Granite Corp
"Mechanical Contractors"

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

Schlotterbeck Block
117 Preble Street
Portland, Me

SUBMITTAL COVER SHEET

Mechanical
23 00 00 Partial Drawings and Ductless Equipment

Date: June 4, 2016

Contractor:

Landry/French Construction
160 Pleasant Hill Road
Scarborough, Maine 04074

Architect:

Goduti/Thomas
44 Oak Street
Portland, Me 04101

Engineer:

Mechanical Systems Engineers
Royal River Center, Unit 10B
10 Forest Falls Road
Yarmouth, Maine 04096

PO Box 370, 85 High St. Oakland, Maine 04963 Tel (207) 465-9229 Fax (207) 465-2684

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Produced on 2/16/2016 with Xpress Selection V7.1.0 - database Central_USA 9.8.8

Project name	Schlotterbeck
Reference	Schlotterbeck
Client name	Granite Corp
Revision	1

Selection parameters of the indoor units can be found under the chapter Indoor unit details
Selection parameters of the outdoor units can be found under the chapter Outdoor unit details
Only the data published in the data book are correct. This program uses close approximations of these data.

1. Material List

Model	Qty	Description
REYQ144TTJU	4	Heat recovery VRV-IV (208-230V)
REYQ168TTJU	1	Heat recovery VRV-IV (208-230V)
REYQ192TTJU	1	Heat recovery VRV-IV (208-230V)
BS12Q54TVJ	3	Branch selector unit
BS6Q54TVJ	2	Branch selector unit
BS8Q54TVJ	3	Branch selector unit
FXAQ07PVJU	22	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	19	VRV A (P) - Wall Mounted Unit
FXAQ12PVJU	19	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	22	VRV A (P) - Wall Mounted Unit
FXAQ24PVJU	6	VRV A (P) - Wall Mounted Unit
KHRP25M72TU9	2	Refnet branch piping kit
KHRP26A22T9	19	Refnet branch piping kit
DCM601A71	1	intelligent Touch Manager (iTM)
KHFP26A100C	3	Branch Selector Closed Pipe Kit
BRC1E73	88	new Navigation Remote Controller
DACA-CP1-1	88	Small Condensate Pump (Local) - Up to 24mbh
BHFP26P100U	1	Condensing Unit Multi Connection Piping kit - VRVIV HR
DCM601A72	1	i-Touch Manager DIII Plus Adapter
R410A	261.9lbs	Extra refrigerant charge
Piping ¼"	4294.0ft	
Piping ⅜"	1154.0ft	
Piping ½"	4584.0ft	
Piping ⅝"	1326.0ft	
Piping ¾"	32.0ft	
Piping ⅞"	390.0ft	
Piping 1⅛"	527.0ft	

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2. Indoor Unit Details

2.1. Table of Abbreviations

Name	Logical name of the device
FCU	Device model name
Tmp C	Indoor conditions in cooling (dry bulb temp. / wet bulb temp.)
Rq TC	Required total cooling capacity
Max TC	Available total cooling capacity
Rq SC	Required sensible cooling capacity
Max SC	Available sensible cooling capacity
Tevap	Evaporating temperature of indoor unit coil
Tmp H	Indoor temperature in heating
Rq HC	Required heating capacity
Max HC	Available heating capacity
Airflow	Supplied airflow
Sound	Sound pressure low and high
PS	Power supply (voltage and phases)
MCA	Minimum Circuit Amps
Fuses	Fuses
WxHxD	WidthxHeightxDepth
Wght	Weight of the device

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2.2. CDU1 - REYQ168TTJU

Capacity data at conditions and connection ratio (113%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°F	BTU/h	BTU/h	BTU/h	BTU/h	°F	°F	BTU/h	BTU/h	cfm
AH-L01	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-L02	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-L03	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-L04	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-L05	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-L06	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-L07	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-L08	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-L09	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-L10	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-L11	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-L12	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-L13	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-L14	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-L15	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-L16	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-L17	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
Σ			160100						205186		

The sum of the required indoor unit capacities is 160100BTU/h for cooling and 205186BTU/h for heating.
However, the outdoor unit selection uses reduced load values for cooling of 80050BTU/h (= -50%) and for heating of 102593BTU/h (= -50%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	Fuses	WxHxD	Wght
	dBA		A		inch	lbs
AH-L01	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L02	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-L03	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L04	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L05	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L06	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L07	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L08	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L09	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-L10	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-L11	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-L12	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-L13	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-L14	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-L15	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-L16	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-L17	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26

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Outdoor unit placed at the same level as the indoor units.

