



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0249

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Johnson Controls

Manufacturer's Technical Representative: Cameron Boyce

Mailing Address: 5005 York Drive, Norman, OK 73069

Telephone: (405) 419-6830

Email: Cameron.w.boyce@jci.com

Product Information

Product Name: Air Conditioning Units

Product Type: Air Conditioning Units - Packaged

Product Model Number: See attachment

General Description: The York Small Sunline / JCI Series 5 family consists of air cooled, outdoor mounted, packaged, cooling and heat pump units in cooling capacities of 3, 4, 5, and 6 tons. The units are factory-available as cooling only (CO), CO with electric heat, CO with gas heat, and heat pump models with or without electric heat.

Mounting Description: Rigid or Isolated Roof Curbs, Floor Mounted

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Dynamic Certification Laboratories

Contact Person: Kelly Laplace

Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





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FACILITIES DEVELOPMENT DIVISION**

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

Company Name: THE VMC GROUP

Name: Kenneth Tarlow California License Number: S2851

Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814

Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3

Other (Please Specify): _____

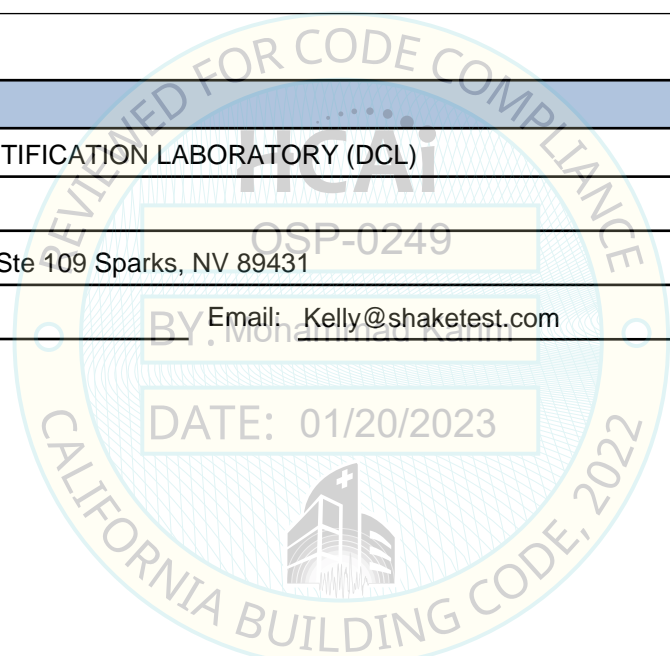
Testing Laboratory

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)

Contact Person: Kelly Laplace

Mailing Address: 1315 Greg St., Ste 109 Sparks, NV 89431

Telephone: (775) 358-5085 Email: Kelly@shaketest.com





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FACILITIES DEVELOPMENT DIVISION**

Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.88 (on rigid curbs); 5.63 (on spring isolated curbs)

SDS (Design spectral response acceleration at short period, g) = 2.5

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0 (on rigid curbs); 2.0 (on spring isolated curbs)

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

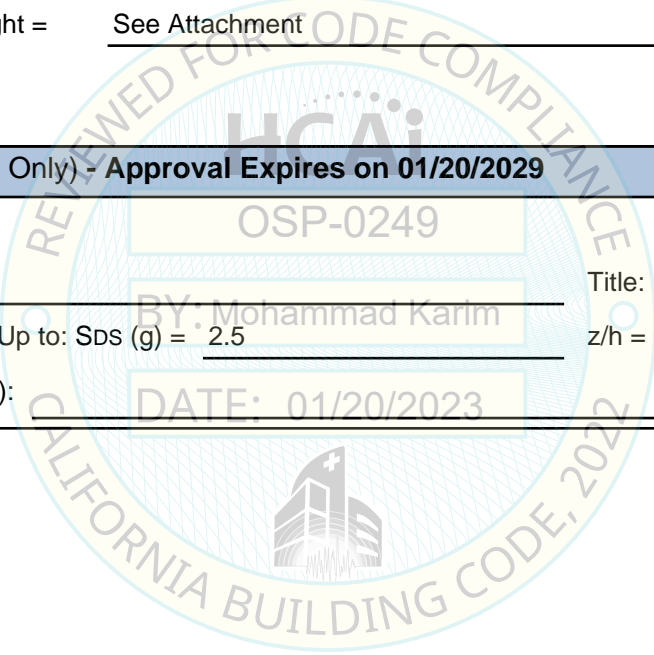
HCAI Approval (For Office Use Only) - Approval Expires on 01/20/2029

