SPECIAL SEISMIC CERTIFICATION
CERTIFICATE OF COMPLIANCE

junker engineering group

Manufacturer	Air Distribution Technologies, Inc. | Triatek
Product Type	Venturi Valves
Model Line	Venturi Valves
Model	**Various, See following**

Air Distribution Technologies, Inc. | Triatek has qualified for Special Seismic Certification in accordance with:

International Building Code (IBC) 2018

Certification has been conducted in compliance with ICC Evaluation Service Document AC156 “Acceptance Criteria for Seismic Certification by Shake-Table Testing of Nonstructural Components” via tri-axial shake table testing at a laboratory accredited by the ANSI-ASQ National Accreditation Board/ANAB to ISO 17025 and under the witness of the seismic qualification engineer, Junker Engineering Group.

Document / Revision #	Revision Date	Reason for Revision	Approved by
2019-099-COC-01-00	05.07.2020	Initial Release	DJ

Equipment Manufacturer

Name: Air Distribution Technologies, Inc. | Triatek
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Test Laboratory

Name: Clark Dynamic Test Laboratory
Address: 1801 Route 51, Jefferson Hills, PA 15025
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Certification Engineer

Name: Junker Engineering Group
Address: 8950 Jefferson Ave. La Mesa, CA 91941
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SPECIAL SEISMIC CERTIFICATION
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Manufacturer	Air Distribution Technologies, Inc. | Triatek
Product Type	Venturi Valves
Model Line	Venturi Valves
Model	**Various, See following**

Certification Parameters

1. The Special Seismic Certification program and this Certificate are based on the issued ICC-ES A156 "Acceptance Criteria for Seismic Certification by Shake-Table Testing of Nonstructural Components. Shake-table testing is simulated for nonstructural components having fundamental frequencies greater than or equal to 1.3 Hz, as permitted by Section 13.2.2 of ASCE7-16.
2. Pre-test functional compliance verification was performed by the test laboratory and confirmed that the equipment was operational prior to seismic simulation. After successful tri-axial shake table testing, post-test functional compliance verification was performed and confirmed that the equipment is capable of performing its intended functions after a seismic event.
3. All components listed in this Certificate are assigned a component importance factor (Ip) equal to 1.5
4. **This certification is only valid for seismic parameters, equipment, and anchorage / installation requirements referenced in the following tables**, as considered by the manufacturer's specifications for seismic applications. Mounting details & drawings must be outlined and approved by the Structural Engineer of Record (SEOR) for the project and location and the Contractor shall insure that the specified requirements by the SEOR are fulfilled. The equipment manufacturer or seismic qualification engineer listed in this certificate is not responsible for the design and performance of the anchorage system.
5. This certification requires that part/model numbers for the units listed herein uniquely identify the configuration, manufacturers, and materials of the subcomponents within the unit.
6. Refer to the Seismic Certification Label mounted to the equipment by the manufacturer for corresponding seismic certification parameters to this Certificate.
7. Product line pre-approval is nullified when: Design, construction, or quality control/quality assurance methods are materially altered as defined in the California Administrative Code (CAC) 2013 Section 7-111. Strength, Stiffness, Size, Weight, Materials, Support, Orientation, or Manufacturer shall not be changed/altered so that they are no longer equivalent to what was physically tested and approved herein.

I declare that this certificate is in general conformance with all applicable codes or ordinances and all documentation supporting this certification meets the requirements of special seismic certification.

Dan Junker, SE
Junker Engineering Group
dan@junkereng.com
8950 Jefferson Ave. La Mesa, CA 91941

Issue Date: **05.07.2020**

SPECIAL SEISMIC CERTIFICATION
CERTIFICATE OF COMPLIANCE

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Table Description Venturi Valves

Table 1

Construction Summary:

0.060" Aluminum (heresite or kynar coating) or 0.040" 316 stainless steel.

Options Summary:

1, 2, 3, 4, or 6 ganged valve configurations. Mechanical constant volume or fully actuated electronic actuator. Insulated or non-insulated. Medium or low-pressure range. Flanged or non-flanged.

