



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0875

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Q-PAC

Manufacturer's Technical Representative: Ryan Morley

Mailing Address: 4010 Deerpark Blvd., Elkton, FL 32033

Telephone: (904) 863-5300

Email: rmorley@q-pac.com

Product Information

Product Name: Q-PAC Multimotor Plenum Fan (MPF)

Product Model Number(s): MPF

Product Category: Air Handling Units

Product Sub-Category: Air Handling Units – Fans

General Description: Carbon steel plug fan shrouds and supports with composite and aluminum plug fans and carbon steel electrical enclosures.

Mounting Description: Several - See Certified Product Tables and UUT Sheet

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: PRE COMPLIANCE

Contact Person: Andrew Coughlin

Mailing Address: 324 NW Hill St, Bend, OR 97703

Telephone: (541) 241-2310

Email: andy@go-pre.com

Title: Principal Engineer



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: PRE COMPLIANCE

Name: Andrew Coughlin

California License Number: S6082

Mailing Address: 324 NW Hill St, Bend, OR 97703

Telephone: (415) 635-8461

Email: Andy@go-pre.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: UNIVERSITY OF NEVADA, RENO (UNR)

Contact Person: Patrick LaPlace

Mailing Address: 1664 N. Virginia Street, Reno NV 89557

Telephone: (775) 784-6937

Email: plaplace@unr.edu

BY: Mohammad Karim

DATE: 07/28/2026



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Seismic Parameters

Certified Response Spectral Acceleration Factors:(F_p/W_p)

Horizontal (A Flx-H), g= 2.57 (A Rig-H), g= 1.73

Vertical (A Flx-V), g= 1.67 (A Rig-V), g= 0.67

SDS (Design spectral response acceleration at short period, g) = 2.50 @ z/h = 0; 1.61 @ z/h = 1

H_f (Force amplification height factor) = 1 @ z/h = 0; 3.5 @ z/h = 1

R_u (Structure ductility reduction factor) = 1 @ z/h = 0; 1.3 @ z/h = 1

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

HCAI Approval (For Office Use Only) - Approval Expires on 07/28/2032

Date: 7/28/2026

Name: Mohammad Karim

Title: Supervisor, Health Facilities

Condition of Approval (if applicable):

OSP-0875

BY: Mohammad Karim

DATE: 07/28/2026

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENTS

Manufacturer: Q-PAC
Product Type: Fans
Model Line: Multimotor Plenum Fan (MPF)

Seismic Parameters	Building Codes
$S_{DS} = 1.61g$ for $z/h=1, R_{\mu}=1.3, H_f=3.5$ $S_{DS} = 2.50g$ for $z/h=0, R_{\mu}=1.0, H_f=1.0$	$I_p=1.5$ CBC 2025

TABLE 1

Mounting Configuration: Base Mounted - Rigid

Construction Summary

Carbon steel plug fan shrouds and supports with composite and aluminum plug fans and carbon steel electrical enclosures.

Options Summary

1-12 plug fans. Up to 4 plug fans wide and 4 plug fans high.

Model Line	Model	Max. Dimensions ¹ (in)			Wt. (lb)	Notes	UUT
		D	W	H			
Q-PAC Multimotor Plenum Fan (MPF)	One Motor Fan Column	12.8	18	36	No limit	Lower limit	Interp.
		...	...	...	...		Interp.
		12.8	18	140	69.1		1d
		...	...	...	...		Interp.
	Two Motor Fan Column	25.9	27	140	180	Upper limit	Interp.
		12.8	18	60	No limit	Lower limit	Interp.
		...	...	...	...		Interp.
		25.9	27	140	360	Upper limit	Interp.
	Three Motor Fan Column	12.8	18	72	No limit	Lower limit	Interp.
		...	...	...	...		Interp.
		25.9	25	140	384.4		1a
		...	...	...	...		Interp.
	Four Motor Fan Column	25.9	27	140	540	Upper limit	Interp.
		12.8	18	96	No limit	Lower limit	Interp.
		...	...	...	...		Interp.
		25.9	25	140	533.8		1c
	Fan Controller Column	25.9	27	140	576.2		1b
		...	...	...	...		Interp.
		25.9	27	140	576.2	Upper limit	Interp.
		15	12	36	No limit	Lower limit	Interp.
	Fan Controller Column	...	...	...	...		Interp.
		15	17	140	44.6		1e
		...	...	...	...		Interp.
		15	31	140	54.1	Upper limit	1f

Notes:

1. Multimotor plenum fans must be installed and fastened to air handling unit according to the Q-PAC seismic installation guidelines with 160" max width. Weight does not include air handling unit cabinet.



SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENTS

Manufacturer: Q-PAC
Product Type: Fans
Model Line: Multimotor Plenum Fan (MPF)

$$\begin{aligned} S_{DS} &= 1.61g \text{ for } z/h=1, R_\mu=1.3, H_f=3.5 \\ S_{DS} &= 2.50g \text{ for } z/h=0, R_\mu=1.0, H_f=1.0 \end{aligned} \quad I_p=1.5$$

CBC 2025

TABLE 2

Mounting Configuration: Wall Mounted - Rigid

Options Summary

NEMA 1 or 4 electrical enclosures

[illegible]

1. NEMA 1 enclosures are depopulated versions of NEMA 4 enclosures.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS

Manufacturer: Q-PAC
Product Type: Fans
Model Line: Multimotor Plenum Fan (MPF)

Seismic Parameters	Building Codes
$S_{DS} = 1.61g$ for $z/h=1, R_{\mu}=1.3, H_f=3.5$ $S_{DS} = 2.50g$ for $z/h=0, R_{\mu}=1.0, H_f=1.0$	$I_p=1.5$ CBC 2025

TABLE 3

Table Description: Plug Fans

Component (Manufacturer)	Model	Dimensions (in)			Wt. (lb)	Notes	UUT
		D	W	H			
Plug Fan (Ziehl Abegg)	1700069	14.3	19.7	19.7	52.9	350 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700071	12.8	17.7	17.7	44.1	315 mm Backwards Curved Centrifugal Fan, Composite Wheel	1d
	1700072	16.1	23.6	23.6	92.6	450 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700076	15.0	21.7	21.7	86.0	400 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700077	16.1	23.6	23.6	92.6	450 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700078	16.1	23.6	23.6	92.6	450 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700079	18.3	26.4	26.4	121.3	500 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700080	18.9	28.7	28.7	130.1	560 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700081	19.7	28.7	28.7	141.1	560 mm Backwards Curved Centrifugal Fan, Composite Wheel	1a,1c
	1700082	13.9	17.7	17.7	48.5	315 mm Backwards Curved Centrifugal Fan, Composite Wheel	Interp.
	1700083	13.6	21.7	21.7	77.2	400 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1a
	1700106	15.4	19.7	19.7	80.0	400 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	Interp.
Plug Fan (EBM Papst)	1700004	15.9	19.7	19.7	83.6	310 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1c
	1700143	21.2	24.8	24.8	99.0	450 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	Interp.
	1700141	21.2	24.8	24.8	121.3	450 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	Interp.
	1700005	22.9	35.8	35.8	180.0	560 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1c



SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS

Manufacturer: Q-PAC
Product Type: Fans
Model Line: Multimotor Plenum Fan (MPF)

$S_{DS} = 1.61g$ for $z/h=1, R_u=1.3, H_f=3.5$
 $S_{DS} = 2.50g$ for $z/h=0, R_u=1.0, H_f=1.0$ $I_p=1.5$

CBC 2025

TABLE 3

Table Description: Plug Fans

[illegible]

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS

Manufacturer: Q-PAC
Product Type: Fans
Model Line: Multimotor Plenum Fan (MPF)

Seismic Parameters
 $S_{DS} = 1.61g$ for $z/h=1, R_{\mu}=1.3, H_f=3.5$
 $S_{DS} = 2.50g$ for $z/h=0, R_{\mu}=1.0, H_f=1.0$ $I_p=1.5$

