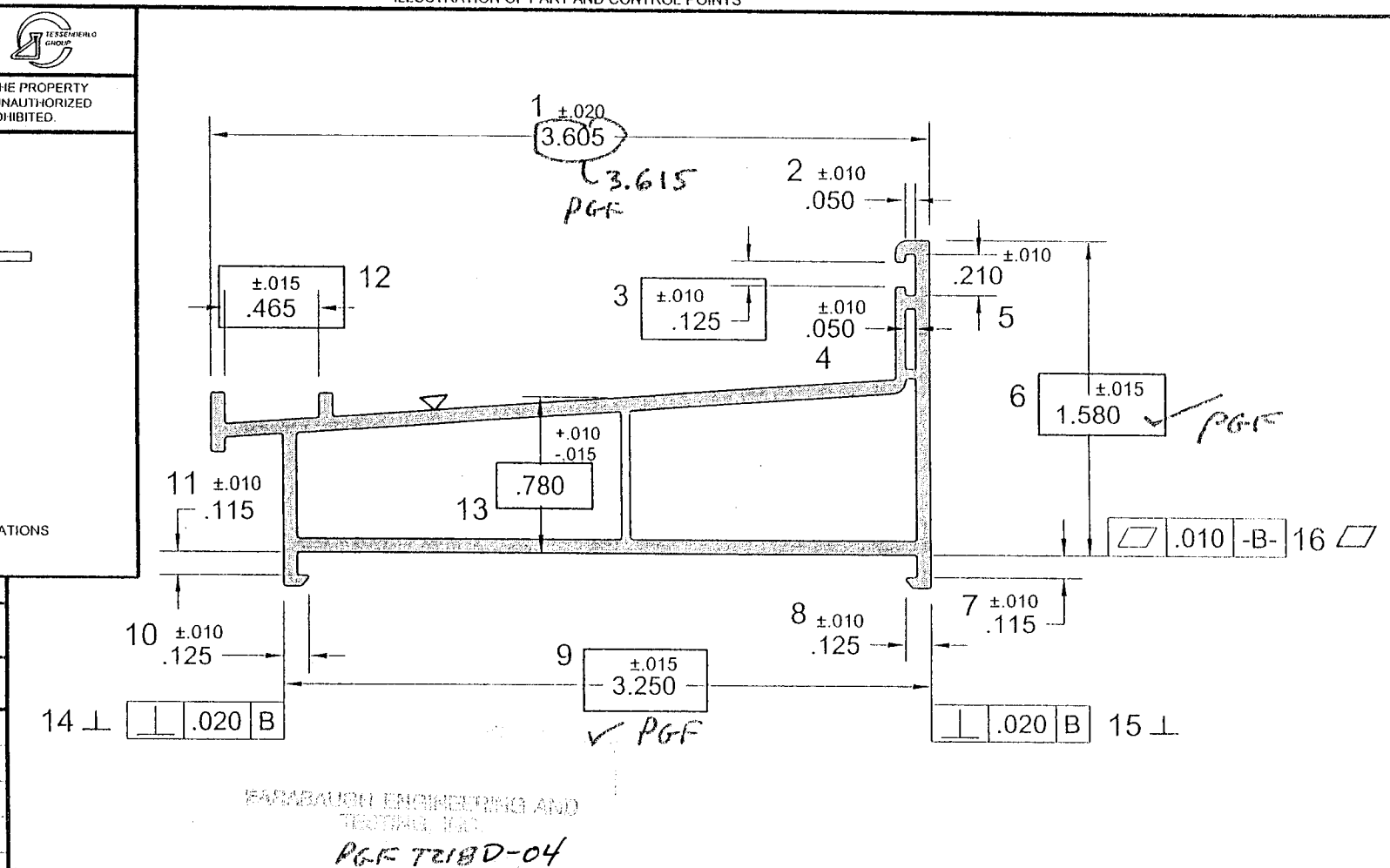
PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5222	DOUBLE HUNG SILL	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA
65 CEDAR WAY, OAKMONT PA 15139

NOTES:

MATERIAL = RIGID P.V.C.
FLEXIBLE P.V.C. =
CAPSTOCK =
LAMINATE =
THINNER INTERIOR WALLS =
WALL THICKNESS = .070
RADIUS = .010
LOCATION FOR IMPACT TEST
ANGULARITY =
PERPENDICULARITY =
PARALLELISM =
FLATNESS =
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-901 PER AAMA SPECIFICATIONS
PROFILE MUST MEET Q-902 IMPACT RESISTANCE PER AAMA SPECIFICATIONS



WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK
5284 MULLION

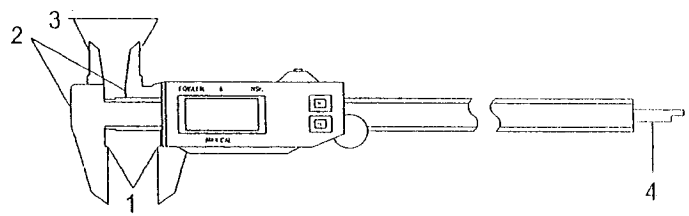
DRAWN DATE: 04-12-01

NO.	REVISION	BY	DATE
2	ADDED FUNCTIONAL CHECK; WO #1189	EAS	12-05-01
1	ADDED .780 DIM +.010/-.010 PER WO 1112	JTS	9/21/01

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 1,6,8,9,10,11
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram: 2,3,4,5,7,12
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



PRINT NUMBER:	DRAWN BY:	APPROVED BY:	DATE:	DEVELOP	INPROCESS	PRODUCTION
5223QC	J.S.					

