**SECTION 08 91 00**

**STATIONARY BLADE WALL LOUVERS**

Window Technologies Inc. dba WinTech

Aluminum PTAC Louver

Series H221i Impact

**PART 1 – GENERAL**

1. **SUMMARY**
	1. Section Contents
		1. Extruded aluminum stationary Packaged Terminal Air Conditioning (PTAC) louver.
	2. Related Sections
		1. Sealant and Caulking – Section 07900
		2. Air Outlets & Inlets – Section 233700
		3. Dampers – Section 233313
		4. Instrumentation and Control Devices for HVAC – Section 230913
2. **TEST AND PERFORMANCE REQUIREMENTS**
	1. Test Units and Test Criteria
		1. Test units should follow the requirements set forth in ASTM E283, ASTM E547, ASTM E331, ASTM E330, ASTM E1886, and ASTM E1996 at size of 69” x 24” (1753 x 610)
		2. Testing shall be performed by an AAMA qualified independent testing agency
		3. Current test reports are to be submitted and be AAMA certified in order to be considered accepted
	2. Performance Requirements
		1. Air Infiltration
			1. Not to exceed .03 cfm/SF of unit per ASTM E283 at static air pressure different of 1.57 PSF (75 Pa)
		2. Water Resistance Test
			1. No uncontrolled water leakage per ASTM E331 / ASTM E547 at static air pressure different of 12 PSF
		3. Uniform Load Deflection Test
			1. Report louver mid span deflection per ASTM E330 at 60 PSF positive and negative pressure
		4. Uniform Load Structural Test
			1. No permanent damage to fasteners, hardware parts, or actuating mechanisms, nor any other damage that would cause the unit to be inoperable per ASTM E330 at 90 PSF positive and negative pressure
		5. Free Air Percentage
			1. Louver should have minimum free air percentage of 68% using Free Air Flow percentage calculation
		6. Large Missile Impact Test
			1. No penetration of 8’-3” 9 pound projectile at missile level D per ASTM E1996-14
		7. Uniform Load Cyclic Test
			1. No penetration after large missile level D testing per ASTM E1886-13 cyclic load testing at 60 PSF both positive and negative
3. **SUBMITTALS**
	1. Product Data
		1. Submit manufacturer’s specifications and certified test reports from an AAMA accredited laboratory
		2. Submit standard PTAC louver details
		3. Submit product installation instructions
	2. Shop Drawings
		1. Submit shop drawings including floor plans, window with PTAC lovuer elevations, detail sections with dimensions, PTAC louver glazing details, and sealant application. Also show anchors, hardware, and other components as applicable.
	3. Samples
		1. Submit finish samples
		2. Submit 18” x 18” PTAC louver product sample
4. **DELIVERY, STORAGE, AND HANDLING**
	1. Protect PTAC louvers and other accessories against damage from construction and other hazards prior to, during, and after installation
5. **WARRANTIES**
	1. PTAC Louver Material and Workmanship
		1. Submit a written warranty against defects in material and workmanship for one (1) year from date of final shipment
	2. Finish
		1. Anodic Finish
			1. Warranty period will be for one (1) year from the date of final shipment
		2. Organic Finish
			1. Warranty period will be for ten (10) years from the date of final shipment for all organic finishes meeting the AAMA 2604 standard
			2. Warranty period will be for ten (10) years from the date of final shipment for all organic finishes meeting the AAMA 2605 standard