Certification Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

S_{DS} = 2.0g at z/h = 1.0

Mounting Summary:

Horizontal, vertical up, or vertical down in-line duct mounted. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Notes:

Diameter (in)	Ganged Valve Quantity	Max Dimensions (in)			Max Weight (lbf)	UUT Description		UUT
		Length	Width	Height				
8	1	23.00	7.88	7.88	20			
10	1	26.00	9.87	9.87	27			
	2	30.00	22.63	11.44	54	Ganged (1) AL CV LP (1) SS CV LP Non-Insulated	Horizontal Mounting	UUT1A
							Vertical Up Mounting	UUT1B
							Vertical Down Mounting	UUT1C
	3	30.00	33.75	11.44	81			
	4	30.00	22.63	22.88	135			
	6	30.00	33.75	22.88	189			
12	1	26.80	11.80	11.8	27			
	2	30.80	26.75	13.50	81			
	3	30.80	40.00	13.50	108			
	4	30.80	26.75	27.00	135			
	6	30.80	40.0	27.00	203	Ganged (1) AL MP (5) SS MP All Fully Actuated Insulated	Horizontal Mounting	UUT2A
							Vertical Up Mounting	UUT2B
							Vertical Down Mounting	UUT2C
14	1	29.90	13.75	13.75	25	Fully Actuated Insulated Heresite Coating	Horizontal Mounting	UUT3A
							Vertical Up Mounting	UUT3B
							Vertical Down Mounting	UUT3C
	2	33.87	32.15	16.00	50			
	3	33.87	48.3	16.00	75			
	4	33.87	32.15	32.00	120			
	6	33.87	48.3	32.00	160			

Notes:

1. Maximum weight and dimensions above are for valve assembly only excluding ductwork and supports.

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV210SNCVPHM

UUT 1A

Construction Summary:

Ganged assembly of (2) 10" diameter valves. (1) Valve Aluminum, (1) Valve Stainless Steel.

Options Summary:

(2) Valves Constant Velocity, Low Pressure. (2) Valves Non-Insulated.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Horizontal Mount. Refer to following pages.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
30.00	22.63	11.44	54	12.26	10.66	21.46

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc.| Triatek

Model Line Venturi Valves

Model Number VV210SNCVPHM

UUT 1B

Construction Summary:

Ganged assembly of (2) 10" diameter valves. (1) Valve Aluminum, (1) Valve Stainless Steel.

Options Summary:

(2) Valves Constant Velocity, Low Pressure. (2) Valves Non-Insulated.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Vertical Up Mount. Refer to following pages.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
30.00	22.63	11.44	54	9.73	11.21	5.78

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV210SNCVPHM

UUT 1C

Construction Summary:

Ganged assembly of (2) 10" diameter valves. (1) Valve Aluminum, (1) Valve Stainless Steel.

Options Summary:

(2) Valves Constant Velocity, Low Pressure. (2) Valves Non-Insulated.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Vertical Down Mount. Refer to following pages.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
30.00	22.63	11.44	54	17.15	14.43	5.76

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV612SNFAPHMU

UUT 2A

Construction Summary:

Ganged assembly of (6) 12" diameter valves. (1) Valve Aluminum, (5) Valves Stainless Steel.

Options Summary:

(6) Valves Fully Actuated, Medium Pressure. (6) Valves Insulated.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Horizontal Mount. Refer to following pages.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
30.80	40.0	27.00	203	21.28	13.14	13.43

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV612SNFAPHMU

UUT 2B

Construction Summary:

Ganged assembly of (6) 12" diameter valves. (1) Valve Aluminum, (5) Valves Stainless Steel.

Options Summary:

(6) Valves Fully Actuated, Medium Pressure. (6) Valves Insulated.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Vertical Up Mount. Refer to following pages.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
30.80	40.0	27.00	203	10.21	11.21	26.25

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV612SNFAPHMU

UUT 2C

Construction Summary:

Ganged assembly of (6) 12" diameter valves. (1) Valve Aluminum, (5) Valves Stainless Steel.

Options Summary:

(6) Valves Fully Actuated, Medium Pressure. (6) Valves Insulated.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Mounting Summary:

Vertical Down Mount. Refer to following pages.

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
30.80	40.0	27.00	203	28.65	20.87	25.35

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV14HIFAPHLU

UUT 3A

Construction Summary:

Single 14" diameter valves. Aluminum.

