



Architectural Testing

**TAS 201, TAS 202 AND TAS 203
TEST REPORT**

Rendered to:

EFCO, A PELLA COMPANY

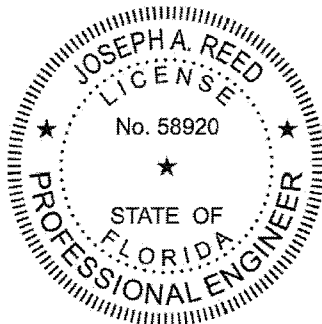
SERIES/MODEL: 5XPT

PRODUCT TYPE: Thermally Improved Aluminum Sliding Glass Door (OXXO)

This report contains in its entirety:

Cover Page: 1 page
Report Body: 16 pages
Test Equipment: 1 page
Sketch: 1 page
Drawings: 32 pages

Secure Electronic Seal
for Electronic Submittal



Joseph A. Reed

Digitally Signed by: Joseph A. Reed

Date: 2009.08.11 16:23:08 -04'00'

Report No.: 92110.01-801-18
Test Dates: 06/09/09
Through: 06/22/09
Report Date: 08/11/09
Expiration Date: 06/22/19

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TAS 201, TAS 202 AND TAS 203 TEST REPORT

Rendered to:

EFCO, A PELLA COMPANY
1000 County Road
Monett, Missouri 65708

Report No.: 92110.01-801-18
Test Dates: 06/09/09
Through: 06/22/09
Report Date: 08/11/09
Expiration Date: 06/22/19

Project Summary: Architectural Testing, Inc. was contracted by EFCO, a Pella Company to perform testing per Florida Building Code, Test Protocols for High Velocity Hurricane Zone, Protocols TAS 201-94, TAS 202-94 and TAS 203-94 on five Series/Model 5XPT, thermally improved aluminum sliding glass doors (OXXO). Test Unit #1 through Test Unit #3 met the performance requirements set forth in the protocols for a ± 90.0 psf *Design Pressure* rating. Test Unit #4 met a ± 110.0 psf *Design Pressure* rating. Test Unit #5 was tested for TAS 202-94 and met a ± 90.0 psf *Design Pressure* rating. Test specimen description and results are reported herein. The samples were provided by the client.

Test Procedures: The test specimens were evaluated in accordance with the following:

TAS 201-94, *Impact Test Procedures.*

TAS 202-94, *Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure Loading.*

TAS 203-94, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.*

Drawing Reference: The test specimen drawings have been reviewed and verified by Architectural Testing and are representative of the samples tested.

Test Specimen Description:

Series/Model: 5XPT

Product Type: Thermally Improved Aluminum Sliding Glass Door (OXXO)

Overall Size: 192" wide by 98-3/8" high

Rough Opening Size: 192-1/2" wide by 98-7/8" high

Operable Panel Size (2): 50-7/8" wide by 92-3/4" high

Fixed Panel Size (2): 49-1/4" wide by 92-3/4" high

Daylight Opening Size: 41-1/2" wide by 86" high

Overall Area: 131.00 ft²

Finish: White painted aluminum

Glazing Details: Test Unit #1 through Test Unit #3 and Test Unit #5 were glazed with insulating glass with 1-3/16" overall thickness and a steel reinforced spacer. There was 1/4" thick heat strengthened glass at the exterior, 3/8" air space, and at the interior was laminated glass with 0.075" thick Vanceva™ interlayer with one piece of 1/4" thick heat strengthened glass on each side. Test Unit #4 was glazed with insulating glass with 1-3/16" overall thickness and a steel reinforced spacer. There was 1/4" thick heat strengthened glass at the exterior, 3/8" airspace, and at the interior was laminated glass with 0.090" thick SentryGlas® Plus interlayer with one piece of 1/4" thick heat strengthened glass on each side. Each unit was interior glazed against a back bedding compound. A heel bead of sealant was applied full perimeter between the frame and glass at the interior. An aluminum snap-in glazing bead with glazing wedge was secured at the interior against the glass. All units were glazed with Bondaflex® SIL 295. Glazing bite on all units was 1".

Weatherstripping:

<u>Description</u>	<u>Quantity</u>	<u>Location</u>	<u>Joinery</u>	<u>Method</u>
0.270" x 0.250" foam filled bulb	7 Rows	Exterior opening along fixed rails, exterior face of threshold, and exterior face of head filler. On each sash at interior face of meeting stile and at interior face of the keeper sash locking stile.	Kerf	Staked

Test Specimen Description: (Continued)

Weatherstripping: (Continued)

<u>Description</u>	<u>Quantity</u>	<u>Location</u>	<u>Joinery</u>	<u>Method</u>
0.270" x 0.220" pile	1 Row	Exterior face of keeper sash locking stile.	Kerf	Staked
0.187" x 0.250" vinyl bulb	1 Row	Interior face of the exterior leg at sub head.	Kerf	Staked
0.270" x 0.150" pile	1 Row	Interior face of the exterior leg at head.	Kerf	Staked

Frame Construction: All frame and retaining members were formed from extruded aluminum members. The frame was thermally improved. Frame corners were square-cut, coped and mechanically assembled using #10 x 1-1/4" pan head Phillips screws at each corner. Two screws were used at each bottom corner and four at each top corner. Foam gasket was applied between corners before assembly. An aluminum 1-3/4" tall threshold was snapped into the sill. A sealant compound at the exterior face of the threshold was used to secure it to the sill. A 7/16" tall aluminum roller track was kerf mounted onto the sill. Between the threshold and the roller track were two 48" wide x 1" tall aluminum windload adaptors that were secured to the sill with #10 x 1/2" set screws (two per adaptor). Windload posts were positioned under operable panels. A sealant compound was applied over the sill thermal break and 7" up each jamb thermal break. An aluminum 1-3/4" tall head filler was snapped into the head of the frame. A sealant compound at the exterior face of the head filler was used to secure it to the frame head.

Fixed Panel Construction: All panel members were formed from thermally improved aluminum extrusions. Panel corners were square-cut, coped and mechanically fastened. Two screws were used to fasten each fixed meeting rail corner: one #10 x 2" and one #10 x 1-1/4" pan head Phillips screw. Two #10 x 1-1/4" pan head Phillips screws were used to secure each fixed panel side rail. Foam gasket was applied between corners before assembly.

Operable Panel Construction: All sash members were formed from thermally improved aluminum extrusions. Sash corners were square-cut, coped and mechanically fastened. Each corner was secured using two #10 x 1-1/4" pan head Phillips screws. A foam gasket was applied between corners before assembly.

Test Specimen Description: (Continued)

Hardware: The latch was fastened to the sash with two #10 x 1/2" flat head Phillips screws. Four #10 x 3/4" pan head Phillips screws were used to secure the keeper. Each flush pull was fastened with two #10 x 7/8" pan head Phillips screws; the flush rollers were secured using #10 x 3/8" flat head Phillips screws, two per roller.

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Two point latch	1	41" from bottom of interior left sash
Keeper	1	41" from bottom of interior right sash
Flush pull	2	39" from bottom of each sash, on exterior of locking stiles
Sash rollers	4	3-1/2" from bottom inside corners of sash, two on each sash bottom rail

Drainage: No drainage was utilized.

Reinforcement: No reinforcement was utilized.

Installation: The unit was installed into a Hem-Fir test buck. A subsill was secured to the buck with a sealant compound and 5/16" x 2-1/4" hex head screws. Screws were located at 2-1/2" and 4" from outside edge of each corner and three at the bottom of each interlock with 1-1/2" on center spacing. The sealant compound was applied under the subsill and a heel bead at exterior of subsill. A sub-head was fastened to the buck with 5/16" x 3-3/4" hex head screws. The screws were positioned at 1-1/2", 3" and 4-1/2" from outer edge of each corner and five at the top of each interlock with 2" on center spacing. All screws at the head went through a sub-head stiffener before entering the sub-head. The stiffener was made out of aluminum and was 3/8" thick by 5" long at the corners and 10" long at top of the interlocks. Sealant was applied under sub-head and heel beaded at exterior. The sill snapped into the subsill, and there was sealant between the interior subsill leg and the interior side of the sill. The head snapped into the sub-head, and sealant was used to secure the two together at the interior and exterior. The jambs were attached to the buck using a heel beaded sealant compound at the exterior. The fixed panels were inserted and secured to the head, jamb and sill at the exterior with a heel bead of sealant. Between the head of the frame and the top rail of each fixed panel was an aluminum head spacer measuring 1-3/8" tall by 4" long. Each sash was installed with head in the frame first and then placing the bottom rail rollers on the roller track.

Test Results: The following results have been recorded:

Protocol TAS 202-94, Static Air Pressure Tests

Test Unit #5

Design Pressure: ± 90.0 psf

Title of Test	Results					
Air Infiltration						
1.57 psf (25 mph)	<0.01 cfm/ft ²					
6.24 psf (50 mph)	<0.01 cfm/ft ²					
	Indicator Readings (inch)					
	#1	#2	#3	#4	#5	#6
Structural Loads						
50% of Test Pressure (+67.5 psf)						
Maximum Deflection	1.24	1.01	0.32	1.51	1.21	0.39
Permanent Set	0.08	0.06	0.04	0.09	0.06	0.05
Design Pressure (+90.0 psf)						
Maximum Deflection	1.74	1.39	0.48	2.05	1.66	0.57
Permanent Set	0.11	0.09	0.06	0.12	0.10	0.09
50% of Test Pressure (-67.5 psf)						
Maximum Deflection	1.04	0.83	0.24	1.26	1.10	0.39
Permanent Set	0.07	0.05	0.04	0.08	0.07	0.06
Design Pressure (-90.0 psf)						
Maximum Deflection	1.44	1.15	0.38	1.72	1.49	0.54
Permanent Set	0.11	0.09	0.07	0.12	0.11	0.10
Water Infiltration						
Water Test Pressure +33.0 psf	No Penetration					
Test Pressure (+135.0 psf)						
Maximum Deflection	3.31	2.57	0.87	3.60	2.91	1.04
Permanent Set	0.38	0.27	0.14	0.35	0.27	0.18
Test Pressure (-135.0 psf)						
Maximum Deflection	2.27	1.77	0.53	2.66	2.24	0.72
Permanent Set	0.16	0.13	0.10	0.14	0.15	0.16
Forced Entry - ASTM F 588-97 Test	Pass					

Note: See Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs

Muzzle Distance from Test Specimen: 16 ft.

Test Unit #1

Impact #1: Missile Velocity: 50.2 fps

Impact Area: Center of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #2: Missile Velocity: 50.9 fps

Impact Area: Bottom right corner of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #3: Missile Velocity: 50.1 fps

Impact Area: Meeting stile midpoint, right operable panel

Observations: No rupture, no penetration

Results: Pass

Note: Refer to Architectural Testing Sketch #1 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, Cyclic Wind Pressure Loading

Test Unit #1

Design Pressure: ± 90.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
18 to 45	3500	2.40	1.22	0.93	0.28	1.41	1.04	0.23
0 to 54	300	2.90	1.45	1.09	0.32	1.63	1.21	0.26
45 to 72	600	2.10	1.79	1.34	0.39	2.00	1.48	0.34
27 to 90	100	3.00	2.22	1.65	0.48	2.44	1.80	0.41
			Permanent Set (inch)					
			0.40	0.25	0.13	0.31	0.22	0.11

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
27 to 90	50	3.00	1.98	1.48	0.47	2.22	1.85	0.64
45 to 72	1050	2.10	1.62	1.21	0.42	1.82	1.52	0.59
0 to 54	50	2.90	1.43	1.06	0.38	1.58	1.32	0.53
18 to 45	3350	1.80	1.32	0.99	0.36	1.42	1.18	0.52
			Permanent Set (inch)					
			0.47	0.34	0.18	0.39	0.36	0.27

Observations: No rupture, no penetration

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs

Muzzle Distance from Test Specimen: 16 ft.

Test Unit #2

Impact #1: Missile Velocity: 50.9 fps

Impact Area: Top right corner of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #2: Missile Velocity: 50.1 fps

Impact Area: Lock stile midpoint, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #3: Missile Velocity: 50.3 fps

Impact Area: Center of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #4: Missile Velocity: 50.2 fps

Impact Area: Meeting stile midpoint, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #5: Missile Velocity: 50.2 fps

Impact Area: Center of glass, right fixed panel

Observations: No rupture, no penetration

Results: Pass

Impact #6: Missile Velocity: 50.2 fps

Impact Area: Bottom right corner of glass, right fixed panel

Observations: No rupture, no penetration

Results: Pass

Note: Refer to Architectural Testing Sketch #1 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, Cyclic Wind Pressure Loading

Test Unit #2

Design Pressure: ± 90.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
18 to 45	3500	2.30	1.27	0.98	0.29	1.42	1.07	0.25
0 to 54	300	2.90	1.54	1.19	0.34	1.73	1.31	0.29
45 to 72	600	2.20	1.71	1.33	0.38	1.93	1.45	0.33
27 to 90	100	3.00	2.03	1.57	0.43	2.31	1.73	0.39
			Permanent Set (inch)					
			0.37	0.23	0.11	0.41	0.28	0.11

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
27 to 90	50	3.00	1.51	1.25	0.47	1.71	1.43	0.35
45 to 72	1050	2.30	1.29	1.01	0.24	1.61	1.30	0.33
0 to 54	50	2.70	1.01	0.77	0.19	1.28	1.02	0.25
18 to 45	3350	2.00	1.01	0.71	0.18	1.17	0.94	0.24
			Permanent Set (inch)					
			0.16	0.11	0.06	0.20	0.18	0.08

Observations: No rupture, no penetration

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs

Muzzle Distance from Test Specimen: 16 ft.

Test Unit #3

Impact #1: Missile Velocity: 50.5 fps

Impact Area: Bottom right corner of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #2: Missile Velocity: 50.5 fps

Impact Area: Meeting stile midpoint, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #3: Missile Velocity: 50.3 fps

Impact Area: Lock stile midpoint, right operable panel

Observations: No rupture, no penetration

Results: Pass

Note: Refer to Architectural Testing Sketch #1 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, Cyclic Wind Pressure Loading

Test Unit #3

Design Pressure: ± 90.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
18 to 45	3500	2.10	1.33	1.08	0.30	1.13	0.91	0.31
0 to 54	300	2.50	1.77	1.44	0.39	1.47	1.18	0.38
45 to 72	600	2.30	1.89	1.52	0.43	1.58	1.26	0.41
27 to 90	100	3.00	2.30	1.82	0.49	1.94	1.54	0.49
			Permanent Set (inch)					
			0.38	0.28	0.14	0.29	0.21	0.12

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
27 to 90	50	2.90	1.88	1.57	0.57	1.60	1.18	0.41
45 to 72	1050	2.20	1.51	1.26	0.45	1.28	0.94	0.36
0 to 54	50	3.00	1.44	1.20	0.42	1.23	0.91	0.35
18 to 45	3350	1.80	1.10	0.90	0.34	0.97	0.68	0.32
			Permanent Set (inch)					
			0.14	0.11	0.10	0.17	0.08	0.12

Observations: No rupture, no penetration

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Results: (Continued)

Protocol TAS 201-94, *Impact Test Procedures*

Missile Weight: 9.2 lbs

Muzzle Distance from Test Specimen: 16 ft.

Test Unit #4

Impact #1: Missile Velocity: 50.5 fps

Impact Area: Center of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #2: Missile Velocity: 50.1 fps

Impact Area: Bottom right corner of glass, right operable panel

Observations: No rupture, no penetration

Results: Pass

Impact #3: Missile Velocity: 50.4 fps

Impact Area: Meeting stile midpoint, right operable panel

Observations: No rupture, no penetration

Results: Pass

Note: Refer to Architectural Testing Sketch #1 for impact locations.

Test Results: (Continued)

Protocol TAS 203-94, *Cyclic Wind Pressure Loading*

Test Unit #4

Design Pressure: ± 110.0 psf

POSITIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
22 to 55	3500	2.30	1.29	0.97	0.23	1.54	1.05	0.17
0 to 66	300	3.00	1.55	1.16	0.28	1.83	1.25	0.20
55 to 88	600	2.20	2.02	1.49	0.36	2.38	1.60	0.25
33 to 110	100	2.90	2.57	1.87	0.43	2.99	1.98	0.29
			Permanent Set (inch)					
			0.23	0.13	0.04	0.24	0.12	0.06

NEGATIVE PRESSURE

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)					
			#1	#2	#3	#4	#5	#6
33 to 110	50	3.00	2.07	1.55	0.44	2.48	2.01	0.54
55 to 88	1050	2.00	1.89	1.45	0.46	2.20	1.88	0.44
0 to 66	50	2.80	1.76	1.18	0.40	2.04	1.67	0.49
22 to 55	3350	2.10	1.56	1.01	0.35	1.62	1.35	0.47
			Permanent Set (inch)					
			0.30	0.27	0.17	0.45	0.37	0.20

Observations: No rupture, no penetration

Result: Pass

Note: Refer to Architectural Testing Sketch #1 for indicator locations.

