CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP - 0213						
OSHPD Special Seismic Certification Preapproval (OSP)								
Type: ☐ New ☐ Renewal								
Manufacturer Information								
Manufacturer: Johnson Controls Inc. (JCI)								
Manufacturer's Technical Representative: Cameron Boyce, Engineer	II							
Mailing Address: 5005 Interstate Drive, Norman, OK, 73069								
Telephone: (405) 419-6830 Email: camero	on.w.boyce@jci.com							
Product Information	MA							
Product Name: Predator Rooftop Air Conditioning Units	N. P.							
Product Type: Packaged Air Conditioning Units OSP-0213	Cal.							
Product Model Number: (List all unique product identification numbers and/or part numbers) The units are enclosures with the following sul General Description: standard indoor blower motor, Variable frequency drive indoor blower drive, economizer, electric heater, heat cells, filters, and other miscel tables.	ocomponents: refrigerant g valve with coil, thermo motor, exhaust fan moto	ostatic expansion valves, or, variable frequency						
Mounting Description: Units are rigid curb and isolated curb base mo	unted							
ORAL ESTA	ODE							
Applicant Information								
Applicant Company Name: The VMC Group								
Contact Person: John Giuliano								
Mailing Address: _113 Main Street, Bloomingdale, NJ 07403								
Telephone: (973) 838-1780 Email: john.gi	uliano@thevmcgroup.co	<u>m</u>						
I hereby agree to reimburse the Office of Statewide Health Faccordance with the California Administrative Code, 2016.	· ·							
Signature of Applicant:		8/28/19						
Title: President Company Name: The VI	// Group	OCUED						

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY

OSHPD

Page 1 of 3

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)					
Company Name: _ The VMC Group					
Name: Kenneth Tarlow California License Number: SE-2851					
Mailing Address: 113 Main Street, Bloomingdale, NJ 07403					
Telephone: (973) 838-1780 Email: ken.tarlow@thevmcgroup.com					
Supports and Attachments Preapproval					
Supports and attachments are preapproved under OPM- (Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required) Supports and attachments are not preapproved					
Certification Method					
 ✓ Testing in accordance with: ✓ Other (Please Specify): OSP-0213					
BY:Timothy J Piland					
Testing Laboratory DATE: 03/08/2021					
Company Name: DCL Labs					
Contact Name: Josh Sailer, Laboratory Manager					
Mailing Address: 1315 Greg Street, Suite 109, Sparks, NV 89431					
Telephone: (775) 358-5085 Email: josh@shaketest.com					

OSP-0213



03/08/2021



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters
Design in accordance with ASCE 7-16 Chapter 13: ⊠ Yes □ No
Design Basis of Equipment or Components (F _p /W _p) = Rigid Curb = 1.5; Spring Isolated Curb = 4.5
S_{DS} (Design spectral response acceleration at short period, g) = 2.00
a _p (In-structure equipment or component amplification factor) = 2.5
R _p (Equipment or component response modification factor) = Rigid Curb = 6.0; Spring Isolated Curb = 2.0
$Ω_0$ (System overstrength factor) = 2.0
I _p (Importance factor) = 1.5
z/h (Height factor ratio) = 1
Equipment or Component Natural Frequencies (Hz) = See attachment
Overall dimensions and weight (or range thereof) = See attachment
Equipment or Components @ grade designed in accordance with ASCE 7-16 Chapter 15: Yes No
Design Basis of Equipment or Components (V/W) =
S _{DS} (Design spectral response acceleration at short period, g) =
S _{D1} (Design spectral response acceleration at 1 second period, g) =
R (Response modification coefficient) =
Ω ₀ (System overstrength factor) = By:Timothy J Piland
C _d (Deflection amplification factor) =
I_P (Importance factor) = 1.5 DATE: 03/08/2021
Height to Center of Gravity above base =
Equipment or Component Natural Frequencies (Hz) =
Overall dimensions and weight (or range thereof) =
Tank(s) designed in accordance with ASME BPVC, 2015: Yes No
List of Attachments Supporting Special Seismic Certification
Other(s) (Please Specify):
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025
1./ 1 00
Signature: Date: March 8, 2021
Print Name: Timothy/J. Piland Title: SSE
Special Seismic Certification Valid Up to: $S_{DS}(g) = 2.00$ $z/h = 1$
Condition of Approval (if applicable):

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





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03/08/2021

Table 1 - Certified Components

Manufacturer: Johnson Controls and other Unitary Product Group brands (York, Coleman, Luxaire, Evcon, Fraser-Johnston and Ready Ship)

Product Line: JCI Packaged Rooftop Units

Product Construction: Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options: 230-575 V, economizer, power exhaust, electric or gas heater, variable frequency drive

		Dime	nsions (inches)	Nominal			
Product Line	Model Number ²	Depth	Width	Height	Operating Weight (lb)	Cooling Capacity (Tons)	Sds (g), z/h=1	Unit
	ZH/ZU/JA3 037	89	59	42	860 ¹	3		3
	ZJ/ZW/JA3 037	89	59	42	740	3		Interpolated
	ZR/ZK/JA3 037	89	59	42	980 ¹	3		1
	ZT/ZV/JA3 037	89	59	42	922	3		Interpolated
	ZH/ZU/JA4 049	89	59	42	763	4		Interpolated
Predator Air Handling	ZJ/ZW/JA4 049	89	59	42	762	4	2.0	Interpolated
Units (Short)	ZR/ZK/JA4 049	89	59	42	880	4	2.0	Interpolated
	ZT/ZV/JA4 049	89	59	42	960	4		Interpolated
	ZH/ZU/JA5 061	89	59	42	772	5		Interpolated
	ZJ/ZW/JA5 061	89	59	42	1,070 ¹	5		4
	ZR/ZK/JA5 061	89	59	42	1,070 ¹	5		2
	ZT/ZV/JA5 061	89	59	42	968	5		Extrapolated
	XP/XA/J06 078	89	59	42	970 ¹	6.5		7
	ZF/ZS/J06 078	89	59	42	1,090 ¹	6.5		10
	ZH/ZU/J06 078	89	59	42	910	6.5	2.0	Interpolated
	ZJ/ZW/J06 078	89	59	51	1030	6.5		Interpolated
	ZR/ZK/J06 078	89/	59	51	1,060 ¹	6.5		5
	ZF/ZS/J07 090	89	59	42.	- 860 1 3	7.5		Interpolated
	ZH/ZU/J07 090	89	59	42	910	7.5		Interpolated
	ZJ/ZW/J07 090	89	59	51	1,081	7.5		Interpolated
	XP/XA/J07 090	89	59. / T	42-+	920 🗀	7.5		Interpolated
	ZR/ZK/J07 090	89	59	42	965	7.5		Interpolated
	ZF/ZS/J08 102	89	59	51	1,020	8.5		Interpolated
	ZH/ZU/J08 102	89	59	51	1,030	8.5	111111/	Interpolated
Predator Air Handling	ZJ/ZW/J08 102	89	59AT	E: 513/	001,060	8.5	1111/	Interpolated
Units (Standard)	XP/XA/J08 102	89	59	51	1,135	8.5	1/0/	Interpolated
	ZR/ZK/J08 102	89	59	51	1,200	8.5		Interpolated
	ZF/ZS/J10 120	89	59	51	1,060	10	00	Interpolated
	ZH/ZU/J10 120	89	59	51	1,090	10		Interpolated
	ZJ/ZW/J10 120	89	59	51	1,070	10		Interpolated
	XP/XA/J10 120	89	59	/ 51	1,135	10		Interpolated
	ZR/ZK/J10 120	89	59	4 51R/	1,200	10		Interpolated
	ZF/ZS/J12 150	119.5	59	51	1,253	12.5		Interpolated
	ZH/ZU/J12 150	119.5	59	51	1,250 ¹	12.5		11
	XP/XA/J12 150	119.5	59	51	1,510 ¹	12.5	2.0	8
	ZJ/ZW/J12 150	119.5	59	51	1,570 ¹	12.5		9
	ZR/ZK/J12 150	119.5	59	51	1,600 ¹	12.5	1	6
	ZT/ZV 120	119.5	59	51	1,470 ¹	10		12
Predator Air Handling	ZT/ZV 078	119.5	59	51	1,550	6.5		Interpolated
Units (Ultra High	ZT/ZV 090	119.5	59	51	1,550	7.5	2.0	Interpolated
Efficiency)	ZT/ZV 102	119.5	59	51	1,575	8.5		Interpolated
	ZT/ZV 150	119.5	59	51	1,680 ¹	12.5	 	13

^{1.} 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 table below.

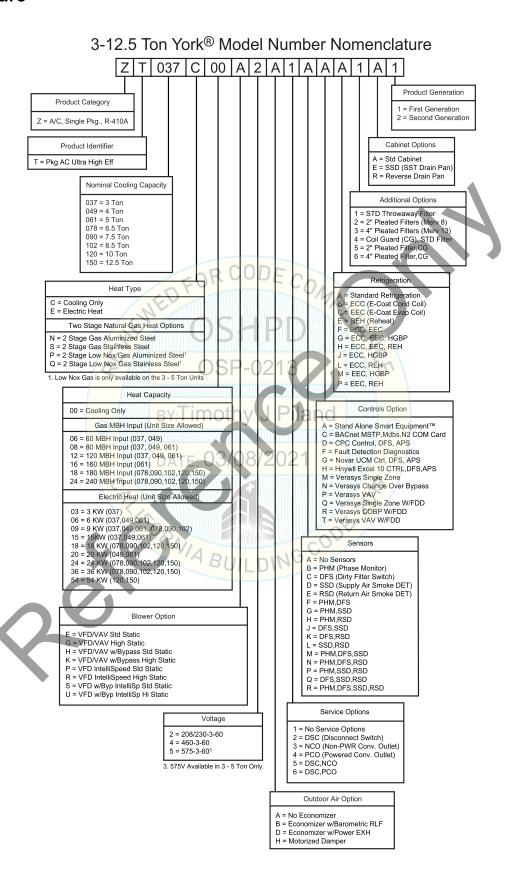
^{2.} Model numbers are generalized for each type of unit and the associated BTU tonnage that the unit can output.

Unit Accessory	Operating Weight (lbs.)
Economizer	85
Power Exhaust	35
Electric Heat	49
Gas Heat	110
Variable Frequency Drive	30

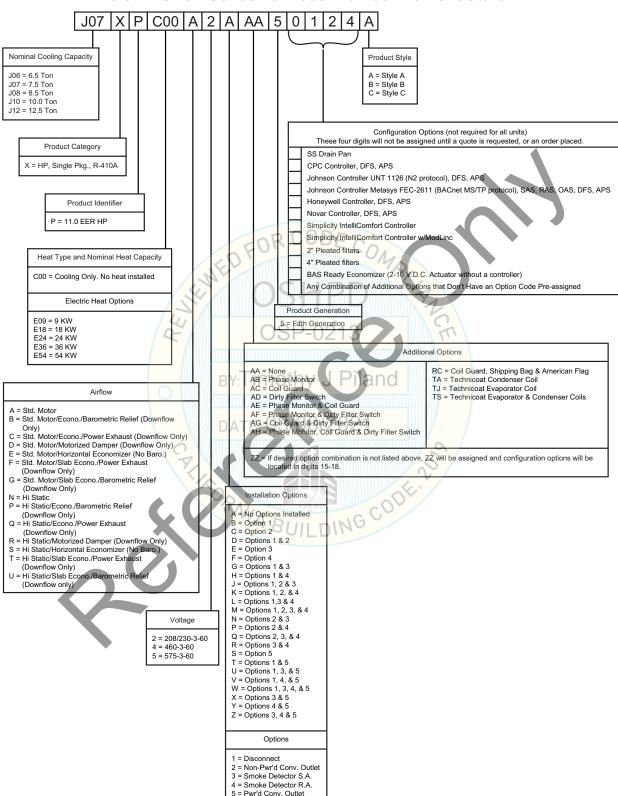
^{1.} Weight given is for the maximum electric heater size available.

^{2.} Weight given for the gas heater is for the maximum number of tube heat exchangers available (8 tube).