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2.3. CDU2 - REYQ144TTJU

Capacity data at conditions and connection ratio (111%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°F	BTU/h	BTU/h	BTU/h	BTU/h	°F	°F	BTU/h	BTU/h	cfm
AH-101	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-102	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-103	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-104	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-105	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-106	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-107	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-108	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-109	FXAQ24PVJU	75.2 / 62.6	n/a	20286	n/a	15351	42.8	72.0	n/a	25498	635
AH-110	FXAQ24PVJU	75.2 / 62.6	n/a	20286	n/a	15351	42.8	72.0	n/a	25498	635
AH-111	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-112	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
Σ			135614						172788		

The sum of the required indoor unit capacities is 135614BTU/h for cooling and 172788BTU/h for heating.
However, the outdoor unit selection uses reduced load values for cooling of 67807BTU/h (= -50%) and for heating of 86394BTU/h (= -50%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	Fuses	WxHxD	Wght
	dBA		A		inch	lbs
AH-101	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-102	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-103	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-104	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-105	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-106	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-107	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-108	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-109	41-47	230V 1ph	0.6	15A	41.4x11.4x9.3	31
AH-110	41-47	230V 1ph	0.6	15A	41.4x11.4x9.3	31
AH-111	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-112	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26

Outdoor unit placed at the same level as the indoor units.

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2.4. CDU3 - REYQ144TTJU

Capacity data at conditions and connection ratio (127%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°F	BTU/h	BTU/h	BTU/h	BTU/h	°F	°F	BTU/h	BTU/h	cfm
AH-201	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-202	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-203	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-204	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-205	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-206	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-207	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-208	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-209	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-210	FXAQ24PVJU	75.2 / 62.6	n/a	20286	n/a	15351	42.8	72.0	n/a	25498	635
AH-211	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-212	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-213	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-214	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
Σ			154633						197686		

The sum of the required indoor unit capacities is 154633BTU/h for cooling and 197686BTU/h for heating.
However, the outdoor unit selection uses reduced load values for cooling of 77317BTU/h (= -50%) and for heating of 98843BTU/h (= -50%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	Fuses	WxHxD	Wght
	dBA		A		inch	lbs
AH-201	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-202	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-203	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-204	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-205	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-206	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-207	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-208	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-209	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-210	41-47	230V 1ph	0.6	15A	41.4x11.4x9.3	31
AH-211	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-212	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-213	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-214	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26

Outdoor unit placed at the same level as the indoor units.

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2.5. CDU4 - REYQ144TTJU

Capacity data at conditions and connection ratio (127%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°F	BTU/h	BTU/h	BTU/h	BTU/h	°F	°F	BTU/h	BTU/h	cfm
AH-301	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-302	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-303	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-304	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-305	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-306	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-307	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-308	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-309	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-310	FXAQ24PVJU	75.2 / 62.6	n/a	20286	n/a	15351	42.8	72.0	n/a	25498	635
AH-311	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-312	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-313	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-314	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
Σ			154633						197686		

The sum of the required indoor unit capacities is 154633BTU/h for cooling and 197686BTU/h for heating.
However, the outdoor unit selection uses reduced load values for cooling of 77317BTU/h (= -50%) and for heating of 98843BTU/h (= -50%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	Fuses	WxHxD	Wght
	dBA		A		inch	lbs
AH-301	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-302	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-303	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-304	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-305	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-306	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-307	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-308	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-309	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-310	41-47	230V 1ph	0.6	15A	41.4x11.4x9.3	31
AH-311	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-312	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-313	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-314	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26

Outdoor unit placed at the same level as the indoor units.