Test Equipment: (See Appendix A)

Cannon: Steel pipe barrel utilizing compressed air to propel the missile

Missile: 2x4 Southern Pine

Timing Device: Electronic Beam Type

Cycling Mechanism: Computer controlled centrifugal blower with electronic pressure measuring device

Deflection Measuring Device: Linear transducers

Laboratory Compliance Statements: The following are provided as required by the protocols for the testing reported herein.

Upon completion of testing, specimens tested for TAS 201-94 met the requirements of Section 1626 of the Florida Building Code.

Upon completion of testing, specimens tested for TAS 202-94 met the requirements of Section 1620 of the Florida Building Code.

Upon completion of testing, specimens tested for TAS 203-94 met the requirements of Section 1626 of the Florida Building Code.

Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

Testing was conducted at the Architectural Testing, Inc. laboratory located in Southlake, Texas.

List of Official Observers:

<u>Name</u>	<u>Company</u>
Andy Cost	Architectural Testing, Inc.
Jesus Mata	Architectural Testing, Inc.
Daniel Reeves	Architectural Testing, Inc.
Jim Sturdevant	Architectural Testing, Inc.
Joseph A. Reed, P.E.	Architectural Testing, Inc.
Tom Klein	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of ten years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

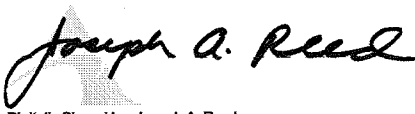
Results obtained are tested values and were secured by using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.



Digitally Signed by: Tom Klein

Tom Klein
Test Technician



Digitally Signed by: Joseph A. Reed

Joseph A. Reed, P.E.
Director - Engineering and Product Testing

TK:ac/cmd

Attachments (pages): This report is complete only when all attachments listed are included.

- Appendix-A: Test Equipment (1)
- Appendix-B: Sketch (1)
- Appendix-C: Drawings (32)

Revision Log

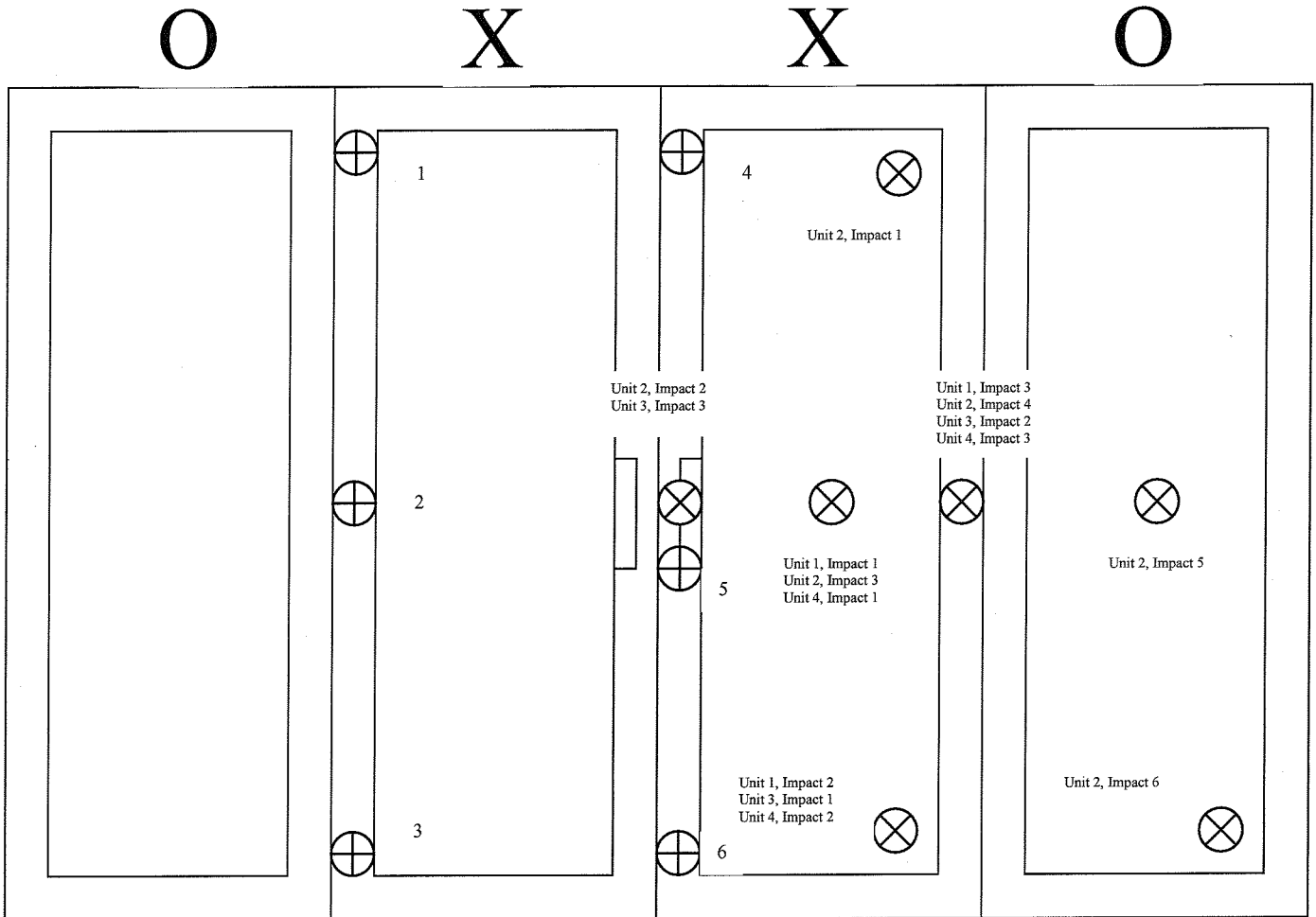
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0	08/11/09	N/A	Original report issue

Appendix A
Test Equipment

Instrument	Manufacturer	Asset #
Linear Transducer	Celesco	5202
Linear Transducer	Celesco	3546
Linear Transducer	Celesco	3755
Linear Transducer	Celesco	62196
Linear Transducer	Celesco	5204
Linear Transducer	Celesco	3273
Cannon	Architectural Testing, Inc.	5469
Spray Rack	Architectural Testing, Inc.	3233
Spring Scale 220#	Taylor	62104
Micro Mule	Architectural Testing, Inc	5302
BABS II	Architectural Testing, Inc.	5576
Control Panel	Architectural Testing, Inc.	4829

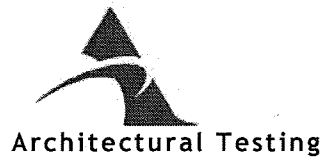
Appendix B

Sketch



⊗ = impact locations

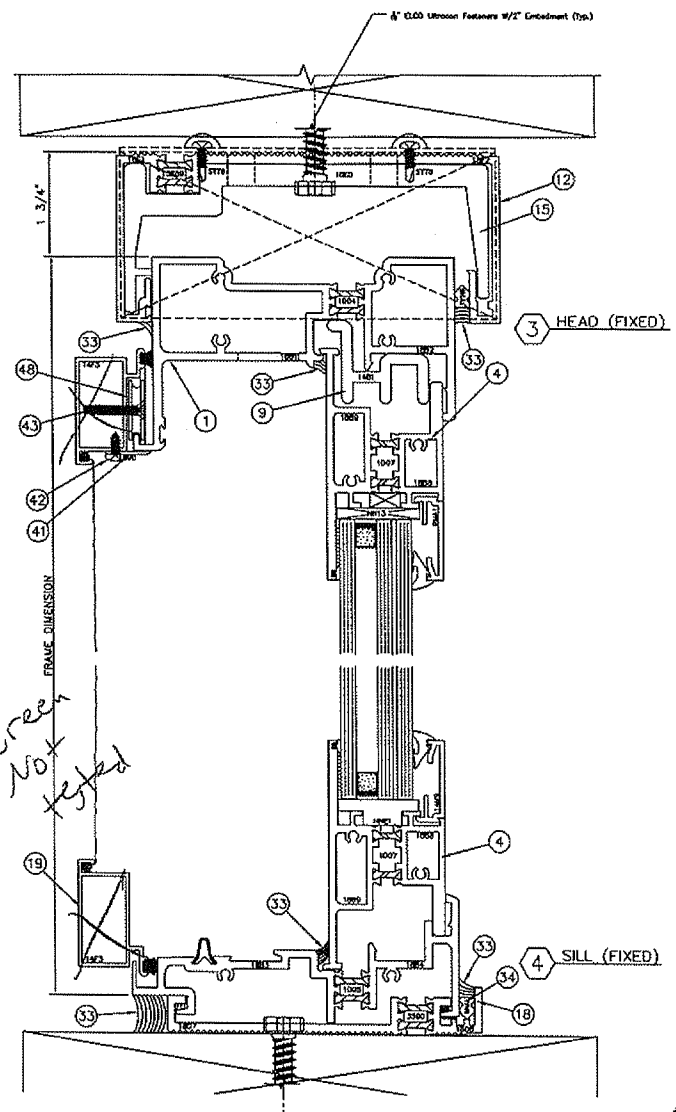
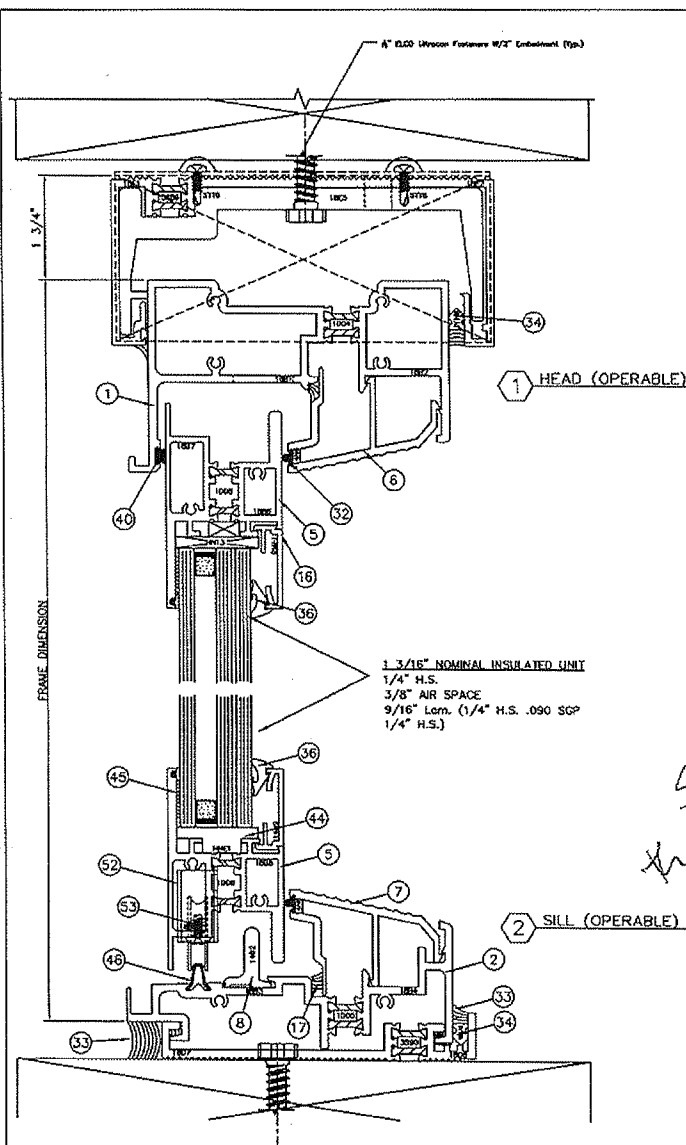
⊕ = indicator locations



92110.01-801-18

Appendix C

Drawings



ITEM	QTY REQD	PART #	DESCRIPTION	MFG.
1	1	1004	HEAD	EFCO
2	1	1005	SILL	EFCO
3	2	1006	JAMB	EFCO
4	2	1007	FIXED PANEL HORIZ.	EFCO
5	2	1008	OPERABLE PANEL HORIZ.	EFCO
6	1	14N6	HEAD FILLER	EFCO
7	2	14N6	THRESHOLD	EFCO
8	1	14B2	WINDLOAD ADAPTOR	EFCO
9	1	14B1	HEAD SPACER	EFCO
10	2	1010	FIXED PANEL SIDE RAIL	EFCO
11	1	1011	OPERABLE MEETING RAIL	EFCO
12	1	3S89	SUB HEAD	EFCO
13	1	1018	MEETING RAIL (MALE)	EFCO
14	1	1014	FIXED MEETING RAIL	EFCO
15	AS REQD	18E5	SUB HEAD STIFFENER	EFCO
16	8	14M9	GLAZING BEAD	EFCO
17	1	1017	MEETING RAIL (FEMALE)	EFCO
18	1	3S90	STARTER SILL	EFCO
19	1	14F3	SCREEN FRAME	EFCO
20	1	HS27	THUMBTURN	BRONZE CRAFT
21	1	HSA1	THUMBTURN SPINDLE	BRONZE CRAFT
22	1	HS26	FLUSH PULL	BRONZE CRAFT
23	1	HSS5	DEAD LOCK	BRONZE CRAFT
24	1	IGK8	NYLON WASHER	ULTRAFAB
25	1	WS07	BUG FLAP	CENTRAL PLASTICS
26	2	HB60	SCREEN LATCH	ULTRAFAB
27	1	HB59	SCREEN KEEPER	ULTRAFAB
28	6	STUB	LATCH/KEEPER FASTENER	CENTRAL PLASTICS
29	3	WS08	MEETING FLAP	CENTRAL PLASTICS
30	2	WW98	WOOL PILE	ULTRAFAB
31	1	STD3	KEEPER FASTENER	CENTRAL PLASTICS
32	AS REQD	WS05	SEALANT DAM	CENTRAL PLASTICS
33	AS REQD	WS05	SILICONE SEALANT	CENTRAL PLASTICS
34	1	WNA1	ARROW SHIM	CENTRAL PLASTICS
35	AS REQD	WS05	SEALANT DAM	CENTRAL PLASTICS
36	AS REQD	WEB4	Glazing Wedge	ULTRAFAB
37	3	WE18	SCREEN WOOL PILE	ULTRAFAB
38	AS REQD	HN13	SIDE BLOCKS (EDPM)	CENTRAL PLASTICS
39	AS REQD	HEP8	SIDE BLOCKS (EDPM)	CENTRAL PLASTICS
40	AS REQD	WW78	WOOL PILE	ULTRAFAB
41	2	1990	SCREEN ANTI-TAKE-OUT	EFCO
42	4	SPP7	ANTI-TAKE OUT FASTENER	EFCO
43	2	S111	SCREEN ROLLER FASTENER	EFCO
44	2	HNE1	SETTING BLOCKS	EPG
45	AS REQD		SILICONE BACKBED	
46	1	LATA	ROLLER TRACK	JOHNSON
47	2	MT26	FLUSH PULL FASTENER	JOHNSON
48	2	RR36	SCREEN ROLLER	FE-DEMAR
49	1	HL95	RETAINER RING	JOHNSON
50	28	SL09	#10 ASSY SCREWS	JOHNSON
51	1	HST0	KEEPER	JOHNSON
52	2	HR41	TANDOM ROLLER	DEBWAY
53	4	STT5	ROLLER FASTENER	DEBWAY
54	2	SM04	FLUSH PULL FASTENER	ULTRAFAB
55	1	HB61	SCREEN-KEEPER	ULTRAFAB