Date: 01/20/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.5 z/h = 1

Condition of Approval (if applicable): DATE: 01/20/2023



Special Seismic Certification

Table 1 - Certified Components



DCL Project Number: 96733-2201
Manufacturer: Unitary Product Group (York, Johnson Controls, Coleman, Luxaire, Evcon, Fraser-Johnston, Champion, and TempMaster)
Product Line: York Small Sunline/JCI 5 Series Family
Mounting Configuration: Rigid or Isolated Roof Curb Mount
Test Levels: S_{DS} = 2.50g, z/h=1.0

Model Number	Manufacturer	Max. Dimensions (in)			Max. Weight (lb.)	Nominal Cooling Capacity (Tons)	Unit
		Depth	Width	Height			
ZD/ZE/ZF/ZS/J03ZF/J03ZE/T03 036	York Small Sunline/ JCI 5 Series Family/ FJ ReliaCore 100/ TempMaster OmniCore 100	82.0	43.5	32.5	600	3	UUT-05a,b
ZD/ZE/ZF/ZS/J04ZF/J04ZE/T04 048		82.0	43.5	32.5	688	4	Interpolated
ZD/ZE/ZF/ZS/J05ZF/J05ZE/T05 060		82.0	43.5	32.5	716	5	Interpolated
ZF/ZS/J06ZF/T06 072		82.0	43.5	32.5	700	6	UUT-06a,b
ZR/ZK/J03ZR/T03 036		82.0	43.5	32.5	680	3	UUT-03a,b
ZR/ZK/J04ZR/T04 048		82.0	43.5	32.5	732	4	Interpolated
ZR/ZK/J05ZR/T05 060		82.0	43.5	32.5	760	5	UUT-04a,b
XN/XT/XP/XA/J03XP/J03XN/T03 036		82.0	43.5	32.5	650	3	UUT-01a,b
XN/XT/XP/XA/J04XP/J04XN/T04 048		82.0	43.5	32.5	690	4	Interpolated
XN/XT/XP/XA/J05XP/J05XN/T05 060		82.0	43.5	32.5	700	5	UUT-02a,b

Note:
 Weights listed for tested units are actual, not approximate weights. The weights listed for interpolated units are maximum weights, assuming all optional features are included. Optional features are summarized in the tables below.

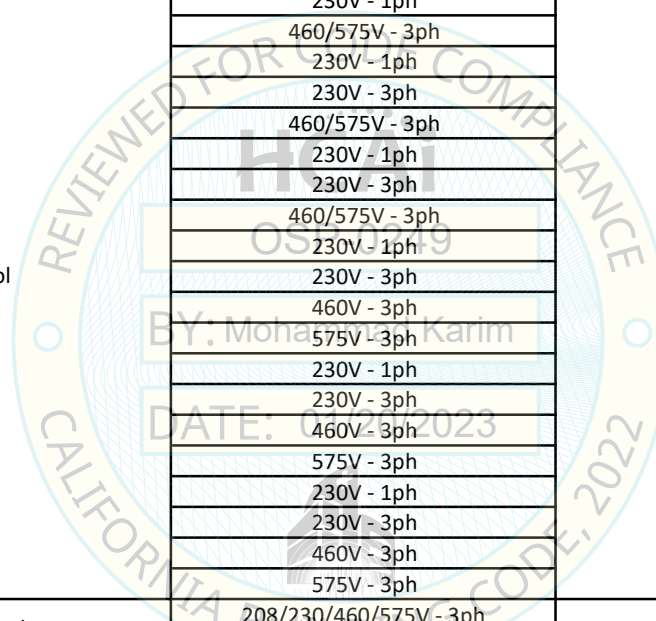
Unit Accessory	Operating Weight (lb)	Unit
Intelli Comfort Board	1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
Coil Guard	7	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
Disconnect	10	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
Electric Heat	28	UUT-05a,b, UUT-06a,b
Economizer	50	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
Gas Heat (Not on XPs)	70	UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b