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2.6. CDU5 - REYQ144TTJU

Capacity data at conditions and connection ratio (123%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°F	BTU/h	BTU/h	BTU/h	BTU/h	°F	°F	BTU/h	BTU/h	cfm
AH-401	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-402	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-403	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-404	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-405	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-406	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-407	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-408	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-409	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-410	FXAQ24PVJU	75.2 / 62.6	n/a	20286	n/a	15351	42.8	72.0	n/a	25498	635
AH-411	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-412	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-413	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-414	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
Σ			149560						191187		

The sum of the required indoor unit capacities is 149560BTU/h for cooling and 191187BTU/h for heating.
However, the outdoor unit selection uses reduced load values for cooling of 74780BTU/h (= -50%) and for heating of 95593BTU/h (= -50%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	Fuses	WxHxD	Wght
	dBA		A		inch	lbs
AH-401	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-402	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-403	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-404	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-405	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-406	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-407	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-408	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-409	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-410	41-47	230V 1ph	0.6	15A	41.4x11.4x9.3	31
AH-411	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-412	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-413	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-414	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26

Outdoor unit placed at the same level as the indoor units.

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2.7. CDU6 - REYQ192TTJU

Capacity data at conditions and connection ratio (115%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°F	BTU/h	BTU/h	BTU/h	BTU/h	°F	°F	BTU/h	BTU/h	cfm
AH-501	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-502	FXAQ24PVJU	75.2 / 62.6	n/a	20286	n/a	15351	42.8	72.0	n/a	25498	635
AH-503	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-504	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-505	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-506	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-507	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-508	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-509	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-510	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-511	FXAQ12PVJU	75.2 / 62.6	n/a	10140	n/a	7810	42.8	72.0	n/a	12999	290
AH-512	FXAQ09PVJU	75.2 / 62.6	n/a	8033	n/a	6585	42.8	72.0	n/a	10299	280
AH-513	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-514	FXAQ18PVJU	75.2 / 62.6	n/a	15213	n/a	11765	42.8	72.0	n/a	19499	500
AH-515	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-516	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
AH-517	FXAQ07PVJU	75.2 / 62.6	n/a	6326	n/a	5606	42.8	72.0	n/a	8100	260
Σ			186312						238284		

The sum of the required indoor unit capacities is 186312BTU/h for cooling and 238284BTU/h for heating.
However, the outdoor unit selection uses reduced load values for cooling of 93156BTU/h (= -50%) and for heating of 119142BTU/h (= -50%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	Fuses	WxHxD	Wght
	dBA		A		inch	lbs
AH-501	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-502	41-47	230V 1ph	0.6	15A	41.4x11.4x9.3	31
AH-503	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-504	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-505	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-506	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-507	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-508	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-509	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-510	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-511	31-38	230V 1ph	0.4	15A	31.3x11.4x9.3	26
AH-512	31-37	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-513	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-514	37-43	230V 1ph	0.4	15A	41.3x11.4x9.3	31
AH-515	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-516	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26
AH-517	29-35	230V 1ph	0.3	15A	31.3x11.4x9.3	26

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Outdoor unit placed at the same level as the indoor units.

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3. Outdoor Unit Details

3.1. Table of Abbreviations

Name	Logical name of the device
Model	Device model name
Tmp C	Outdoor temperature in cooling
CC	Available cooling capacity
Rq CC	Required cooling capacity
Tmp H	Outdoor conditions in heating (dry bulb temp. / wet bulb temp.)
HC	Available heating capacity (integrated heating capacity)
Rq HC	Required heating capacity
Piping	Largest distance from indoor unit to outdoor unit
Bse Refr	Standard factory refrigerant charge (5m actual piping length)
	excluding extra refrigerant charge
	For calculation of extra refrigerant charge refer to the databook
Ex Refr	Extra refrigerant charge
PS	Power supply (voltage and phases)
MCA	Minimum Circuit Amps
MFA	Maximum Fuse Amps
Run Amps	Running Amps
St Curr	Starting current
Fuses	Fuses
WxHxD	WidthxHeightxDepth
Wght	Weight of the device
EER	EER value at nominal conditions
IEER	IEER value at nominal conditions
COP 47°F	COP value at nominal conditions and ambient temperature of 47°F
COP 17°F	COP value at nominal conditions and ambient temperature of 17°F
SCHE	SCHE (Simultaneous Cooling and Heating Efficiency) value at nominal conditions