Building Codes
CBC 2025

TABLE 4

Table Description: Fan Controllers

Component (Manufacturer)	Model	Dimensions (in)			Wt. (lb)	Notes	UUT
		D	W	H			
Fan Controllers (Q-PAC)	1700815	15	3.123	20.59	19.6	9-Motor Left Fan Controller 15A	1e
	1700814	15	3.123	18.84	17.9	8-Motor Left Fan Controller 15A	Interp.
	1700813	15	3.123	17.09	16.1	7-Motor Left Fan Controller 15A	Interp.
	1700812	15	3.123	15.34	14.4	6-Motor Left Fan Controller 15A	Interp.
	1700811	15	3.123	13.59	12.6	5-Motor Left Fan Controller 15A	Interp.
	1700810	15	3.123	11.84	10.9	4-Motor Left Fan Controller 15A	Interp.
	1700809	15	3.123	10.09	9.1	3-Motor Left Fan Controller 15A	Interp.
	1700808	15	3.123	8.34	7.4	2-Motor Left Fan Controller 15A	Interp.
	1700807	15	3.123	6.59	5.6	1-Motor Left Fan Controller 15A	Interp.
	1700824	15	3.123	20.59	19.6	9-Motor Right Fan Controller 15A	Interp.
	1700823	15	3.123	18.84	17.9	8-Motor Right Fan Controller 15A	Interp.
	1700822	15	3.123	17.09	16.1	7-Motor Right Fan Controller 15A	Interp.
	1700821	15	3.123	15.34	14.4	6-Motor Right Fan Controller 15A	Interp.
	1700820	15	3.123	13.59	12.6	5-Motor Right Fan Controller 15A	Interp.
	1700819	15	3.123	11.84	10.9	4-Motor Right Fan Controller 15A	Interp.
	1700818	15	3.123	10.09	9.1	3-Motor Right Fan Controller 15A	1f
	1700817	15	3.123	8.34	7.4	2-Motor Right Fan Controller 15A	Interp.
	1700816	15	3.123	6.59	5.6	1-Motor Right Fan Controller 15A	Interp.
	1700839	15	3.123	13.59	12.6	5-Motor Left Fan Controller 20A	Interp.
	1700838	15	3.123	11.84	10.9	4-Motor Left Fan Controller 20A	Interp.
	1700837	15	3.123	10.09	9.1	3-Motor Left Fan Controller 20A	Interp.
	1700836	15	3.123	8.34	7.4	2-Motor Left Fan Controller 20A	Interp.
	1700835	15	3.123	6.59	5.6	1-Motor Left Fan Controller 20A	Interp.
	1700844	15	3.123	13.59	12.6	5-Motor Right Fan Controller 20A	Interp.
	1700843	15	3.123	11.84	10.9	4-Motor Right Fan Controller 20A	Interp.
	1700842	15	3.123	10.09	9.1	3-Motor Right Fan Controller 20A	Interp.
	1700841	15	3.123	8.34	7.4	2-Motor Right Fan Controller 20A	Interp.
	1700840	15	3.123	6.59	5.6	1-Motor Right Fan Controller 20A	Interp.

Note: All enclosures are constructed with carbon steel.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENTS

Manufacturer: Q-PAC
Product Type: Fans
Model Line: Multimotor Plenum Fan (MPF)

Seismic Parameters
 $S_{DS} = 1.61g$ for $z/h=1, R_{\mu}=1.3, H_f=3.5$
 $S_{DS} = 2.50g$ for $z/h=0, R_{\mu}=1.0, H_f=1.0$ $I_p=1.5$

Building Codes
CBC 2025

TABLE 5

Table Description: Dampers

Component (Manufacturer)	Model	Dimensions (in)			Wt. (lb)	Notes	UUT
		D	W	H			
7600 CWA Backdraft Damper (TAMCO)	1700454	4.0	18.3	17.3	9.4	Zinc Plated Carbon Steel	1d
	1700455	4.0	17.3	19.5	10.1		Interp.
	1700456	4.0	19.5	19.5	11.4		Interp.
	1700457	4.0	20.3	19.8	12.0		Interp.
	1700458	4.0	20.3	21.5	13.1		Interp.
	1700459	4.0	21.6	21.6	14.0		Interp.
	1700460	4.0	22.3	21.6	14.4		Interp.
	1700461	4.0	22.3	23.4	15.6		Interp.
	1700462	4.0	22.4	22.4	15.0		Interp.
	1700463	4.0	24.1	23.6	17.1		Interp.
	1700464	4.0	24.1	25.4	18.4		Interp.
	1700465	4.0	25.4	24.8	18.8		Interp.
	1700466	4.0	25.4	25.4	19.3		Interp.
	1700467	4.0	25.4	26.5	20.2		Interp.
	1700468	4.0	26.5	26.5	21.1		Interp.
	1700469	4.0	27.0	26.4	21.4		Interp.
	1700470	4.0	27.0	28.1	22.8		Interp.
	1700471	4.0	28.1	27.5	23.2		Interp.
	1700472	4.0	23.6	23.6	16.7		Interp.
	1700473	4.0	28.1	29.3	24.7		Interp.
	1700474	4.0	29.1	28.5	24.9		Interp.
	1700476	4.0	29.3	28.8	25.2		1c
	1704148	4.0	18.3	19.8	10.8		Interp.
	1704149	4.0	22.3	24.3	16.2		Interp.
	1704150	4.0	25.3	26.8	20.3		Interp.
	1704151	4.0	27.4	28.4	23.3		Interp.
	1704152	4.0	28.1	29.5	24.9		Interp.