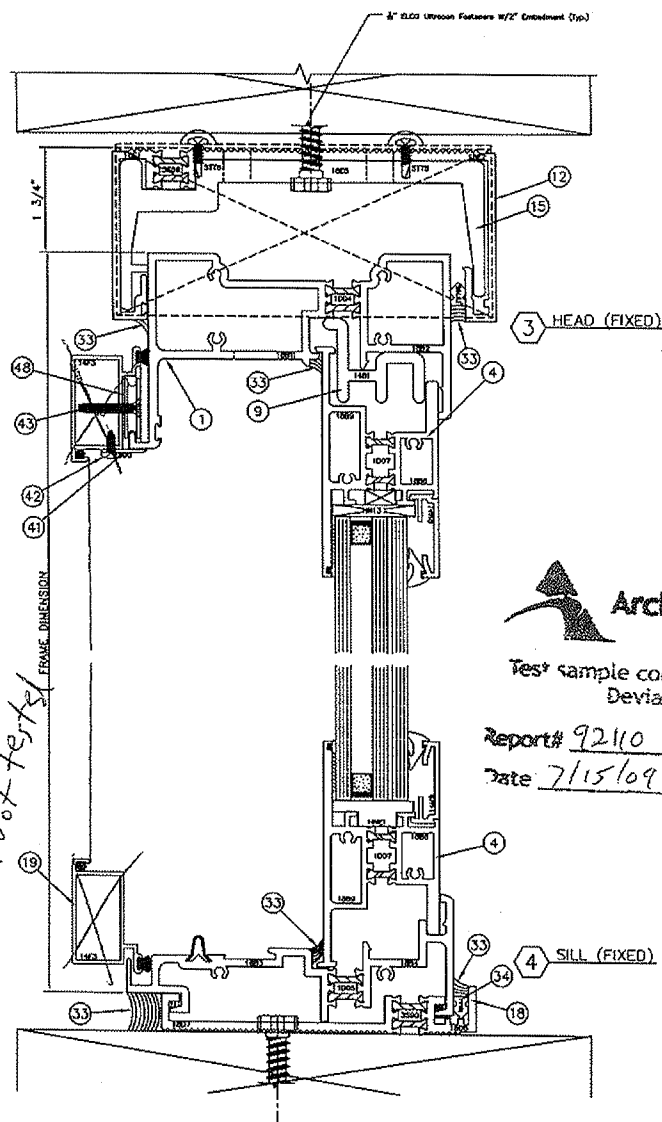
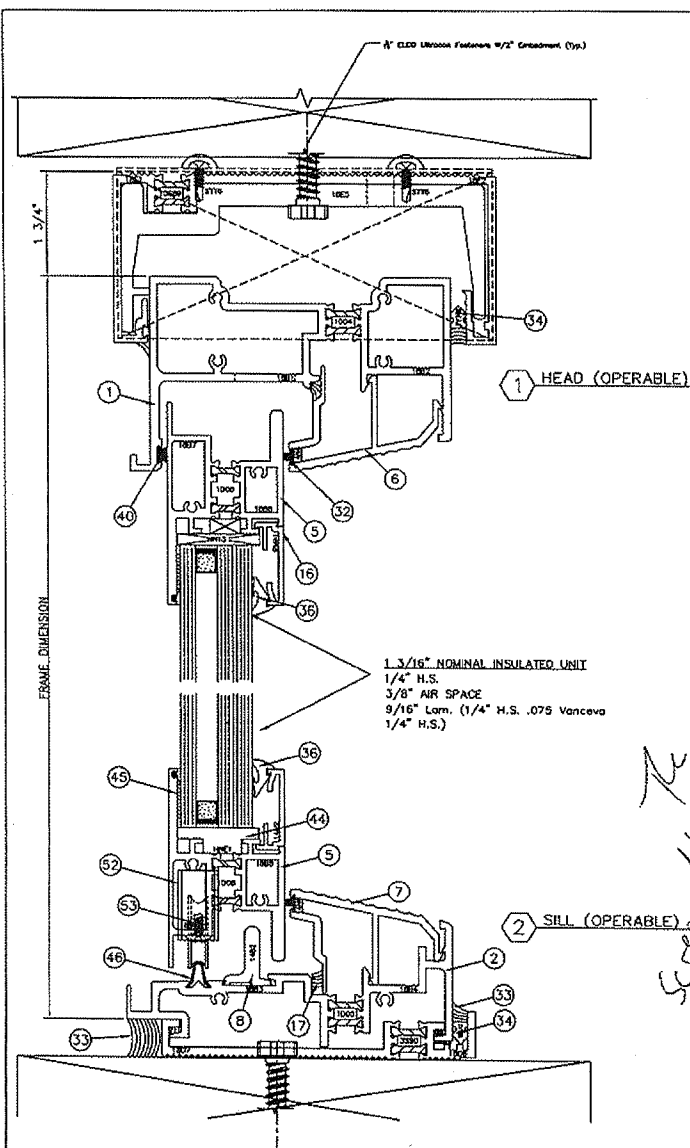
DRAWN BY T.H.	CHECKED BY DATE	SCALE FULL	REV.	EFCO CORPORATION 1000 County Road • Munett, Missouri 65708	SERIES 5XPT SCD (OXXO) Test sample complies with these details Deviations are noted.	REPORT# SHEET	92110 7/15/09 Tech <i>TH</i>
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Architectural Testing

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Report# 92110
Date 7/15/09 Tech *TH*



ITEM	# REQD	PART #	DESCRIPTION	MFG.
1	1	1D04	HEAD	EFCO
2	1	1D05	SILL	EFCO
3	2	1D06	JAMB	EFCO
4	2	1D07	FIXED PANEL HORIZ	EFCO
5	2	1D08	OPERABLE PANEL HORIZ	EFCO
6	1	14N6	HEAD FILLER	EFCO
7	2	14N6	THRESHOLD	EFCO
8	1	14B2	WINDLOAD ADAPTOR	EFCO
9	1	14B1	HEAD SPACER	EFCO
10	2	1D10	FIXED PANEL SIDE RAIL	EFCO
11	1	1D11	OPERABLE MEETING RAIL	EFCO
12	1	3S89	SUB HEAD	EFCO
13	1	1D18	MEETING RAIL (MALE)	EFCO
14	1	1D14	FIXED MEETING RAIL	EFCO
15	AS REQD	18E5	SUB HEAD STIFFNER	EFCO
16	8	14M9	GLAZING BEAD	EFCO
17	1	1D17	MEETING RAIL (FEMALE)	EFCO
18	1	3S90	STARTER SILL	EFCO
19	4	14F3	SCREEN FRAME	EFCO
20	1	HS27	THUMBTURN	BROWNE DRAFT
21	1	HS41	THUMBTURN SPINDLE	BROWNE DRAFT
22	1	HS26	FLUSH PULL	BROWNE DRAFT
23	1	HS55	DEAD LOCK	SASH CONTROL
24	1	IGK8	NYLON WASHER	
25	1	WS07	BUG FLAP	CENTRAL PLASTICS
26	2	WB60	SCREEN LATCH	ULTRAFAB
27	1	WB59	SCREEN-KEEPER	ULTRAFAB
28	6	STUB	LATCH/KEEPER FASTENER	ULTRAFAB
29	3	WS08	MEETING FLAP	CENTRAL PLASTICS
30	2	WW98	WOOL PILE	ULTRAFAB
31	1	STD3	KEEPER FASTENER	CENTRAL PLASTICS
32	AS REQD	WS05	SEALANT DAM	CENTRAL PLASTICS
33	AS REQD	WNA1	SILICONE SEALANT	CENTRAL PLASTICS
34	AS REQD	WNA1	ARROW SHIM	CENTRAL PLASTICS
35	AS REQD	WS05	SEALANT DAM	CENTRAL PLASTICS
36	AS REQD	WEB4	Glazing Wedge	CENTRAL PLASTICS
37	2	WF18	SCREEN WOOL PILE	ULTRAFAB
38	AS REQD	PHN13	SIDE BLOCKS (EDPM)	CENTRAL PLASTICS
39	AS REQD	HEP8	SIDE BLOCKS (EDPM)	CENTRAL PLASTICS
40	AS REQD	WW78	WOOL PILE	ULTRAFAB
41	2	4990	SCREEN ANTI-TAKE-OUT	EFCO
42	4	SPP7	ANTI-TAKE OUT FASTENER	
43	2	SL11	SCREEN ROLLER FASTENER	
44	2	HNE1	SETTING BLOCKS	EPG
45	AS REQD		SILICONE BACKBED	
46	1	LA1A	ROLLER TRACK	JOHNSON BRIDGE
47	2	MTZ6	FLUSH PULL FASTENER	
48	2	MR38	SCREEN ROLLER	PE DELMAR
49	1	HL95	RETAINER RING	
50	28	SL09	#10 ASSY SCREWS	
51	1	HS70	KEEPER	SASH CONTROL
52	2	HR41	TANDOM ROLLER	DEBWAY
53	4	STTS	ROLLER FASTENER	
54	2	SM04	FLUSH PULL FASTENER	
55	1	MB61	SCREEN-KEEPER	ULTRAFAB

Architectural Testing

Test sample complies with the
Deviations are noted

Report# 92110

Date 7/15/09

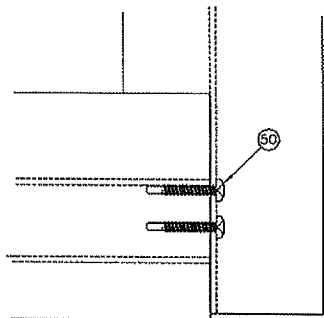
Tech 76

DRAWN BY T.H. CHECKED BY
DATE 5-1-09 DATE
SCALE FULL REV.

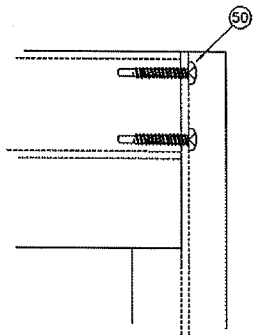
EFCO CORPORATION
1000 County Road • Montett, Missouri 65708

SERIES 5XPT SGD (OXXO)

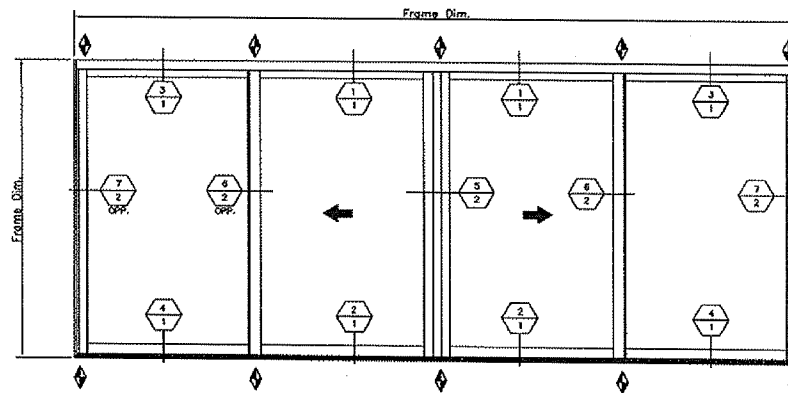
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REPORT# XXXXX SHEET 1 of 2



SASH CORNER ASSEMBLY -
SQR. CUT, END COPEO, AND MECH. FASTENED.



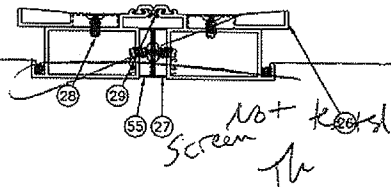
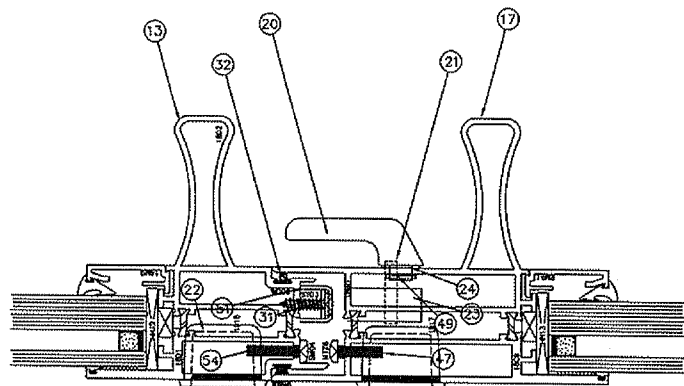
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SQR. CUT, END COPEO, AND MECH. FASTENED.



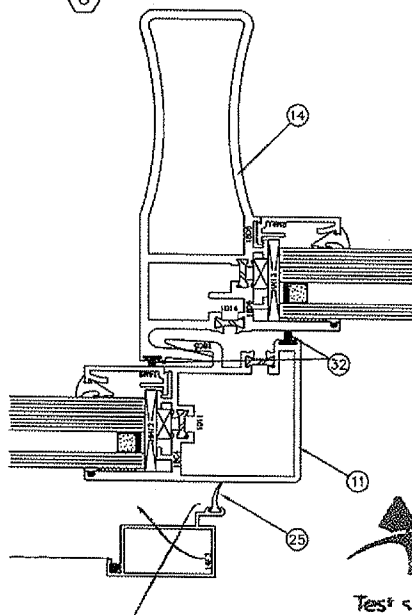
ELEVATION

* DENOTES LOCK LOCATION
♦ DENOTES ANCHOR LOCATIONS

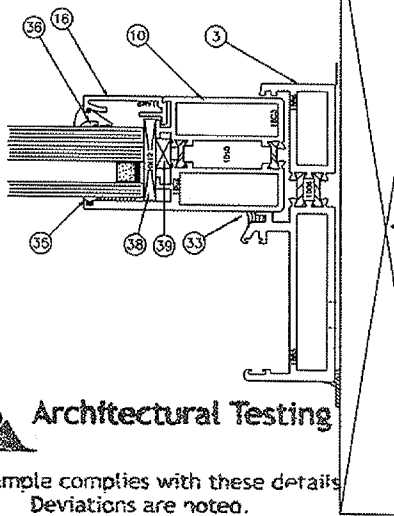
5 OXXO MEETING RAIL



6 MEETING RAIL



7 JAMB (FIXED)



Test sample complies with these details
Deviations are noted.

Report# 92110

DRAWN BY	T.H.	CHECKED BY		SCALE	FULL	REV.	
DATE	5-1-09	DATE					

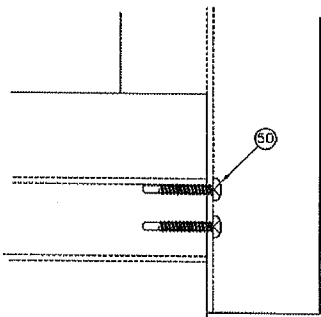


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1000 County Road - Menett, Missouri 65708

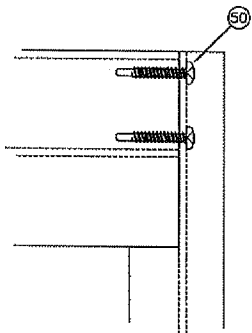
711510a SERIES 1501 (OXXO)

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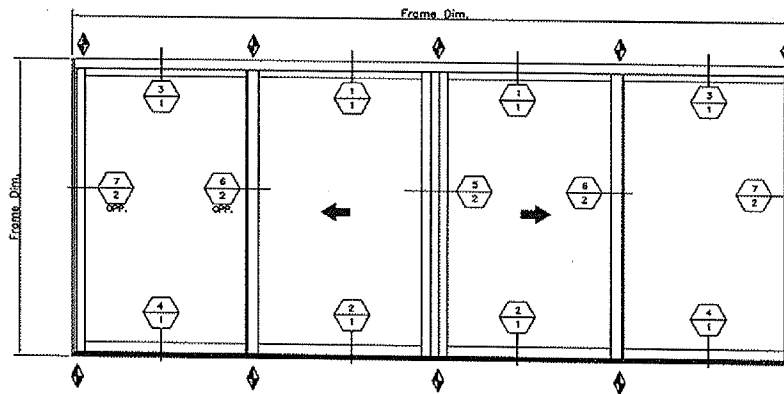
REPORT#	XXXXXX	SHEET	2 of 2
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SASH CORNER ASSEMBLY -
SQR. CUT, END COPEO, AND MECH. FASTENED.



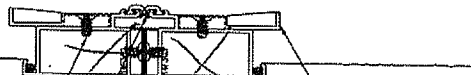
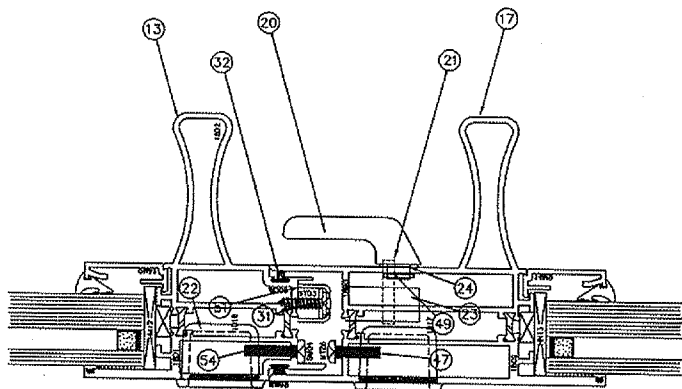
FRAME CORNER ASSEMBLY -
SQR. CUT, END COPEO, AND MECH. FASTENED.