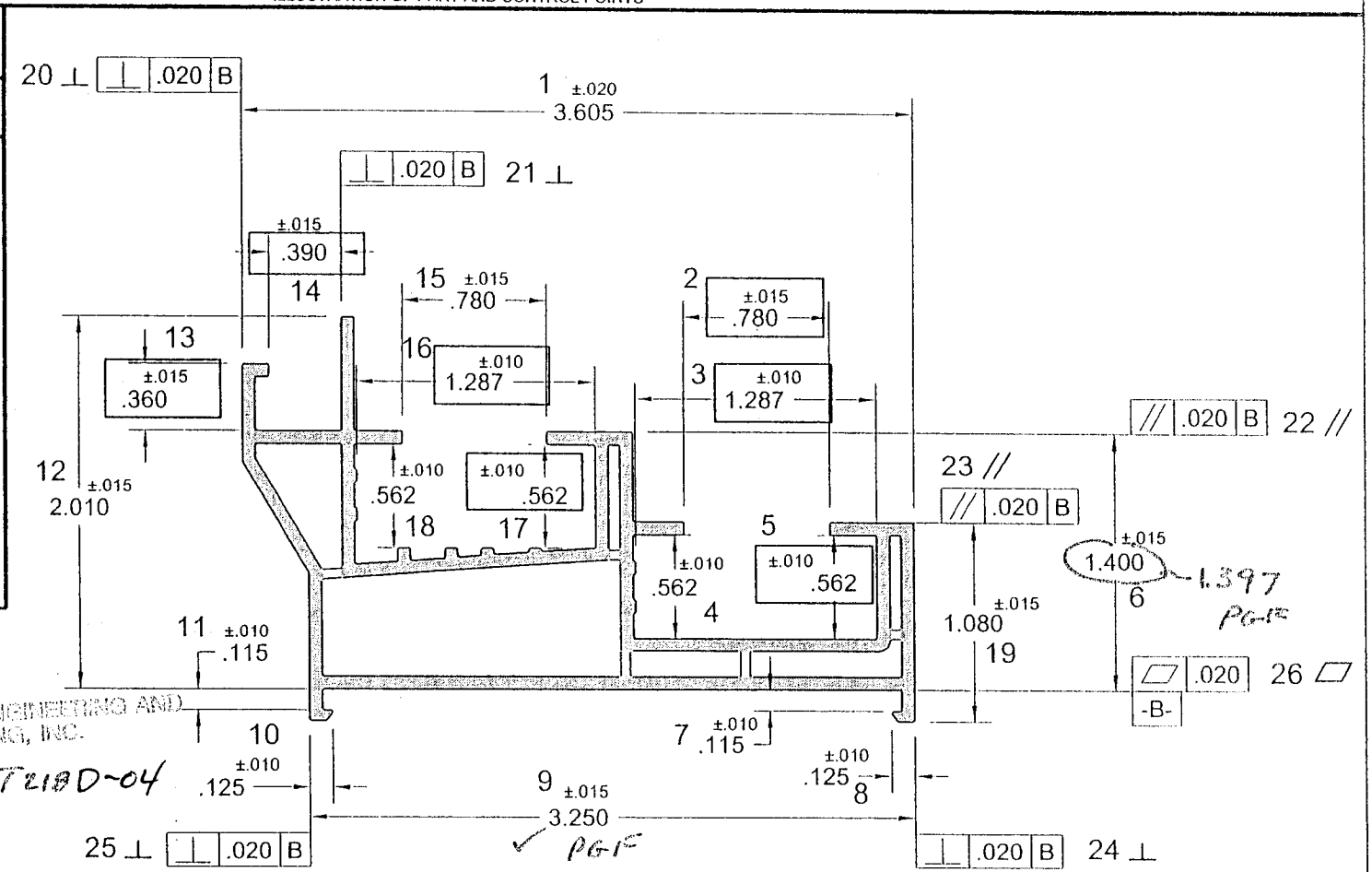
PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5223	DOUBLE HUNG JAMB	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

CHELSEA
65 CEDAR WAY, OAKMONT PA 15139

NOTES:

1. MATERIAL = RIGID P.V.C.
   FLEXIBLE P.V.C. =
   CAPSTOCK =
   LAMINATE =
   THINNER INTERIOR WALLS =
   WALL THICKNESS = .070
   RADIUS = .010
   LOCATION FOR IMPACT TEST
   ANGULARITY =
9. PERPENDICULARITY =
10. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
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
		FALABAUGH