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3.2. Outdoor Details

Name	Model	Comb	Tmp C	CC	Rq CC	Tmp H	HC	Rq HC	Piping
		%	°F	BTU/h	BTU/h	°F	BTU/h	BTU/h	ft
CDU1	REYQ168TTJU	113	88.0	149441	80050	-0.0 / -0.0	107930	102593	289.4
CDU2	REYQ144TTJU	111	88.0	128711	67807	-0.0 / -0.0	101899	86394	240.4
CDU3	REYQ144TTJU	127	88.0	142120	77317	-0.0 / -0.0	102613	98843	256.5
CDU4	REYQ144TTJU	127	88.0	142147	77317	-0.0 / -0.0	102613	98843	256.4
CDU5	REYQ144TTJU	123	88.0	139636	74780	-0.0 / -0.0	102475	95593	251.4
CDU6	REYQ192TTJU	115	88.0	174434	93156	-0.0 / -0.0	151320	119142	263.4

Name	Model	Refrigerant		
		Type	Bse Refr	Ex Refr
			lbs	lbs
CDU1	REYQ168TTJU	R410A	25.8	52.9
CDU2	REYQ144TTJU	R410A	25.8	37.8
CDU3	REYQ144TTJU	R410A	25.8	43.0
CDU4	REYQ144TTJU	R410A	25.8	42.6
CDU5	REYQ144TTJU	R410A	25.8	42.2
CDU6	REYQ192TTJU	R410A	47.6	43.7

Name	Model	PS	MCA	MFA	Run Amps	St Curr	Fuses	WxHxD	Wght
			A	A	A	A		inch	lbs
CDU1	REYQ168TTJU	230V 3ph	61.9	70	41.8		70A	48.9x66.7x30.2	780
BSB9	BS6Q54TVJ	230V 1ph	0.6	15				22.8x11.7x18.9	68
BSB10	BS8Q54TVJ	230V 1ph	0.8	15				22.8x11.7x18.9	73
CDU2	REYQ144TTJU	230V 3ph	55	70	38.8		70A	48.9x66.7x30.2	780
BSB3	BS8Q54TVJ	230V 1ph	0.8	15				22.8x11.7x18.9	73
CDU3	REYQ144TTJU	230V 3ph	55	70	38.8		70A	48.9x66.7x30.2	780
BSB4	BS12Q54TVJ	230V 1ph	1.2	15				32.3x11.7x18.9	106
CDU4	REYQ144TTJU	230V 3ph	55	70	38.8		70A	48.9x66.7x30.2	780
BSB5	BS12Q54TVJ	230V 1ph	1.2	15				32.3x11.7x18.9	106
CDU5	REYQ144TTJU	230V 3ph	55	70	38.8		70A	48.9x66.7x30.2	780
BSB6	BS12Q54TVJ	230V 1ph	1.2	15				32.3x11.7x18.9	106
CDU6	REYQ192TTJU	230V 3ph							
	* REYQ120TTJU		43	50	30		50A	48.9x66.7x30.2	703
	* REYQ72TTJU		30.2	35	20.7		35A	36.7x66.7x30.2	507
BSB7	BS6Q54TVJ	230V 1ph	0.6	15				22.8x11.7x18.9	68
BSB8	BS8Q54TVJ	230V 1ph	0.8	15				22.8x11.7x18.9	73

Sufficient distance should be respected between the modules according to the service & operation space rules as mentioned in the databook.

Name	Ducted					Non-ducted				
	EER	IEER	COP 47°F	COP 17°F	SCHE	EER	IEER	COP 47°F	COP 17°F	SCHE
CDU1	11.3	19.5	3.33	2.15	22.8	11.7	22	3.77	2.32	26.6
CDU2	11.9	20.7	3.55	2.35	23.8	12.9	24.2	3.81	2.56	25.5
CDU3	11.9	20.7	3.55	2.35	23.8	12.9	24.2	3.81	2.56	25.5
CDU4	11.9	20.7	3.55	2.35	23.8	12.9	24.2	3.81	2.56	25.5
CDU5	11.9	20.7	3.55	2.35	23.8	12.9	24.2	3.81	2.56	25.5
CDU6	12.6	20.4	3.67	2.38	22.9	12.5	22.9	3.84	2.55	26.6