ELEVATION

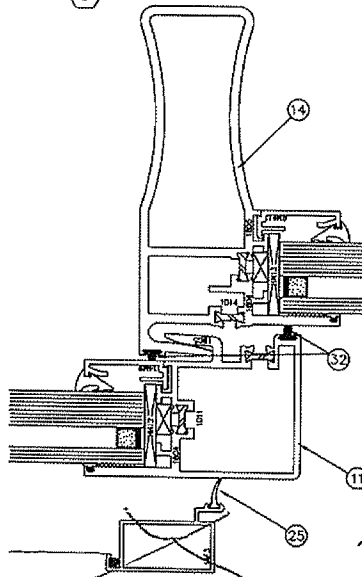
* DENOTES LOCK LOCATION
♦ DENOTES ANCHOR LOCATIONS

5 OXXO MEETING RAIL

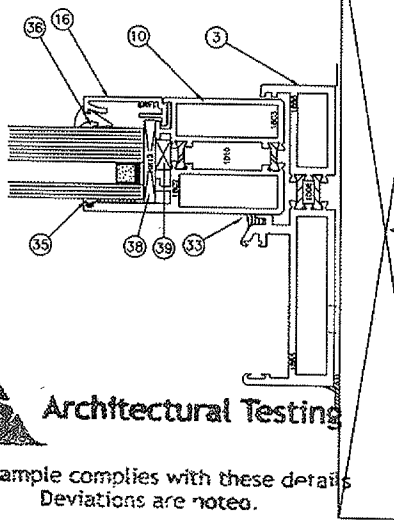


Screen
Not
tested
th

6 MEETING RAIL



7 JAMB (FIXED)



Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92110

DRAWN BY	T.H.	CHECKED BY	SCALE	REV.
DATE	5-1-09	DATE	FULL	



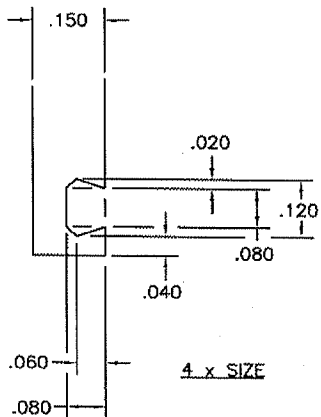
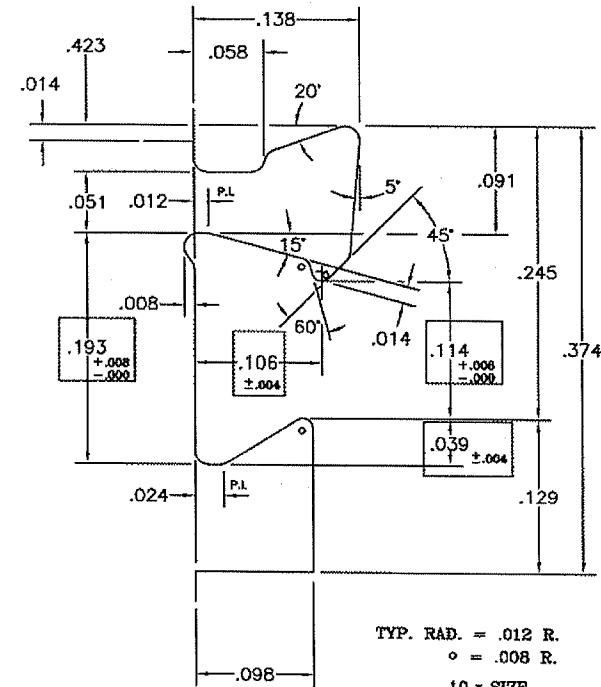
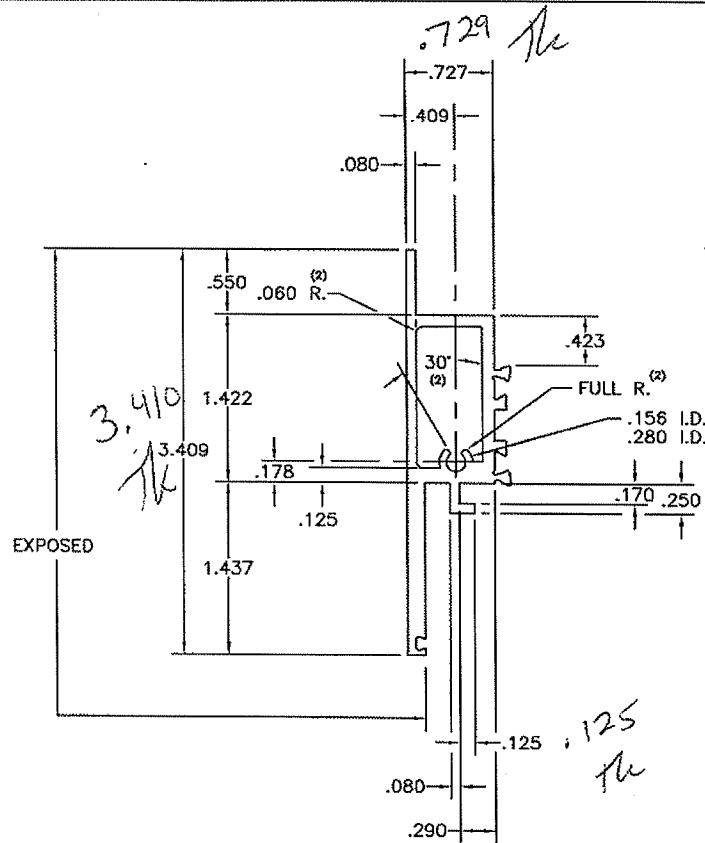
EFCO CORPORATION
1000 County Road - Morett, Missouri 65708

Series 5XPT LSCD (OXXO)

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REPORT#
SHEET
2 of 2

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92110

Date 7/15/09

Tech *TL*

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 14.337	OS = 10.366 IS = 3.941
PAINTED PERIMETER: 5.453	
AREA: .728	WT/FT: .874
FACTOR: 16	



EFCO CORPORATION
1000 County Road
Monett, Missouri 65708
1-800-321-4169
Fax: 417-235-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 5/2/07		
APPROVED: SCC		
DATE: 5/2/07	JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 4"
TITLE: OPERABLE PANEL HORIZ.	(EXT.)	DWG NO. 18B7

Technical drawing of a mechanical part, likely a valve or fitting, showing dimensions and handwritten notes. The drawing includes the following dimensions and features:

- Top Dimensions:**
 - 30° (Angle)
 - .727 (Horizontal distance)
 - .27 (Handwritten note)
- Left Side Dimensions:**
 - EXPOSED (Label)
 - 1.250 (Handwritten note)
 - .985 (Vertical distance)
 - .178 (Vertical distance)
 - .862 (Vertical distance)
- Right Side Dimensions:**
 - FULL R. (2) (Label)
 - .156 I.D. (Internal Diameter)
 - .280 I.D. (Internal Diameter)
 - .205 (Vertical distance)
 - .409 (Vertical distance)
 - .203 (Handwritten note)
- Bottom Dimensions:**
 - .062 R. (2) (Label)
- Other Features:**
 - Handwritten note: "ACTUAL SIZE" (underlined)
 - Handwritten note: "203" (with a checkmark)

Technical drawing of a mechanical part with dimensions:

- Top horizontal dimensions: .525, .080
- Vertical dimensions on the left: .110, .080
- Horizontal dimensions in the center: .125, .299
- Horizontal dimensions on the right: .080, .170
- Bottom left horizontal dimension: .125
- Bottom left vertical dimension: .065
- Bottom right text: 2 x SIZE



Report# 92110
Date 7/15/09 Tech th

MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER:	10.838 CS = 7.510 IS = 3.328
PAINTED PERIMETER: 2.088	
AREA:	.594 WT/FT: .713
FACTOR:	15



DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 5/2/07			
APPROVED: SCC			
DATE: 5/2/07		JOB REF. NO.:	
SERIES: 5XPT	SCALE:	AS NOTED	DIE CIRCLE: 3"
TITLE: (INT.) OPERABLE PANEL HORIZ.		DWG NO. 18B8	

Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and handwritten notes.

Dimensions:

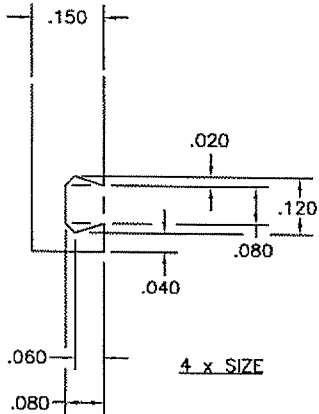
- Overall width: 7.29 in (handwritten)
- Overall height: 3.312 in (handwritten)
- Top horizontal segment: $.727$
- Top horizontal segment: $.080$
- Top horizontal segment: $.100$ R.
- Vertical segment: $.150$
- Vertical segment: $.150$ in (handwritten)
- Vertical segment: 1.437
- Vertical segment: $.125$
- Vertical segment: $.080$
- Vertical segment: $.290$
- Horizontal segment: $.170$
- Horizontal segment: $.250$

Handwritten Notes:

- 3.312 in (vertical dimension)
- 7.29 in (horizontal dimension)
- $.150$ in (vertical dimension)

Other Labels:

- EXPOSED
- Test sa



Test sample complies with these details
Deviations are noted.

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MATERIAL: 6063-T6 ALUM.		 EFCO CORPORATION 1000 County Road Monett, Missouri 65708 1-800-221-4169 Fax 417-233-7313	DRAWN BY: SCC		REVISIONS W/ DATES:	
WALL THICKNESS: .100 & AS NOTED			DATE: 5/2/07			
TOTAL PERIMETER: 14.503 OS = 10.159 IS = 4.344			APPROVED: SCC			
PAINTED PERIMETER: 3.519			DATE: 5/2/07			
AREA: .753			JOB REF. NO.:			
WT/FT: .904			SERIES: 5XP1	SCALE: AS NOTED	DWG. CIRCLE: 4"	DWG NO. 18C2
FACTOR: 16		TITLE: FIXED SIDE RAIL (EXT.)				

Technical drawing of a mechanical part, likely a cross-section of a valve or plug. The drawing includes the following dimensions and features:

- Overall Height:** 2.000
- Top Flange Thickness:** .080
- Top Flange Inner Diameter:** .727 (Handwritten note: $\frac{727}{32}$)
- Internal Bore Diameter:** .375
- Internal Bore Length:** 1.998 (Handwritten note: $\frac{1998}{16}$)
- Bottom Flange Thickness:** .020
- Bottom Flange Inner Diameter:** .727 (Handwritten note: $\frac{727}{32}$)
- Bottom Flange Outer Diameter:** 1.000 R. (Radius)
- Bottom Flange Taper:** 45°
- Internal Thread:** Indicated by a symbol on the right side of the internal bore.
- Label:** EXPOSED

Technical drawing of a mechanical part with dimensions. The drawing shows a cross-section of a part with a central vertical feature. Dimensions are given in inches. Handwritten notes include ".081" and "7/16".

Dimensions:

- Top horizontal dimension: .525
- Top right horizontal dimension: .080
- Top right vertical dimension: .081 (handwritten)
- Top right vertical dimension: 7/16 (handwritten)
- Top right vertical dimension: .299
- Top right vertical dimension: .125
- Top right vertical dimension: .110
- Top right vertical dimension: .080
- Top right vertical dimension: .080
- Top right vertical dimension: .170
- Top right vertical dimension: .125
- Top right vertical dimension: .065

Bottom right corner: 2 x 5/16

Test sample complies with these details
Deviations are noted.

Report# 92110

Date 7/15/09

Tech the

Technical drawing of a mechanical part with dimensions and tolerances. The drawing includes the following dimensions and tolerances:

- Overall width: .138
- Top left corner radius: .014
- Top left corner radius: .058
- Top left corner radius: .051
- Top left corner radius: .012
- Top left corner radius: .008
- Top left corner radius: .193 $\pm .008$ $-.002$
- Top left corner radius: .106 $\pm .004$
- Top left corner radius: .114 $\pm .008$ $-.002$
- Top left corner radius: .039 $\pm .004$
- Top left corner radius: .024
- Top left corner radius: .091
- Top left corner radius: .245
- Top left corner radius: .374
- Top left corner radius: .129
- Top left corner radius: .098
- Angles: 20°, 5°, 15°, 45°, 60°
- Surface finish: P.L.
- Typical radius: TYP. RAD. = .012 R.
- Typical radius: $\phi = .008$ R.

10 x SIZE

MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 12.049	OS = 7.605 IS = 4.444
PAINTED PERIMETER: 2.085	
AREA: .537	WT/FT: .644
FACTOR: 19	



DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 5/2/07			
APPROVED: SCC			
DATE: 5/2/07			
JOB REF. NO.:			
SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE:	3"
TITLE: FIXED SIDE RAIL (INT.)		DWG NO. 18C3	



Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and tolerances. The part has a rectangular top section with a central slot, and two angled legs. Dimensions include: .062 R. (2) for the top section, .062 R. for the left leg, .100 R. for the right leg, and .050 R. for the base. A note (B) is present near the left leg. The drawing is labeled "FULL R." on the left.

$$\Delta = .012 \text{ R}$$

10X SIZE



Test sample complies with these details
Deviations are noted.

Report# 92410

Date 7/15/09

Tech Tu

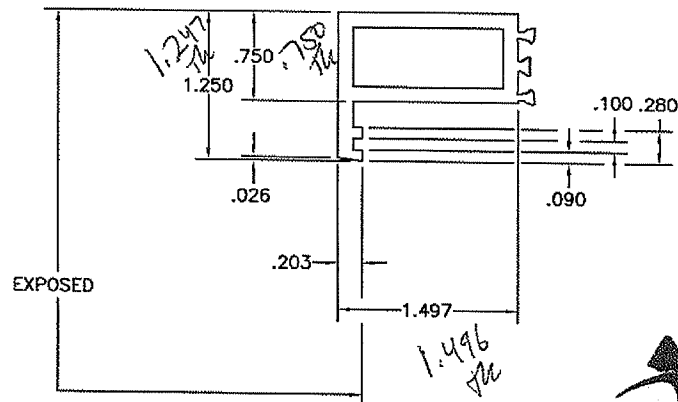
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EFCO CORPORATION
1000 County Road
Monett, Missouri 65708
1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 5/2/07			
APPROVED: SCC			
DATE: 5/2/07		JOB REF. NO.:	
SERIES: 5XPT		SCALE: AS NOTED	DWG. NO. 4"
TITLE: JAMB (EXT.)		DWG. NO. 18B5	



ACTUAL SIZE



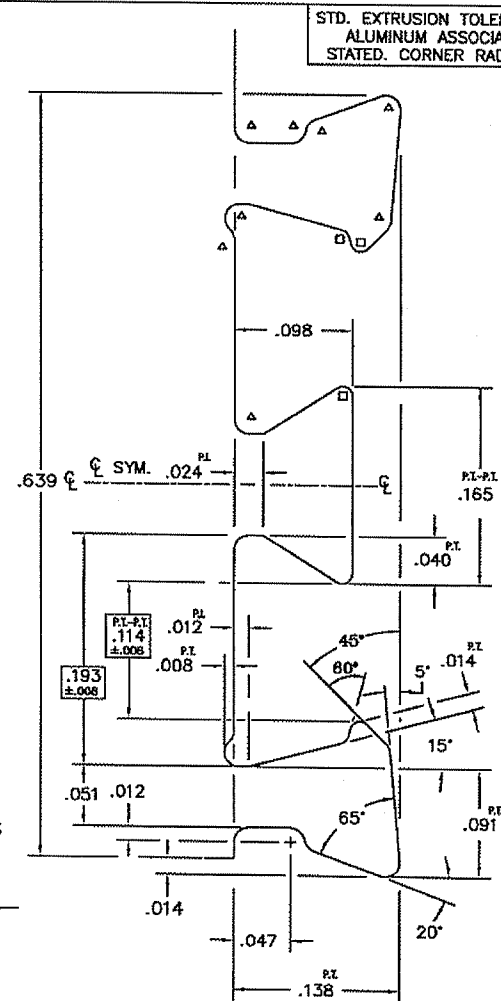
Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92110

Date 7/15/09

Tech *tu*



□=.008 R
△=.012 R

10X SIZE

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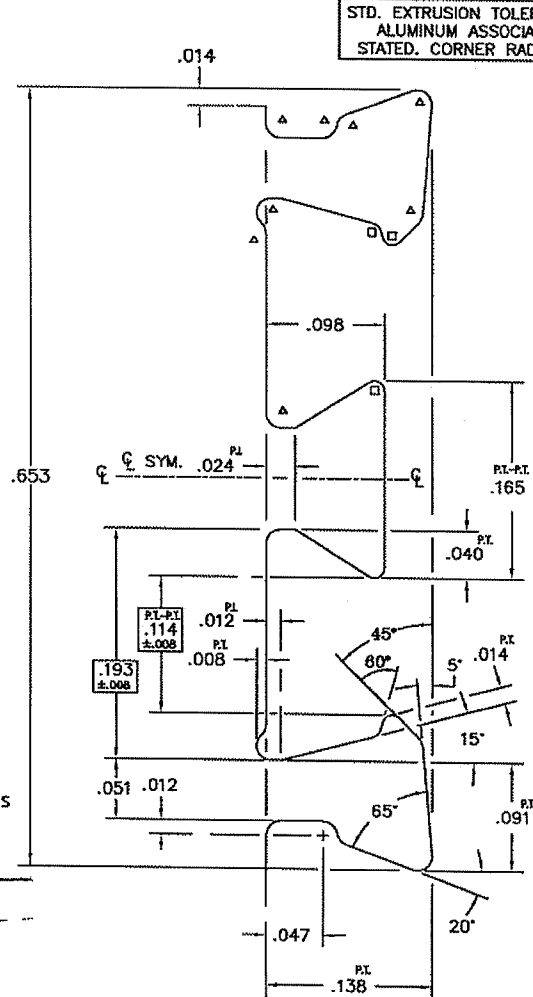
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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .125 & AS NOTED	
TOTAL PERIMETER: 10.269	OS = 6.775 IS = 3.494
PAINTED PERIMETER: 1.429	
AREA: .607	WT/FT: .728
FACTOR: 14	