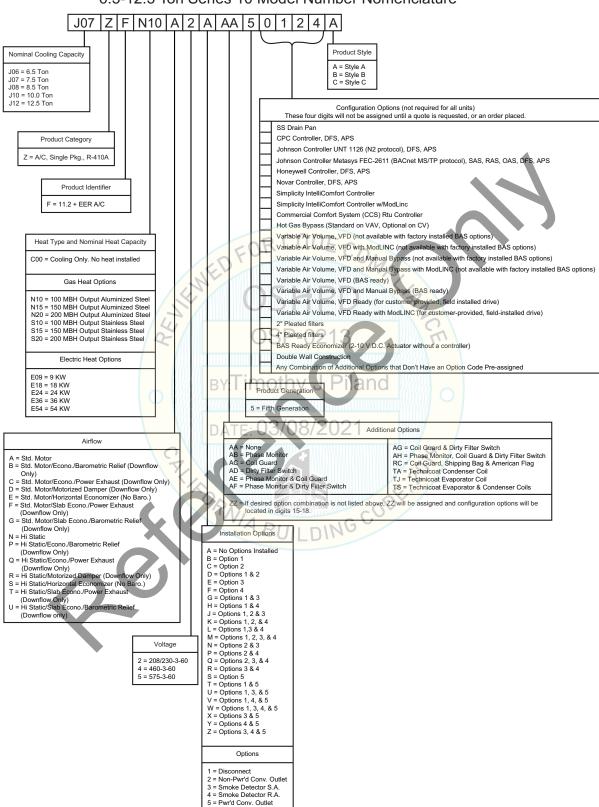
 $^{{\}bf 3.}\ Weight\ includes\ mounting\ hardware,\ controls\ and\ manual\ by pass\ option.$

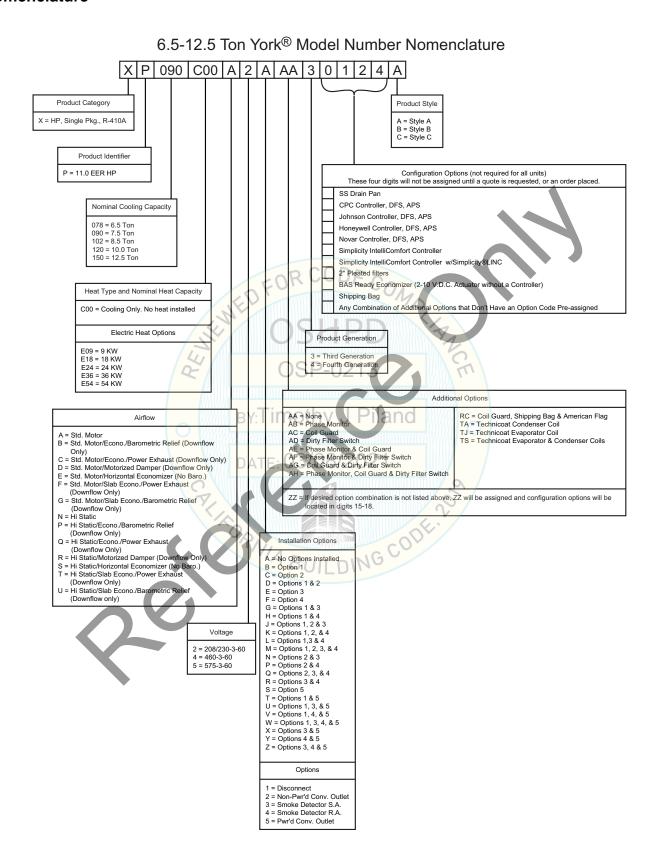


6.5-12.5 Ton Series 10 Model Number Nomenclature

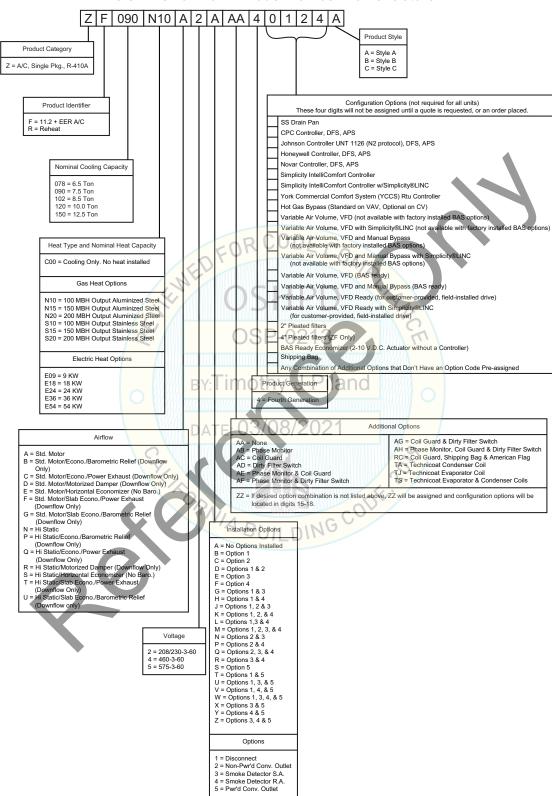


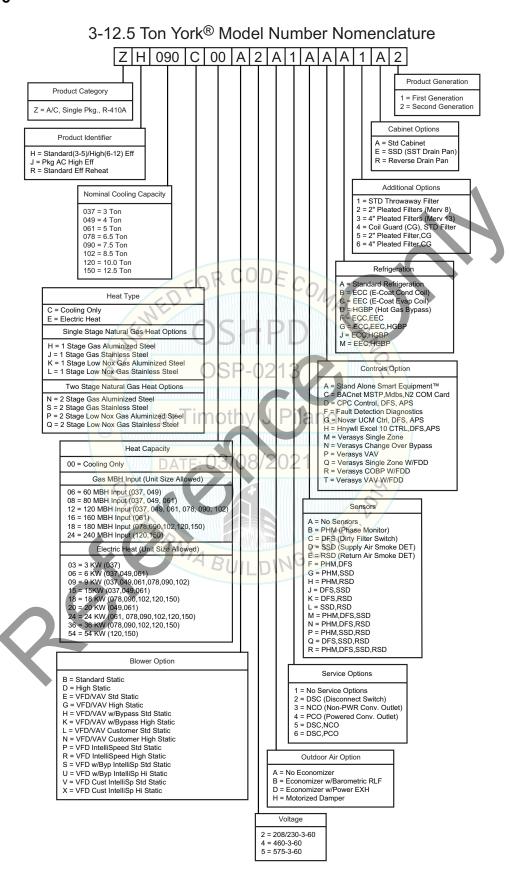
6.5-12.5 Ton Series 10 Model Number Nomenclature



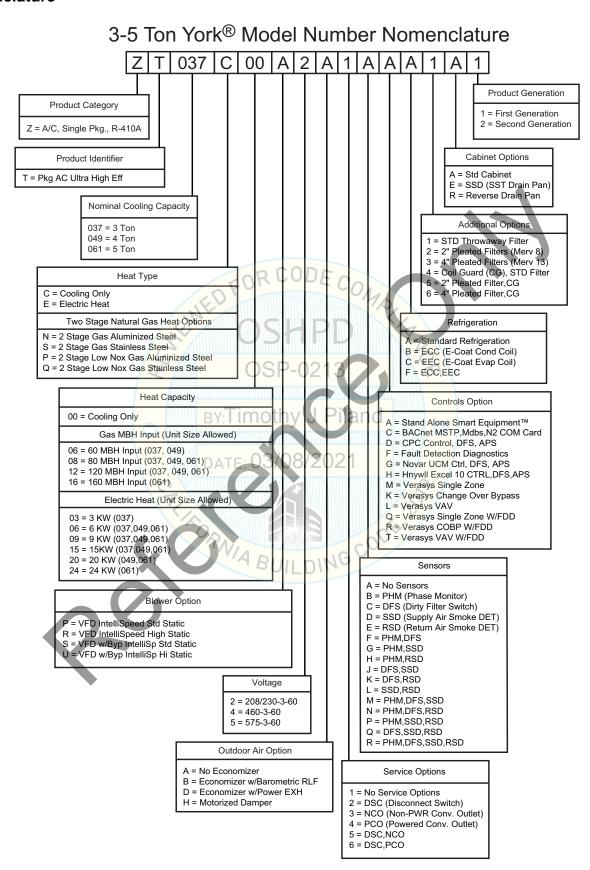


6.5-12.5 Ton York® Model Number Nomenclature



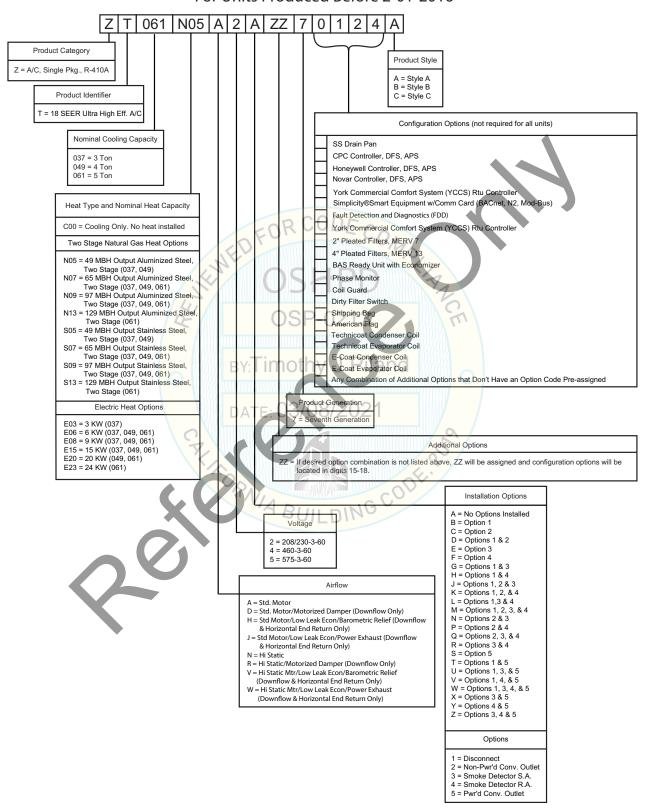


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Prior Nomenclature

3-5 Ton York® Model Number Nomenclature For Units Produced Before 2-01-2016



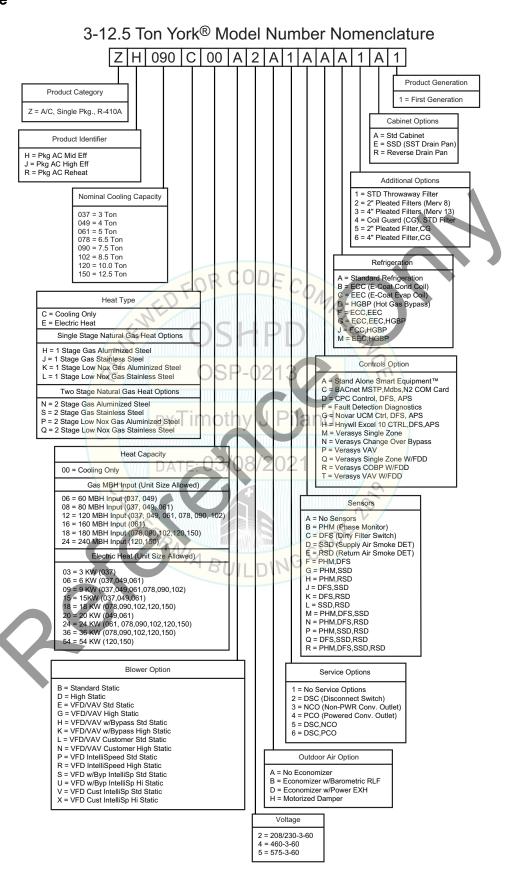
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3-12.5 Ton York® Model Number Nomenclature Z H 090 N10 A 2 A AA 5 0 1 2 4 A Product Category Product Style A = Style A B = Style B Z = A/C, Single Pkg., R-410A Product Identifier Configuration Options (not required for all units) H = 11.7-11.8 FFR These four digits will not be assigned until a quote is requested, or an order placed. J = 12.2 EER SS Drain Pan R = Reheat CPC Controller, DFS, APS Nominal Cooling Capacity Johnson Controller UNT 1126 (N2 protocol), DFS, APS 037 = 3 Ton 049 = 4 Ton 061 = 5 Ton 078 = 6.5 Ton Honeywell Controller, DFS, APS Novar Controller, DFS, APS Simplicity IntelliComfort Controller 090 = 7.5 Ton 102 = 8.5 Ton Simplicity IntelliComfort Controller w/Simplicity®LINC York Commercial Comfort System (YCCS) Rtu Controlle 120 = 10.0 Ton 150 = 12.5 Ton Hot Gas Bypass (Standard on VAV, Optional on CV) Variable Air Volume, VFD (not available with factory i Heat Type and Nominal Heat Capacity Variable Air Volume, VFD with Simplicity®LINC (not available with factory (Unit Size Allowed) Variable Air Volume, VFD and Manual Bypass (not available with factory installed BAS options) C00 = Cooling Only. No heat installed Variable Air Volume, VFD and Manual Bypass with Simplicity®LINC (not available with factory installed BAS options) Single Stage Natural Gas Heat Options A05 = 49 MBH Output Aluminized Steel Variable Air Volume, VFD (BAS ready) Single Stage (037, 049) A07 = 65 MBH Output Aluminized Steel, Single Stage (037, 049, 061) A09 = 97 MBH Output Aluminized Steel, Variable Air Volume, VFD and Manual Bypass (BAS ready) Variable Air Volume, VFD Ready (for customer-provided, field-installed drive) Variable Air Volume, VFD Ready with Simplicity®LINC Single Stage (037, 049, 061) A13 = 129 MBH Output Aluminized Steel, (for customer-pr ded, field-installed drive) Single Stage (061) B05 = 49 MBH Output Stainless Single Stage (037, 049) 2" Pleated filters 4" Pleated filters Single Stage (037, 049) B07 = 65 MBH Output Stainless Steel, Single Stage (037, 049, 061) B09 = 97 MBH Output Stainless Steel, Single Stage (037, 049, 061) B13 = 129 MBH Output Stainless Steel, BAS Ready Economizer (2-10 V.D.C. Actuator without a Controller) Any Combination of Additional Options that Don't Have an Option Code Pre-assigned Product Generation Single Stage (061) Two Stage Natural Gas Heat Options = Fifth Generation N05 = 49 MBH Output Aluminized Steel, Two Stage (037, 049) N07 = 65 MBH Output Aluminized Steel, Two Stage (037, 049, 061) Additional Options N09 = 97 MBH Output Aluminized Steel, Two Stage (037, 049, 061) N13 = 129 MBH Output Aluminized Steel, Two Stage (061) S05 = 49 MBH Output Stainless Steel, Two Stage (037, 049) AA = None AB = Phase Monitor AC = Coil Guard AD = Dirty Filter Switch AE = Phase Monitor & Coil Guard AF = Phase Monitor & Dirty Filter Switch AG = Coil Guard & Dirty Filter Switch AH = Phase Monitor, Coil Guard & Dirty Filter Switch RC = Coil Guard, Shipping Bag & American Flag TA = Technicoat Condenser Coil TJ = Technicoat Evaporator Coil S07 = 65 MBH Output Stainless Steel, Two Stage (037, 049, 061) S09 = 97 MBH Output Stainless Steel, ZZ = If desired option combination is not listed above, ZZ will be assigned and configuration options will be Two Stage (037, 049, 061) S13 = 129 MBH Output Stainless Steel, located in digits 15-18. \$13 = 129 MBH Output Stainless Steel, Two Stage (061) N10 = 100 MBH Output Aluminized Steel, Two Stage (078, 090, 102) N15 = 150 MBH Output Aluminized Steel, Two Stage (078, 090, 102, 120, 150) N20 = 200 MBH Output Aluminized Steel, Two Stage (178, 090, 102, 120, 150) S10 = 100 MBH Output Stainless Steel, Two Stage (178, 090, 102) \$15 = 150 MBH Output Stainless Steel, Two Stage (078, 090, 102, 120, 150) \$20 = 200 MBH Output Stainless Steel, Two Stage (120, 150) Installation Options Voltage A = No Options Installed B = Option 1 C = Option 2 D = Options 1 & 2 2 = 208/230-3-60 4 = 460-3-60 5 = 575-3-60 E = Option 3 F = Option 4 G = Options 1 & 3 H = Options 1 & 4 Airflow J = Options 1, 2 & 3 K = Options 1, 2, & 4 Electric Heat Options A = Std. Motor B = Std. Motor/Econo./Barometric Relief (Downflow L = Options 1, 2, & 4 M = Options 1, 2, 3, & 4 N = Options 2, 3, & 4 N = Options 2, 3 E03 = 3 KW (037) E06 = 6 KW (037, 049, 061) E08 = 9 KW (037, 049, 061) Only) C = Std. Motor/Econo./Power Exhaust (Downflow Only) C = Std. Motor/Econo/Prower Exhaust (Downliow O D = Std. Motor/Motorized Damper (Downflow Only) E = Std. Motor/Horizontal Economizer (No Baro.) F = Std. Motor/Slab Econo/Power Exhaust (Downflow Only) G = Std. Motor/Slab Econo/Barometric Relief P = Options 2 & 4 E09 = 9 KW (078, 090, 102) E15 = 15 KW (037, 049, 061) E18 = 18 KW (078, 090, 102, 120, 150) E20 = 20 KW (049, 061) Q = Options 2, 3, & 4 R = Options 3 & 4 S = Option 5 T = Options 1 & 5 E23 = 24 KW (061) U = Options 1, 3, & 5 (Downflow Only) V = Options 1, 4, & 5 W = Options 1, 3, 4, & 5 X = Options 3 & 5 Y = Options 4 & 5 E24 = 24 KW (078, 090, 102, 120, 150) N = Hi Static P = Hi Static/Econo./Barometric Relief (Downflow Only) Q = Hi Static/Econo./Power Exhaust E36 = 36 KW (078, 090, 102, 120, 150) E54 = 54 KW (120, 150) Z = Options 3, 4 & 5 (Downflow Only) R = Hi Static/Motorized Damper (Downflow Only) S = Hi Static/Horizontal Economizer (No Baro.) Options T = Hi Static/Slab Econo./Power Exhaust (Downflow Only)