Special Seismic Certification
Table 2 - Certified Subcomponents - Compressors



DCL Project Number: 96733-2201

Model Number	Manufacturer	Description	Material	Unit
Compressors				
H82J283	Bristol	230V - 3ph	Carbon Steel	UUT-05a,b
H82J28B		230V - 1ph		Interpolated
H82J28D		460/575V - 3ph		Interpolated
H82J373A		230V - 1ph		Interpolated
H82J373D		230V - 3ph		Interpolated
H82J37D		460/575V - 3ph		Interpolated
H82J483A		230V - 1ph		Interpolated
H82J483D		230V - 3ph		Interpolated
H82J483D		460/575V - 3ph		Interpolated
HRH032U1		230V - 1ph		Interpolated
HRH032U2		230V - 3ph		UUT-01a,b, UUT-03a,b
HRH032U4		460V - 3ph		Interpolated
HRH032U7		575V - 3ph		Interpolated
HRH041U1		230V - 1ph		Interpolated
HRH041U2		230V - 3ph		Interpolated
HRH041U4		460V - 3ph		Interpolated
HRH041U7		575V - 3ph		Interpolated
HRH054U1		230V - 1ph		Interpolated
HRH054U2		230V - 3ph		Interpolated
HRH054U4		460V - 3ph		Interpolated
HRH054U7	575V - 3ph	UUT-04a,b		
ZP54K5E	Copeland	208/230/460/575V - 3ph	Carbon Steel	UUT-02a,b
ZP61KCE		208/230/460/575V - 3ph		UUT-06a,b



Special Seismic Certification

Table 3 - Certified Subcomponents - Coils, Valves, Indoor Motors, and Economizers



DCL Project Number: 96733-2201

Model Number	Manufacturer	Description	Material	Unit
Coils				
676262	JCI	Outdoor Coil, 16.3 x 2	Aluminum	UUT-05a,b
573816*		Outdoor Coil, 18.5 x 2	Aluminum	UUT-06a,b
435504		Outdoor Coil, 16.3 x 2	Copper and Aluminum	UUT-03a,b, UUT-04a,b
255202		Outdoor Coil, 16.3 x 2		UUT-01a,b
255468		Outdoor Coil, 16.3 x 2		Interpolated
440770		Outdoor Coil, 16.3 x 2		UUT-02a,b
526682		Indoor Coil, 5.06 x 3		UUT-05a,b
526681		Indoor Coil, 5.06 x 3		Interpolated
514544		Indoor Coil, 5.06 x 4		Interpolated
550356		Indoor Coil, 5.06 x 4		UUT-06a,b
403139		Indoor Coil w/ Reheat, 5.06 x 3		UUT-03a,b
403181		Indoor Coil w/ Reheat, 5.06 x 3		Interpolated
403182		Indoor Coil w/ Reheat, 5.06 x 4	UUT-04a,b	
267504		Indoor Coil, 5.06 x 4	UUT-01a,b	
255186		Indoor Coil, 5.06 x 4	Interpolated	
440763		Indoor Coil, 5.06 x 4	UUT-02a,b	
Thermostatic Expansion Valves				
BBIZE	Sporlan	3/8"	Brass	UUT-03a,b, UUT-04a,b, UUT-05a,b
43712		Fixed Orifice		UUT-06a,b
ANCE	Emerson	3/8"	Brass	UUT-01a,b, UUT-02a,b
Indoor Blower Motors				
*Q*T17D	Marathon	1.5 HP (230/460V-3ph)	Rolled Carbon Steel/ Cast Iron	UUT-01a,b, UUT-03a,b, UUT-05a,b
196302	AO Smith	1.5 HP (230V-1ph)	Rolled Carbon Steel/ Cast Iron	Interpolated
8-158756		2.0 HP (230/460V-3ph)		Interpolated
8-151204		2.0 HP (575V-3ph)		UUT-02a,b, UUT-04a,b
8-158556		3.0 HP (230/460V-3ph)		Interpolated
8-176059		3.0 HP (575V-3ph)		UUT-06a,b
Economizers				
2EE04703724	JCI	Horizontal Economizer	Galvanized Carbon Steel	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
2MD04700324		2-Position Economizer		UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b