FUNCTIONAL CHECK

BALANCE SHOE

5284 MULLION

DRAWN DATE: 04-12-01

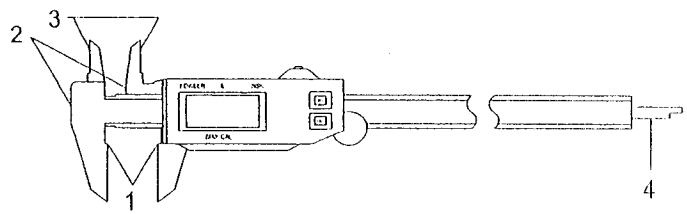
NO.	REVISION	BY	DATE
4	ADDED DIM 19	JPP	05-07-02
3	BALANCE SHOE POCKET WIDTH WAS 1.272; WO #0045	EAS	02-20-02
2	ADDED FUNCTIONAL CHECK; WO #1189	EAS	12-05-01
1	MADE DIM. #14 CRITICAL DIMENSION	JTS	9-20-01

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 1,6,8,9,10,12,
Measure the following control points using #2 on the caliper diagram: 13
Measure the following control points using #3 on the caliper diagram: 2,3,4,5,7,11,14,15,16,17,18
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



PRINT NUMBER:	DRAWN BY:	APPROVED BY:	DATE:	DEVELOP	INPROCESS	PRODUCTION
5205QC	J.S.					

PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5205	HANDLE RAIL/STILE	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

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

NOTES:

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .070
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
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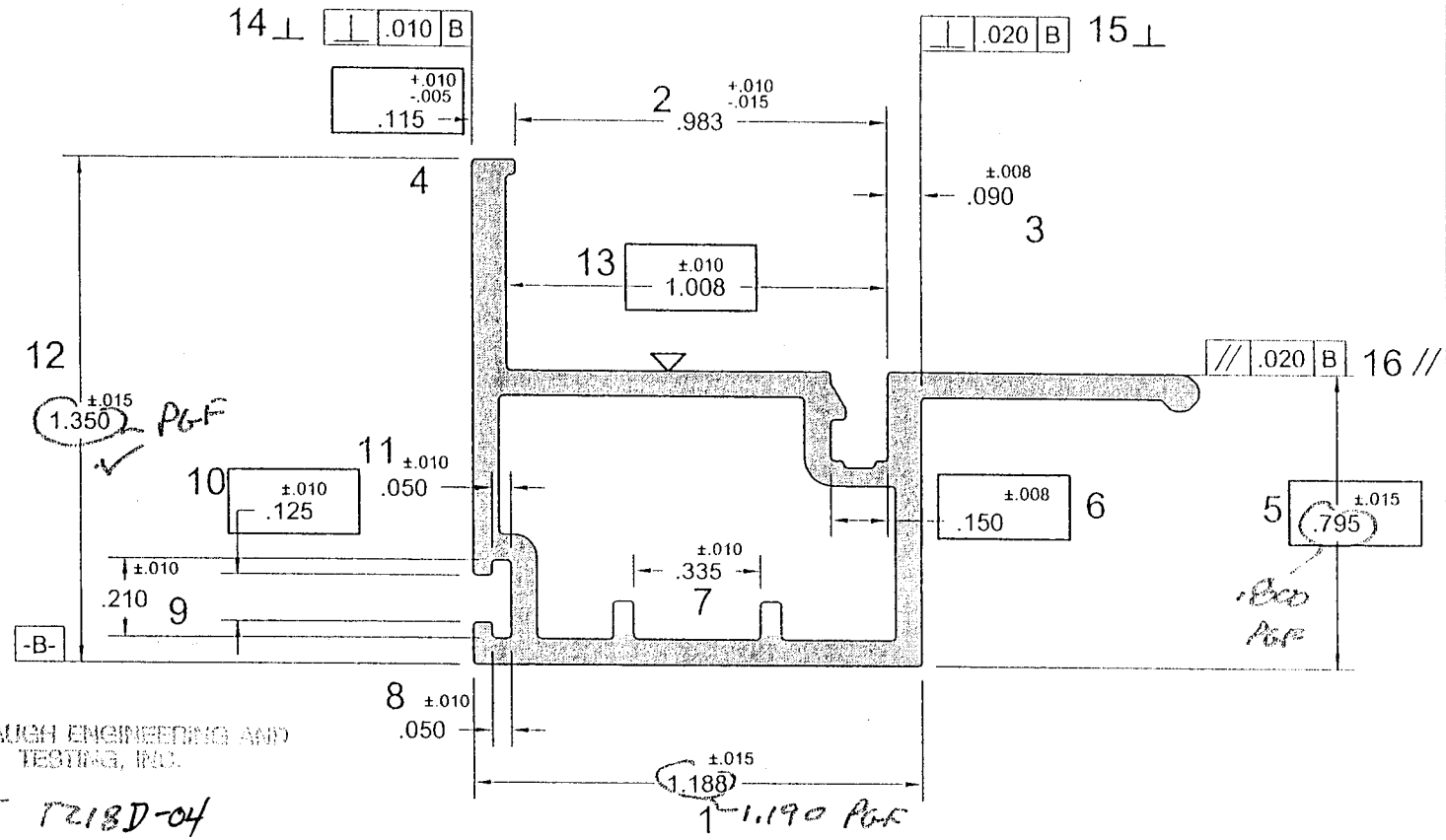