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1000 County Road
Monett, Missouri 65708
1-800-221-4169
Fax: 417-233-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 5/2/07		
APPROVED: SCC		
DATE: 5/2/07	JOB REF. NO.:	
SERIES: 6XPT	SCALE: AS NOTED	DWG. NO. 2"
TITLE: JAMB (INT.)		DWG. NO. 18B6


$$\square = .008 \text{ R}$$

10X SIZE

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Tech The



DRAWN BY:	SCC
DATE:	5/1/07
APPROVED:	SCC
DATE:	5/1/07
SERIES:	5XPT
TITLE:	

REVISIONS W/ DATES:

JOB REF. NO.:

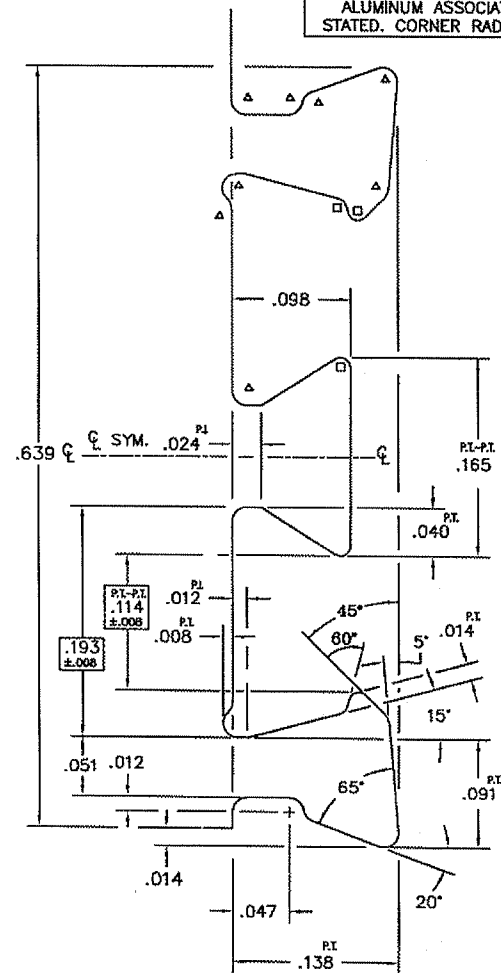
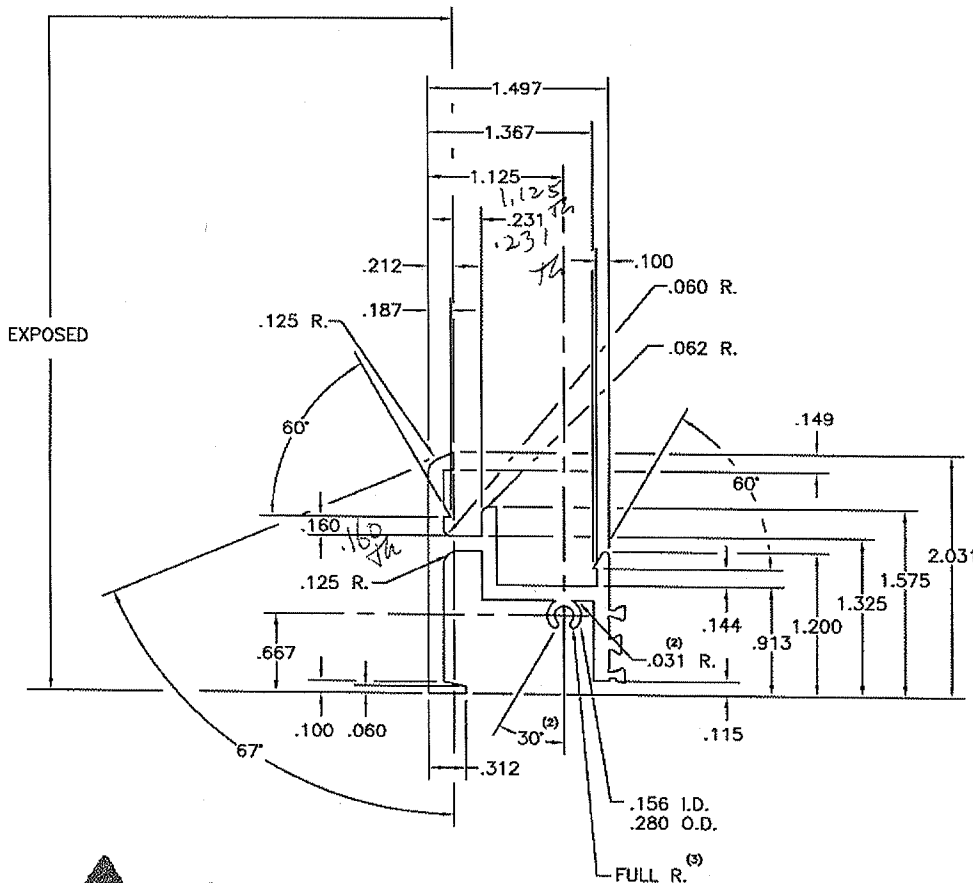
SCALE: AS NOTED

DIE CIRCLE: 4"

DWG NO.	
---------	--

18B3

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



□=.008 R
△=.012 R

10X SIZE



Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92410

Date 7/15/09

Tech TH
ACTUAL SIZE

DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .125 & AS NOTED	
TOTAL PERIMETER: 12.593	
PAINTED PERIMETER: 2.178	
AREA: .710	WT/FT: .852
FACTOR: 15	



EFCO CORPORATION
1800 County Road
Monett, Missouri 65708
1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC	REVISIONS W/ DATES:		
DATE: 5/1/07			
APPROVED: SCC			
DATE: 5/1/07			
SERIES: 5XPT	SCALE: AS NOTED	JOB REF. NO.:	
TITLE: SILL (INT.)	DWG NO. 18B4		DIE CIRCLE: 3"

[illegible][illegible]

10X SIZE

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Test sample complies with these details
Deviations are noted.

Report# 92110
Date 7/15/09 Tech PH

MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .125 & AS NOTED	
TOTAL PERIMETER: 12.634	
PAINTED PERIMETER: .647	
AREA: .742	WT/FT: .890
FACTOR: 14	



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1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 4/30/07			
APPROVED: SCC			
DATE: 4/30/07		JOB REF. NO.:	
SERIES: 5XPT		SCALE: AS NOTED	DWG. NO. 5"
TITLE: SILL STARTER (EXT.)		DWG. NO. 18D7	

EXPOSED

.75
flc

.531

.219

.050

.090

.125

.392

.296

.090

.625
flc

90°

.050

.100

.200

.250

Test

Test sample complies with these details
Deviations are noted.

Date 7/15/09

Tech the

[illegible]

10X SIZE

MATERIAL: 6063--T6 ALUM.	
WALL THICKNESS: .125 & AS NOTED	
TOTAL PERIMETER: 6.014	
PAINTED PERIMETER: .750	
AREA: .323	WT/FT: .388
FACTOR: 16	



DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 4/30/07			
APPROVED: SCC			
DATE: 4/30/07		JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DWG. NO. 2"	
TITLE: SILL STARTER (INT.)		18D8	



Architectural Testing

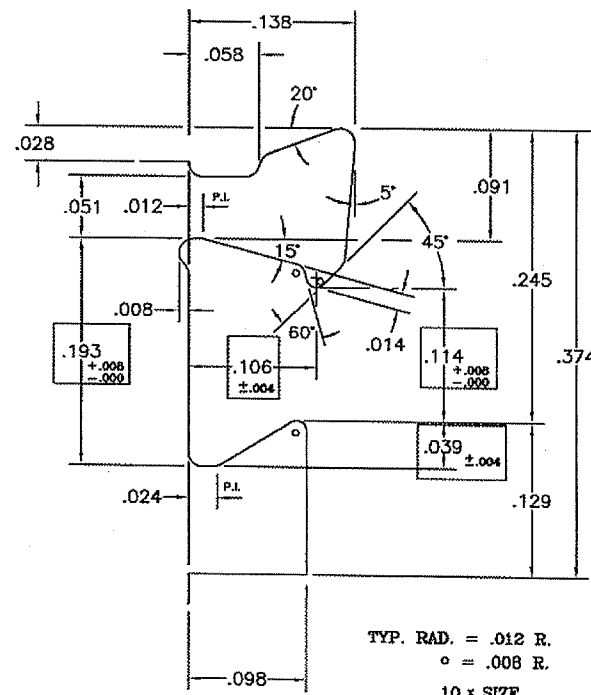
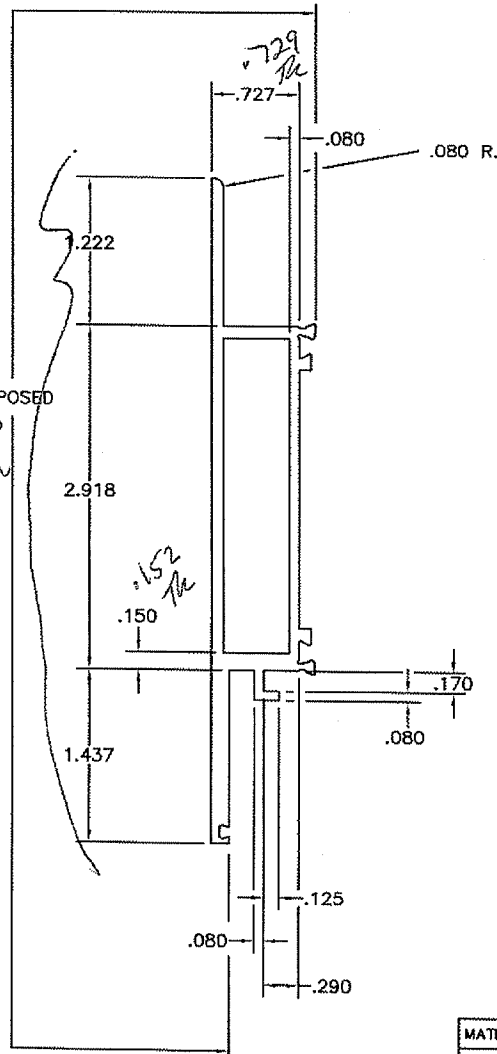
Test sample complies with these details
Deviations are noted.

Report# 92110

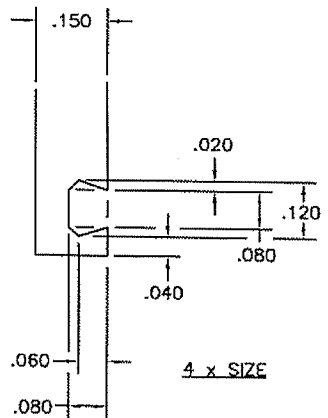
Date 7/15/09

Tech *TL*

EXPOSED
5.57



TYP. RAD. = .012 R.
° = .008 R.
10 x SIZE



STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.

DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 21.127	OS = 14.697
PAINTED PERIMETER: 7.821	IS = 6.430
AREA: 1.066	WT/FT: 1.279
FACTOR: 17	



EFCO CORPORATION
100 County Road
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1-800-221-4169
Fax 417-235-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 5/7/07		
APPROVED: SCC		
DATE: 5/2/07	JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DWG NO. 6"
TITLE: OXXO HARDWARE SIDE RAIL	(EXT.)	DWC NO. 18C9



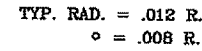
STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.

Date 7/15/09

Tach the



ACTUAL SIZE



10 x SIZE

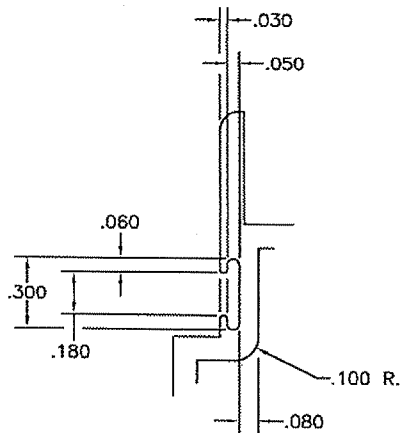
DO NOT SCALE PRINT

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1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 5/7/07			
APPROVED: SCC			
DATE: 5/7/07		JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 5"	
TITLE: (INT.)		DWG NO.	
OXXO HARDWARE SIDE RAIL		18D0	

STD. EXTRUSION TOLERANCES AS DEFINED BY THE ALUMINUM ASSOCIATION UNLESS OTHERWISE STATED. CORNER RADII .015 EXCEPT AS NOTED.



2 x SIZE



Architectural Testing

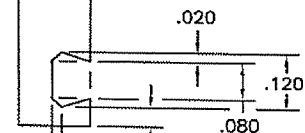
Test sample complies with these details
Deviations are noted.

Report# 9210

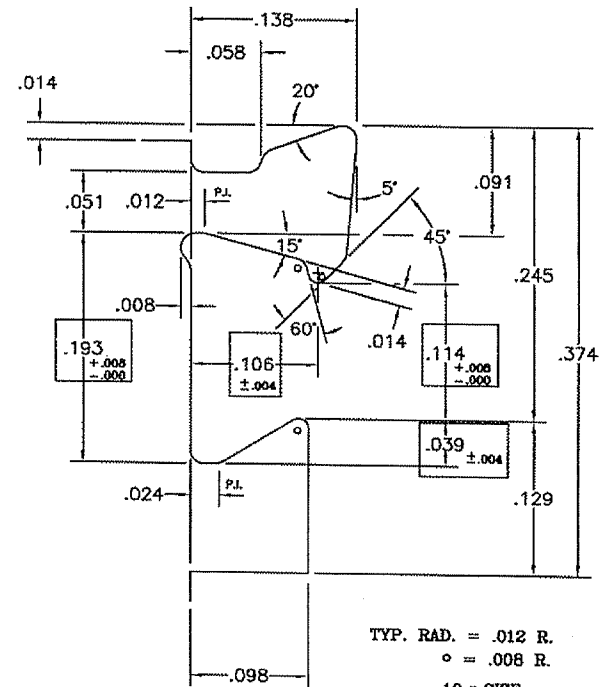
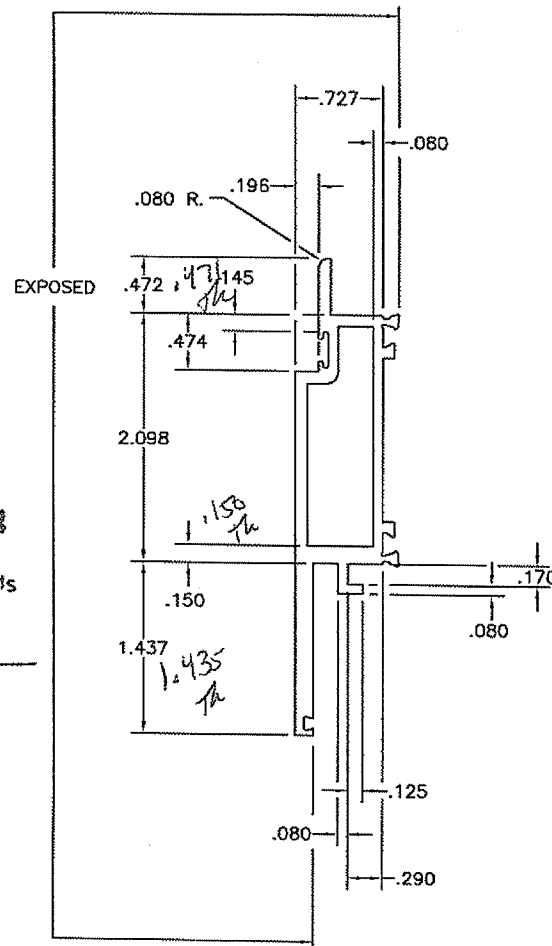
Date 7/15/09

Tech *TL*

.150



4 x SIZE



TYP. RAD. = .012 R.
° = .008 R.
10 x SIZE

DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 16.635	OS = 11.888
PAINTED PERIMETER: 5.833	IS = 4.747
AREA: .847	WT/FT: 1.016
FACTOR: 16	



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Monett, Missouri 65708
1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 5/7/07		
APPROVED: SCC		
DATE: 5/2/07		
SERIES: 5XPT	SCALE: AS NOTED	DWG. NO. 18D1
TITLE: OXXO MEETING RAIL (EXT.)		

Architectural Testing

STD. EXTRUSION TOLERANCES AS DEFINED BY THE ALUMINUM ASSOCIATION UNLESS OTHERWISE STATED. CORNER RADII .015 EXCEPT AS NOTED.

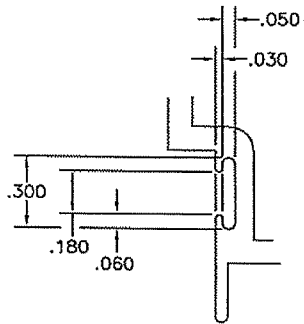
Test sample complies with these details
Deviations are noted.