SPECIAL SEISMIC CERTIFICATION TESTING SUMMARY

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: Custom
Serial Number: N/A

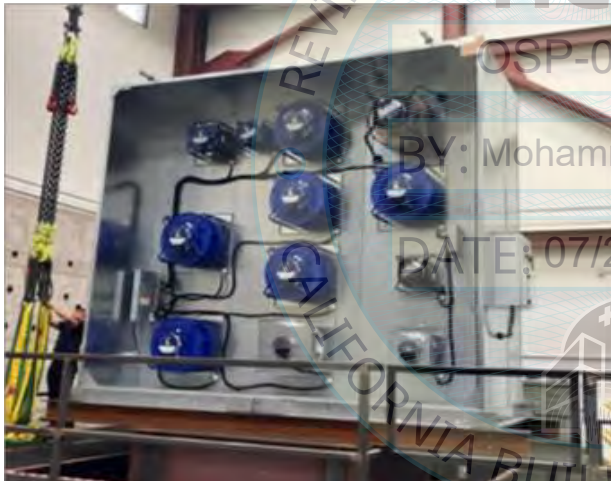
Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
70	164	151	5200

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
4.2	7.0	24.5

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

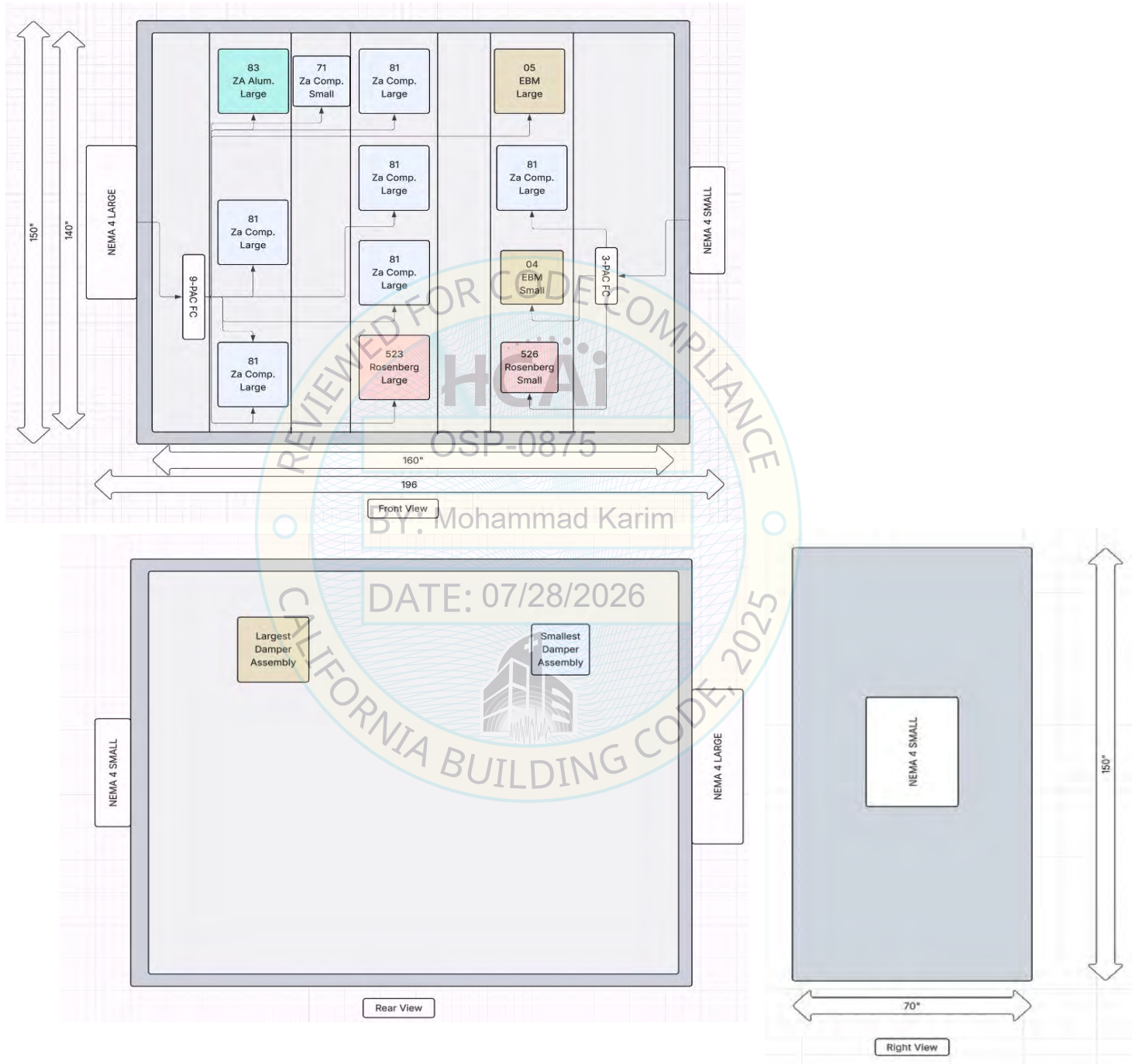
Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
EBM Papst 560 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700005	Aluminum
EBM Papst 310 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700004	Aluminum
Rosenburg 500 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700523	Aluminum
Rosenburg 355 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700526	Aluminum
Ziehl Abegg 400 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700083	Aluminum
Ziehl Abegg 560 mm Backwards Curved Centrifugal Fan, Composite Wheel	1700081	Composite
Ziehl Abegg 315 mm Backwards Curved Centrifugal Fan, Composite Wheel	1700071	Composite
Q-PAC 3-Motor Right Fan Controller 15A	1700818	Carbon Steel
Q-PAC 9-Motor Left Fan Controller 15A	1700815	Carbon Steel
Q-PAC NEMA 4 30A Enclosure	1702269	Carbon Steel
Q-PAC NEMA 4 200A Enclosure	1702769	Carbon Steel
27.25"W x 26.75"H TAMCO 7600 CWA Backdraft Damper	1700476	Carbon Steel
16.25"W x 15.75"H TAMCO 7600 CWA Backdraft Damper	1700454	Carbon Steel

UUT 1

Test Report# TR251709-01-R0



SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1a

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: MPF Three Motor Fan Column
Serial Number: N/A

Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
25.9	25	140	384.4

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with #14 sheet metal screws at 8" o.c. sides, top and bottom. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Ziehl Abegg 400 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700083	Aluminum
Ziehl Abegg 560 mm Backwards Curved Centrifugal Fan, Composite Wheel	1700081	Composite

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1b

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: MPF Four Motor Fan Column
Serial Number: N/A

Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
25.9	27	140	576.2

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with #14 sheet metal screws at 8" o.c. sides, top and bottom. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Rosenburg 500 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700523	Aluminum
Ziehl Abegg 560 mm Backwards Curved Centrifugal Fan, Composite Wheel	1700081	Composite

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1c

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: MPF Four Motor Fan Column
Serial Number: N/A