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3.2.1. CDU1 - REYQ168TTJU

Model	Qty	Description
REYQ168TTJU	1	Heat recovery VRV-IV (208-230V)
BS6Q54TVJ	1	Branch selector unit
BS8Q54TVJ	1	Branch selector unit
FXAQ07PVJU	5	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ12PVJU	5	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	3	VRV A (P) - Wall Mounted Unit
KHRP25M72TU9	1	Refnet branch piping kit
KHRP26A22T9	3	Refnet branch piping kit
BRC1E73	17	new Navigation Remote Controller
DACA-CP1-1	17	Small Condensate Pump (Local) - Up to 24mbh
R410A	52.9lbs	Extra refrigerant charge
Piping ¼"	953.0ft	
Piping ⅜"	138.0ft	
Piping ½"	953.0ft	
Piping ⅝"	243.0ft	
Piping ¾"	15.0ft	
Piping ⅞"	95.0ft	
Piping 1⅛"	105.0ft	

Standard factory refrigerant charge (5m actual piping length) = 25.8lbs
Extra refrigerant charge = (105.0ft(ø⅝") × 0.179kg/m + 138.0ft(ø⅜") × 0.059kg/m + 953.0ft(ø¼") × 0.022kg/m) × 1.04 + A + B + C = 52.9lbs
A 113% 233.0ft = 6.6lbs
B 14HP = 10.8lbs
C = 1(BS6Q54TVJ) × 0.4kg/m + 1(BS8Q54TVJ) × 0.5kg/m = 2.0lbs

Piping Limitations

Maximum total length	3280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	295.3ft
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor units	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50-200%

Pipe Capacities

Maximum Connection Index	Diameters
53.9	⅜"×⅝"×½"
71.9	⅜"×¾"×⅝"
110.9	⅜"×⅞"×¾"
161.9	½"×1⅛"×¾"
> 161.9	⅝"×1⅛"×⅞"
Main pipe size up	¾"×1⅛"×⅞"

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3.2.2. CDU2 - REYQ144TTJU

Model	Qty	Description
REYQ144TTJU	1	Heat recovery VRV-IV (208-230V)
BS8Q54TVJ	1	Branch selector unit
FXAQ07PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ24PVJU	2	VRV A (P) - Wall Mounted Unit
KHRP26A22T9	4	Refnet branch piping kit
BRC1E73	12	new Navigation Remote Controller
DACA-CP1-1	12	Small Condensate Pump (Local) - Up to 24mbh
R410A	37.7lbs	Extra refrigerant charge
Piping ¼"	287.0ft	
Piping ⅜"	229.0ft	
Piping ½"	367.0ft	
Piping ⅝"	229.0ft	
Piping ⅞"	80.0ft	
Piping 1⅛"	80.0ft	

Standard factory refrigerant charge (5m actual piping length) = 25.8lbs
Extra refrigerant charge = (80.0ft(ø½") × 0.12kg/m + 229.0ft(ø⅜") × 0.059kg/m + 287.0ft(ø¼") × 0.022kg/m) × 1.04 + A + B + C = 37.7lbs
A 111% 185.0ft = 5.5lbs
B 12HP = 10.6lbs
C = 1(BS8Q54TVJ) × 0.5kg/m = 1.1lbs

Piping Limitations

Maximum total length	3280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	295.3ft
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor units	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50-200%

Pipe Capacities

Maximum Connection Index	Diameters
53.9	⅜"×⅝"×½"
71.9	⅜"×¾"×⅝"
110.9	⅜"×⅞"×¾"
> 110.9	½"×1⅛"×⅞"
Main pipe size up	⅝"×1⅛"×⅞"

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3.2.3. CDU3 - REYQ144TTJU

Model	Qty	Description
REYQ144TTJU	1	Heat recovery VRV-IV (208-230V)
BS12Q54TVJ	1	Branch selector unit
FXAQ07PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ12PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ24PVJU	1	VRV A (P) - Wall Mounted Unit
KHRP26A22T9	3	Refnet branch piping kit
KHFP26A100C	1	Branch Selector Closed Pipe Kit
BRC1E73	14	new Navigation Remote Controller
DACA-CP1-1	14	Small Condensate Pump (Local) - Up to 24mbh
R410A	43.0lbs	Extra refrigerant charge
Piping ¼"	738.0ft	
Piping ⅜"	182.0ft	
Piping ½"	813.0ft	
Piping ⅝"	182.0ft	
Piping ⅞"	75.0ft	
Piping 1⅛"	75.0ft	