Report# 92110

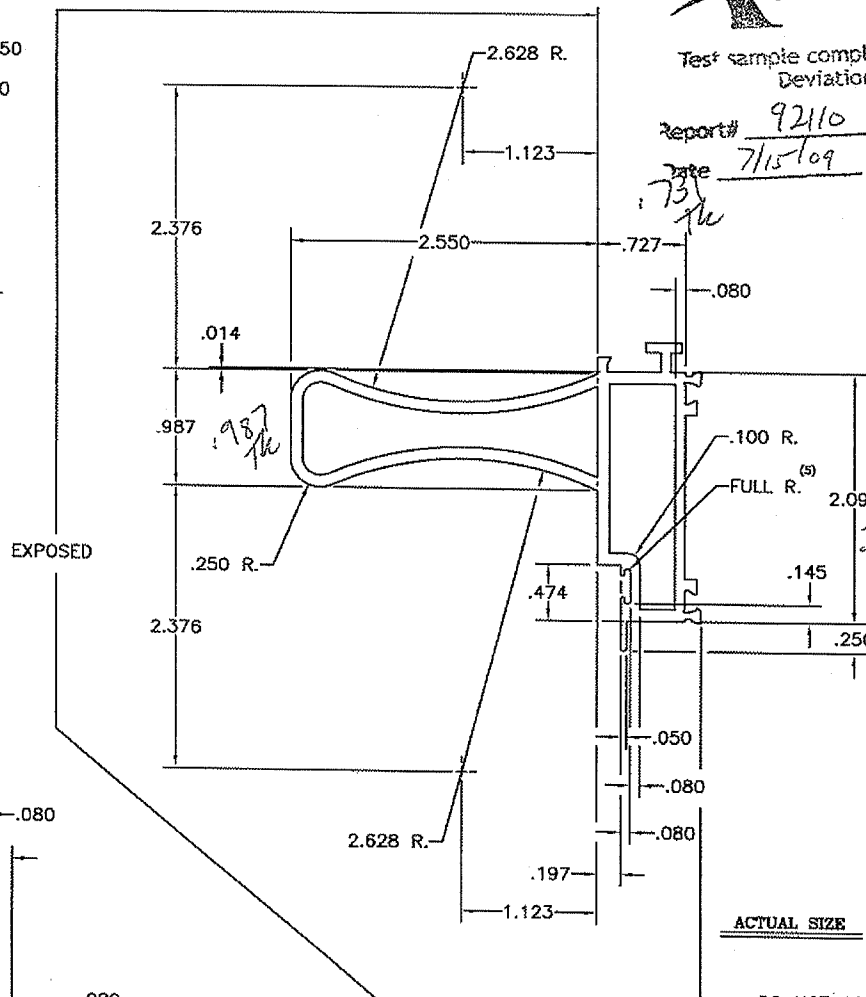
Date 7/15/09

Tech *flc*

73 flc

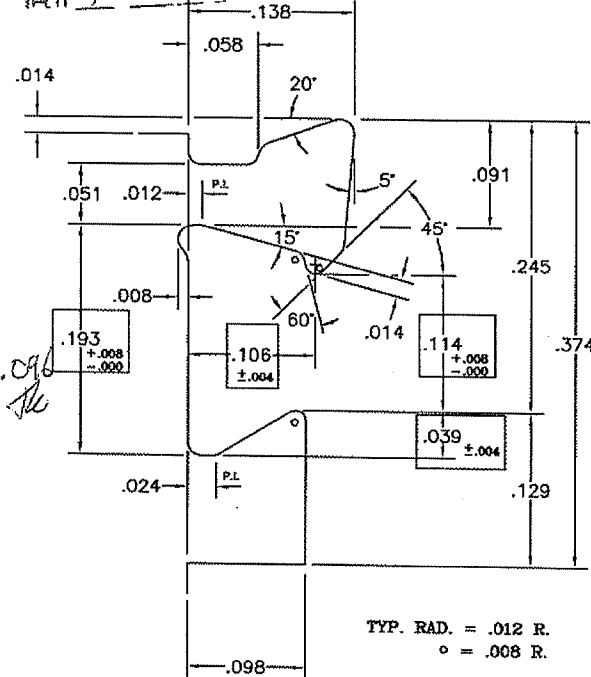


2 x SIZE

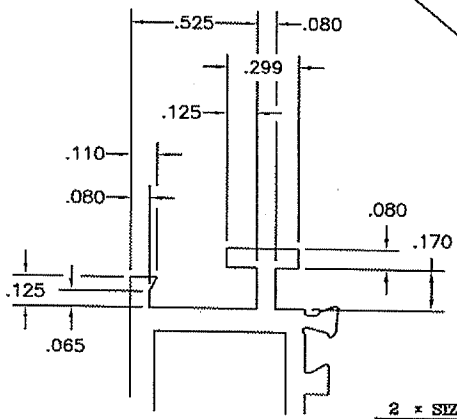


ACTUAL SIZE

DO NOT SCALE PRINT



10 x SIZE



2 x SIZE

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 25.217	OS = 13.906
PAINTED PERIMETER: 8.970	IS = 11.311
AREA: 1.182	WT/FT: 1.418
FACTOR: 18	



EFCO CORPORATION
1010 County Road
Monett, Missouri 65708
1-800-221-4169
Fax: 417-233-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 5/7/07		
APPROVED: SCC		
DATE: 5/7/07	JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 4"
TITLE: OXXO MEETING RAIL (INT.)	DWG NO. 18D2	



Test sample complies with these details
Deviations are noted.

Report# 92110

DATE 7/15/09

Tech 16.014.

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.

Technical drawing of a mechanical part, likely a valve or fitting, showing a cross-section. The drawing includes dimensions in inches and millimeters, a 60-degree angle, and a 15-degree angle. Handwritten notes include 'EXPOSED', '1.875', '1.875', '1.213', and '1.213'. The drawing is labeled 'ACTUAL SIZE'.

Dimensions (inches):

- 4.996 R. (2)
- 1.561 (2)
- 5.869
- 5.044
- 4.139
- 4.059
- 3.412
- 4.746 (2)
- 1.875
- .250 R. (2)
- .100
- .100
- .144
- .080
- .100
- 1.253
- 1.213
- .053

Angles:

- 60°
- 15°

Handwritten notes:

- EXPOSED
- 1.875
- 1.875
- 1.213
- 1.213

ACTUAL SIZE

ACTUAL SIZE

Technical drawing of a mechanical part with dimensions:

- Top horizontal dimensions: .525, .080
- Vertical dimensions on the left: .110, .080
- Horizontal dimensions in the center: .125, .299
- Horizontal dimension on the right: .080
- Bottom horizontal dimensions: .125, .170
- Bottom vertical dimension: .065
- Bottom right corner: 2 SIZE

2 SIZE

Technical drawing of a mechanical part, likely a valve or plug, showing dimensions and tolerances. The drawing includes a cross-section view of a cylindrical component with a central bore. Key dimensions include:

- 15° angle at the top
- .053, .182, .043 R., .160 R., .075, .300, .180, .062, .030, and .050 radial dimensions
- 1.250 R., .817, and 4° arc dimensions
- .062 dimension for the central bore
- Note: 2 x SIZE for the .030 dimension
- Labels: P.L. and FULL R.

2 x SIZE

DO NOT SCALE PRINT

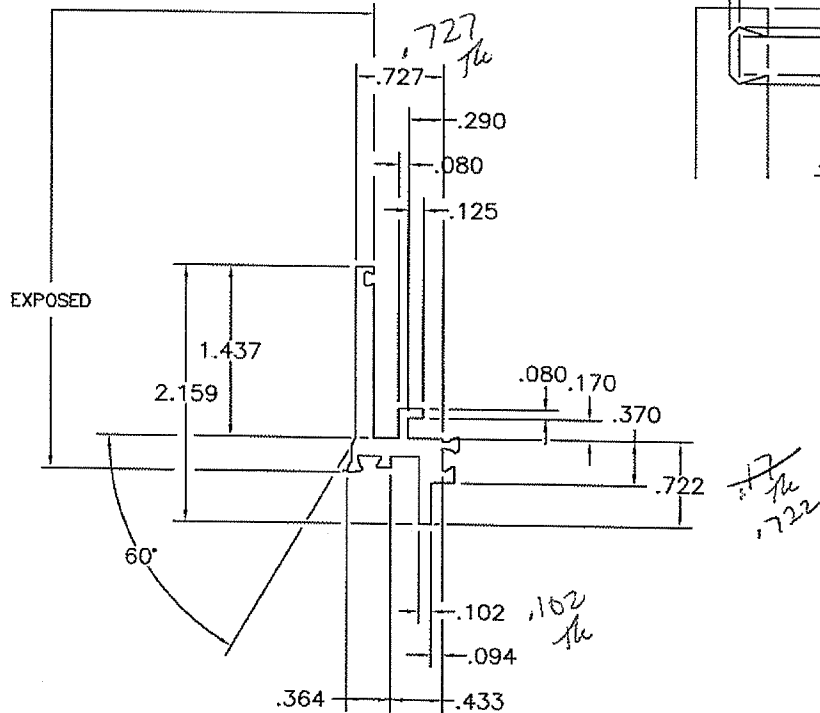
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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .150 & AS NOTED	
TOTAL PERIMETER: 33.402	OS = 22.415 IS = 10.987
PAINTED PERIMETER: 15.347	
AREA: 2.382	WT/FT: 2.856
FACTOR: 12	

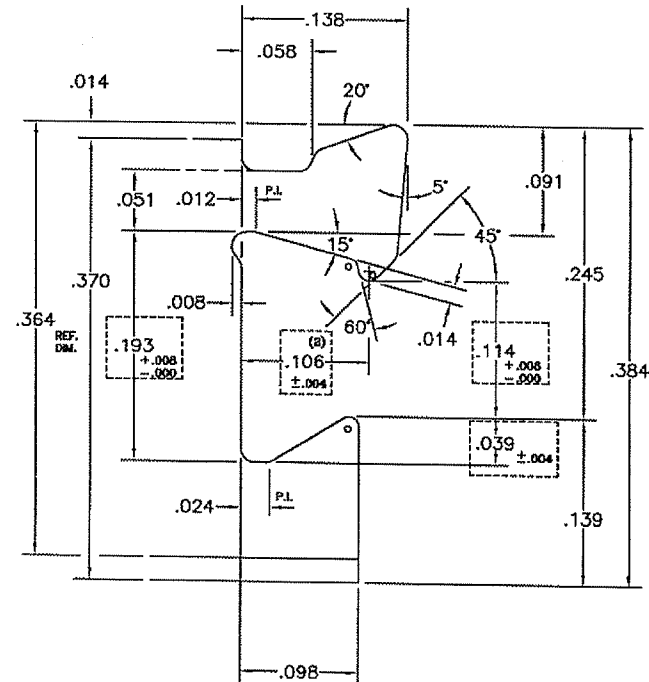


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1000 County Road
Monett, Missouri 65708
1-800-221-1169
Fax: 417-235-7313

DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 5/7/07			
APPROVED: SCC			
DATE: 5/7/07		JOB REF. NO.:	
SERIES: 5XPT		SCALE: AS NOTED	DIE CIRCLE: 7"
TITLE: MEETING RAIL (INT.)		DWG. NO. 18D5	



ACTUAL SIZE



TYP. RAD. = .012 R.
o = .008 R.

10 x SIZE

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Architectural Testing

Test sample complies with these details
Deviations are noted.

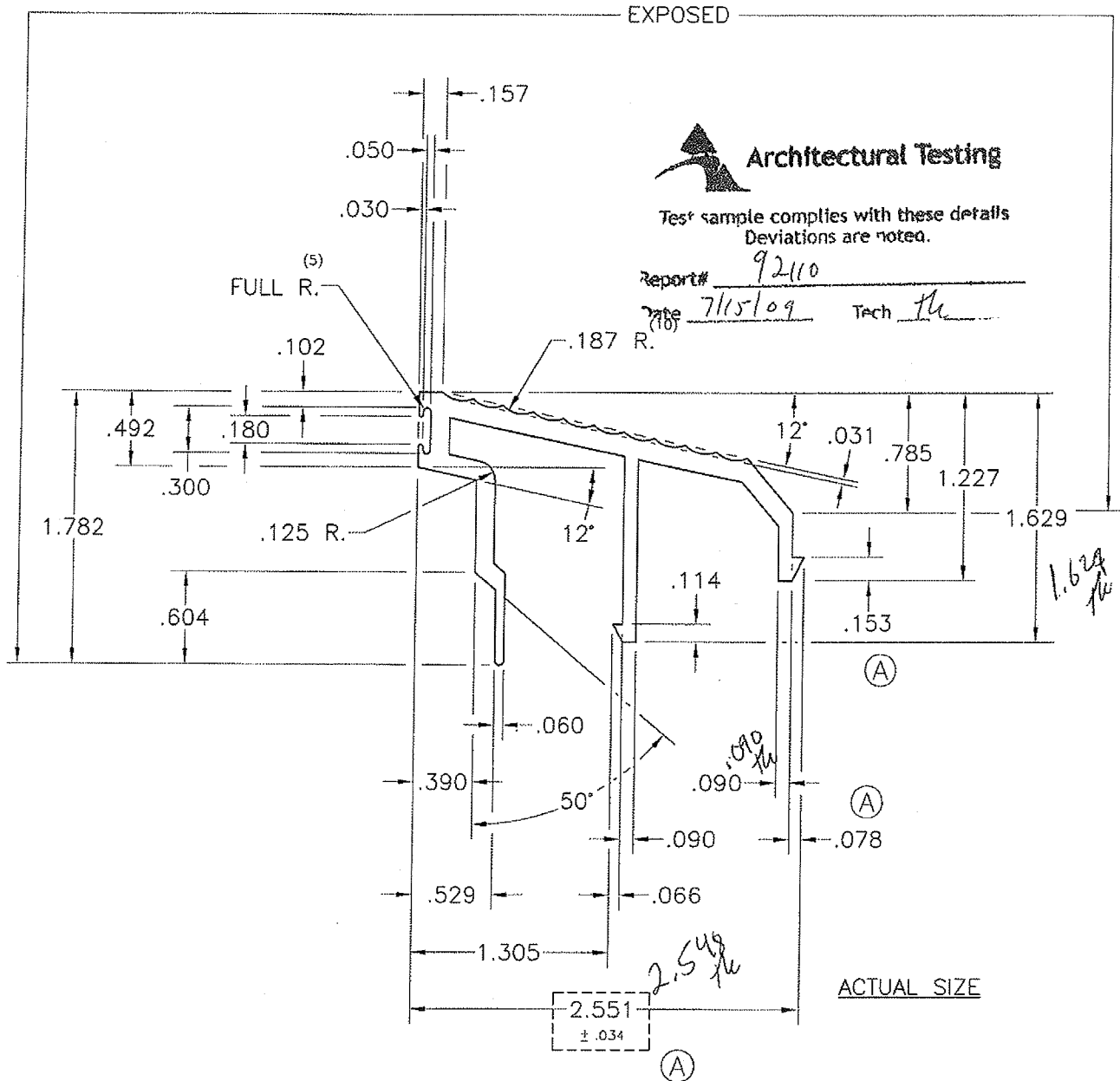
Report# 92110

Date 7/15/09

Tech *Th*

MATERIAL: 6063-T6 ALUM.			DRAWN BY: SCC		REVISIONS W/ DATES:	
WALL THICKNESS: .150 & AS NOTED			DATE: 5/7/07			
TOTAL PERIMETER: 7.940			APPROVED: SCC			
PAINTED PERIMETER: 1.906			DATE: 5/7/07		JOB REF. NO.:	
AREA: .473	WT/FT: .568	EFCO CORPORATION 1000 County Road Monett, Missouri 65708 1-800-223-4169 Fax: 417-235-7313	SERIES: 5XP1	SCALE: AS NOTED	ONE CIRCLE:	3"
FACTOR: 14			TITLE: MEETING RAIL (EXT.)			DWG NO. 18D6

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
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MATERIAL: 6063-T6 ALUM.		 EFCO CORPORATION 1000 County Road Monett, Missouri 65708 1-800-221-4169 Fax: 417-235-7313	DRAWN BY: SCC		REVISIONS W/ DATES: A .078 was .066, .153 was .145, 2.551 was 2.538 .717 was .715, .860 was .858, 13.026 was 13.003 9/29/06 SCC	
WALL THICKNESS: .125 & AS NOTED			DATE: 8/21/06			
TOTAL PERIMETER: 13.026 (A)			APPROVED: SCC			
PAINTED PERIMETER: 5.317			DATE: 9/29/06		JOB REF. NO.:	
AREA: .717 (A) WT/FT: .860 (A)			SERIES: 5XP		SCALE: AS NOTED	DIE CIRCLE: 3"
FACTOR: 15			TITLE: THRESHOLD			DWG NO. 14N6 REV. (A)

Technical drawing of a mechanical part, likely a bracket or flange, showing dimensions and tolerances. The drawing includes the following features and dimensions:

- Top Section:**
 - Overall width: .277
 - Top flange width: .062
 - Top flange thickness: .031 R.
 - Internal slot width: .062
 - Internal slot depth: .250
 - Overall height: .375
- Left Section:**
 - Overall height: 1.375 ± .021
 - Internal slot width: .040
 - Internal slot depth: .040 R.
 - Internal slot thickness: .040
 - Internal slot radius: FULL R.
 - Internal slot depth: .455
 - Internal slot width: .109
 - Internal slot radius: .040 R.
- Right Section:**
 - Overall width: .071
 - Overall height: .010
 - Internal slot width: .030
 - Internal slot depth: .089
 - Internal slot thickness: .115
 - Internal slot radius: .015 R.
 - Internal slot depth: .060
 - Internal slot width: .138
 - Internal slot radius: .060
 - Internal slot depth: .478

Handwritten annotations include:

- Top right: *.279*
- Left side: *.375*
- Bottom left: *.06*

Architectural logo and text:

- Architect
- Test sample complies with Deviations and
- Report# 92110
- Date 7/15/09

Tech 74

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F I C O

14M9

.010 x 90° I.D. MARK TO BE INCORPORATED
INTO DIE © EFCO BARNWELL ONLY. EFCO
MONETT IS NOT TO HAVE I.D. MARK.