Options Summary:

Fully Actuated, Insulated Heresite Coating.

Mounting Summary:

Horizontal Mount. Refer to following pages.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
29.90	13.75	13.75	25	13.52	9.33	25.29

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV14HIFAPHLU

UUT 3B

Construction Summary:

Single 14" diameter valves. Aluminum.

Options Summary:

Fully Actuated, Insulated Heresite Coating.

Mounting Summary:

Vertical Up Mount. Refer to following pages.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
29.90	13.75	13.75	25	17.15	14.43	5.76

Unit maintained structural integrity and remained operational

per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

SPECIAL SEISMIC CERTIFICATION
MOUNTING SUMMARY

junker engineering group

IBC Special Seismic Certification Document Number: **2019-099-COC-01-00**

Manufacturer Air Distribution Technologies, Inc. | Triatek

Model Line Venturi Valves

Model Number VV14HIFAPHLU

UUT 3C

Construction Summary:

Single 14" diameter valves. Aluminum.

Options Summary:

Fully Actuated, Insulated Heresite Coating.

Mounting Summary:

Vertical Up Mount. Refer to following pages.

Test Parameters:

Building Code: IBC 2018

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

Notes:

Contents were included in testing per operating conditions.

UUT Image

UUT Properties

Dimensions (in) (Valve Only)			Weight (lb)	Min. First Natural Frequency (Hz)		
Length	Width	Height		F-B	S-S	Vert
29.90	13.75	13.75	25	9.73	11.21	5.78

Unit maintained structural integrity and remained operational

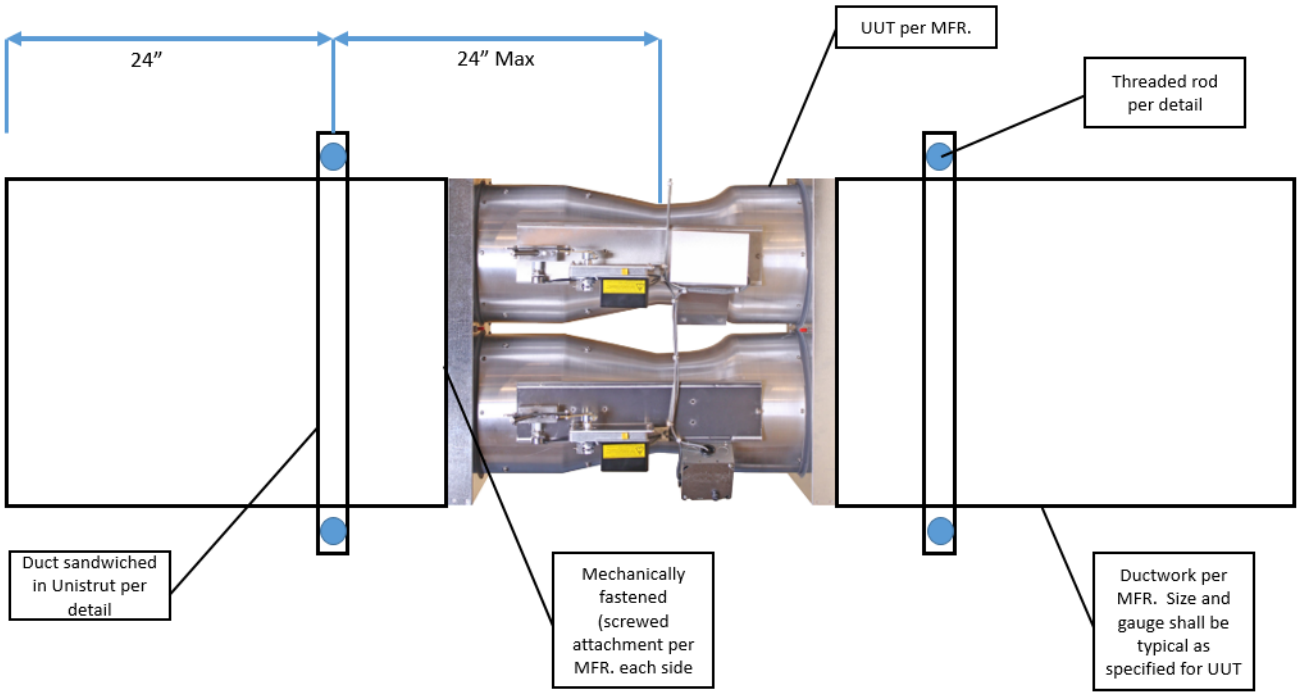
per manufacturer requirement when subjected to the following test parameters