Note: *573816 was previously labeled incorrectly as 550546

Special Seismic Certification

Table 4 - Certified Subcomponents - Heaters and Heat Cells



DCL Project Number: 96733-2201

Model Number	Manufacturer	Description	Material	Unit	
Electric Heaters					
2CE04510506	JCI	5 kW (230V-1ph)	Nickel Chrome Alloy Galvanized Carbon Steel	UUT-05a,b	
2CE04510525		5 kW (230V-3ph)		Interpolated	
2CE04510706		7 kW (230V-1ph)		Interpolated	
2CE04510725		7 kW (230V-3ph)		Interpolated	
2CE04510746		7 kW (460V-3ph)		Interpolated	
2CE04511006		10 kW (230V-1ph)		Interpolated	
2CE04511025		10 kW (230V-3ph)		Interpolated	
2CE04511046		10 kW (460V-3ph)		Interpolated	
2CE04511058		10 kW (575V-3ph)		Interpolated	
2CE04511506		15 kW (230V-1ph)		Interpolated	
2CE04511525		15 kW (230V-3ph)		Interpolated	
2CE04511546		15 kW (460V-3ph)		Interpolated	
2CE04511558		15 kW (575V-3ph)		Interpolated	
2CE04512006		20 kW (230V-1ph)		Interpolated	
2CE04512025		20 kW (230V-3ph)		Interpolated	
2CE04512046		20 kW (460V-3ph)		Interpolated	
2CE04512058		20 kW (575V-3ph)		Interpolated	
2CE04513006		30 kW (230V-1ph)		Interpolated	
2CE04513025		30 kW (230V-3ph)		Interpolated	
2CE04513046		30 kW (460V-3ph)		Interpolated	
2CE04513058	30 kW (575V-3ph)	UUT-06a,b			
Heat Cells (Heat Type and Nominal Heat Capacity)					
N04	JCI	40 MBH Output, Single Stage	Aluminized Carbon Steel	UUT-03a,b	
N06		60 MBH Output, Single Stage		Interpolated	
N08		80 MBH Output, Single Stage		Interpolated	
N10		100 MBH Output, Single Stage		Interpolated	
D04		40 MBH Output, Dual Stage		Interpolated	
D06		60 MBH Output, Dual Stage		Interpolated	
D08		80 MBH Output, Dual Stage		Interpolated	
D10		100 MBH Output, Dual Stage		UUT-04a,b	
S04		40 MBH Output, Single Stage		Stainless Steel	UUT-05a,b
S06		60 MBH Output, Single Stage			Interpolated
S08		80 MBH Output, Single Stage	Interpolated		
S10		100 MBH Output, Single Stage	Interpolated		
T04		40 MBH Output, Dual Stage	Interpolated		
T06		60 MBH Output, Dual Stage	Interpolated		
T08		80 MBH Output, Dual Stage	Interpolated		
T10		100 MBH Output, Dual Stage	UUT-06a,b		