PARABAUGH ENGINEERING AND TESTING, INC.
PGF T218D-04

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

5216A GLAZING BEAD

DRAWN DATE: 04-10-01

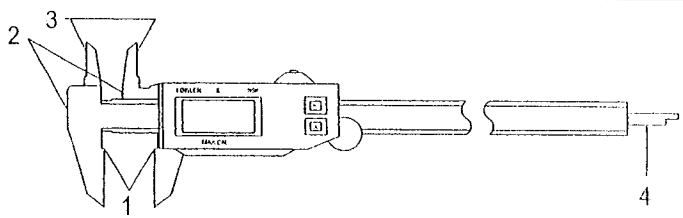
NO.	REVISION	BY	DATE
7	DIM .983 WAS CRITICAL; WO#498	EAS	03-26-04
6	REVISED DIM 13; WO#487	JPP	03-09-04
5	ADDED DIM 13; WO#3233	JPP	07-02-03
4	REVISED DIMS; WO#287	JPP	10-31-02
3	REVISED DIMENSIONS	BLG	10/15/02
2	ADDED FUNCTIONAL CHECK; WO #1084	EAS	09-06-01

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

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



PRI[redacted]MBE[redacted] 5206QC | DRAWN BY: J.S. | APPROVED BY: | DATE: | DEVELOP | INPROCESS | PRODUCTION

PART NAME: 5206

DESCRIPTION: LOCK RAIL/STILE

SUPPLIER/PLANT: CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

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

NOTES:

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .070
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
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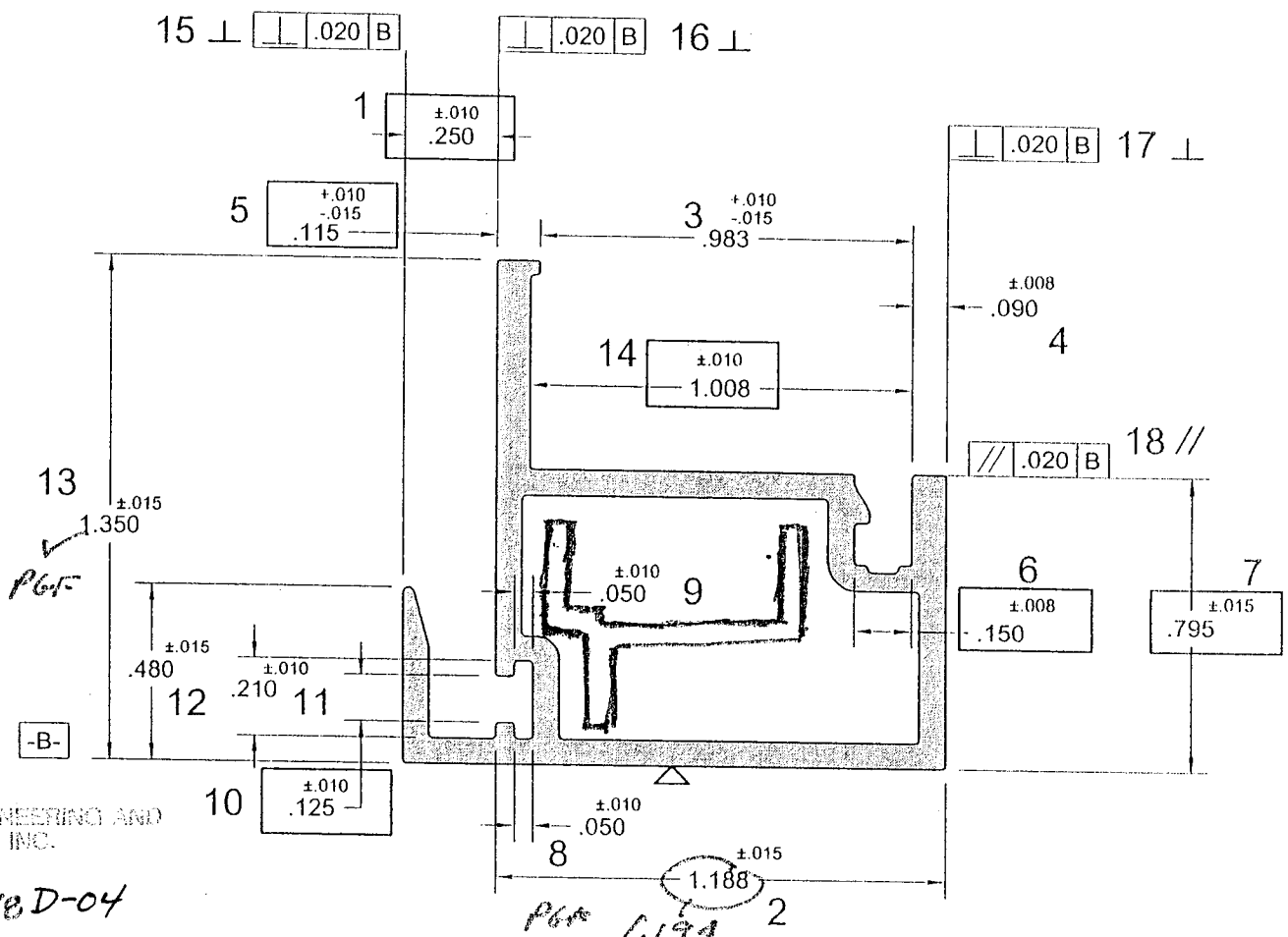


FARABAUGH ENGINEERING AND TESTING, INC.