**PART 2 – PRODUCTS**

1. **MANUFACTURERS**
	1. WinTech Series H221i Impact PTAC Louver manufactured by WinTech, Inc., Monett, MO
	2. Alternate Manufacturers
		1. Products of alternate manufacturers will be considered upon written authorization from the architect. Their product information, test reports documenting compliance with Section 1.2, and a sample window must be submitted fifteen (15) days prior to project bid date.
2. **MATERIALS**
	1. Aluminum Extrusions
		1. 6063-T6 alloy and tempered
		2. Extrusion tolerances should be in accordance with the Aluminum Associations “Drafting Standards for Aluminum Extruded and Tubular Products”.
	2. Fasteners
		1. Provide aluminum, stainless steel, or other corrosion resistant material as warranted by the manufacturer. Fasteners should be compatible with aluminum
		2. Provide concealed fasteners wherever possible
	3. Sealant
		1. Provide sealant product that complies with AAMA 800
		2. Sealant is to be appropriate for PTAC louver application and approved by the PTAC louver manufacturer
		3. Refer to Division 7 for perimeter sealants between PTAC louvers, window units and surrounding conditions
3. **FABRICATION**
	1. General
		1. Aluminum louver shall be provided per the manufacturer’s standard fabrication and comply with specifications.
	2. Aluminum Louver Material
		1. All aluminum window frame and sash extrusions will have a minimum wall thickness of .047”
	3. Aluminum Louver Frame
		1. Frame members are to be mechanically fastened
		2. Frame joints should be mitered and joined neatly
		3. Louver frame should incorporate sealing flange for PTAC sleeve installation
	4. Aluminum Louver Blades
		1. Aluminum louver blades should be “J” style with .062” minimum wall thickness
		2. Angle of aluminum blades should be 42 degrees
		3. Aluminum louver blades should be spaced .775” on center to allow for 68% free air
4. **ACCESSORIES**
	1. Impact Resistant Insulated Blank-off Panels
		1. Provide 1” insulated blank off panel, composed of minimum 16 gauge sheet metal skin to exterior side and minimum 24 gauge sheet metal to interior with insulated core
		2. Impact insulated blank-off panels should be sealed and mechanically fastened with pop rivets to the aluminum louver frame
	2. Bird Screen
		1. Provide 1/2” x 1/2" .051” thick aluminum wire screen
			1. Bird screen to be mechanically fastened to the aluminum louver frame
	3. Insect Screen
		1. Provide 18x16 aluminum screen mesh
		2. Screen frame should be aluminum
5. **ALUMINUM WINDOW FINISHES**
	1. Anodic
		1. Provide Class I Choose an item. anodize finish to all exposed surfaces of aluminum window units.
		2. Finish must meet AAMA 611
	2. Paint
		1. Provide manufacturer’s standard polyester powder coating to all exposed surfaces of aluminum window units.
		2. Finish must meet AAMA 2604
		3. Color: Choose an item. (Custom colors available upon request)
	3. Paint
		1. Provide manufacturer’s standard two-coat 70% fluoropolymer resin based coating to all exposed surfaces of aluminum window units.
		2. Finish must meet AAMA 2605
		3. Color: Choose an item. (Custom colors available upon request)
	4. Paint
		1. Provide manufacturer’s standard polyester powder coating to all exposed surfaces of aluminum window units.
		2. Finish must meet AAMA 2605
		3. Color: Choose an item. (Custom colors available upon request)

**PART 3 – EXECUTION**

1. **INSPECTION**
	1. Job Conditions
		1. Verify all openings accepting aluminum PTAC louvers are sized correctly, free of obstruction or any substance that will hinder in the installation of the PTAC louver or PTAC sleeve.
		2. Do not install aluminum PTAC louver into unsatisfactory openings
2. **INSTALLATION**
	1. Install aluminum louvers using only skilled tradesmen in exact accordance with the approved shop drawings and/or product installation instructions
	2. Plumb and align louver in opening. Erect windows square and true. Adequately anchor aluminum louver to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.
	3. Perimeter Sealing
		1. Seal joints at perimeters in accordance with approved shop drawings to provide a watertight installation.
		2. Wipe excess sealant and leave all exposed surfaces and joints clean and smooth
3. **ADJUST AND CLEAN**
	1. After installation, aluminum PTAC louvers should be inspected for any repair or touch up that may be required.
	2. After installation, leave louver clean and free of labels, dirt, sealant, etc.
	3. Initiate all protection and precautions to ensure aluminum louver will be without damage.

**END OF SECTION**