U = Hi Static/Slab Econo./Barometric Relief

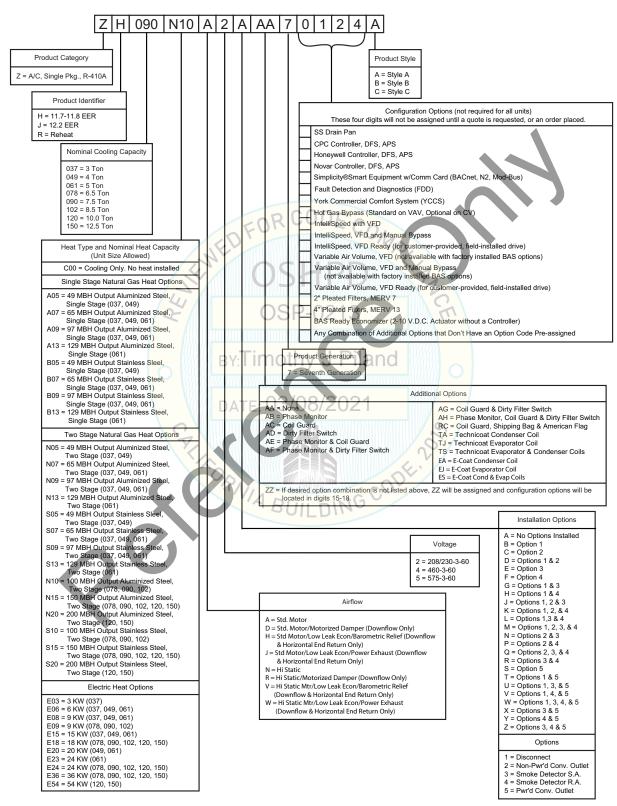
1 = Disconnect

2 = Non-Pwr'd Conv. Outlet 3 = Smoke Detector S.A. 4 = Smoke Detector R.A. 5 = Pwr'd Conv. Outlet

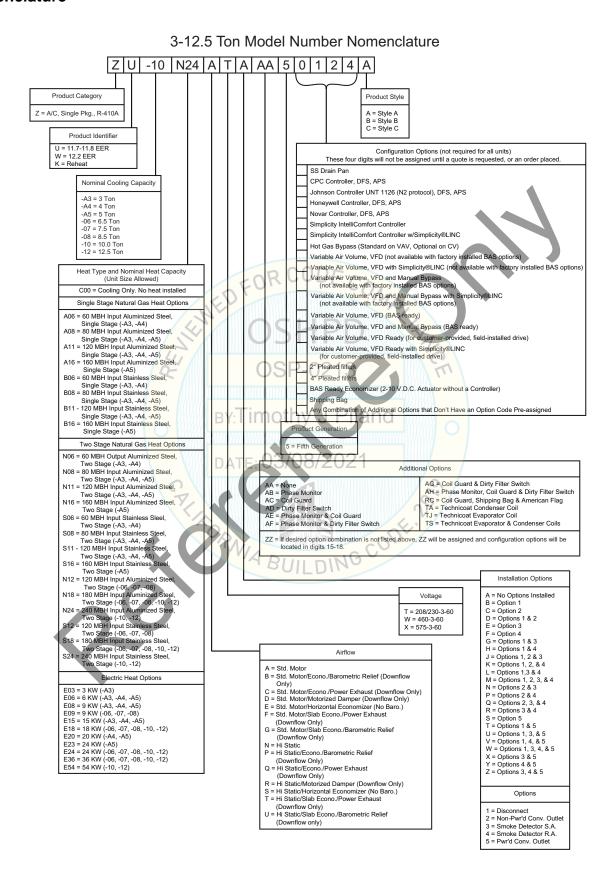


Prior Nomenclature

3-12.5 Ton York® Model Number Nomenclature For Units Produced Before 2-01-2016



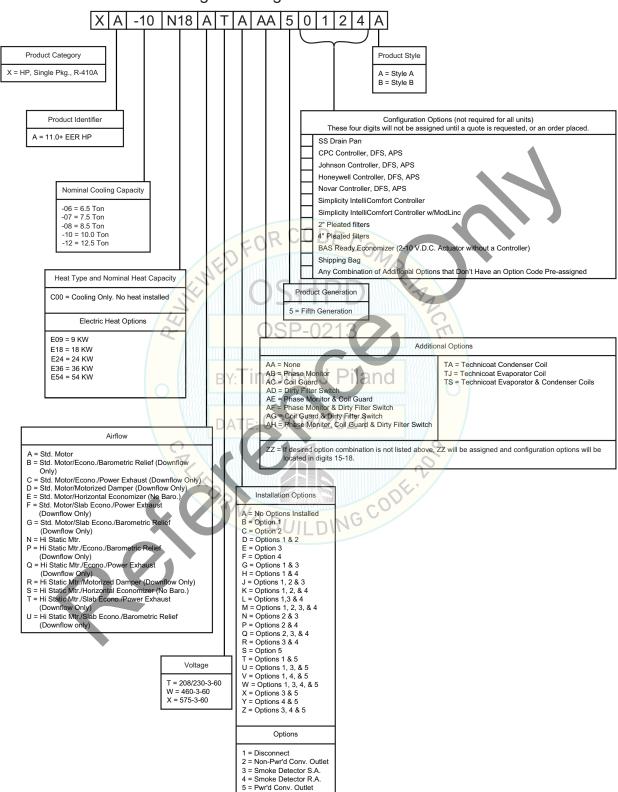
4



6.5-12.5 Ton Single Package Model Number Nomenclature Z S -10 N18 A T A AA 5 0 1 2 4 A Product Category Product Style Z = A/C, Single Pkg., R-410A A = Style A B = Style B Configuration Options (not required for all units) These four digits will not be assigned until a quote is requested, or an order placed. Product Identifier S = 11.2 + EER A/C SS Drain Pan CPC Controller, DFS, APS Johnson Controller UNT 1126 (N2 protocol), DFS, APS Nominal Cooling Capacity Honeywell Controller, DFS, APS -06 = 6.5 Ton Novar Controller, DFS, APS -07 = 7.5 Ton -08 = 8.5 Ton Simplicity IntelliComfort Controller -10 = 10.0 Ton Simplicity IntelliComfort Controller w/Simplicity®LINC -12 = 12.5 Ton Hot Gas Bypass (Standard on VAV, Optional on CV) Variable Air Volume, VFD (not available with factory installed BAS options) Variable Air Volume, VFD with Simplicity®LINC (not available vith factory installed BAS Heat Type and Nominal Heat Capacity Variable Air Volume, VFD and Manual Bypass (not available with factory installed BAS options) C00 = Cooling Only. No heat installed Variable Air Volume, VFD and Manual Bypass with Simplicity®LINC (not available with factory installed BAS options) Gas Heat Options Variable Air Volume, VFD (BAS ready) Variable Air Volume, VFD and Manual Bypass (BAS ready) N12 = 120 MBH Input Aluminized Steel N18 = 180 MBH Input Aluminized Steel N24 = 240 MBH Input Aluminized Steel S12 = 120 MBH Input Stainless Steel S18 = 180 MBH Input Stainless Steel Variable Air Volume, VFD Ready (for customer-provided, field-installed drive) Variable Air Volume, VFD Ready with Simplicity©LINC (for customer-provided, field-installed drive) 2" Pleated filters S24 = 240 MBH Input Stainless Steel BAS Ready Economizer (2-10 V.D.C. Actuator without a Controller) Electric Heat Options Shipping Bag E09 = 9 KW E18 = 18 KW Any Combination of Additional Options that Don't Have an Option Code Pre-assigned E24 = 24 KW Product Generation Airflow Additional Options AA = None AB = Phase Monitor AC = Coil Guard AD = Dirty Filter Switch AE = Phase Monitor & Coil Guard AF = Phase Monitor & Dirty Filter Switch AG = Coil Guard & Dirty Filter Switch A = Std. Motor B = Std. Motor/Econo./Barometric Relief (Downflow TA = Technicoat Condenser Coil TJ = Technicoat Evaporator Coil B = Std. Motor/Econo./Barometric Relief (Downflow Only) C = Std. Motor/Econo./Power Exhaust (Downflow Only) D = Std. Motor/Motorized Damper (Downflow Only) E = Std. Motor/Hotizontal Economizer (No Baro.) F = Std. Motor/Slab Econo./Power Exhaust (Downflow Only) G = Std. Motor/Slab Econo./Barometric Relief (Downflow Only) TS = Technicoat Evaporator & Condenser Coils AG = Coil Guard & Dirty Filter Switch AH = Phase Monitor, Coil Guard & Dirty Filter Switch (Downflow Only) N = Hi Static ZZ = If desired option combination is not listed above, ZZ will be assigned and configuration options will be located in digits 15-18. P = Hi Static/Econo./Bare (Downflow Only) Q = Hi Static/Econo./Pow (Downflow Only) ver Exhaust Installation Options R = Hi Static/Motorized Damper (Downflow Only) S = Hi Static/Horizontal Economizer (No Baro.) T = Hi Static/Slab Econo./Power Exhaust A = No Options Installed B = Option 1 C = Option 2 D = Options 1 & 2 (Downflow Only) U = Hi Static/Slab Econo (Downflow only) E = Option 3 F = Option 4 F = Option 4 G = Options 1 & 3 H = Options 1 & 4 J = Options 1, 2 & 3 K = Options 1, 2, & 4 L = Options 1, 3 & 4 M = Options 1, 2, 3, & 4 T = 208/230-3-60

W = 460-3-60 X = 575-3-60 N = Options 2 & 3 P = Options 2 & 4 Q = Options 2, 3, & 4 R = Options 3 & 4 S = Option 5 S = Option 5 T = Options 1 & 5 U = Options 1, 3, & 5 V = Options 1, 4, & 5 W = Options 1, 3, 4, & 5 X = Options 3 & 5 X = Options 3 & 5 X = Options 4 & 5 Y = Options 4 & 5 Z = Options 3, 4 & 5 Options 1 = Disconnect 2 = Non-Pwr'd Conv. Outlet 3 = Smoke Detector S.A. 4 = Smoke Detector R.A. 5 = Pwr'd Conv. Outlet

6.5-12.5 Ton Single Package Model Number Nomenclature



4

3-12.5 Ton JCI Series 10 Model Number Nomenclature

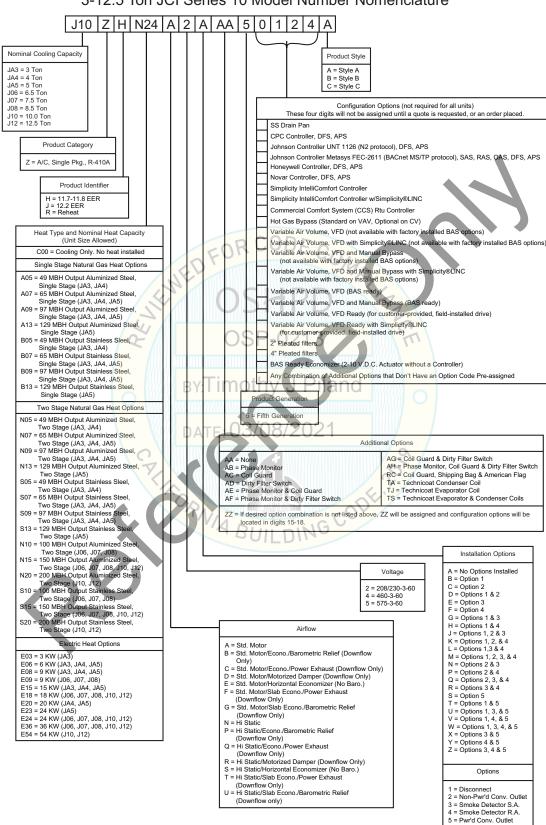


Table 2 - Certified Subcomponents - Refrigerant Compressor

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Mounting Description: Rigid or Flexible Curb Mounting

Model Number	Manufacturer	Material of Construction	Unit
H82J263		Carbon Steel	1
H82J283		Carbon Steel	3
H82J293		Carbon Steel	Interpolated
H82J303		Carbon Steel	10
H82J353		Carbon Steel	Interpolated
H82J373	Dristal	Carbon Steel	Interpolated
H82J403	Bristol	Carbon Steel	Interpolated
H82J483		Carbon Steel	2, 4
H83C363	.00	Carbon Steel	7
H83R443	SFORG	Carbon Steel	Interpolated
H83R513	MEDFORCO	Carbon Steel	Interpolated
H83R683		Carbon Steel	8
HLH068	Danfoss	Carbon Steel	6,11
ZP29K6E	Q OSF	Carbon Steel	Extrapolated ²
ZPS30K5E		Carbon Steel	Extrapolated
ZP36K5E	By:Timoth	Carbon Steel	5
ZP38K6E	BY:TITIOU	Carbon Steel	Interpolated
ZP39K5E		Carbon Steel	Interpolated
ZP40K6E	DATE: 03/0	Carbon Steel	Interpolated
ZPS40K5E	Consider	Carbon Steel	12
ZP42K5E		Carbon Steel	Interpolated
ZP44K5E		Carbon Steel	Interpolated
ZP34K6E	Copeland	Carbon Steel	Interpolated
ZP51K5E	ABU	Carbon Steel	9
ZPS51K5E		Carbon Steel	Interpolated
ZP54K6E		Carbon Steel	Interpolated
ZP49K6E		Carbon Steel	Interpolated
ZPS49K5E		Carbon Steel	12
ZPS60K5E		Carbon Steel	13
ZP61K5E		Carbon Steel	Interpolated
ZP67KCE		Carbon Steel	Interpolated
ZP72KCE		Carbon Steel	13

Note:

^{1.} Tested Copeland compressors weigh between 63 and 88 lb. Extrapolated Copeland compressors weigh 48 and 49 lb.