S_{DS} (g)	z/h	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
2.0	1.0	3.20	2.40	1.33	0.53

junker engineering group

Manufacturer Air Distribution Technologies, Inc. | Triatek
Product Type Venturi Valves
Model Line Venturi Valves

Required Horizontal Mounting



Plan (Overhead) View

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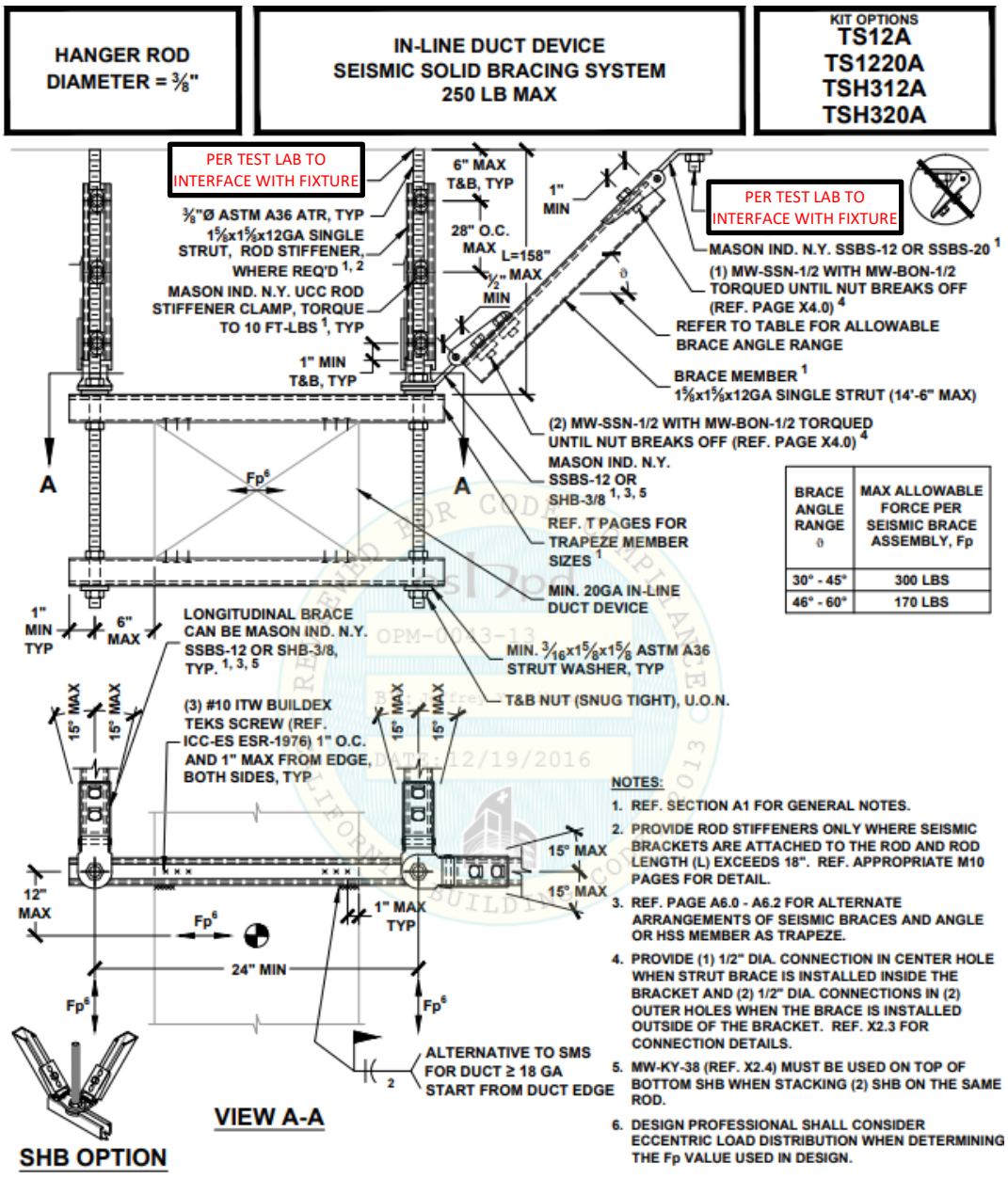