Special Seismic Certification

Table 5 - Certified Subcomponents - Filters, Miscellaneous and Outdoor Motors



DCL Project Number: 96733-2201

Model Number	Manufacturer	Description	Material	Weight (lb)	Unit
Filters					
198, 15" x 20"	AAF	1" Fiberglass TA Filter	Fiberglass	<1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
198, 14" x 25"				<1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
300X, 15" x 20"		2" Pleated Filter	Cotton/Polyester	<1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
300X, 14" x 25"				<1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
Miscellaneous					
663678	SAP	Simplicity Lite Board Controller	Plastic	1	UUT-01a,b, UUT-02a,b
663677				1	UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
1157-903	United Technologies	Defrost Board	Plastic	1	UUT-01a,b, UUT-02a,b
1159-10		Itelli Comfort Board		1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
STF-04U	Saginomiya	Reversing Heat Valve	Plastic	2	UUT-01a,b
STF-07U				2	UUT-02a,b
FAL	Square D	Electrical Disconnect Switch	Plastic	3	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
P32AF-2C	JCI	Dirty Filter Switch	Plastic	1	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
2LA04700100		Outdoor Fan Speed Controller		3	UUT-03a,b, UUT-04a,b, UUT-05a,b
2SD04700324		Smoke Detector, Supply & Return		5	UUT-01a,b, UUT-02a,b, UUT-03a,b, UUT-04a,b, UUT-05a,b, UUT-06a,b
Outdoor Fan Motors					
F48H x 1 x 1/4	AO Smith	1/4 HP (230V)	Rolled Carbon Steel/ Cast Iron	13	UUT-01a,b
F48H x 1 x 1/4		1/4 HP (460V)		13	Interpolated
F48L x 1 x 1/2		1/2 HP (230V)		19	UUT-03a,b, UUT-05a,b
F48L x 1 x 1/2		1/2 HP (460V)		19	UUT-02a,b, UUT-04a,b, UUT-06a,b

Options: ODF Blades - Lau T10, ODF Grilles - Premier

Special Seismic Certification
Table 6 - Tested Units

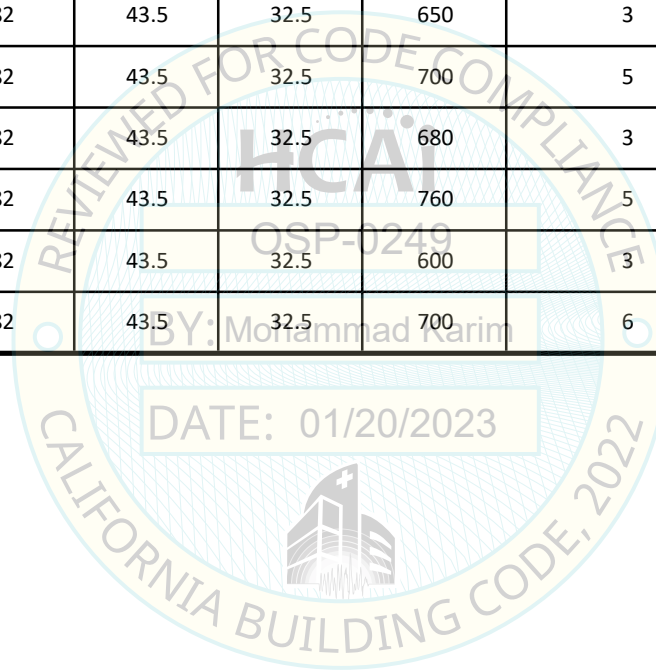


Testing Laboratory: DCL (Report Number 90300-1108a)

DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group (York, Johnson Controls, Coleman, Luxaire, Evcon, Fraser-Johnston, Champion, and TempMaster)