P&F T218D-04

P&F 1.191

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

5216A GLAZING BEAD

DRAWN DATE: 04-10-01

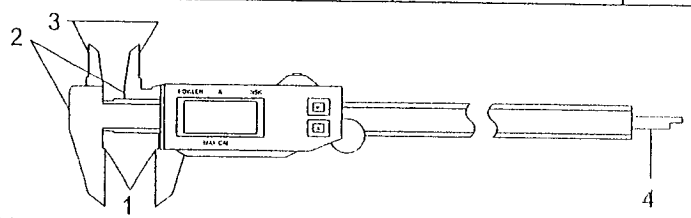
NO.	REVISION	BY	DATE
7	DIM .983 WAS CRITICAL; WO#498	EAS	03-26-04
6	REVISED DIM 14; WO#487	JPP	03-09-04
5	ADDED DIM 14; WO#3233	JPP	07-02-03
4	REVISED DIMS; WO#287	JPP	10-31-02
3	REVISED DIMENSIONS	BLG	10/15/02
2	ADDED FUNCTIONAL CHECK; WO #1084	EAS	09-06-01

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

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



QC PRINT NUMBER:	DRAWN BY:	APPROVED BY:	DATE:	DEVELOP	INPROCESS	PRODUCTION
5217QC	J.S.					

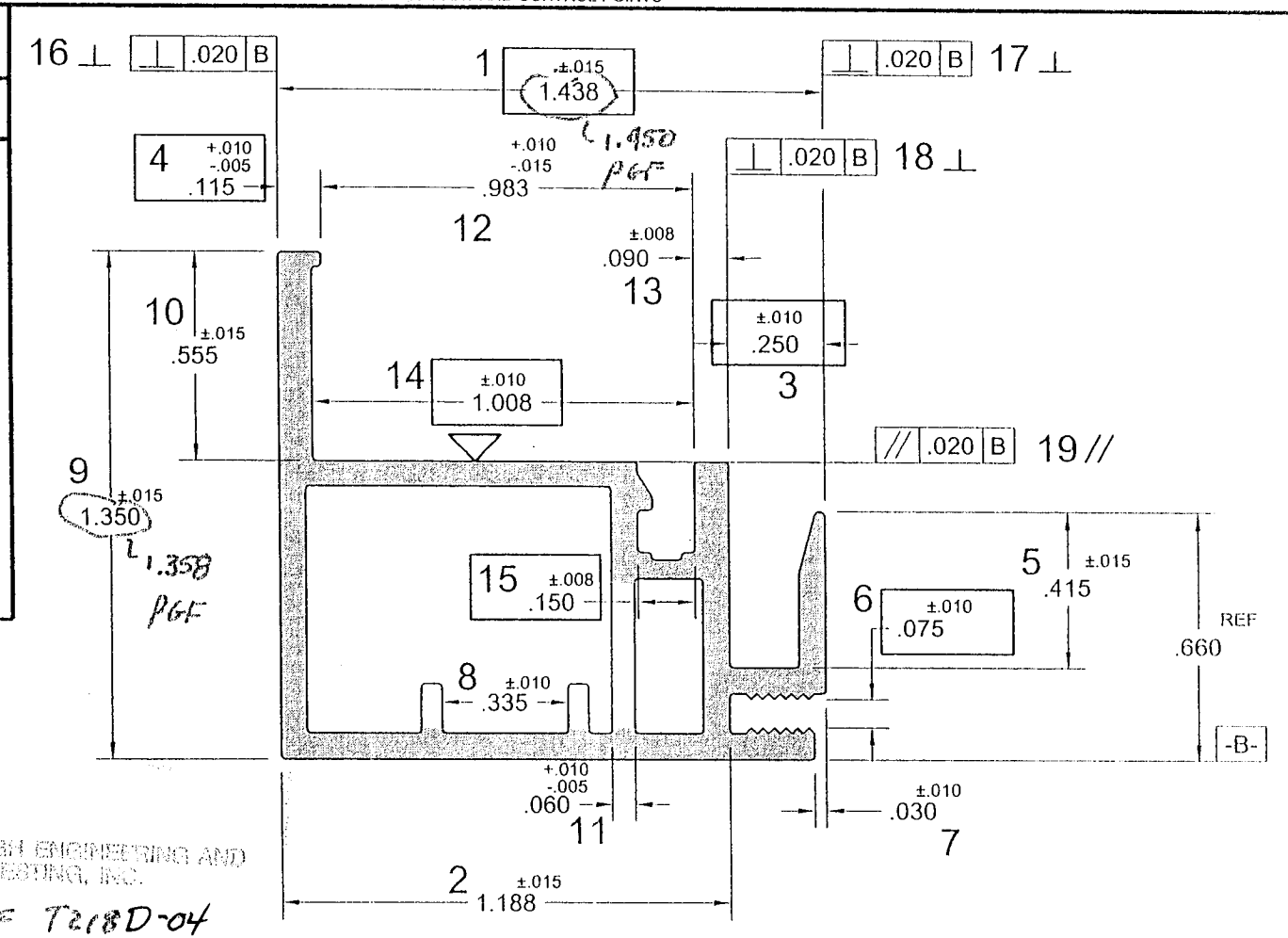
PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5217	KEEPER RAIL/STILE	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