Table 3 - Certified Subcomponents - Outdoor Fan Motors

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Mounting Description: Rigid or Flexible Curb Mounting

Outdoor Fan Motors							
Model Number	Manufacturer	Voltage [V]	Power [Horsepower]	Material of Construction	Unit		
F48T	AO Smith ¹	230/460/575	1/3	Carbon Steel	1,2,3,4		
F48N	AU Smith	230/460/576	1/3 to 3/4 (2-4 Quantity)	Carbon Steel	5, 6, 7, 8, 9, 10, 11		
1041518		230	1/3	Carbon Steel	Extrapolated		
5271257		230	1/3	Carbon Steel	Extrapolated		
5271258		460	1/3	Carbon Steel	Extrapolated		
5400378		230	1/3	Carbon Steel	Extrapolated		
5400379	Genteq ¹	460	1/3	Carbon Steel	13		
5400376		230	1/3	Carbon Steel	12		
5400377		460	1/3	Carbon Steel	Extrapolated		
5411939		230	FOR 1/3 E CO	Carbon Steel	Extrapolated		
5411940]	460	1/3	Carbon Steel	Extrapolated		

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

1. Owned by Regal Beloit.



Table 4 - Certified Subcomponents - Indoor Coils

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Indoor Coils						
Model Number	umber Manufacturer Description Dimensions [to		Dimensions [total ft^2]	Material of Construction	Unit	
84978	JCI	Evaporating Coils	7.8	Copper	5	
84974	JCI	Evaporating Coils	10.0	Copper	13	
5522860	JCI	Evaporating Coils	10.0	Copper	13	
83725	JCI	Evaporating Coils	8.0	Aluminum and Copper	3	
74105	JCI	Evaporating Coils	10.6	Aluminum and Copper	2	
83730	JCI	Evaporating Coils	10.6	Aluminum and Copper	1, 4, 5, 7, 10	
83694	JCI	Evaporating Coils	13.2	Aluminum and Copper	Interpolated	
83748	JCI	Evaporating Coils	13.2	Aluminum and Copper	6, 8, 9, 11	
286479	JCI	Reheat Coil	6.6	Aluminum and Copper	5	
635816	JCI	Reheat Coil	10.0 CO	Aluminum and Copper	6	



Table 5 - Certified Subcomponents - Outdoor Coils

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Outdoor Coils						
Model Number	Manufacturer	Description	Dimensions [total ft^2]	Material of Construction	Unit	
JCI#449602	Delphi	Condenser Coil	11.9	Aluminum	3	
JCI#666492	Delphi	Condenser Coil	11.9	Aluminum	1	
JCI#670762	Delphi	Condenser Coil	11.9	Aluminum	2	
JCI#449598	Delphi	Condenser Coil	18.5	Aluminum	10	
JCI#513695	Delphi	Condenser Coil	18.5	Aluminum	Interpolated	
JCI#449600	Delphi	Condenser Coil	23.8	Aluminum	4	
JCI#519832	Delphi	Condenser Coil	23.8	Aluminum	Interpolated	
JCI#520526	Delphi	Condenser Coil	23.8	Aluminum	Interpolated	
JCI#551643	Delphi	Condenser Coil	23.8	Aluminum	Interpolated	
JCI#579297	Delphi	Condenser Coil	OK 23.8 CO	Aluminum	5	
JCI#579313	Delphi	Condenser Coil	23.8	Aluminum	Interpolated	
JCI#519833	Delphi	Condenser Coil	29.0	Aluminum	Interpolated	
JCI#519834	Delphi	Condenser Coil	O O 1 29.0	Aluminum	11	
JCI#513697	Delphi	Condenser Coil	OSD 29.0	Aluminum	Interpolated	
JCI#519833	Delphi	Condenser Coil	29.0	Aluminum	Interpolated	
JCI#579319	Delphi	Condenser Coil	29.0	<u>Alumi</u> num	Interpolated	
JCI#520697	Delphi	Condenser Coil	mothy _{47.5} Piland	Aluminum Aluminum	9	
JCI#85075	Delphi	Condenser Coil	47.5	Aluminum	6	
256903	JCI	Fin/Tube	03/0838021	Aluminum and Copper	7	
260544	JCI	Fin/Tube	23.8	Alu <mark>minum</mark> and Copper	Interpolated	
176560	JCI	Fin/Tube	29.0	Aluminum and Copper	Interpolated	
177201	JCI	Fin/Tube	29.0	Aluminum and Copper	Interpolated	
253771	JCI	Fin/Tube	47.5	Aluminum and Copper	8	
5410631	Sanhua	Condenser Coil	4 P 9.4 NG	Aluminum	Extrapolated	
5399396	Sanhua	Condenser Coil	12.1	Aluminum	12	
5444909	Sanhua	Condenser Coil	12.1	Aluminum	Interpolated	
5399395	Sanhua	Condenser Coil	12.1	Aluminum	13	
5444910	Sanhua	Condenser Coil	14.8	Aluminum	13	
5399399	Sanhua	Condenser Coil	14.8	Aluminum	13	
5399400	Sanhua	Condenser Coil	14.8	Aluminum	13	
5399400	Sanhua	Condenser Coil	14.8	Aluminum	Interpolated	
5410632	Sanhua	Condenser Coil	11.8	Aluminum	Interpolated	
5399402	Sanhua	Condenser Coil	14.4	Aluminum	12	

Table 6 - Certified Subcomponents - Reversing Valve with Coil

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Reversing Valve with Coil							
Model Number Manufacturer Description Material of Construction Unit							
STF04U23G	Danfoss	Reversing Valve with Coil	Brass, Copper	7			
STF07U21G	Danfoss	Reversing Valve with Coil	Brass, Copper	8			



Table 7 - Certified Subcomponents - Thermostatic Expansion Valves

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Mounting Description: Rigid or Flexible Curb Mounting

Thermostatic Expansion Valves							
Model Number Manufacturer Description Material of Construction Unit							
BBIZE-3	Sporlan	3/8"	Brass, Copper	5, 7, 10			
BBIZE-4	Sporlan	3/8"	Brass, Copper	Interpolated			
BBIZE-5	Sporlan	3/8"	Brass, Copper	Interpolated			
BBIZE-6	Sporlan	3/8"	Brass, Copper	5, 8, 9, 11			

Note: 2 valves per UUT.



Table 8 - Certified Subcomponents - Indoor Blower Motor, Standard

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Indoor Blower Motor, Standard							
Model Number Manufacturer Description Material of Construction Unit							
P63PYC	Emerson	1.5 to 2.0 HP	Carbon Steel	1, 2, 3, 4, 5, 7, 10			
U56T	Marathon	1.5 to 3.0 HP/575V	Carbon Steel	5, 6, 7, 8, 9, 10, 11			
Q56T	Marathon	3.0 HP/230-460V	Carbon Steel	6, 8, 9, 11			
8-158756PP	AO Smith	2.0 HP/230-460V	Carbon Steel	5, 7, 10			
36J448	Baldor	5.0 HP/230-460V	Carbon Steel	6, 8, 9, 11			
36B106	Baldor	5.0 HP/575V	Carbon Steel	6, 8, 9, 11			



Table 9 - Certified Subcomponents - Indoor Blower Motor, Variable Frequency Drive

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Indoor Blower Motor, Variable Frequency Drive								
Model Number	Manufacturer	Description	Material of Construction	Unit				
35Y377S	Baldor	1.5 HP 230/460V	Carbon Steel	10				
35Y041P	Baldor	2.0 HP 230/460V	Carbon Steel	10				
35Y041M	Baldor	1.5 HP 575V	Carbon Steel	10				
35Y377S	Baldor	2.0 HP 575V	Carbon Steel	10				
35Y041T	Baldor	3.0 HP 230/460V	Carbon Steel	9, 11				
35Y041S	Baldor	3.0 HP 575V	Carbon Steel	9, 11				
36M381	Baldor	5.0 HP/230-460V	Carbon Steel	9, 11				
36M382	Baldor	5.0 HP/575V	Carbon Steel	9, 11				



Table 10 - Certified Subcomponents - Exhaust Fan Motor

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Exhaust Fan Motor							
Model Number	odel Number Manufacturer Description Material of Construction						
F48X26	A.O. Smith	230V Motor	Carbon Steel	4			
F48X06	A.O. Smith	460V Motor	Carbon Steel	Interpolated			
F48W97	A.O. Smith	575V Motor	Carbon Steel	10			



Table 11 - Certified Subcomponents - Variable Frequency Drive

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Mounting Description: Rigid or Flexible Curb Mounting

Variable Frequency Drive							
Model Number Manufacturer		Description	Material of Construction	Unit			
MVX002A0-2	Eaton	1.5 to 2.0 HP, 230V	Plastic, Aluminum	10			
MVX002A0-4	Eaton	1.5 to 2.0 HP, 460V	Plastic, Aluminum	10			
MVX002A0-5	Eaton	1.5 to 2.0 HP, 575V	Plastic, Aluminum	10			
MVX003A0-2	Eaton	3.0 HP, 230V	Plastic, Aluminum	9, 11			
MVX003A0-4	Eaton	3.0 HP, 460V	Plastic, Aluminum	9, 11			
MVX003A0-5	Eaton	3.0 HP, 575V	Plastic, Aluminum	9, 11			
MVX005A0-2	Eaton	5.0 HP, 230V	Plastic, Aluminum	9, 11			
MVX005A0-4	Eaton	5.0 HP, 460V	Plastic, Aluminum	9, 11			
MVX005A0-5	Eaton	5.0 HP, 575V	Plastic, Aluminum	9, 11			
FR-D720-070-NA	Mitsubishi	2 HP, 230V	Plastic, Aluminum	Extrapolated			
FR-D740-036-NA	Mitsubishi	2 HP, 480V	Plastic, Aluminum	Extrapolated			
FR-E560-1.5K-NA	Mitsubishi	2 HP, 575V	Plastic, Aluminum	Extrapolated			
FR-D720-100-NA	Mitsubishi	3 HP, 230V	Plastic, Aluminum	12			
FR-D740-050-NA	Mitsubishi	3 HP, 480V	Plastic, Aluminum	Interpolated			
FR-E560-2.2K-NA	Mitsubishi	3 HP, 575V	Plastic, Aluminum	Interpolated			
FR-D720-165-NA	Mitsubishi	5 HP, 230V	Plastic, Aluminum	Interpolated			
FR-D740-080-NA	Mitsubishi	5 HP, 480V OT	Plastic, Aluminum	Interpolated			
FR-E560-3.7K-NA	Mitsubishi	5 HP, 575V	Plastic, Aluminum	13			

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Table 12 - Certified Subcomponents - Economizer

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

	Economizer								
Model Number	Manufacturer	Description	Material of Construction	Unit					
2EE04706024	JCI	Horizontal Economizer	Carbon Steel	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11					
2EE04705824	JCI	Slab Economizer	Carbon Steel	1, 2, 3, 4, 5, 7, 10					
2EE04705724	JCI	Slab Economizer	Carbon Steel	6, 8, 9, 11					
2MD04703724	JCI	2-Position Economizer	Carbon Steel	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11					
2EE04706924	RRS	Econ, Fact, Down, SSE w/Belimo actuator, Tall	Carbon Steel	12					
2EE04706924	RRS	Econ, Fact, Down, SSE w/ JCl actuator, w/PE,	Carbon Steel	13					