Model Number	Manufacturer	Dimensions (in)			Weight (lb.)	Nominal Cooling Capacity (Tons)	Mounting Configuration	Sds (g) z/h=1	Unit
		Depth	Width	Height					
XP036E05P2bE1	York Small Sunline/ JCI 5 Series Family	82	43.5	32.5	650	3	2.5	Rigid Roof Curb	UUT-01a
XP060E30V5BZZ2								Isolated Roof Curb	UUT-01b
ZR036N04R2DZZ1		82	43.5	32.5	700	5		Rigid Roof Curb	UUT-02a
								Isolated Roof Curb	UUT-02b
ZR060D10U5GZZ1		82	43.5	32.5	680	3		Rigid Roof Curb	UUT-03a
								Isolated Roof Curb	UUT-03b
ZF036S04N2KZZ1		82	43.5	32.5	760	5		Rigid Roof Curb	UUT-04a
								Isolated Roof Curb	UUT-04b
ZF072T10T5bC1		82	43.5	32.5	600	3		Rigid Roof Curb	UUT-05a
								Isolated Roof Curb	UUT-05b
		82	43.5	32.5	700	6		Rigid Roof Curb	UUT-06a
								Isolated Roof Curb	UUT-06b



UUT-01a
DCL (Report No. 90300-1108a)
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: XP036E05P2BAE1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

HRH032U2 Compressor, 255202 Outdoor Coil, 267504 Indoor Coil, ANCE 3/8" Thermostatic Expansion Valve, *Q*T17D Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MMD04700324 2-Position Economizer, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663678 Simplicity Lite Board Controller, 1157-903 Defrost Board, 1159-10 Intelli Comfort Board, STF-04U Reversing Heat Valve, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2SD04700324 Smoke Detector: Supply and Return, and F48H x 1 x 1/4 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
650	82.0	43.5	32.5	10.3	8.0	14.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT1a was tested on an rigid roof curb supplied by MicroMetl, part #W560-OSP-C14D-00000. The curb had six 10-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with sixteen 1/2-inch diameter Grade 5 bolts, six on each long side of the curb and four on each short side, with each side sharing a bolt on the corners.



Overall view of UUT-01a

UUT-01b

DCL (Report No. 90300-1108a)

UNIT UNDER TEST (UUT)

Summary Sheet



DCL
DYNAMIC
CERTIFICATION
LABORATORIES, LLC

DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: XP036E05P2BAE1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

HRH032U2 Compressor, 255202 Outdoor Coil, 267504 Indoor Coil, ANCE 3/8" Thermostatic Expansion Valve, *Q*T17D Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MMD04700324 2-Position Economizer, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663678 Simplicity Lite Board Controller, 1157-903 Defrost Board, 1159-10 Intelli Comfort Board, STF-04U Reversing Heat Valve, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2SD04700324 Smoke Detector: Supply and Return, and F48H x 1 x 1/4 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
650	82.0	43.5	32.5	3.8	3.0	5.3

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT1b was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALSUN3672212. The curb had six 12-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with six 1/2-inch diameter Grade 5 bolts, one centered at each corner and one centered on each of the long sides of the curb.



Overall view of UUT-01b

UUT-02a

DCL (Report No. 90300-1108a)

UNIT UNDER TEST (UUT)

Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: XP060E30V5BZZ2

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

ZP54K5E 575V Compressor, 440770 Outdoor Coil, 440763 Indoor Coil, ANCE 3/8" Thermostatic Expansion Valve, 8-151204 Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663678 Simplicity Lite Board Controller, 1157-903 Defrost Board, 1159-10 Intelli Comfort Board, STF-07U Reversing Heat Valve, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
700	82.0	43.5	32.5	10.0	7.5	17.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT2a was tested on an rigid roof curb supplied by MicroMetl, part #W560-OSP-C14D-00000. The curb had six 10-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with sixteen 1/2-inch diameter Grade 5 bolts, six on each long side of the curb and four on each short side, with each side sharing a bolt on the corners.