Standard factory refrigerant charge (5m actual piping length) = 25.8lbs
Extra refrigerant charge = (75.0ft(ø½") × 0.12kg/m + 182.0ft(ø⅜") × 0.059kg/m + 738.0ft(ø¼") × 0.022kg/m) × 1.04 + A + B + C = 43.0lbs
A 127% 205.0ft = 5.5lbs
B 12HP = 10.6lbs
C = 1(BS12Q54TVJ) × 0.8kg/m = 1.8lbs

Piping Limitations

Maximum total length	3280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	295.3ft
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor units	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50-200%

Pipe Capacities

Maximum Connection Index	Diameters
53.9	⅜"×⅝"×½"
71.9	⅜"×¾"×⅝"
110.9	⅜"×⅞"×¾"
> 110.9	½"×1⅛"×⅞"
Main pipe size up	⅝"×1⅛"×⅞"

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3.2.4. CDU4 - REYQ144TTJU

Model	Qty	Description
REYQ144TTJU	1	Heat recovery VRV-IV (208-230V)
BS12Q54TVJ	1	Branch selector unit
FXAQ07PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ12PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ24PVJU	1	VRV A (P) - Wall Mounted Unit
KHRP26A22T9	3	Refnet branch piping kit
KHFP26A100C	1	Branch Selector Closed Pipe Kit
BRC1E73	14	new Navigation Remote Controller
DACA-CP1-1	14	Small Condensate Pump (Local) - Up to 24mbh
R410A	42.5lbs	Extra refrigerant charge
Piping ¼"	738.0ft	
Piping ⅜"	182.0ft	
Piping ½"	808.0ft	
Piping ⅝"	182.0ft	
Piping ⅞"	70.0ft	
Piping 1⅛"	70.0ft	

Standard factory refrigerant charge (5m actual piping length) = 25.8lbs
Extra refrigerant charge = (70.0ft(ø½") × 0.12kg/m + 182.0ft(ø⅜") × 0.059kg/m + 738.0ft(ø¼") × 0.022kg/m) × 1.04 + A + B + C = 42.5lbs
A 127% 200.0ft = 5.5lbs
B 12HP = 10.6lbs
C = 1(BS12Q54TVJ) × 0.8kg/m = 1.8lbs

Piping Limitations

Maximum total length	3280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	295.3ft
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor units	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50-200%

Pipe Capacities

Maximum Connection Index	Diameters
53.9	⅜"×⅝"×½"
71.9	⅜"×¾"×⅝"
110.9	⅜"×⅞"×¾"
> 110.9	½"×1⅛"×⅞"
Main pipe size up	⅝"×1⅛"×⅞"

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Inspections Division
Approved with Conditions
Date: 03/21/17

3.2.5. CDU5 - REYQ144TTJU

Model	Qty	Description
REYQ144TTJU	1	Heat recovery VRV-IV (208-230V)
BS12Q54TVJ	1	Branch selector unit
FXAQ07PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ12PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ24PVJU	1	VRV A (P) - Wall Mounted Unit
KHRP26A22T9	3	Refnet branch piping kit
KHFP26A100C	1	Branch Selector Closed Pipe Kit
BRC1E73	14	new Navigation Remote Controller
DACA-CP1-1	14	Small Condensate Pump (Local) - Up to 24mbh
R410A	42.1lbs	Extra refrigerant charge
Piping ¼"	739.0ft	
Piping ⅜"	182.0ft	
Piping ½"	804.0ft	
Piping ⅝"	182.0ft	
Piping ⅞"	65.0ft	
Piping 1⅛"	65.0ft	

Standard factory refrigerant charge (5m actual piping length) = 25.8lbs
Extra refrigerant charge = (65.0ft(ø½") × 0.12kg/m + 182.0ft(ø⅜") × 0.059kg/m + 739.0ft(ø¼") × 0.022kg/m) × 1.04 + A + B + C = 42.1lbs
A 123% 195.0ft = 5.5lbs
B 12HP = 10.6lbs
C = 1(BS12Q54TVJ) × 0.8kg/m = 1.8lbs

Piping Limitations

Maximum total length	3280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	295.3ft
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor units	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50-200%

Pipe Capacities

Maximum Connection Index	Diameters
53.9	⅜"×⅝"×½"
71.9	⅜"×¾"×⅝"
110.9	⅜"×⅞"×¾"
> 110.9	½"×1⅛"×⅞"
Main pipe size up	⅝"×1⅛"×⅞"