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

NOTES:

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .070
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO±3/8"
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



EAMDALIGH ENGINEERING AND TESTING, INC.
PGF T218D-04

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

5266 GLAZING BEAD

DRAWN DATE: 04-10-01

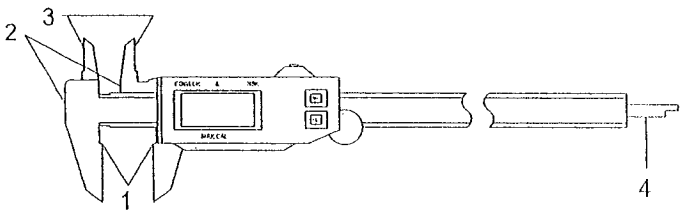
NO.	REVISION	BY	DATE
8	DIM .983 WAS CRITICAL; WO#498	EAS	03-26-04
7	REVISED DIM 14; WO #487	JPP	03-09-04
6	ADDED DIM 14; WO #3233	JPP	07-02-03
5	REVISED DIMS; WO #287	JPP	10-31-02
4	ADDED FUNCTIONAL CHECK; WO #1189	EAS	12-05-01
3	ADDED .415 DIMENTION MADE #5 MADE.660 DIM REF ONLY PER PDWO #1126	JTS	10/02/01

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

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



QC PROGRAM [redacted]	5208QC	DRAWN BY: J.S.	APPROVED BY:	DATE:	DEVELOP	INPROCESS	PRODUCTION

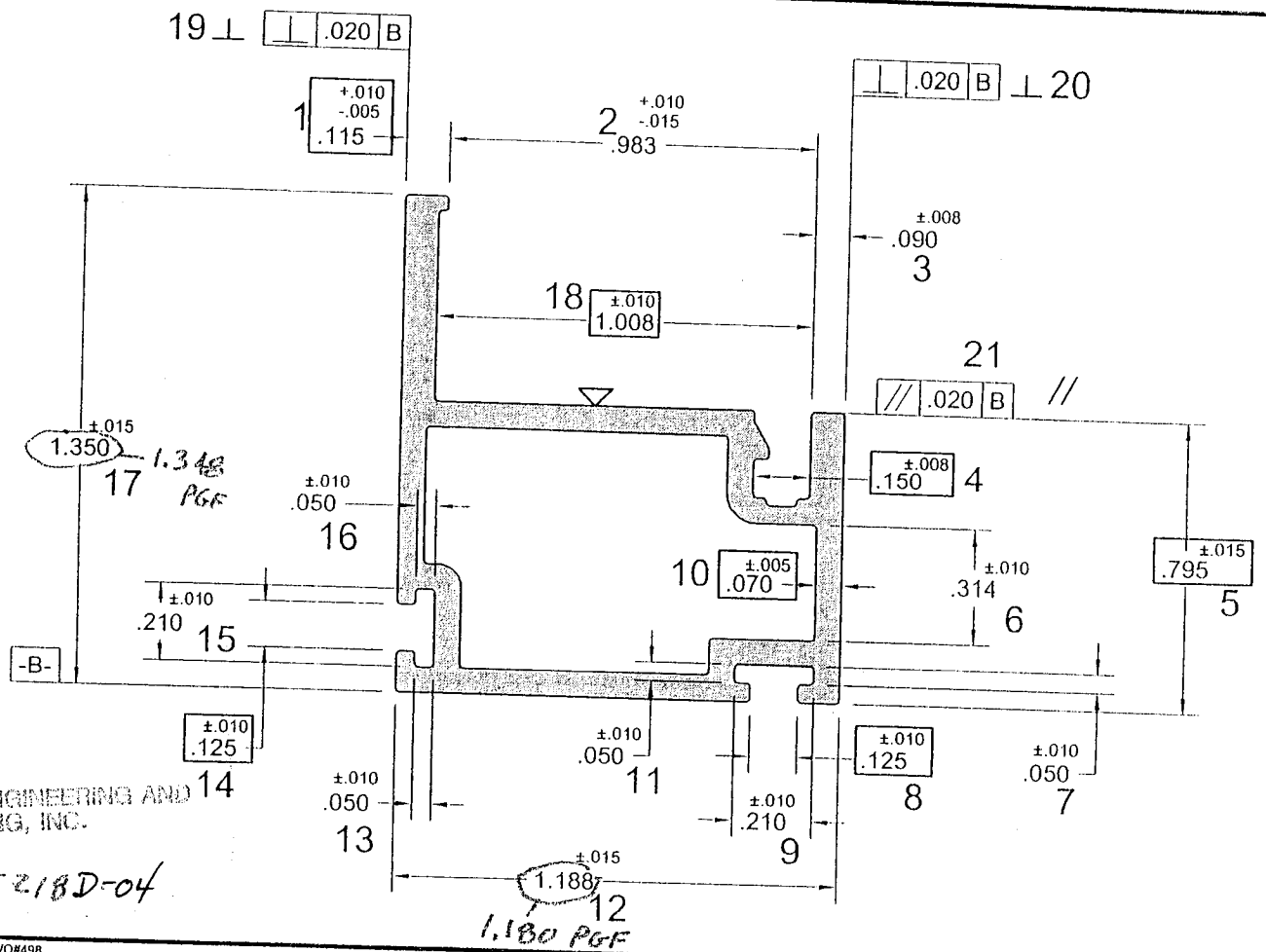
PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5208	RAIL/STILE	CHELSEA BUILDING PRODUCTS