Overall view of UUT-02a

UUT-02b

DCL (Report No. 90300-1108a)

UNIT UNDER TEST (UUT)

Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: XP060E30V5BZZ2

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

ZP54K5E 575V Compressor, 440770 Outdoor Coil, 440763 Indoor Coil, ANCE 3/8" Thermostatic Expansion Valve, 8-151204 Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663678 Simplicity Lite Board Controller, 1157-903 Defrost Board, 1159-10 Intelli Comfort Board, STF-07U Reversing Heat Valve, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
700	82.0	43.5	32.5	3.5	2.8	5.8

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT2b was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALSUN3672212. The curb had six 12-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with six 1/2-inch diameter Grade 5 bolts, one centered at each corner and one centered on each of the long sides of the curb.



Overall view of UUT-02b

UUT-03a
DCL (Report No. 90300-1108a)
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZR036N04R2DZZ1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

HRH032U2 230V Compressor, 435504 Outdoor Coil, 403139 Indoor Coil, BBIZE 3/8" Thermostatic Expansion Valve, *Q*T17D Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, N04 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
680	82.0	43.5	32.5	12.8	7.5	17.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT3a was tested on a rigid roof curb supplied by Ruskin, part #80-272-1314. The curb had eight 10-gage anchoring pockets, three on each long side of the curb and one on each short side. The unit was attached to each of the pockets using two #14-24 x 5-inch self drilling screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with eight 3/8-inch diameter Grade 5 bolts, two on each side of the curb, each 5-inches in from the corners.



Overall view of UUT-03a

UUT-03b

DCL (Report No. 90300-1108a)

UNIT UNDER TEST (UUT)

Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZR036N04R2DZZ1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

HRH032U2 230V Compressor, 435504 Outdoor Coil, 403139 Indoor Coil, BBIZE 3/8" Thermostatic Expansion Valve, *Q*T17D Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MMD04700324 2-Position Economizer, N04 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
680	82.0	43.5	32.5	3.5	2.3	6.3

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT3b was tested on an isolated roof curb supplied by MicroMetl, part #0405-602D. The curb had six 10-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with sixteen 1/2-inch diameter Grade 5 bolts, six each long side and four each short side, with each side sharing a bolt on the corners.



Overall view of UUT-03b

UUT-04a

DCL (Report No. 90300-1108a)



UNIT UNDER TEST (UUT)

Summary Sheet

DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZR060D10U5GZZ1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

HRH054U7 575V Compressor, 435504 Outdoor Coil, 403182 Indoor Coil, BBIZE 3/8" Thermostatic Expansion Valve, 8-151204 Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, D10 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
760	82.0	43.5	32.5	9.5	7.8	14.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT4a was tested on an rigid roof curb supplied by MicroMetl, part #W560-OSP-C14D-00000. The curb had six 10-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with sixteen 1/2-inch diameter Grade 5 bolts, six on each long side of the curb and four on each short side, with each side sharing a bolt on the corners.



Overall view of UUT-04a

UUT-04b

DCL (Report No. 90300-1108a)

UNIT UNDER TEST (UUT)

Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZR060D10U5GZZ1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

HRH054U7 575V Compressor, 435504 Outdoor Coil, 403182 Indoor Coil, BBIZE 3/8" Thermostatic Expansion Valve, 8-151204 Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, D10 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses scroll compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
760	82.0	43.5	32.5	4.3	3.5	6.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT4b was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALSUN3672212. The curb had four 12-gage anchoring pockets, two on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with six 1/2-inch diameter Grade 5 bolts, one centered at each corner and one centered on each of the long sides of the curb.



Overall view of UUT-04b

UUT-05a
DCL (Report No. 90300-1108a)
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZF036S04N2KZZ1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

H82J283 230V Compressor, 676262 Outdoor Coil, 526682 Indoor Coil, BBIZE 3/8" Thermostatic Expansion Valve, *Q*T17D Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, 2CE04510506 Electric Heater, S04 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor.
 Uses a reciprocating compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
600	82.0	43.5	32.5	13.0	7.0	16.5

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT5a was tested on a rigid roof curb supplied by Ruskin, part #80-272-1314. The curb had eight 10-gage anchoring pockets, three on each long side of the curb and one on each short side. The unit was attached to each of the pockets using two #14-24 x 5-inch self-drilling screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with eight 3/8-inch diameter Grade 5 bolts, two on each side of the curb, each 5-inches in from the corners.