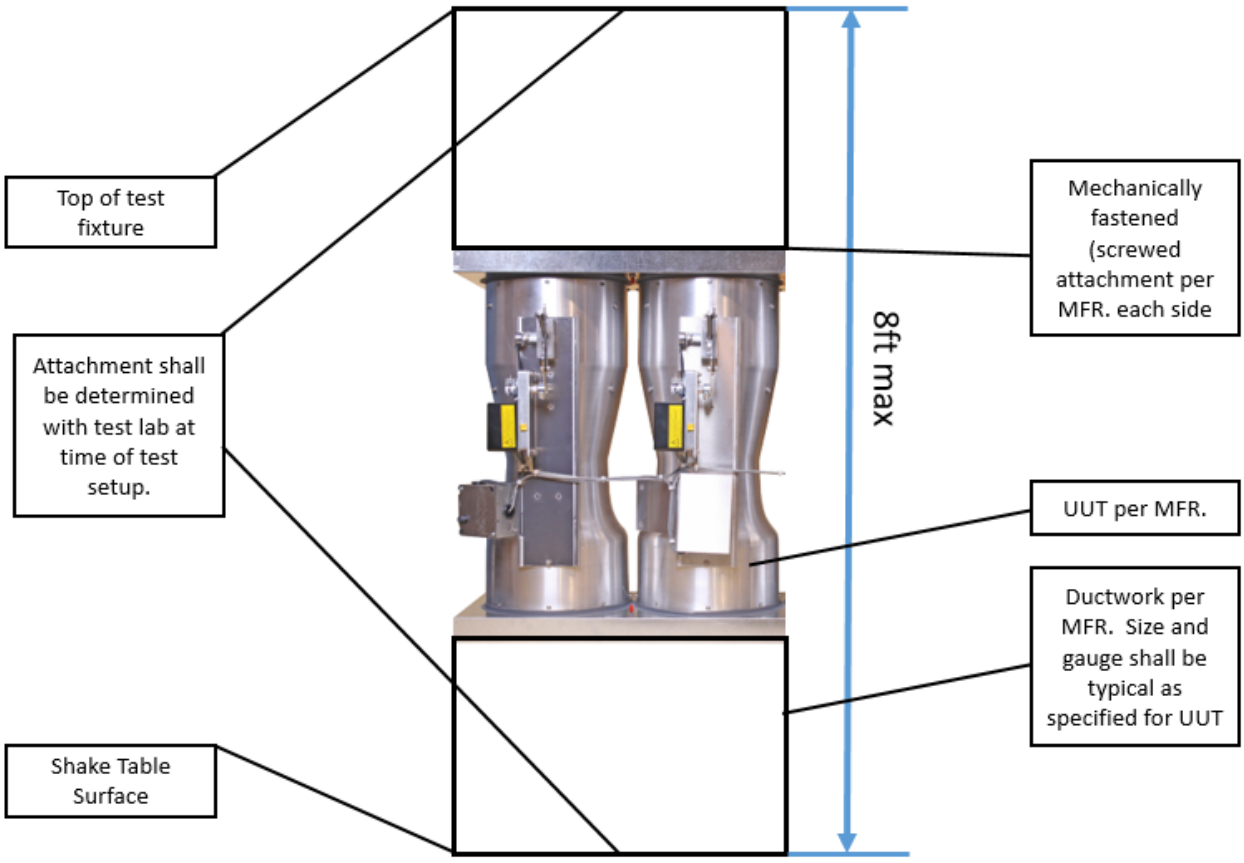
Manufacturer Air Distribution Technologies, Inc. | Triatek
Product Type Venturi Valves
Model Line Venturi Valves

Required Horizontal Mounting



Manufacturer Air Distribution Technologies, Inc. | Triatek
Product Type Venturi Valves
Model Line Venturi Valves

Required Vertical Mounting



Elevation (Side) View