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



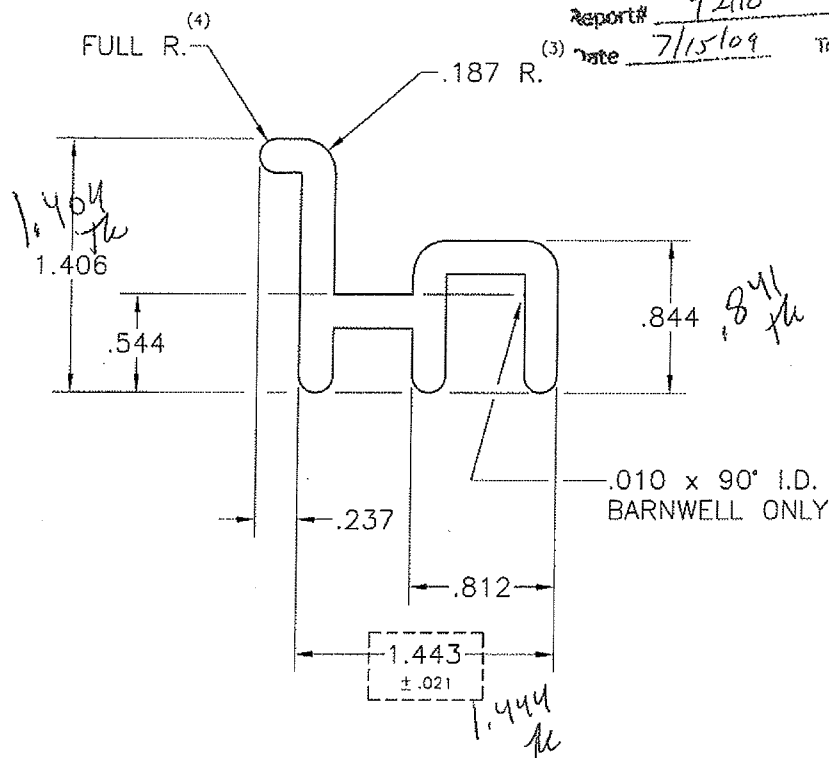
Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92110

(3) Date 7/15/09

Tech flc



ACTUAL SIZE

NO EXPOSED
SURFACES

14B1

DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.

WALL THICKNESS: .187 & AS NOTED

TOTAL PERIMETER: 8.238

AREA: .750

WT/FT: .900

FACTOR: 9



EFCO CORPORATION
1000 County Road
Monett, Missouri 65708
1-800-221-4169
Fax: 417-325-7212

DRAWN BY: SCC

DATE: 10/25/05

APPROVED: SCC

DATE: 10/25/05

SERIES: 5XP

TITLE:

REVISIONS W/ DATES:

JOB REF. NO.:

SCALE: AS NOTED

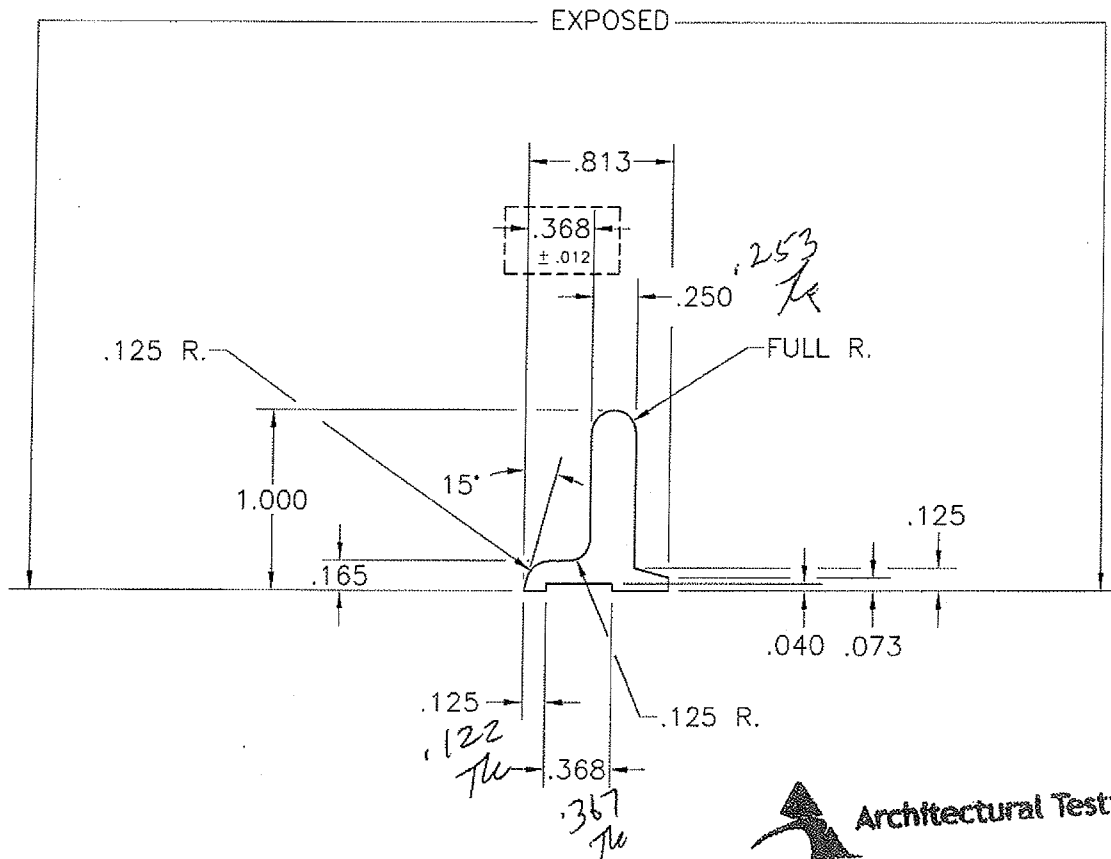
DIE CIRCLE: 3"

DWG NO.

HEAD SPACER

14B1

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



Architectural Testing

Test sample complies with these details
Deviations are noted.

ACTUAL SIZE

Report# 92110
Date 7/15/09 Tech Th

14B2

DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .250 & AS NOTED	
TOTAL PERIMETER:	3.433
PAINTED PERIMETER:	2.540
AREA: .307	WT/FT: .368
FACTOR: 9	



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1-800-221-4169
Fax: 417 225 7212

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 10/25/05		
APPROVED: SCC		
DATE: 10/25/05	JOB REF. NO.:	
SERIES: 5XP	SCALE: AS NOTED	DIE CIRCLE: 2"
TITLE: PERFORMANCE SILL ADAPTER	DWG NO. 14B2	

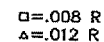


Test sample complies with these details
Deviations are noted. _____

Report# 92110

7/15/09

From the

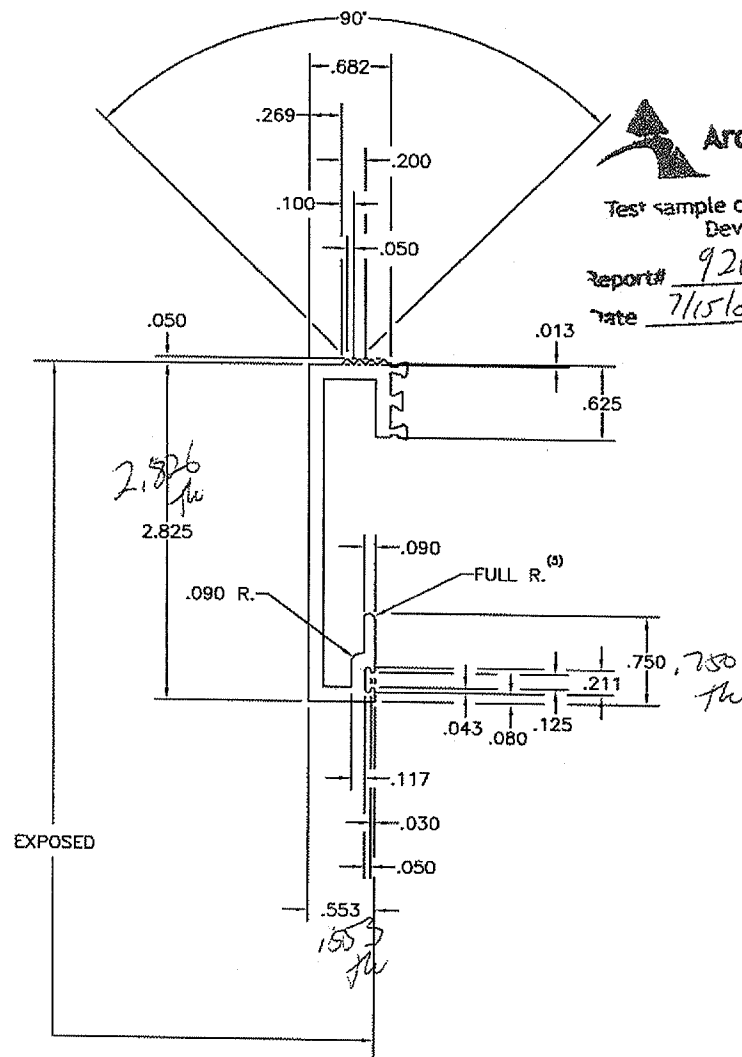


10X SIZE

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MATERIAL: 6063--T6 ALUM.		 EPCO CORPORATION 1000 County Road Menett, Missouri 65708 1-800-221-4169 Fax: 417-235-7213	DRAWN BY: SCC		REVISIONS W/ DATES:	
WALL THICKNESS: .125 & AS NOTED			DATE: 4/30/07			
TOTAL PERIMETER: 24.865 OS = 15.040 IS = 9.825			APPROVED: SCC			
PAINTED PERIMETER: 8.946			DATE: 4/30/07	JOB REF. NO.:		
AREA: 1.502	WT/FT: 1.802		SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 5"	
FACTOR: 14		TITLE: HEAD (EXT.)			DWG NO. 18B1	



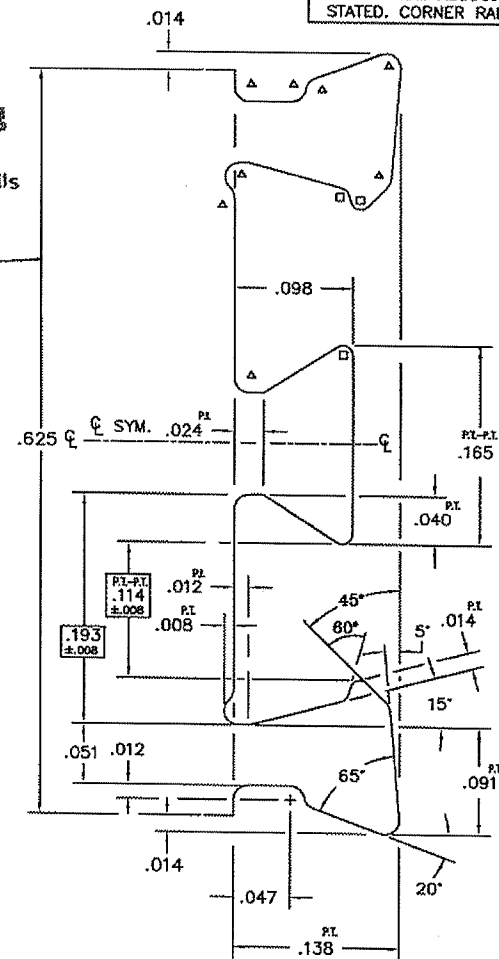
Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92110

Date 7/15/09 Tech fu

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
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□=.008 R
△=.012 R

10X SIZE

DO NOT SCALE PRINT

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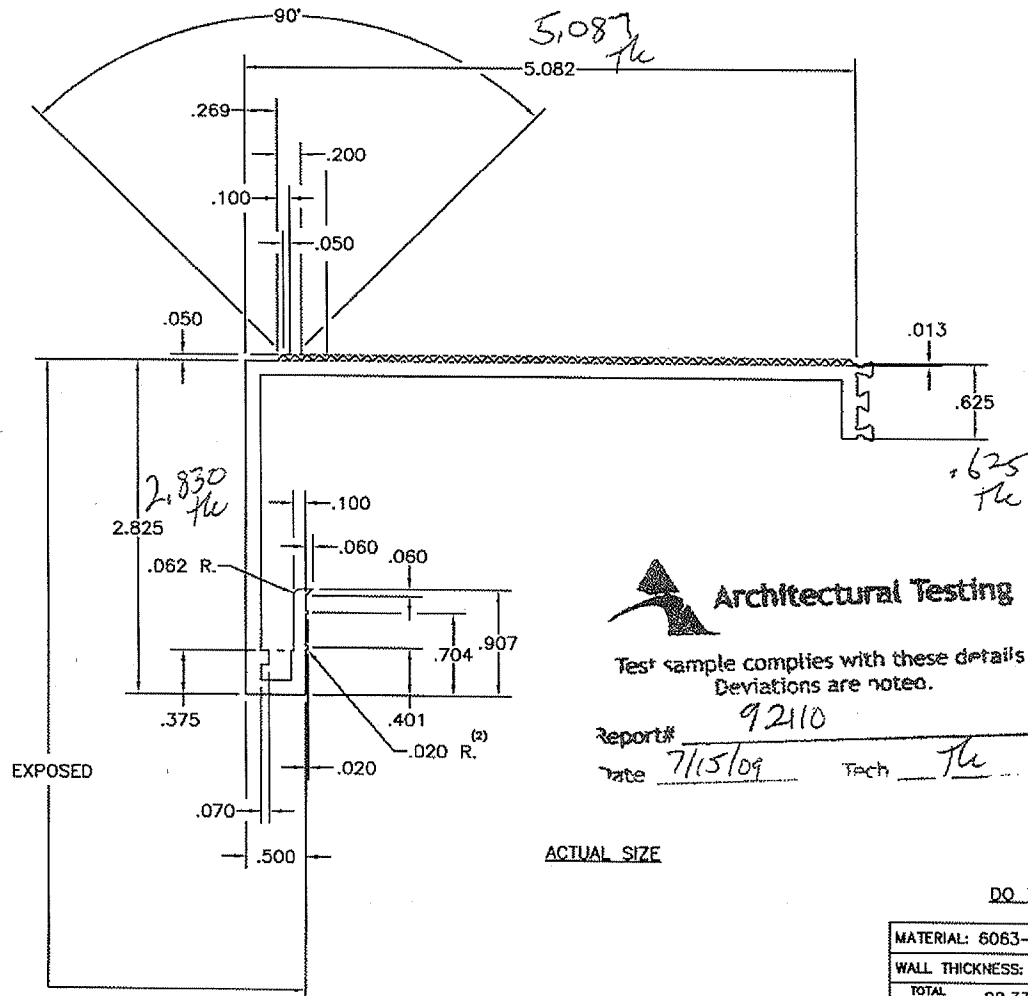
MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .125 & AS NOTED	
TOTAL PERIMETER: 11.445	
PAINTED PERIMETER: 3.378	
AREA: .652	WT/FT: .782
FACTOR: 15	



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Mowett, Missouri 65708
1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 5/17/07			
APPROVED: SCC			
DATE: 5/17/07		JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 3"	
TITLE: SUBHEAD (EXT.)		DWG NO. 18E1	

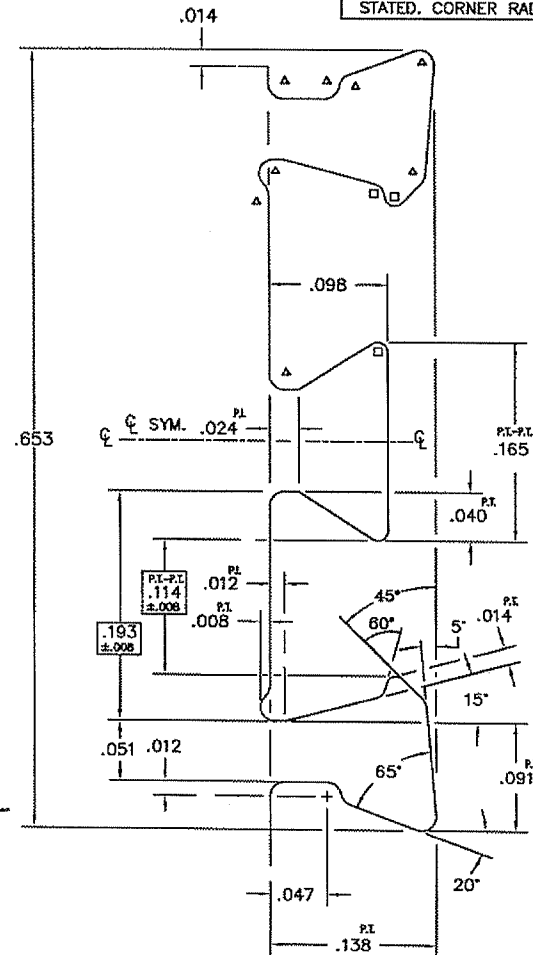
STD. EXTRUSION TOLERANCES AS DEFINED BY THE ALUMINUM ASSOCIATION UNLESS OTHERWISE STATED. CORNER RADII .015 EXCEPT AS NOTED.