Table 13 - Certified Subcomponents - Electric Heater

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Model Number	Manufacturer	Electric Heater Description	Material of Construction	Unit
2TP04540925	Tutco	9kW, 230V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	7
2TP04540946	Tutco	9kW, 460V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04540958	Tutco	9kW, 575V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04541825	Tutco	18kW, 230V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04541846	Tutco	18kW, 460V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04541858	Tutco	18kW, 575V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04542425	Tutco	24kW, 230V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04542446	Tutco	24kW, 460V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04542458	Tutco	24kW, 575V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04543625	Tutco	36kW, 230V, Standard Predator, 42"	Carbon Steel	Interpolated
2TP04543646	Tutco	36kW, 460V, Standard Predator, 42"	Carbon Steel	Interpolated
2TP04543658	Tutco	36kW, 575V, Standard Predator, 42" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04520925	Tutco	9kW, 230V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04520946	Tutco	9kW, 460V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04520958	Tutco	9kW, 575V, Standard Predator, 50" cabinet, AC and HP	3/2 Carbon Steel	Interpolated
2TP04531825	Tutco	18kW, 230V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04531846	Tutco	18kW, 460V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04521858	Tutco	18kW, 575V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04532425	Tutco	24kW, 230V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04532446	Tutco	24kW, 460V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04522458	Tutco	24kW, 575V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04533625	Tutco	36kW, 230V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04533646	Tutco	36kW, 460V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2TP04523658	Tutco	36kW, 575V, Standard Predator, 50" cabinet, AC and HP	Carbon Steel	Interpolated
2HP04535425	Tutco	54kW, 230V, Standard Predator, 50" cabinet, heat pump	Carbon Steel	Interpolated
2HP04535446	Tutco	54kW, 460V, Standard Predator, 50" cabinet, heat pump	Carbon Steel	Interpolated
2TP04525425	Tutco	54kW, 230V, Standard Predator, 50" cabinet, AC only	Carbon Steel	Interpolated
2TP04525446	Tutco	54kW, 460V, Standard Predator, 50" cabinet, AC only	Carbon Steel	Interpolated
2TP04525458	Tutco	54kW, 575V, Standard Predator, 50" cabinet, AC only	Carbon Steel	Interpolated
2HP04535458	Tutco	54kW, 575V, Standard Predator, 50" cabinet, heat pump	Carbon Steel	8

Table 14 - Certified Subcomponents - Heat Cells

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Mounting Description: Rigid or Flexible Curb Mounting

Heat Cells (Heat Type and Nominal Heat Capacity)								
Model Number	Manufacturer	Description [MBH Output]	Material of Construction	Unit				
		Single Stage Natural Gas Heat Op	tions					
A05	JCI	49 MBH Output Aluminized Steel, Single Stage	Carbon Steel	1				
A07	JCI	65 MBH Output Aluminized Steel, Single Stage	Carbon Steel	Interpolated				
A09	JCI	97 MBH Output Aluminized Steel, Single Stage	Carbon Steel	Interpolated				
A13	JCI	129 MBH Output Aluminized Steel, Single Stage	Carbon Steel	2				
B05	JCI	49 MBH Output Stainless Steel, Single Stage	C Stainless Steel	Interpolated ¹				
В07	JCI	65 MBH Output Stainless Steel, Single Stage	Stainless Steel	Interpolated ¹				
В09	JCI	97 MBH Output Stainless Steel, Single Stage	Stainless Steel	Interpolated ¹				
B13	JCI	129 MBH Output Stainless Steel, Single Stage	Stainless Steel	Interpolated ¹				
		Two Stage Natural Gas Heat Opt	ions					
N05	JCI	49 MBH Output Aluminized Steel, Two Stage	Piland Carbon Steel	Interpolated				
N07	JCI	65 MBH Output Aluminized Steel, Two Stage	2021 Carbon Steel	Interpolated				
N09	JCI	97 MBH Output Aluminized Steel, Two Stage	Carbon Steel	Interpolated				
N10	JCI	100 MBH Output Aluminized Steel, Two Stage	Carbon Steel	5				
N13	JCI	129 MBH Output Aluminized Steel, Two Stage	Carbon Steel	Interpolated				
N15	JCI	150 MBH Output Aluminized Steel, Two Stage	Carbon Steel	Interpolated				
N20	JCI	200 MBH Output Aluminized Steel, Two Stage	Carbon Steel	6				
S05	JCI	49 MBH Output Stainless Steel, Two Stage	Stainless Steel	3				
S07	JCI	65 MBH Output Stainless Steel, Two Stage	Stainless Steel	Interpolated				
S09	JCI	97 MBH Output Stainless Steel, Two Stage	Stainless Steel	Interpolated				
S10	JCI	100 MBH Output Stainless Steel, Two Stage	Stainless Steel	10				
S13	JCI	129 MBH Output Stainless Steel, Two Stage	Stainless Steel	4				
S15	JCI	150 MBH Output Stainless Steel, Two Stage	Stainless Steel	Interpolated				
S20	JCI	200 MBH Output Stainless Steel, Two Stage	Stainless Steel	9				

All heat cells are both stainless and aluminized.

^{1.} Single stage units are bookended by UUT 3 and UUT 4

Table 15 - Certified Subcomponents - Filters

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Mounting Description: Rigid or Flexible Curb Mounting

	Filters								
Model Number	Manufacturer	Description	Material of Construction	Unit					
198	American Air Filter	16" x 24" x 2" Fiberglass TA Filter	Cardboard, Fiberglass	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11					
300X	American Air Filter	16" x 24"x 2" Pleated Filter	Cardboard, Fiberglass	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11					
AA1300	American Air Filter	16" x 24" x 4" Pleated Filter	Cardboard, Fiberglass	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11					
102-741-020	Koch ¹	2"x16"x24" Fiberglass TA Filter	Cardboard, Fiberglass	12					
141-604-859	Koch	4"x20"x24" Fiberglass TA Filter	Cardboard, Fiberglass	13					

Notes:

1. Alternative branding of American Air part number 170-112-782



Table 16 - Certified Subcomponents - Miscellaneous

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

CY017 Advanced Controls Inc. VFD Bypass Switch Carbon Steel, PI SKCP39N GE 230 / 460V Power Exhaust Fan Motor Carbon Steel F48P AO Smith 575V Power Exhaust Fan Motor Carbon Steel YD4120 System Sensor Smoke Detector Plastic FHL/KHL/JGL Square D Electrical Disconnect Switch Plastic AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Copper AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Copper 5786050 JCI Controller, Simplicity SE 1-stage Copper 5786051 JCI Controller, Simplicity SE 1-stage Copper 6786052 JCI Controller, Simplicity SE 2-stage Copper Copper 6786054 JCI Controller, Simplicity SE 2-stage w/ COM Copper C	Miscellaneous									
F48P AO Smith 575V Power Exhaust Fan Motor Carbon Stee YD4120 System Sensor Smoke Detector Plastic FHL/KHL/IGL Square D Electrical Disconnect Switch Plastic AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Copper Epoxy Resin, Fibe Copper S786050 JCI Controller, Simplicity 1A Board heat pump Copper Epoxy Resin, Fibe Copper S786051 JCI Controller, Simplicity SE 1-stage Foxy Resin, Fibe Copper Epoxy Resin, Fibe Copper S786053 JCI Controller, Simplicity SE 1-stage Foxy Resin, Fibe Copper Epoxy Resin, Fibe Copper S786054 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fibe Copper Plast Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56°L x 4.13°W x 4°D Plastic Evap Coil Drain Pan (Plastic), 56.56°L x 4.13°W x 4°D Plastic Epoxy Resin, Fibe Copper Flast Italian Epoxy Resin, Fibe Copper Plast Floating Polymer, 0.200°THK Epoxy Resin, Fibe Copper Flastic Epoxy Resin, Fibe Copper Flastic Floating Polymer, 0.200°THK Epoxy Resin, Fibe Copper Floating Polymer, 0.200°THK Epoxy Resin, Fibe Copper Floating Polymer, 0.200°THK Epoxy Resin, Fibe	uction Unit	Material of Construction								
F48P AO Smith 575V Power Exhaust Fan Motor Carbon Stee YD4120 System Sensor Smoke Detector Plastic FHL/KHL/JGL Square D Electrical Disconnect Switch Plastic AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Epoxy Resin, Fiber Copper AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Epoxy Resin, Fiber Copper AE 00501 Ayrshire Controller, Simplicity 1A Board heat pump Epoxy Resin, Fiber Copper 5786050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 5786051 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 6786052 JCI Controller, Simplicity SE 2-stage Epoxy Resin, Fiber Copper 6786053 JCI Controller, Simplicity SE 2-stage Foxy Resin, Fiber Copper 6786054 JCI Controller, Simplicity SE 2-stage w/ COM Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 2-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper 65674 (026-39484-000A) JCI Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56"L x 4.13"W x 4"D Plastic Floory Resin, Fiber Copper Polymer, 0.200"THK 1159-10 United Technologies Intelli Comfort Board Epoxy Resin, Fiber Copper	stic 9, 10, 11	Carbon Steel, Plastic								
Plastic FHL/KHL/JGL Square D Electrical Disconnect Switch Plastic AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Copper AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Epoxy Resin, Fibe Copper AE 00501 Ayrshire Controller, Simplicity 1A Board heat pump Epoxy Resin, Fibe Copper 5786050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fibe Copper 5786051 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fibe Copper 6786052 JCI Controller, Simplicity SE 2-stage Epoxy Resin, Fibe Copper 6786053 JCI Controller, Simplicity SE 2-stage Copper 6786054 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 5-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 5-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 5-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 6-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 6-stage board Epoxy Resin, Fibe Copper 6786056 JCI Controller, Simplicity SE 6-stage board Copper 6786056 JCI Controller, Simplicity SE 6-stage board Copper 6786056 JCI Controller, Simplicity SE 6-stage board Copper Plastic 65674 (026-39484-000A) JCI Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56°L x 4.13°W x 4°D Polymer, 0.200°THK 65674 (026-39484-000A) JCI Evap Coil Drain Pan (Plastic), 56.56°L x 4.13°W x 4°D Polymer, 0.200°THK 65675 LX 4.13°W x 4°D Polymer, 0.200°THK 65676 LX 4.13°W x 4°D Polymer, 0.200°THK 65677 LX 4.13°W x 4°D Polymer, 0.200°THK 65678 LX 4.13°W x 4°D Polymer, 0.200°THK	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,	Carbon Steel								
FHL/KHL/JGL Square D Electrical Disconnect Switch Plastic AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Copper AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Copper AE 00501 Ayrshire Controller, Simplicity 1A Board heat pump Epoxy Resin, Fiber Copper 5786050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 5786051 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 6786052 JCI Controller, Simplicity SE 2-stage Foxy Resin, Fiber Copper 6786053 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fiber Copper 6786054 JCI Controller, Simplicity SE 2-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Copper, Plast Copper Epoxy Resin, Fiber Copper Epoxy Resin, Fibe	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Carbon Steel								
AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Copper AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Epoxy Resin, Fiber Copper AE 00501 Ayrshire Controller, Simplicity 1A Board heat pump Epoxy Resin, Fiber Copper 5786050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 5786051 JCI Controller, Simplicity SE 1-stage W/ COM Epoxy Resin, Fiber Copper 6786052 JCI Controller, Simplicity SE 2-stage Epoxy Resin, Fiber Copper 6786053 JCI Controller, Simplicity SE 2-stage Epoxy Resin, Fiber Copper 6786054 JCI Controller, Simplicity SE 2-stage W/ COM Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper, Plastic 65674 (026-39484-000A) JCI Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56"L x 4.13"W x 4"D Polymer, 0.200"THK 1159-10 United Technologies Intellicomfort Board Epoxy Resin, Fiber Copper	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Plastic								
AE 00203 Ayrshire Controller, Simplicity Lite Board gas/elec Copper AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Epoxy Resin, Fiber Copper AE 00501 Ayrshire Controller, Simplicity 1A Board heat pump Epoxy Resin, Fiber Copper 5786050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 5786051 JCI Controller, Simplicity SE 1-stage Copper 6786052 JCI Controller, Simplicity SE 2-stage Epoxy Resin, Fiber Copper 6786053 JCI Controller, Simplicity SE 2-stage Copper 6786054 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper, Plast Copper, Plast Stainless Steel 65674 (026-39484-000A) JCI Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56"L X 4.13"W X 4"D Plastic Polymer, 0.200"THK 1159-10 United Technologies Intelli Comfort Board Epoxy Resin, Fiber Copper	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,	Plastic								
AE 00401 Ayrshire Controller, Simplicity 1A Board gas/elec Copper Epoxy Resin, Fiber Copper 5786050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 5786051 JCI Controller, Simplicity SE 1-stage W/COM Epoxy Resin, Fiber Copper 6786052 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fiber Copper 6786053 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fiber Copper 6786054 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper Epoxy Resin, Fiber Copper	glass, 1, 2, 3, 4	Epoxy Resin, Fiberglass, Copper								
AFS6050 JCI Controller, Simplicity SE 1-stage Epoxy Resin, Fiber Copper 5786051 JCI Controller, Simplicity SE 1-stage W/COM Epoxy Resin, Fiber Copper 6786052 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fiber Copper 6786053 JCI Controller, Simplicity SE 2-stage W/COM Epoxy Resin, Fiber Copper 6786054 JCI Controller, Simplicity SE 2-stage w/COM Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 4-stage board Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper 65674 (026-39484-000A) JCI Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56"L Stainless Steel 10241 (032-00184-000) JCI Evap Coil Drain Pan (Plastic), 56.56"L x 4.13"W x 4"D Plastic Polymer, 0.200"THK Epoxy Resin, Fiber Copper 1159-10 United Technologies Intellic Comfort Board Epoxy Resin, Fiber Copper	glass, 5, 6, 9, 10, 11	Epoxy Resin, Fiberglass, Copper								
5786050 JCI Controller, Simplicity SE 1-stage Copper Epoxy Resin, Fiber Copper For Resin, Fiber Copper, Plast For Resin, Fiber Copper For Resin, Fiber For Resin, Fiber For Resin, Fiber Copper For Resin, Fiber Copper For Resin, Fiber	glass, 7, 8	Epoxy Resin, Fiberglass, Copper								
Copper 6786052 JCI Controller, Simplicity SE 1-stage W/ COM Copper 6786053 JCI Controller, Simplicity SE 2-stage Copper 6786054 JCI Controller, Simplicity SE 2-stage W/ COM Epoxy Resin, Fiber Copper 6786056 JCI Controller, Simplicity SE 4-stage board Copper Epoxy Resin, Fiber Copper Epoxy Resin, Fiber Copper Epoxy Resin, Fiber Copper Epoxy Resin, Fiber Copper, Plast	glass, Extrapolated	Epoxy Resin, Fiberglass, Copper								
6786052 JCI Controller, Simplicity SE 2-stage Copper Epoxy Resin, Fiber Copper 6786054 JCI Controller, Simplicity SE 4-stage board Copper Epoxy Resin, Fiber Copper, Plast Copper, Plast Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56"L X4.13"W x 4"D Plastic Evap Coil Drain Pan (Plastic), 56.56"L x 4.13"W x 4"D Polymer, 0.200"THK United Technologies Intelli Comfort Board Epoxy Resin, Fiber Copper	glass, Extrapolated	Epoxy Resin, Fiberglass, Copper								
6786054 JCI Controller, Simplicity SE 2-stage W/ COM Copper From Resin, Fiber Copper Copper Copper Copper Copper Copper Epoxy Resin, Fiber Copper Epoxy Resin, Fiber Copper, Plast Copper, Pl	glass, Extrapolated	Epoxy Resin, Fiberglass, Copper								
6786054 JCI Controller, Simplicity SE 4-stage board Copper 6786056 JCI Controller, Simplicity SE Economizer Board Epoxy Resin, Fiber Copper, Plast Stainless Steel), 56.56"L Stainless Steel 65674 (026-39484-000A) JCI Evap Coil Drain Pan (20 ga 304 Stainless Steel), 56.56"L Stainless Steel 10241 (032-00184-000) JCI Evap Coil Drain Pan (Plastic), 56.56"L x 4.13"W x 4"D Plastic 1159-10 United Technologies Intelli Comfort Board Epoxy Resin, Fiber Copper	glass, 12, 13	Epoxy Resin, Fiberglass, Copper								
Copper	glass, 12, 13	Epoxy Resin, Fiberglass, Copper								
10241 (032-00184-000) JCI Evap Coil Drain Pan (Plastic), 56.56"L x 4.13"W x 4"D Plastic	17.13	Epoxy Resin, Fiberglass, Copper, Plastic								
10241 (032-00184-000) JCI Evap Coil Drain Pan (Plastic), 56.56"L x 4.13"W x 4"D Plastic Polymer, 0.200"THK Epoxy Resin, Fibe Copper	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Sta <mark>inless St</mark> eel								
1159-10 United Technologies Intelli Comfort Board Copper	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Plastic								
TAIP TO THE TOTAL PROPERTY OF THE PARTY OF T	glass, 1,2,3,4, 10	Epoxy Resin, Fiberglass, Copper								
1084-900 United Technologies Defrost Board Epoxy Resin, Fiber Copper	glass, 7, 8	Epoxy Resin, Fiberglass,								
	glass, 9, 10	Epoxy Resin, Fiberglass,								