Overall view of UUT-05a

UUT-05b
DCL (Report No. 90300-1108a)
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZF036S04N2KZZ1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

H82J283 230V Compressor, 676262 Outdoor Coil, 526682 Indoor Coil, BBIZE 3/8" Thermostatic Expansion Valve, *Q*T17D Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, 2CE04510506 Electric Heater, S04 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor.
 Uses a reciprocating compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
600	82.0	43.5	32.5	3.5	2.8	5.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT5b was tested on an isolated roof curb supplied by MicroMetl, part #0405-602D. The curb had six 10-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with sixteen 1/2-inch diameter Grade 5 bolts, six each long side and four each short side, with each side sharing a bolt on the corners.



Overall view of UUT-05b

UUT-06a
DCL (Report No. 90300-1108a)
UNIT UNDER TEST (UUT)
Summary Sheet



DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZF072T10T5BAC1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

ZP61KCE 575V Compressor, 550546 Outdoor Coil, 550356 Indoor Coil, 43712 Fixed Orifice Thermostatic Expansion Valve, 8-176059 Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, 2CE04513058 Electric Heater, T10 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor. Uses a reciprocating compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
700	82.0	43.5	32.5	12.5	7.3	14.0

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT6a was tested on a rigid roof curb supplied by Ruskin, part #80-272-1314. The curb had eight 10-gage anchoring pockets, three on each long side of the curb and one on each short side. The unit was attached to each of the pockets using two #14-24 x 5-inch self drilling screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with eight 3/8-inch diameter Grade 5 bolts, two on each side of the curb, each 5-inches in from the corners.



Overall view of UUT-06a

UUT-06b

DCL (Report No. 90300-1108a)

UNIT UNDER TEST (UUT)

Summary Sheet



DCL
DYNAMIC
CERTIFICATION
LABORATORIES, LLC

DCL Project Number: 96733-2201

Manufacturer: Unitary Product Group

Product Line: York Small Sunline/JCI 5 Series

Model Number: ZF072T10T5BAC1

Product Construction Summary:

Cabinet is constructed of G90 galvanized steel, with powder-coated finish, certified at 1,000 hours salt spray test per ASTM B 117.

Options / Component Summary:

ZP61KCE 575V Compressor, 550546 Outdoor Coil, 550356 Indoor Coil, 43712 Fixed Orifice Thermostatic Expansion Valve, 8-176059 Indoor Blower Motor, 2EE04703724 Horizontal Economizer, 2MD04700324 2-Position Economizer, 2CE04513058 Electric Heater, T10 Heat Cell, 15" x 20" Filter, 14" x 25" Filter, 15" x 20" Filter, 14" x 25" Filter, 663677 Simplicity Lite Board Controller, 1159-10 Intelli Comfort Board, FAL Electric Disconnect Switch, P32AF-2C Dirty Filter Switch, 2LA04700100 Outdoor Fan Speed Controller, 2SD04700324 Smoke Detector: Supply and Return, and F48L x 1 x 1/2 Outdoor Fan Motor.
Uses a reciprocating compressor design.

Note: The UUT was filled with operating fluid for the seismic simulation test and was operational before and after shaking. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
700	82.0	43.5	32.5	3.5	2.5	5.3

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

UUT6b was tested on an isolated roof curb supplied by MicroMetl, part #0405-602D. The curb had six 10-gage anchoring pockets, three on each long side of the curb. The unit was attached to each of the pockets using four #12 1-1/2-inch TEK screws. The curb was attached to the 3/4-inch thick steel shake table interface plate with sixteen 1/2-inch diameter Grade 5 bolts, six each long side and four each short side, with each side sharing a bolt on the corners.



Overall view of UUT-06b