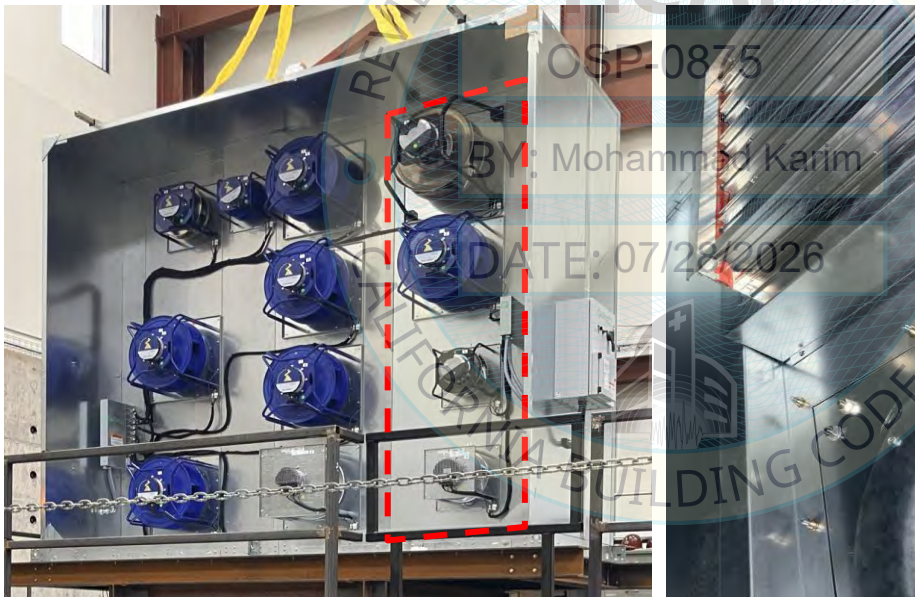
Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
25.9	25	140	533.8

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with #14 sheet metal screws at 8" o.c. sides, top and bottom. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
EBM Papst 560 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700005	Aluminum
EBM Papst 310 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700004	Aluminum
Rosenburg 355 mm Backwards Curved Centrifugal Fan, Aluminum Wheel	1700526	Aluminum
Ziehl Abegg 560 mm Backwards Curved Centrifugal Fan, Composite Wheel	1700081	Composite
27.25"W x 26.75"H TAMCO 7600 CWA Backdraft Damper	1700476	Carbon Steel

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1d

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: MPF One Motor Fan Column
Serial Number: N/A

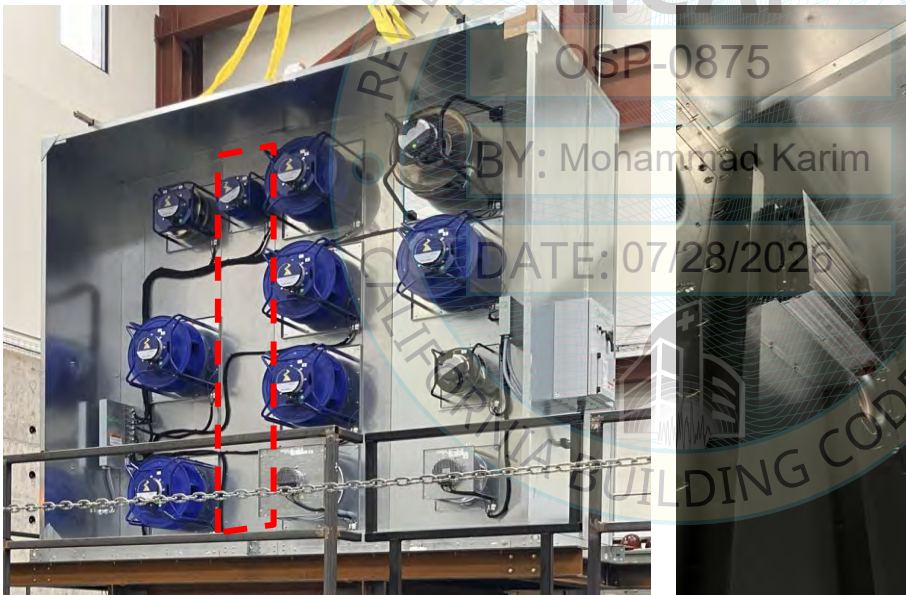
Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
12.8	18	140	69.1

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with #14 sheet metal screws at 8" o.c. sides, top and bottom. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Ziehl Abegg 315 mm Backwards Curved Centrifugal Fan, Composite Wheel	1700071	Composite
16.25"W x 15.75"H TAMCO 7600 CWA Backdraft Damper	1700454	Carbon Steel

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1e

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: 9-PAC FC Controller Column
Serial Number: N/A

Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
15	17	140	44.6

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with #14 sheet metal screws at 8" o.c. sides, top and bottom. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Q-PAC 9-Motor Left Fan Controller 15A	1700815	Carbon Steel

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1f

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: 3-PAC FC Controller Column
Serial Number: N/A

Highest Passed Test Level								
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g
2.50g	0.0	1.0	1.0					