Table 17 - Tested Units

Manufacturer: Johnson Controls and other Unitary Product Group brands

Product Line: JCI Packaged Rooftop Units

Tested Product Construction:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Tested Options:

230-575 V, economizer, power exhaust, electric or gas heater, variable frequency drive

Tested Mounting Description:

Equipment was tested with both rigid (a) or flexible (b) curb mounting

		Dimensions (inches)				Nominal			
Product Line	Model Number	Depth	Width	Height	Operating Weight (lb)	Cooling Capacity (Tons)	Mount	Sds level Approved	Unit
	ZR037A05D2DAE5	89	59	42	980	3	Rigid Roof Curb Mounted		1a
	ZRUSTAUSDZDAES	89	39	42	960	3	Isolated Roof Curb Mounted		1b
	ZR061A13S5GZZ50001	89	59	42	1,070	5	Rigid Roof Curb Mounted		2a
Predator Air Handling	ZN001A1333GZZ30001	83	39	42	1,070	3	Isolated Roof Curb Mounted	2.5	2b
Units (Short)	ZH037S05A2HZZ50001	89	59	42	860	3	Rigid Roof Curb Mounted	2.5	3a
	211037303A2112230001	65	33	42	000	,	Isolated Roof Curb Mounted		3b
	ZJ061S13T5BZZ50001	89	59	42	1,070	5	Rigid Roof Curb Mounted		4a
	2,00131313132230001		33	42	1,070	3	Isolated Roof Curb Mounted		4b
	ZR078N10D2DZZ5001	89	59	53	1,060	6.5	Rigid Roof Curb Mounted	2.5	5a
	ZNO70N10DZDZZZO01	03		33		0.5	Isolated Roof Curb Mounted		5b
	XP078E09A2BAC5	89	59	0 42 C	O 970E	6.5	Rigid Roof Curb Mounted		7a
							Isolated Roof Curb Mounted		7b
	ZF078S10F2BZZ5001	89	59	42	1,090	6.5	Rigid Roof Curb Mounted		10a
							Isolated Roof Curb Mounted		10b
Predator Air Handling	ZH150C00A2BAC5	119.5	59	51	1,250	12.5	Rigid Roof Curb Mounted		11a
Units (Standard)							Isolated Roof Curb Mounted		11b
	ZR150N20N5GZZ50001	Z50001 119.5	59	42	1,600	12.5	Rigid Roof Curb Mounted		6a
	21(130)(20)(302230001		33	72		12.5	Isolated Roof Curb Mounted		6b
	XP150E54N5HZZ50001	119.5	59	O513P		12.5	Rigid Roof Curb Mounted	2.0	8a
	XI 150E54IV5IIEE50001	115.5	39		-0/22013) 12.3	Isolated Roof Curb Mounted	2.0	8b
	ZJ150S20S5BZZ50001	119.5	59	51	1,570	12.5	Rigid Roof Curb Mounted		9a
	251505205582250001	113.5	33	31	1,370	///// i/fi/i/ //////	Isolated Roof Curb Mounted		9b
Predator Air Handling	ZT120N18P2B1LAAKA1	119.5	59/.	m 51th	1,470	100	Rigid Roof Curb Mounted	2.0	12a
Units (Ultra High	2.125.125. 2D1D 0 110 (1		BY: I	moth	V J'P	iariu	Isolated Roof Curb Mounted	2.0	12b
Efficiency)	ZT150S24R4D5LAE3E1	119.5	59	51	1,680	12.5	Rig <mark>id Roof C</mark> urb Mounted	2.0	13a
Efficiency)	Z1130324N4D3LAE3E1	DOZANADOLALOLI 119.3	.5.5	31	2,300	9	Isola <mark>ted Roof</mark> Curb Mounted	2.0	13b

DATE: 03/08/2021

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UUT1a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZR037A05D2DAE5

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Aluminized 3-ton natural gas fired heat exchanger, 230V, with solenoid valves and indoor (ID) reheat coil, IDB motor, 12"x9"wide blower wheel, micro channel OD coil, a single reciprocating type compressor, and a single refrigeration circuit. The unit uses TXV for modulating refrigerant control. An optional Motorized economizer/no power exhaust (PE), non-powered convenience outlet, standard controller, phase monitor (PM), no Dirty Filter Switch (DFS), standard plastic drain pan & standard 2" throw-away (TA) fiberglass filters were selected. The ZR/ZK and ZJ/ZW 3 ton series uses a single outdoor fan (ODF) motor deck arrangement.

			105	UUT Proper	ties	7		
Weight (lb)		Dim	ensions (inch	es)		Lowest Natural Frequency (Hz)		
weight (ib)	Depth	W	Width		ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)
980	89		59	9 42		7.8	7.5	13.3
		2	Se	ismic Test Par	ameters	//////////////////////////////////////		
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	1.00	moitsoy .	J Paidenc	3.00	1.67	0.67

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by MicroMetl, part #0564-C14D-0010. The unit rested on the perimeter of the curb The curb had (4) 12Ga anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (6) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT1b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZR037A05D2DAE5

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Aluminized 3-ton natural gas fired heat exchanger, 230V, with solenoid valves and indoor (ID) reheat coil, IDB motor, 12"x9"wide blower wheel, micro channel OD coil, a single reciprocating type compressor, and a single refrigeration circuit. The unit uses TXV for modulating refrigerant control. An optional Motorized economizer/no power exhaust (PE), non-powered convenience outlet, standard controller, phase monitor (PM), no Dirty Filter Switch (DFS), standard plastic drain pan & standard 2" throw-away (TA) fiberglass filters were selected. The ZR/ZK and ZJ/ZW 3 ton series uses a single outdoor fan (ODF) motor deck arrangement.

				THE RESERVE OF THE PERSON NAMED IN COLUMN 1				
				JUT Properties		9		
Weight (lb)		Dim	ensions (inch	Lowest Natural Frequency (Hz)				
weight (ib)	Depth	W	idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)
980	89	2/	59 OSP_(42)13			3.0	2.5	4.0
			Seism	ic Test Param	eters			
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	BY: I II 1.00	1.50	Pliano 4.00	3.00	1.67	0.67

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALPRD371522_104. The unit rested on the perimeter of the curb. The curb had (6) 10Ga anchoring pockets, (2) on the each of the long side of the curb and (1) on each short side. The unit was attached to each of the pockets using (4) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 5 bolts. The bolts were spaced 5-inches in from each side of the curb. The steel plate was attached to the shake table with (12) M12 threaded studs.

UUT2a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZR061A13S5GZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Short 5-ton reheat unit with aluminized gas heat section, 575V, solenoid valves, ID reheat coil, IDB motor, 12"x9"wide blower wheel, micro channel OD coil, a single reciprocating type compressor, and a single refrigeration circuit. The unit uses TXV for modulating refrigerant control. An optional fully modulating horizontal economizer/no power exhaust (PE), no convenience outlet, standard controller, no PM, optional DFS, optional supply air (SA) smoke detector, optional stainless steel drain pan & 2" pleated air filters were selected. The ZR/ZK and ZJ/ZW 4 & 5 ton use a dual outdoor fan (ODF) motor deck arrangement.

					MAMAMAM			
		/i:	N A	JUT Properties				
Weight (lb)		Dim	ensions (incl	Lowest Natural Frequency (Hz)				
weight (ib)	Depth	/L/W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,070	89	18/	05P-0 ₂₋ 13				6.0	6.5
			Seism	ic Test Param	eters	XXXXXXXXXX		
Building Code	Test Criteria	Sds (g)	Bz/h ir	nothy J	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	1.00	1.50	4.00	3.00	1.67	0.67

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by MicroMetl, part #0564-C14D-0010. The unit rested on the perimeter of the curb. The curb had (4) 12Ga anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (6) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT2b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZR061A13S5GZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Short 5-ton reheat unit with aluminized gas heat section, 575V, solenoid valves, ID reheat coil, IDB motor, 12"x9"wide blower wheel, micro channel OD coil, a single reciprocating type compressor, and a single refrigeration circuit. The unit uses TXV for modulating refrigerant control. An optional fully modulating horizontal economizer/no power exhaust (PE), no convenience outlet, standard controller, no PM, optional DFS, optional supply air (SA) smoke detector, optional stainless steel drain pan & 2" pleated air filters were selected. The ZR/ZK and ZJ/ZW 4 & 5 ton use a dual outdoor fan (ODF) motor deck arrangement.

	_	/j:	U	UT Properties						
Maiabe (Ib)		Dim	ensions (incl	nes)		Lowest Natural Frequency (Hz)				
Weight (lb)	Depth	/L/W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)		
1,070	89	R	59	JSP-42	213	3.0	2.8	5.3		
			Seismi	ic Test Parame	ters	MAKAKAKAKA NA				
Building Code	Test Criteria	Sds (g)	Bz/h jr	nothy J	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)		
CBC 2019	ICC-ES AC156	2.50	1.00	1.50	4.00	3.00	1.67	0.67		

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALPRD371522_102. The unit rested on the perimeter of the curb. The curb had (6) 10Ga anchoring pockets, (2) on the each of the long side of the curb and (1) on each short side. The unit was attached to each of the pockets using (4) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 5 bolts. The bolts were spaced 5-inches in from each side of the curb. The steel plate was attached to the shake table with (12) M12 threaded studs.

UUT3a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZH037S05A2HZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Short 3-ton cooling only unit with single ODF deck construction, stainless steel natural gas fired heat exchanger, 230V, IDB motor, 12"x9"wide blower wheel, a single reciprocating type compressor and a single refrigeration circuit. The unit uses TXV for refrigerant control. Standard controller, standard plastic drain pan, and 4" high efficiency pleated filters were selected.

OD CODE -

			IN FU	UT Properties	COM							
\4/a;ab+ /lb\		Dim	nensions (inch	Lowest Natural Frequency (Hz)								
Weight (lb)	Depth	W	idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)				
860	89	59 42			6.5	5.8	5.8					
	Seismic Test Parameters											
Building Code	Test Criteria	Sds (g)	z/h	- Ip	Aflx-H (g)	A <mark>rig-H (</mark> g)	Aflx-V (g)	Arig-V (g)				
CBC 2019	ICC-ES AC156	2.50	B4.00im	ot 1.50 J	Piland	3.00	1.67	0.67				

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by MicroMetl, part #0564-C14D-0010. The unit rested on the perimeter of the curb. The curb had (4) 12Ga anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (6) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT3b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZH037S05A2HZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Short 3-ton cooling only unit with single ODF deck construction, stainless steel natural gas fired heat exchanger, 230V, IDB motor, 12"x9"wide blower wheel, a single reciprocating type compressor and a single refrigeration circuit. The unit uses TXV for refrigerant control. Standard controller, standard plastic drain pan, and 4" high efficiency pleated filters were selected.

			IN FU	IUT Propertie	s COM				
Woight (lh)		Din	nensions (inch	Lowest Natural Frequency (Hz)					
Weight (lb)	Depth	W	Width 59		Height		Side-Side (Y)	Vertical (Z)	
860	89	13	59	42		3.3 2.8			
	-	8	Seism	ic Test Param	eters	Man I			
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)	
CBC 2019	ICC-ES AC156	2.50	B4:00im	ot 4:50 J	Pila.00d	3.00	1.67	0.67	

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by MicroMetl, part #0405-642D-01. The unit rested on the perimeter of the curb. The curb had (4) 10Ga, 11-inch side anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (8) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT4a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZJ061S13T5BZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Short 5-ton cooling-only unit with stainless steel natural gas fired heat exchanger, 575V, IDB motor, 12"x9"wide blower wheel, a single reciprocating type compressor and a single refrigeration circuit. The unit uses TXV for refrigerant control. Full modulating slab economizer with PE, optional IntelliComfort controller, standard plastic drain pan & standard 2" TA air filters were selected.