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

NOTES:

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .070
7. RADIUS = .010
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
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

ILLUSTRATION OF PART AND CONTROL POINTS



FARABAUGH ENGINEERING AND TESTING, INC.

PGF T218D-04

WEATHERSTRIP SPECIFICATION

POSITION	SIZE	WEATHERSTRIP TYPE

FUNCTIONAL CHECK

5216A GLAZING BEAD

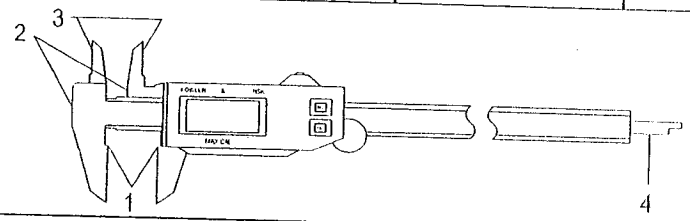
DRAWN DATE: 04-10-01

NO.	REVISION	BY	DATE
7	DIM .983 WAS CRITICAL; WO#498	EAS	03-26-04
6	REVISED DIM 18; WO#187	JPP	03-09-04
5	ADDED DIM 18; WO#3233	JPP	07-02-03
4	REVISED DIMENSIONS	JPP	10-23-02
3	REVISED DIMENSIONS	BLG	10/15/02
2	ADDED FUNCTIONAL CHECK; WO #1084	EAS	09-06-01

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 1,3,6,8,17
Measure the following control points using #2 on the caliper diagram:
Measure the following control points using #3 on the caliper diagram: 4,5,7,9,10,11,12,13,14,15,16
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



QC PRINT NUMBER:	DRAWN BY:	APPROVED BY:	DATE:			
5216QC	EAS			DEVELOP	INPROCESS	PRODUCTION

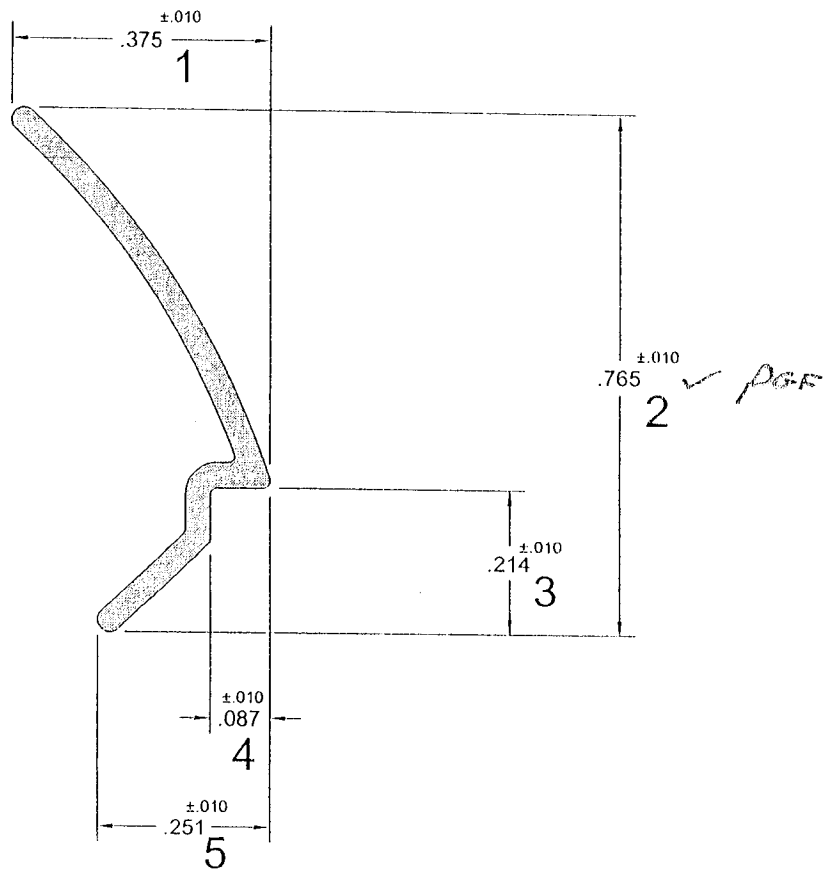
PART NAME:	DESCRIPTION:	SUPPLIER/PLANT:
5216	GLAZING BEAD	CHELSEA BUILDING PRODUCTS

ILLUSTRATION OF PART AND CONTROL POINTS

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

NOTES:

1. MATERIAL = RIGID P.V.C.
2. FLEXIBLE P.V.C. =
3. EXTERIOR COATING =
4. LAMINATE =
5. THINNER INTERIOR WALLS =
6. WALL THICKNESS = .035
7. RADIUS = .010 R
8. LOCATION FOR IMPACT TEST
9. ANGULARITY =
10. PERPENDICULARITY =
11. PARALLELISM =
12. FLATNESS =
13. SPECIFICATION LENGTH TO ±3/8"
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



PGF

WEATHERSTRIP SPECIFICATION		
POSITION	SIZE	WEATHERSTRIP TYPE

FARABAUGH ENGINEERING AND TESTING, INC.