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
15	31	140	54.1

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with #14 sheet metal screws at 8" o.c. sides, top and bottom. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Q-PAC 3-Motor Right Fan Controller 15A	1700818	Carbon Steel

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1g

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: 1702769 NEMA 4 200A Electrical Box
Serial Number: N/A

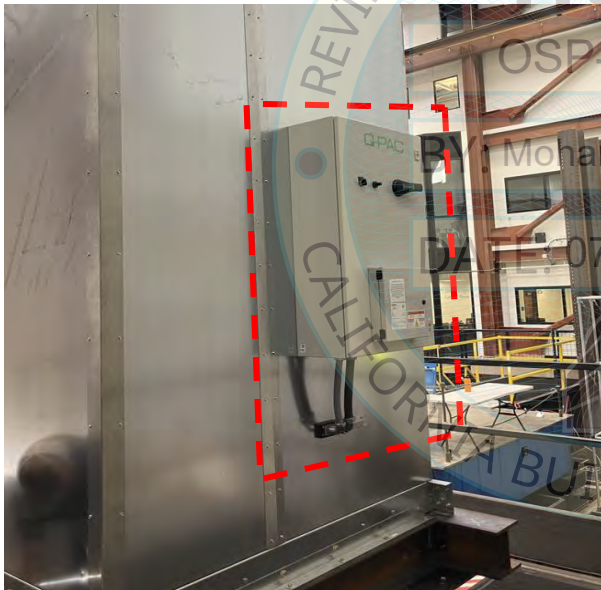
Highest Passed Test Level									
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}	
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g	
2.50g	0.0	1.0	1.0						

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
12.6	23.6	39.7	142

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with (4) 5/16" Grade 5 Bolts. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Q-PAC NEMA 4 200A Enclosure	1702769	Carbon Steel

SPECIAL SEISMIC CERTIFICATION UUT SUMMARY

UUT 1h

Test Report# TR251709-01-R0

Manufacturer: Q-PAC
Model Line: Multimotor Plenum Fan (MPF)
Model Number: 1702269 NEMA 4 30A Electrical Box
Serial Number: N/A

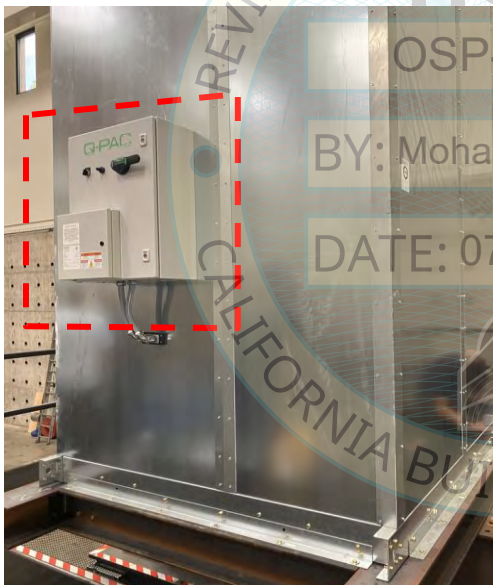
Highest Passed Test Level									
S _{DS}	z/h	R _μ	H _f	I _p	A _{flx-h}	A _{rig-h}	A _{flx-v}	A _{rig-v}	
1.61g	1.0	1.3	3.5	1.5	2.57g	1.73g	1.67g	0.67g	
2.50g	0.0	1.0	1.0						

Dimensions/Weights			
Depth (in)	Width (in)	Height (in)	Weight (lbs.)
12.6	19.7	27.7	87

Lowest Natural Frequency (Hz)		
Front-Back	Side-Side	Vertical
N/A	N/A	N/A

Building Codes	Test Criteria	Construction/Option Summary
CBC 2025	ICC-ES AC156 (2024)	Carbon steel air handling unit with composite and aluminum fans and carbon steel electrical enclosures.

UUT Mounting Details:



Mounted in Air Handling Unit (AHU) with (4) 5/16" Grade 5 Bolts. AHU was base mounted-rigid with (36) 3/8" Grade 8 hex head bolts and 1" square x 0.12" thick washers.

Unit maintained structural integrity and remained operational per manufacturer requirement following shake table test. All contents were included in the unit per operating conditions.

List of Included Subcomponents

Description	Model Number	Material
Q-PAC NEMA 4 30A Enclosure	1702269	Carbon Steel