				O L. HIL				
			FU	IUT Propertie:	E COL			
Weight (lb)		Dim	ensions (inch	Lowest Natural Frequency (Hz)				
weight (ib)	Depth	Wi	idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,070	89	59 42 6.8 5.8						6.0
		24/	Seism	ic Test Param	eters	1121		
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	BY: In	not ^{1.50}	Pi ^{4.00} nd	3.00	1.67	0.67

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by MicroMetl, part #0564-C14D-0010. The unit rested on the perimeter of the curb. The curb had (4) 12Ga anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (6) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT4b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator (Short 3-5 Ton)

Model Number: ZJ061S13T5BZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

Short 5-ton cooling-only unit with stainless steel natural gas fired heat exchanger, 575V, IDB motor, 12"x9"wide blower wheel, a single reciprocating type compressor and a single refrigeration circuit. The unit uses TXV for refrigerant control. Full modulating slab economizer with PE, optional IntelliComfort controller, standard plastic drain pan & standard 2" TA air filters were selected.

UUT Properties O										
\4/a;ab+ /lb\		Dim	nensions (inch	Lowest Natural Frequency (Hz)						
Weight (lb)	Depth	W	idth	C He	eight	Front-Back (X)	Side-Side (Y)	Vertical (Z)		
1,070	89		59 42 3.3 3.3							
	-	0-/	Seism	ic Test Param	eters	12	-			
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)		
CBC 2019	ICC-ES AC156	2.50	B1:00im	oth:50 J	Pil4.00d	3.00	1.67	0.67		

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by MicroMetl, part #0405-642D-01. The unit rested on the perimeter of the curb. The curb had (4) 10Ga, 11-inch side anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (8) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT5a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated **Product Line:** Predator (Standard 6.5-12.5 Ton)

Model Number: ZR078N10D2DZZ5001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

6.5-ton standard reheat unit with aluminized natural gas fired heat exchanger, 230V, solenoid valves, indoor (ID) reheat coil, IDB motor, 12"x12" blower wheel, micro channel OD coils, dual reciprocating type compressors, and dual refrigeration circuits. These units use TXV for modulating refrigerant control. An optional Motorized economizer/no power exhaust (PE), non-powered convenience outlet, standard controller, standard plastic drain pan, & 2" pleated air filters were selected. The ZR/ZK 6.5 ton series uses a dual ODF motor deck arrangement.

			IED I	JUT Properties				
Weight (lb)		Din	nensions (inch	Lowest Natural Frequency (Hz)				
weight (ib)	Depth	W	idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,060	89	8	59 OSP-0 ⁵³ 13			6.0	5.5	5.8
			Seism	nic Test Param	eters			
Building Code	Test Criteria	Sds (g)	z/h	lp .	Aflx-H (g)	Ar <mark>ig-H (</mark> g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	BY: I III 1.00	1.50	4.00	3.00	1.67	0.67

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by MicroMetl, part #0564-C14D-0010. The unit rested on the perimeter of the curb. The curb had (4) 12Ga anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (6) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT5b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated **Product Line:** Predator (Standard 6.5-12.5 Ton)

Model Number: ZR078N10D2DZZ5001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

6.5-ton standard reheat unit with aluminized natural gas fired heat exchanger, 230V, solenoid valves, indoor (ID) reheat coil, IDB motor, 12"x12" blower wheel, micro channel OD coils, dual reciprocating type compressors, and dual refrigeration circuits. These units use TXV for modulating refrigerant control. An optional Motorized economizer/no power exhaust (PE), non-powered convenience outlet, standard controller, standard plastic drain pan, & 2" pleated air filters were selected. The ZR/ZK 6.5 ton series uses a dual ODF motor deck arrangement.

			IE	UUT Properties						
Weight (lb)		Din	n <mark>ens</mark> ions (incl	Lowest Natural Frequency (Hz)						
weight (ib)	Depth	W	idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)		
1,060	89	2	59 OSP-0 ⁵³ 13				2.8	4.5		
			Seisn	nic Test Param	eters	WWW.				
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Ar <mark>ig-H (</mark> g)	Aflx-V (g)	Arig-V (g)		
CBC 2019	ICC-ES AC156	2.50	1.00	1.50	Pliand 4.00	3.00	1.67	0.67		

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by MicroMetl, part #0405-642D-02. The unit rested on the perimeter of the curb. The curb had (4) 10Ga, 11-inch side anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (8) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT6a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZZR150N20N5GZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12.5-ton standard reheat unit with aluminized gas heat section, 575V, solenoid valves, ID reheat coil, IDB motor, 12x15" wide blower wheel, micro channel OD coils, dual reciprocating type compressors, and dual refrigeration circuits. The unit uses TXV for modulating refrigerant control. Standard controller was used. An optional supply air (SA) smoke detector, stainless steel drain pan, & 4" pleated air filters were selected.

				ROOD	F						
			U	UT Properties	M						
Woight (lh)		Dimensions (inches) Lowest Natural Frequency (
Weight (lb)	Depth	W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)			
1,600	119 1/2		59	42		6.8	6.8 4.0 5.0				
	Seismic Test Parameters										
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)			
CBC 2019	ICC-ES AC156	2.00	B1/00 in	nothsy J	Pisand	2.40	1.34	0.54			

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by MicroMetl, part #0564-C14D-0010. The unit rested on the perimeter of the curb. The curb had (4) 12Ga anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (6) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT6b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZZR150N20N5GZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12.5-ton standard reheat unit with aluminized gas heat section, 575V, solenoid valves, ID reheat coil, IDB motor, 12x15" wide blower wheel, micro channel OD coils, dual reciprocating type compressors, and dual refrigeration circuits. The unit uses TXV for modulating refrigerant control. Standard controller was used. An optional supply air (SA) smoke detector, stainless steel drain pan, & 4" pleated air filters were selected.

				11000	1.0			
			205	IUT Properties	MA			
Weight (lb)		Dim	n <mark>ensions</mark> (inch		Lowest Natural Frequency (Hz)			
weight (ib)	Depth	W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,600	119 1/2	41	59 42			2.8	2.5	5.8
		2	Seism	ic Test Param	eters	M		
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	BY:00im	oth.50 J	Piland	2.40	1.34	0.54

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by MicroMetl, part #0405-642D-04. The unit rested on the perimeter of the curb. The curb had (4) 10Ga, 11-inch side anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (8) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT7a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: XP078E09A2BAC5

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

6.5 ton standard heat pump unit with 9kW electric heat section, 230V, finned/tube OD coils, IDB motor, 12"x12" wide blower wheel, fin/tube OD coils, dual scroll type compressors, and dual refrigeration circuits. The unit uses TXV for modulating refrigerant control on both ID/OD coils. A standard controller, standard plastic drain pan, 2" fiberglass TA air filters and dual outdoor fan (ODF) motor deck arrangement were used.

UUT Properties-											
Weight (lb)		Dim	nensions (inch	Lowest Natural Frequency (Hz)							
weight (ib)	Depth	Ŵ	idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)			
970	89		59 21 42				8.3	13.8			
	Seismic Test Parameters										
Building Code	Test Criteria	Sds (g)	z/h	lp lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)			
CBC 2019	ICC-ES AC156	2.50	BY: 00 im	oth 50 J	Piland	3.00	1.67	0.67			

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by Ruskin, part #80-270-4414. The unit rested on the perimeter of the curb. The curb had (12) 12Ga anchoring pockets, (2) on the each of the short sides of the curb and (4) on each of the long sides of the curb. The unit was attached to each of the pockets using (2) # 14 - 5 inch long self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 2 bolts. There were two bolts on each side of the unit. The bolts were mounted five inches inward from the edge of the curb flange. The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT7b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: XP078E09A2BAC5

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

6.5 ton standard heat pump unit with 9kW electric heat section, 230V, finned/tube OD coils, IDB motor, 12"x12" wide blower wheel, fin/tube OD coils, dual scroll type compressors, and dual refrigeration circuits. The unit uses TXV for modulating refrigerant control on both ID/OD coils. A standard controller, standard plastic drain pan, 2" fiberglass TA air filters and dual outdoor fan (ODF) motor deck arrangement were used.

				UUT Properties	E COL							
Maight (lh)		Dim	nensions (inch	The state of the s	Lowest N	latural Frequen	cy (Hz)					
Weight (lb)	Depth	Wi	idth	Hei	ight	Front-Back (X)	2.5 (g) Aflx-V (g)	Vertical (Z)				
970	89	5	59	42		2.8						
	Seismic Test Parameters											
Building Code	Test Criteria	Sds (g)	z/h	45 Pp-02	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)				
CBC 2019	ICC-ES AC156	2.50	1.00 BV: LIO	1.50	Piland	3.00	1.67	0.67				

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALPRD371522_104. The unit rested on the perimeter of the curb. The curb had (6) 10Ga anchoring pockets, (2) on the each of the long side of the curb and (1) on each short side. The unit was attached to each of the pockets using (4) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 5 bolts. The bolts were spaced 5-inches in from each side of the curb. The steel plate was attached to the shake table with (12) M12 threaded studs.

UUT8a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: XP150E54N5HZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12. 5 ton standard heat pump with 54 kW electric heat section, 575V, finned/tube OD coils, IDB motor, 15x15"wide blower wheel, fin/tube OD coils, dual scroll type compressors, and dual refrigeration circuits. The unit uses TXV for modulating refrigerant control. Optional IntelliComfort controller, optional return air (RA) smoke detector, standard plastic drain pan & standard 2" fiberglass TA air filters were used.

		FO	IUT Properties	s. Co.							
	Dim	nensions (inch	MA	Lowest N	latural Frequen	cy (Hz)					
Depth	W	idth		eight	Front-Back (X)	, , , , , , , , , , , , , , , , , , , 	Vertical (Z)				
119 1/2		59	$\bigcirc 1 \boxed{51}$		9.8	6.0	14.8				
Seismic Test Parameters											
Test Criteria	Sds (g)	z/h	SF-UZ	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)				
ICC-ES AC156	2.00	1.00 BY: IM	othy J	Piland	2.40	1.34	0.54				
	119 1/2 Test Criteria	Depth W 119 1/2 Test Criteria Sds (g)	Dimensions (inch Depth Width 119 1/2 59 Seism Test Criteria Sds (g) z/h	Dimensions (inches) Depth Width He 119 1/2 59 51 Seismic Test Param Test Criteria Sds (g) z/h lp	Depth Width Height 119 1/2 59 51 Seismic Test Parameters Test Criteria Sds (g) z/h lp Aflx-H (g)	Dimensions (inches) Lowest N Depth Width Height Front-Back (X) 119 1/2 59 51 9.8 Seismic Test Parameters Test Criteria Sds (g) z/h Ip Afix-H (g) Arig-H (g)	Dimensions (inches) Lowest Natural Frequent Depth Width Height Front-Back (X) Side-Side (Y) 119 1/2 59 51 9.8 6.0 Seismic Test Parameters Test Criteria Sds (g) z/h Ip Aflx-H (g) Arig-H (g) Aflx-V (g)				

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by Ruskin, part #80-270-4414. The unit rested on the perimeter of the curb. The curb had (12) 12Ga anchoring pockets, (2) on the each of the short sides of the curb and (4) on each of the long sides of the curb. The unit was attached to each of the pockets using (2) # 14 - 5 inch long self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 2 bolts. There were two bolts on each side of the unit. The bolts were mounted five inches inward from the edge of the curb flange. The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT8b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: XP150E54N5HZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12. 5 ton standard heat pump with 54 kW electric heat section, 575V, finned/tube OD coils, IDB motor, 15x15" wide blower wheel, fin/tube OD coils, dual scroll type compressors, and dual refrigeration circuits. The unit uses TXV for modulating refrigerant control. Optional IntelliComfort controller, optional return air (RA) smoke detector, standard plastic drain pan & standard 2" fiberglass TA air filters were used.

1												
			FO	JUT Properties	- CO							
Weight (lb)		Dim	nensions (inch	ies)	MA	Lowest Natural Frequency (Hz)						
weight (ib)	Depth	W	idth	C LL He	eight	Front-Back (X) Side-Side (Y)	Vertical (Z)					
1,510	119 1/2		59	31 51	U	2.0	3.5					
	Seismic Test Parameters											
Building Code	Test Criteria	Sds (g)	z/h	SP-UZ Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)				
CBC 2019	ICC-ES AC156	2.00	1.00 BY: IM	othV J	Piland	2.40	1.34	0.54				

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALPRD371522_103. The unit rested on the perimeter of the curb. The curb had (6) 10Ga anchoring pockets, (2) on the each of the long side of the curb and (1) on each short side. The unit was attached to each of the pockets using (4) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 5 bolts. The bolts were spaced 5-inches in from each side of the curb. The steel plate was attached to the shake table with (12) M12 threaded studs.

UUT9a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZJ150S20S5BZZ50001

Product Construction Summary:

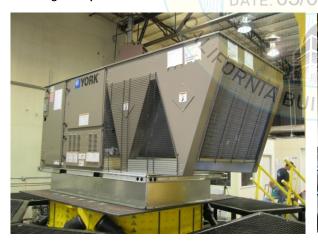
Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12. 5 ton standard cooling only unit with stainless steel gas heat section, 575V, IDB motor, 15x15" wide blower wheel, Micro Channel OD coils, dual reciprocating type compressors, dual refrigeration circuits, 4 ODFs, and a "W" shaped OD condenser coil. The unit uses TXV for modulating refrigerant control. An optional VFD w/ manual bypass switch, fully modulating horizontal economizer/no PE, no convenience outlet, standard controller, standard plastic drain pan & standard 2" TA air filters were used.