PGF T21BD-04

FUNCTIONAL CHECK
5203 JAMB
5204 FRAME
5231 FRAME
5241 FRAME
5207 MEETING RAIL
5208 STILE
DRAWN DATE: 06-18-02

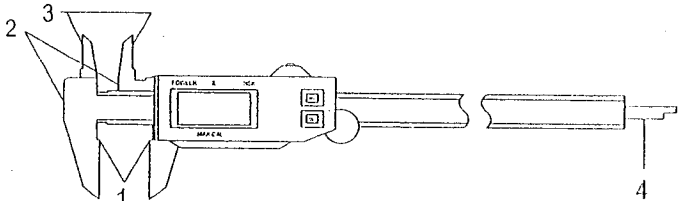
NO.	REVISION	BY	DATE
2	DIM. #1 .375 WAS .379, PER WO#290	BLG	10/30/02
2	DIM. #2 .765 WAS .775	BLG	10/22/02
1	DIM. #1 WAS .353 AND DIM #2 WAS .750	BLG	7/22/02

CUSTOMER LENGTH	CHELSEA CUT LENGTH	TOLERANCE

Use the caliper diagram as your guide to measure the following control points.
Measure the following control points using #1 on the caliper diagram: 1,2,5
Measure the following control points using #2 on the caliper diagram: 4
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

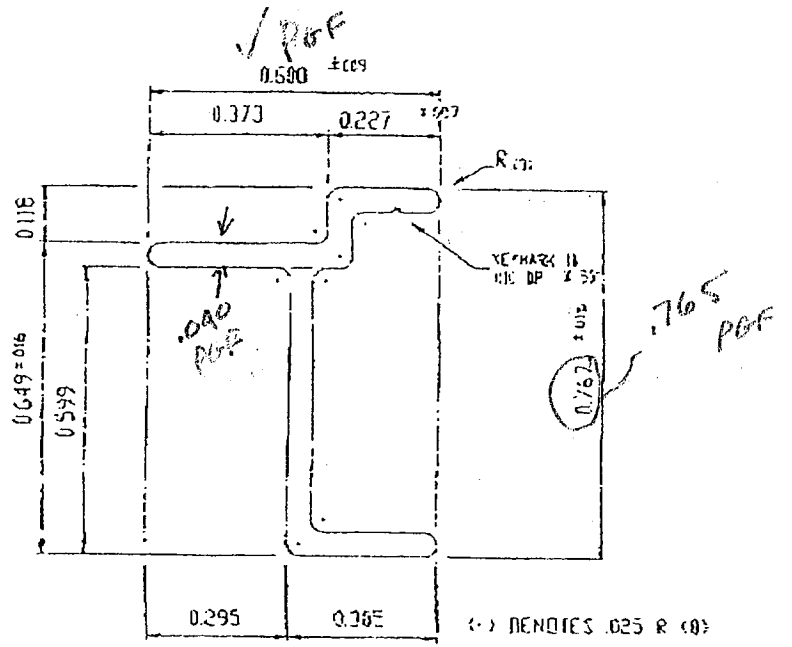


STANDARD COMMERCIAL TOLERANCES FOR EXTRUDED PRODUCTS APPLY UNLESS SPECIFIED OTHERWISE

S-22052
Die Number

ACTUAL SIZE

NO EXPOSED SURFACES



FARABAUGH ENGINEERING AND TESTING, INC.

PGF T218D-04

KEYMARK CORPORATION
FINDLAY, NEW YORK
TELEPHONE (518) 853-3421
FAX ENG (518) 853-3435 SALES (518) 853-3130

Spc	Revisions	Date
1	PRINT REVISION	03-02-94

Unspecified Wall Thickness .050 +.003 -.003
Break All Corners .015 Radius or as Noted

Customer
Customer's Part Number
Job Name
Part Title: S.H. LOCK RAIL STIFFENER
Scale: 4:1

Alloy	Est. Area	Finish Perimeter	Date
6063	.058 Sq In	0.000 In	02-21-94
Temper	Est. Wt/FT	Est. Perimeter	Drawn
T-6	.054 Lbs	3.102 In	A.H.
Cavity Size	Circle Size	Exterior Perimeter	Checked
-	0-1 in	3.102 In	

I_x =	I_y =	Factor	Type Of Finish
S_x =	S_y =	34	Mill ■ Anod. ☐ Bright ☐ Check ☐

Satin ■ Semi-Gloss ☐ Gloss Hollow ☐ Glass