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3.2.6. CDU6 - REYQ192TTJU

Model	Qty	Description
REYQ192TTJU	1	Heat recovery VRV-IV (208-230V)
BS6Q54TVJ	1	Branch selector unit
BS8Q54TVJ	1	Branch selector unit
FXAQ07PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ09PVJU	3	VRV A (P) - Wall Mounted Unit
FXAQ12PVJU	4	VRV A (P) - Wall Mounted Unit
FXAQ18PVJU	5	VRV A (P) - Wall Mounted Unit
FXAQ24PVJU	1	VRV A (P) - Wall Mounted Unit
KHRP25M72TU9	1	Refnet branch piping kit
KHRP26A22T9	3	Refnet branch piping kit
BRC1E73	17	new Navigation Remote Controller
DACA-CP1-1	17	Small Condensate Pump (Local) - Up to 24mbh
BHFP26P100U	1	Condensing Unit Multi Connection Piping kit - VRVIV HR
R410A	43.7lbs	Extra refrigerant charge
Piping ¼"	839.0ft	
Piping ⅜"	241.0ft	
Piping ½"	839.0ft	
Piping ⅝"	308.0ft	
Piping ¾"	17.0ft	
Piping ⅞"	5.0ft	
Piping 1⅛"	132.0ft	

Standard factory refrigerant charge (5m actual piping length) = 47.6lbs
Extra refrigerant charge = (72.0ft(ø⅝") × 0.179kg/m + 241.0ft(ø⅜") × 0.059kg/m + 839.0ft(ø¼") × 0.022kg/m) × 1.04 + A + B + C = 43.7lbs
A 115% 202.0ft = 6.6lbs
B 16HP = 3.3lbs
C = 1(BS6Q54TVJ) × 0.4kg/m + 1(BS8Q54TVJ) × 0.5kg/m = 2.0lbs

Piping Limitations

Maximum total length	3280.8ft
Maximum longest actual length	541.3ft
Maximum longest equivalent length	623.4ft
Maximum main pipe length (size up of main pipe required if longer)	295.3ft
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	131.2ft
Maximum length first branch to indoor units	295.3ft
Maximum length of indoor units to nearest branch	131.2ft
Maximum length difference between longest and shortest distance to indoor units	131.2ft
Maximum height difference between indoor units	98.4ft
Connection ratio range	50-200%

Pipe Capacities

Maximum Connection Index	Diameters
53.9	⅜"×⅝"×½"
71.9	⅜"×¾"×⅝"
110.9	⅜"×⅞"×¾"
161.9	½"×1⅛"×¾"

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Maximum Connection Index	Diameters
> 161.9	⅝"×1⅛"×1⅛"
Main pipe size up	¾"×1⅛"×1⅛"

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Date: 03/21/17

4. Piping Diagrams

Pipes marked with * in the diagrams must be connected to the device with a reducing joint.

4.1. Piping CDU1

The actual length (138.0ft) from the first branch to AH-L04 exceeds 131.2ft. The intermediate pipes are sized up

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4.2. Piping CDU2

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Inspections Division
Approved with Conditions
Date: 03/21/17

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4.3. Piping CDU3

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4.4. Piping CDU4

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Approved with Conditions
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4.5. Piping CDU5

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4.6. Piping CDU6

The actual length (140.0ft) from the first branch to AH-503 exceeds 131.2ft. The intermediate pipes are sized up
The actual length (142.0ft) from the first branch to AH-504 exceeds 131.2ft. The intermediate pipes are sized up

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Date: 03/21/17

5. Wiring Diagrams

P1P2 = Please select the cable type and size in accordance with the databook.
F1F2 = Please select the cable type and size in accordance with the databook.