	•		50	KCODE	E CO			
			200	UT Properties	MA			
Woight (lb)		Dimensions (inches) Lowest Natural Frequency						
Weight (lb)	Depth	W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,570	119 1/2	59 51			7.8	5.5	10.3	
		18/	Seism	ic Test Param	eters			
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	B _{1:00} im	oth.y ₀ J	Piland	2.40	1.34	0.54

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by Ruskin, part #80-270-4414. The unit rested on the perimeter of the curb. The curb had (12) 12Ga anchoring pockets, (2) on the each of the short sides of the curb and (4) on each of the long sides of the curb. The unit was attached to each of the pockets using (2) # 14 - 5 inch long self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 2 bolts. There were two bolts on each side of the unit. The bolts were mounted five inches inward from the edge of the curb flange. The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT9b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZJ150S20S5BZZ50001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12. 5 ton standard cooling only unit with stainless steel gas heat section, 575V, IDB motor, 15x15" wide blower wheel, Micro Channel OD coils, dual reciprocating type compressors, dual refrigeration circuits, 4 ODFs, and a "W" shaped OD condenser coil. The unit uses TXV for modulating refrigerant control. An optional VFD w/ manual bypass switch, fully modulating horizontal economizer/no PE, no convenience outlet, standard controller, standard plastic drain pan & standard 2" TA air filters were used.

			500	IUT Properties	MA					
Waight (lb)		Din	n <mark>ensio</mark> ns (inch	es)	Lowest Natural Frequency (Hz)					
Weight (lb)	Depth	W	idth	He	ight	Front-Back (X)	1	Vertical (Z)		
1,570	119 1/2	44/	59	51	4.0	2.8	2.5	2.8		
		18/	Seism	ic Test Param	eters					
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)		
CBC 2019	ICC-ES AC156	2.00	B1:00im	oth.y ₀ J	Piland	2.40	1.34	0.54		

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by MicroMetl, part #0405-642D-04. The unit rested on the perimeter of the curb. The curb had (4) 10Ga, 11-inch side anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (8) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT10a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZF078S10F2BZZ5001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

6.5 ton standard cooling only unit with smallest stainless steel natural gas fired heat exchanger, 230V, 12"x12" wide blower wheel, Micro Channel OD coils, dual reciprocating type compressors, and dual refrigeration circuits. TXV used for modulating refrigerant control. Optional VFD used with fully modulating slab economizer with PE, standard controller, standard plastic drain pan & standard 2" TA air filters. Dual outdoor fan (ODF) motor deck arrangement.

				K OOD					
			20	UT Properties	MA				
Weight (lb)		Dim	Dimensions (inches) Lowest Natural Frequency (
weight (ib)	Depth	W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)	
1,090	89	41	59	42		11.3	7.5	9.0	
		8	Seism	ic Test Param	eters				
Building Code	Test Criteria	Sds (g)	z/h	lp lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)	
CBC 2019	ICC-ES AC156	2.50	BY:Joim	oth.56 J	Pila.od	3.00	1.67	0.67	

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by Ruskin, part #80-270-4414. The unit rested on the perimeter of the curb. The curb had (12) 12Ga anchoring pockets, (2) on the each of the short sides of the curb and (4) on each of the long sides of the curb. The unit was attached to each of the pockets using (2) # 14 - 5 inch long self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 2 bolts. There were two bolts on each side of the unit. The bolts were mounted five inches inward from the edge of the curb flange. The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT10b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZF078S10F2BZZ5001

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

6.5 ton standard cooling only unit with smallest stainless steel natural gas fired heat exchanger, 230V, 12"x12" wide blower wheel, Micro Channel OD coils, dual reciprocating type compressors, and dual refrigeration circuits. TXV used for modulating refrigerant control. Optional VFD used with fully modulating slab economizer with PE, standard controller, standard plastic drain pan & standard 2" TA air filters. Dual outdoor fan (ODF) motor deck arrangement.

			2000	IUT Properties	MA			
Woight (lh)		Din	n <mark>ensio</mark> ns (inch		Lowest N	latural Frequen	cy (Hz)	
1,090	Depth	Width		He	ight	Front-Back (X)	Front-Back (X) Side-Side (Y) Ver	
1,090	89	41/	9 42			2.8	2.5	4.5
		12/	Seism	ic Test Param	eters	M/m/		
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	BY:00im	oth.y ₀ J	Pila.od	3.00	1.67	0.67

Unit Mounting Description:



Description: Unit was mounted to an isolated roof curb supplied by MicroMetl, part #0405-642D-02. The unit rested on the perimeter of the curb. The curb had (4) 10Ga, 11-inch side anchoring pockets, (2) on the each of the long side of the curb. The unit was attached to each of the pockets using (8) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (14) 1/2"-dia Gr. 2 bolts. The min spacing for the bolts was 8". The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT11a

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZH150C00A2BAC5

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12.5 ton standard cooling only unit with single V OD coil design, 230V, 12x12"wide blower wheel, micro channel OD coils, dual scroll type compressors, dual refrigeration circuits, and 4 ODFs. The unit uses TXV for modulating refrigerant control. No heat section (cooling only), VAV, no economizer/no power exhaust (PE), no convenience outlet, standard controller, no phase monitor or dirty filter switch, no smoke detectors, standard plastic drain pan & standard 2" fiberglass air filters were selected.

				THE PROPERTY OF THE PARTY OF TH				
		1.		JUT Propertie	25			
Woight (lh)		Dir	nensions (incl		Lowest N	latural Frequen	cy (Hz)	
Weight (lb)	Depth	W	idth .	Н	eight	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,250	119 1/2	8	59	SP-025	13	7.8	12.8	
			Seisn	nic Test Paran	neters	XXXX		
Building Code	Test Criteria	Sds (g)	z/h	oth VP I	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.50	1.00	1.50	4.00	3.00	1.67	0.67

Unit Mounting Description:





Description: Unit was mounted to a rigid roof curb supplied by Ruskin, part #80-270-4414. The unit rested on the perimeter of the curb. The curb had (12) 12Ga anchoring pockets, (2) on the each of the short sides of the curb and (4) on each of the long sides of the curb. The unit was attached to each of the pockets using (2) # 14 - 5 inch long self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 2 bolts. There were two bolts on each side of the unit. The bolts were mounted five inches inward from the edge of the curb flange. The steel plate was attached to the shake table with (22) M12 threaded studs.

UUT11b

Unit Under Test (UUT) Summary Sheet



Manufacturer: Johnson Controls Incorporated

Product Line: Predator

Model Number: ZH150C00A2BAC5

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

12.5 ton standard cooling only unit with single V OD coil design, 230V, 12x12" wide blower wheel, micro channel OD coils, dual scroll type compressors, dual refrigeration circuits, and 4 ODFs. The unit uses TXV for modulating refrigerant control. No heat section (cooling only), VAV, no economizer/no power exhaust (PE), no convenience outlet, standard controller, no phase monitor or dirty filter switch, no smoke detectors, standard plastic drain pan & standard 2" fiberglass air filters were selected.

			ED.	JUT Properties	MA					
\\\\aight\ (lb\		Din	nensions (inch	Lowest N	latural Frequen	cy (Hz)				
1.250	Depth	W	idth) He	eight	Front-Back (X)	Side-Side (Y)	Side-Side (Y) Vertical (Z)		
1,250	119 1/2	44/	59 51			2.5	2.3	3.8		
		R	Seism	nic Test Param	eters					
Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	A <mark>rig-H (</mark> g)	Aflx-V (g)	Arig-V (g)		
CBC 2019	ICC-ES AC156	2.50	BY:Tim	othy J	Piland	3.00	1.67	0.67		

Unit Mounting Description:





Description: Unit was mounted to an isolated roof curb supplied by Ruskin (Provent), part #ISCALPRD371522_103. The unit rested on the perimeter of the curb. The curb had (6) 10Ga anchoring pockets, (2) on the each of the long side of the curb and (1) on each short side. The unit was attached to each of the pockets using (4) # 12 self tapping screws. The curb was attached to a 3/4" thick steel plate with (8) 3/8"-dia Gr. 5 bolts. The bolts were spaced 5-inches in from each side of the curb. The steel plate was attached to the shake table with (12) M12 threaded studs.

UUT 12a

Unit Under Test (UUT)

Summary Sheet



Product Line: Predator

Model Number: ZT120N18P2B1LAAKA1

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

The UUT is comprised of components including the following: refridgerant compressor, outdoor fan motor, outdoor and indoor coils, VFD, economizer, Filters, smoke detector, Simplicity SE

			U	IUT Properties				
Weight (lb)		Dim	nensions (inch	00	Lowest N	atural Frequen	cy (Hz)	
weight (ib)	Depth W		idth	Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,470	119.5	5	9.0	5	51.0 6.5 9.			
			Seism	ic Test Parame	eters	Y.		
Building Code	Test Criteria	Sds (g)	z/h	lp lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.00	1.50	3.20	2.40	1.33	0.53

Unit Mounting Description:

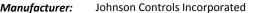


The unit was mounted to a rigid roof curb supplied by Ruskin part #80270-2914 8" height model. The unit rested on the perimeter of the curb. The unit was attached to the curb via (18) manufacturer provided mounting clips on the curb with (2) #10 TEK screw holes each spaced at 5" on each clip and each clip spaced 8", 20.5", 11", 20.5", and 8" on center respectively on the longer side and 18" on center on the shorter side for a total of (36) #10 TEK self tapping screws. The curb was attached to a steel plate shake table interface plate with (8) 3/8"-diameter grade 5 bolts and washers. The bolts were spaced 38" depthwise and 68" widthwise.

UUT 12b

Unit Under Test (UUT)

Summary Sheet



Product Line: Predator

Model Number: ZT120N18P2B1LAAKA1

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

The UUT is comprised of components including the following: refridgerant compressor, outdoor fan motor, outdoor and indoor coils, VFD, economizer, Filters, smoke detector, Simplicity SE 2-stage with COM, Simplicity SE 4-stage board.

			U	UT Properties				
Weight (lb)		Din	nensions (inch	Lowest N	atural Frequen	cy (Hz)		
weight (ib)	Depth	Width		He	ight //	Front-Back (X)	Side-Side (Y) Vertical (
1,470	119.5	5	9.0	CHD	1.0	3.5	4.0	8.0
		13/	Seism	ic Test Parame	eters	12		
Building Code	Test Criteria	Sds (g)	z/h	SP-1021	3 Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.00	1.50	3.20	2.40	1.33	0.53

Unit Mounting Description:



Unit was mounted to a isolated roof curb supplied by MicroMetl part #CRBV-PRD01FA-081-020. The unit rested on the perimeter of the curb. The unit was attached to the curb via (8) manufacturer provided mounting clips with (6) #10 TEK screw holes each spaced at 1.375" on each clip and each clip spaced 20+1/8" on center for a total of (48) #10 TEK self tapping screws. The curb was attached to a steel plate shake table interface plate with (8) 3/8"-diameter grade 5 bolts and washers. The bolts were spaced 41" depthwise and 71.5" widthwise.

UUT 13a

Unit Under Test (UUT)

Summary Sheet



Product Line: Predator

Model Number: ZT150S24R4D5LAE3E1

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

The UUT is comprised of components including the following: refridgerant compressor, outdoor fan motor, outdoor and indoor coils, VFD, economizer, Filters, smoke detector, Simplicity SE 2-stage with COM, Simplicity SE 4-stage board.

			U	UT Properties				
Woight (lh)		Dim	nensions (inch	Lowest N	atural Frequen	cy (Hz)		
Weight (lb)	Depth	W	idth	He	ight	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,680	119.5	5:	9.0	CHD	1.0	6.0	9.0	13.0
		12/	Seism	ic Test Parame	ters	2		
Building Code	Test Criteria	Sds (g)	z/h	SP-1921	3 Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.00	1.50	3.20	2.40	1.33	0.53

Unit Mounting Description:



The unit was mounted to a rigid roof curb supplied by Ruskin part #80-270-2914 14" height model. The unit rested on the perimeter of the curb. The unit was attached to the curb via (18) manufacturer provided mounting clips on the curb with (2) #10 TEK screw holes each spaced at 5" on each clip and each clip spaced 8", 20.5", 11", 20.5", and 8" on center respectively on the longer side and 18" on center on the shorter side for a total of (36) #10 TEK self tapping screws. The curb was attached to a steel plate shake table interface plate with (8) 3/8"-diameter grade 5 bolts and washers. The bolts were spaced 38" depthwise and 68" widthwise.

UUT 13b

Unit Under Test (UUT)

Summary Sheet



Product Line: Predator

Model Number: ZT150S24R4D5LAE3E1

Product Construction Summary:

Cabinet is constructed of G90 galvanized 1,000 hour salt spray (per ASTM-B117) rated powder-coated 20 gage carbon steel wrapper and duct panel with integral corner posts, all attached at the base to four (4) full perimeter 14 gage base rails with #10 sheet metal screws.

Options / Component Summary:

The UUT is comprised of components including the following: refridgerant compressor, outdoor fan motor, outdoor and indoor coils, VFD, economizer, Filters, smoke detector, Simplicity SE 2-stage with COM, Simplicity SE 4-stage board.

UUT Properties								
Weight (lb)	Dimensions (inches)					Lowest Natural Frequency (Hz)		
	Depth	Width		Height		Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,680	119.5	59.0		51.0		2.5	3.5	6.0
Seismic Test Parameters								
Building Code	Test Criteria	Sds (g)	z/h	SP-1921	3 Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2019	ICC-ES AC156	2.00	1.00	1.50	3.20	2.40	1.33	0.53

Unit Mounting Description:



Unit was mounted to a isolated roof curb supplied by MicroMetl part #CRBV-PRD01FA-1412-P40. The unit rested on the perimeter of the curb. The unit was attached to the curb via (8) manufacturer provided mounting clips with (6) #10 TEK screw holes each spaced at 1.375" on each clip and each clip spaced 20+1/8" on center for a total of (48) #10 TEK self tapping screws. The curb was attached to a steel plate shake table interface plate with (8) 3/8"-diameter grade 5 bolts and washers. The bolts were spaced 41" depthwise and 71.5" widthwise.