Test sample complies with these details
Deviations are noted.

Report# 92110
Date 7/15/09 Tech TL

ACTUAL SIZE



□=.008 R
△=.012 R

10X SIZE

DO NOT SCALE PRINT

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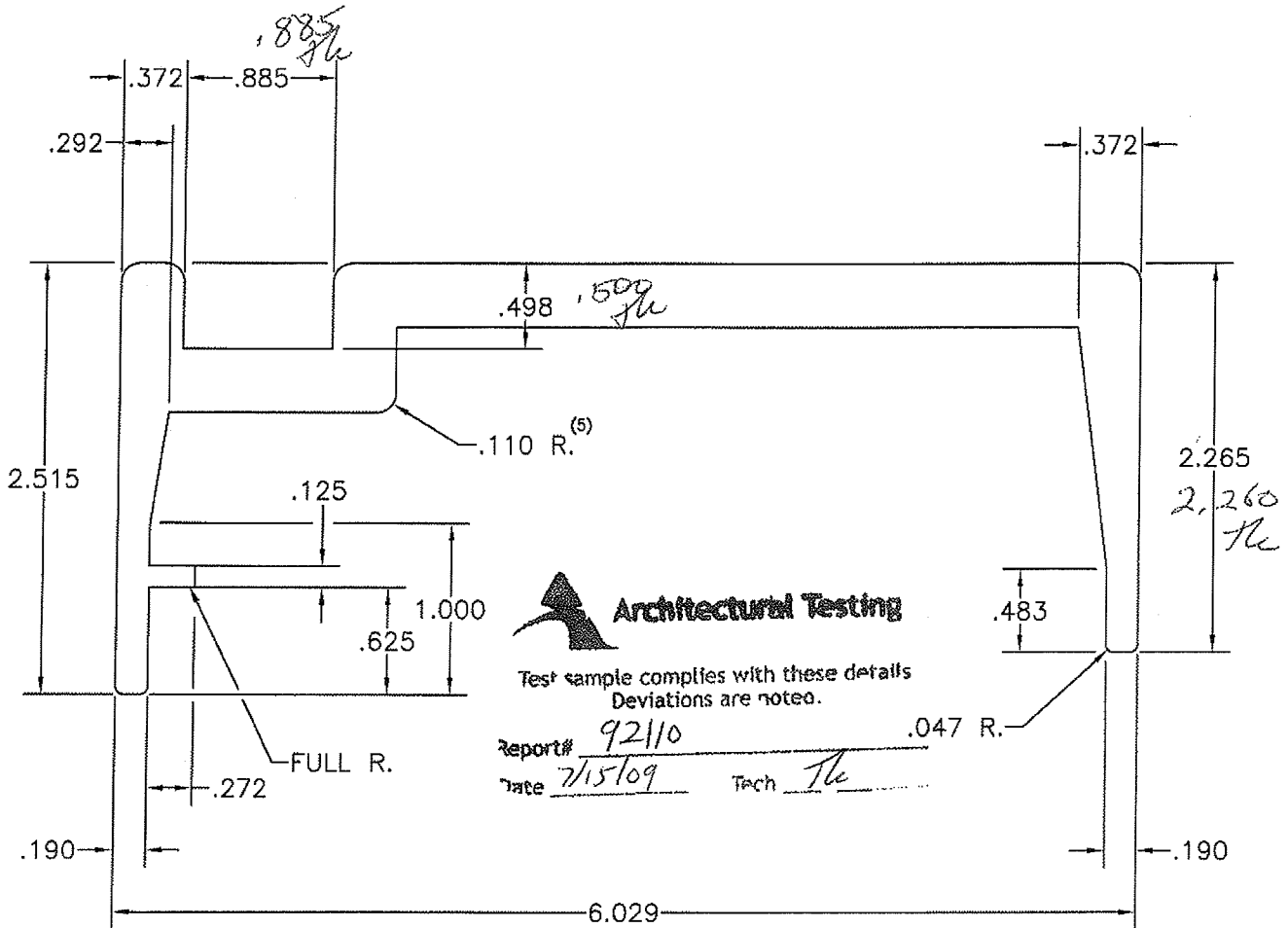
MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .125 & AS NOTED	
TOTAL PERIMETER: 22.334	
PAINTED PERIMETER: 3.325	
AREA: 1.330	WT/FT: 1.596
FACTOR: 14	



EFCO CORPORATION
1640 County Road
Monett, Missouri 65708
1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 4/30/07		
APPROVED: SCC		
DATE: 4/30/07	JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DWG NO. 18E2
TITLE: SUBHEAD (INT.)		

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



ACTUAL SIZE

NO EXPOSED SURFACES

DO NOT SCALE PRINT

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MATERIAL: 6063--T6 ALUM.			DRAWN BY: SCC		REVISIONS W/ DATES:	
WALL THICKNESS: .372 & AS NOTED			DATE: 5/8/07			
TOTAL PERIMETER: 21.833			APPROVED: SCC			
PAINTED PERIMETER: N/A			DATE: 5/8/07		JOB REF. NO.:	
AREA: 3.466	WT/FT: 4.159		EFCO CORPORATION 1000 County Road Monett, Missouri 65708 1-800-221-4169 Fax: 417-325-7212	SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 4"
FACTOR: 5		TITLE: SUBHEAD STIFFENER		DWG NO. 18E5		

EXPOSED

3.562
2.126

2 1/27 in

3.562 in

2.392

1.826

.727

.290

.125

.080

.150

.150

.080

.170

.080

.080

.062 R.

.300

.180

.434

.062 .060

.030

.080

.100 R.

FULL R.⁽⁴⁾

4x SIZE

.080

.060

.040

.020

.080

.120

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10 x SIZE



Test sample complies with these details
Deviations are noted.

Report# 92110
Date 7/15/09 Tech TH

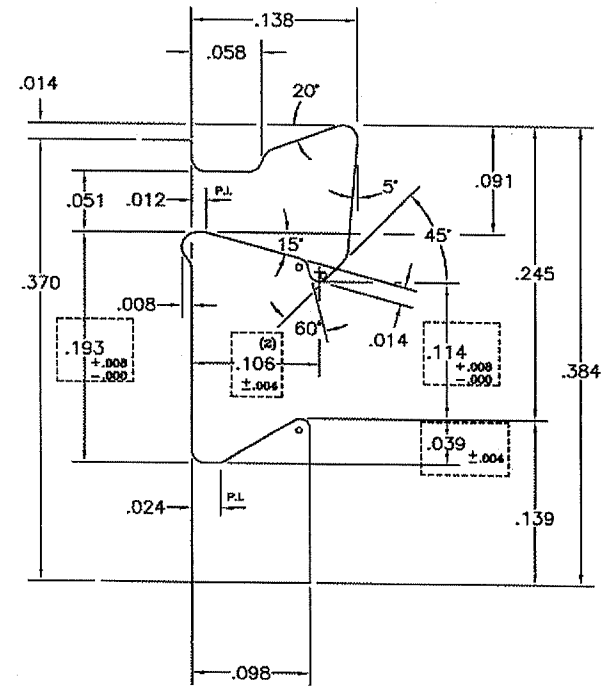
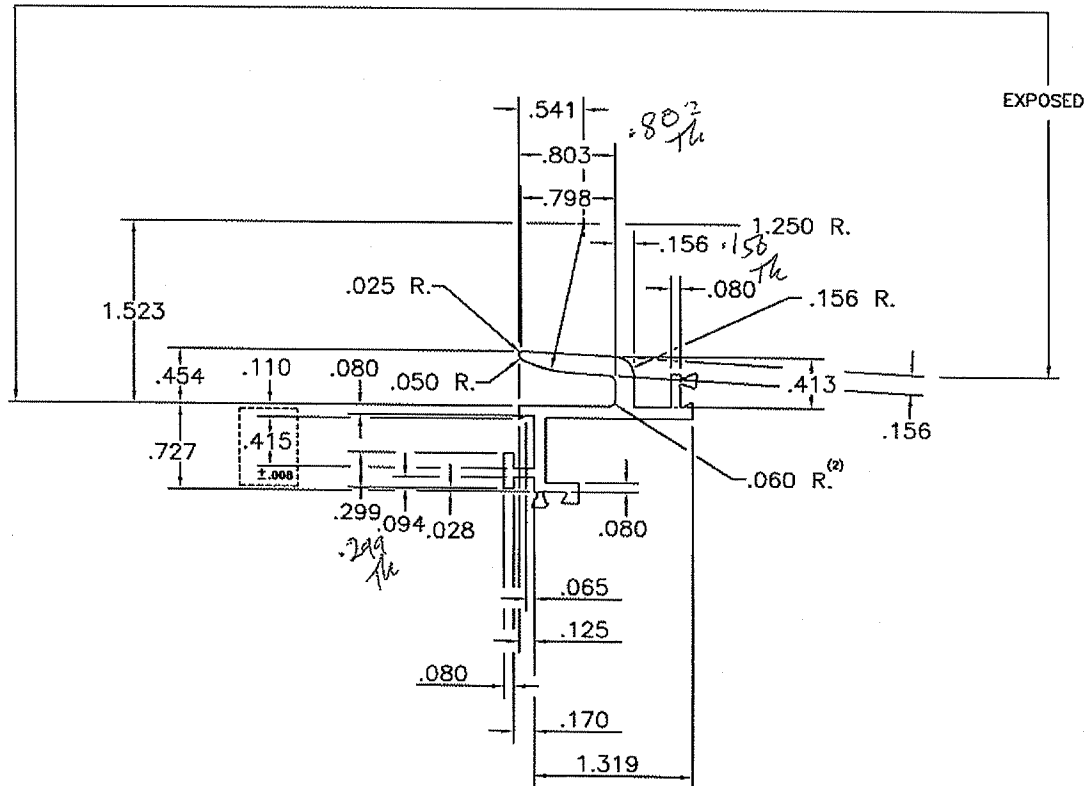
MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 17.428	
PAINTED PERIMETER: 7.175	
AREA: .904	WT/FT: 1.085
FACTOR: 16	



EFCO CORPORATION
1000 County Road
Monett, Missouri 65706
1-800-221-4169
Fax: 417-235-7313

DRAWN BY: SCC		REVISIONS W/ DATES:	
DATE: 3/27/07			
APPROVED: SCC			
DATE: 3/27/07		JOB REF. NO.:	
SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 5"	
TITLE: MEETING RAIL (EXT.)		DWG NO. 18C4	

STD. EXTRUSION TOLERANCES AS DEFINED BY THE
ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



TYP. RAD. = .012 R.
 o = .008 R.
10 x SIZE



Architectural Testing

Test sample complies with these details
Deviations are noted.

Report# 92110
Date 7/15/09 Tech Th

DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.		 EFCO CORPORATION 1000 Canby Road Monett, Missouri 65708 1-800-221-4169 Fax: 417-235-7313	DRAWN BY: SCC		REVISIONS W/ DATES:	
WALL THICKNESS: .100 & AS NOTED			DATE: 3/27/07			
TOTAL PERIMETER: 9.604			APPROVED: SCC			
PAINTED PERIMETER: 4.000			DATE: 3/27/07			
AREA: .492			WT/FT: .590			
FACTOR: 16			SERIES: 5XPT	SCALE: AS NOTED	DIE CIRCLE: 2"	DWG NO. 18C5
			TITLE: MEETING RAIL (INT.)			



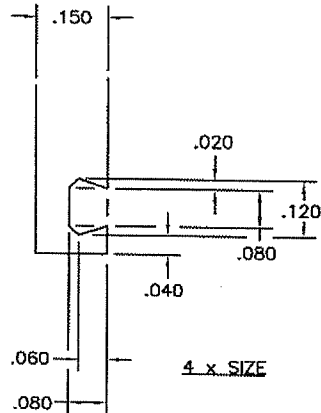
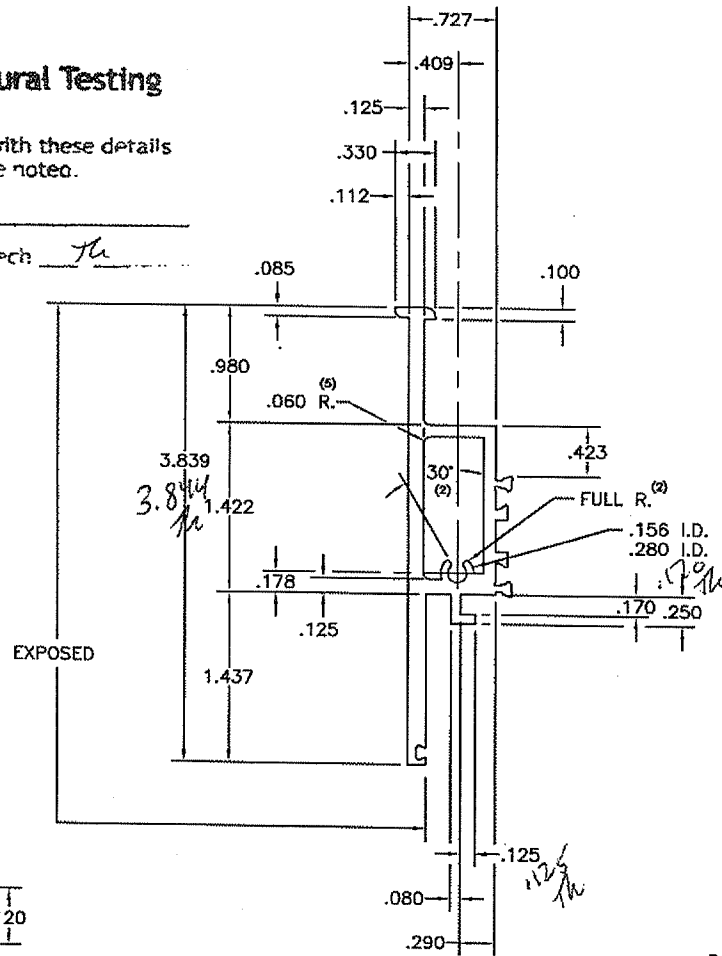
Architectural Testing

Test sample complies with these details
Deviations are noted.

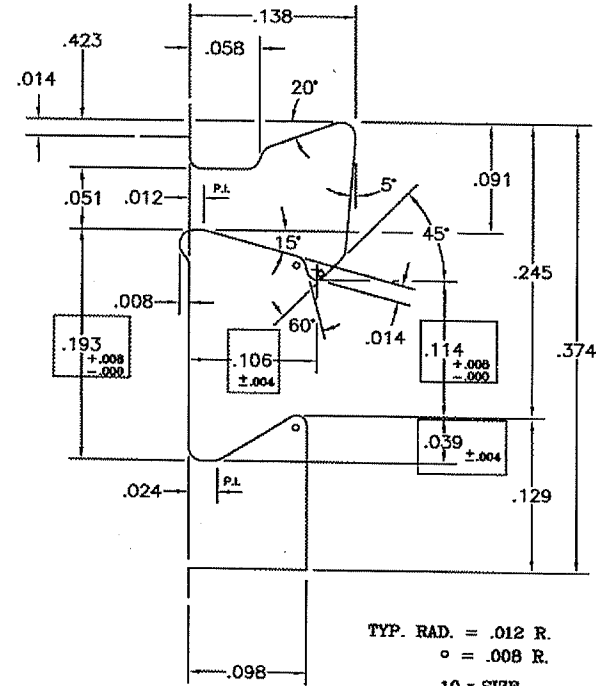
Report# 92110

Date 7/15/09

Tech. *ju*



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ALUMINUM ASSOCIATION UNLESS OTHERWISE
STATED. CORNER RADII .015 EXCEPT AS NOTED.



DO NOT SCALE PRINT

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MATERIAL: 6063-T6 ALUM.	
WALL THICKNESS: .100 & AS NOTED	
TOTAL PERIMETER: 15.435	OS = 11.588
PAINTED PERIMETER: 4.074	IS = 3.848
AREA: .878	WT/FT: 1.054
FACTOR: 15	



EFCO CORPORATION
1000 County Road
Monett, Missouri 65706
1-800-221-4169
Fax: 417-233-7313

DRAWN BY: SCC	REVISIONS W/ DATES:	
DATE: 5/2/07		
APPROVED: SCC		
DATE: 5/2/07	JOB REF. NO.:	
SERIES: 5KPT	SCALE: AS NOTED	DIE CIRCLE: 4"
TITLE: (EXT.) FIXED PANEL HORIZ.		DWG NO. 18B9