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5.1. Wiring CDU1

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5.2. Wiring CDU2

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5.3. Wiring CDU3

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5.4. Wiring CDU4

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5.5. Wiring CDU5

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5.6. Wiring CDU6

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6. Centralized Controllers

6.1. Concept

Global Controller Models | **Control Groups**

i-Touch Manager

controllers 1

Control group 1

CDU1 (17)	# outdoors	6
CDU6 (17)	# indoors	88
CDU3 (14)		
CDU4 (14)		
CDU5 (14)		
CDU2 (12)		

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6.2. Control group 1

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6.3. Dimensional Drawings

i-Touch Manager DCM601A71

DCM601A71

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1 TYPICAL DUCT & PIPING SUPPORT RACK

NO SCALE

2 ELEVATOR MACH. ROOM

SCALE: ¼" = 1'-0"

3 UNACCEPTABLE DUCT FITTINGS

NO SCALE

4 SHOP FABRICATED MANUAL DAMPER

NO SCALE

5 FIRST FLOOR PLAN

SCALE: ⅛" = 1'-0" ELEV. 18.55'

6 LOWER LEVEL PLAN

SCALE: ⅛" = 1'-0" ELEV. 07.55'

6"x4" DUCT TO EACH INDIVIDUAL SUPPLY REGISTER.
4"Ø DUCT TO EACH INDIVIDUAL EXHAUST REGISTER
ALL SUPPLY REGISTERS SERVING LIVING UNITS TO BE 6"x4", 75 CFM
ALL EXHAUST REGISTERS SERVING LIVING UNITS TO BE 6"x4", 50 CFM IN BATHROOMS & 25 CFM IN KITCHENS.
FLEXIBLE DUCTWORK IS NOT PERMITTED OTHER THAN FINAL TERMINATIONS AT CLOTHES DRYERS.
PIPING AND DUCTWORK WILL BE EXPOSED. INSTALLATION & ARRANGEMENTS TO BE AS NEAT & ORGANIZED AS POSSIBL
PROVIDE A CONDENSATE LIFT PUMP WITH EVERY AIR HANDLER & BCC UNIT. LIFT CONDENSATE AS HIGH AS POSSIBLE THEN DRAIN BY GRAVITY @ 0.10"/LF AS SHOWN. DRAIN LINES TO PARALLEL REFRIGERANT LINES AS MUCH AS POSSIBLE.
DRAINS FROM EACH UNIT TO BE 1" WITH UP TO 2 UNITS ON A 1" LINE. USE 1¼" WHERE MORE THAN TWO UNITS ARE CONNECTED.
EACH SINGLE REFRIGERANT LINE SHOWN BETWEEN BCC UNITS AND AIR HANDLERS REPRESENTS BOTH LIQUID AND GAS.

⅛" = 1'-0" 0' 2' 4' 6' 8' 16' 24' 32'

MECHANICAL SYSTEMS ENGINEERS
ROYAL RIVER CENTER, UNIT 10B
10 FOREST FALLS DRIVE, YARMOUTH, MAINE 04096
(207) 846-1441
FACEBOOK: MECHANICAL SYSTEMS ENGINEERS

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N

Schlotterbeck Block

117 Preble Street
Portland, Maine

Schlotterbeck Block LLC
goduti/thomas architects
44 oak st.
portland, maine 04101
ph. 207-775-3184
fax 207-774-0486

STATE OF MAINE Kurt F. Magnusson 10257 LICENSED PROFESSIONAL ENGINEER

Revise Unit L06 3.8.2016
Add Unit L10 3.8.2016

revisions

date
March 15, 2016

sheet title

Lower Level and 1st Floor Mechanical Plans
sheet title line 3

scale
Noted

drawn by
R.E.M.

project number
scholtterbeck

sheet number
M1

March 08, 2016 – 10:31 am
\\MSEPS1\Projects\1533 Foss Building\Post-Bid\1533 M1-M4 (3-8-2016).dwg

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Date: 03/21/17

Note - Cross Rails may be individually rotated 180° to increasing range of adjustability of mounting holes.

Plan View

Side View

End View Expanded

End View Retracted

(*) - Width is adjustable in 1" increments.

(**) - Height is adjustable in ¼" or ½" increments up to 1 ¾".

Important Note: The installer is responsible for tethering and bolting units to withstand wind and/or seismic loads.

PARTS LIST

- (A1) (2) - Single 1 ½" x 1 ½" Steel Adjustable L-Bar w/Feet (SS100L24)
- (A2) (2) - Single 1 ½" x 1 ½" Steel Adjustable L-Bar w/Feet (SS100R24)
- (F) (2) - 11 Gauge Type "D" Cross Rails (SS55)
- (G) (2) - 1 ¼" x 1 ¼" Steel Adjustment Bars (SS103)

Note - All assembly hardware is included

QUICK-SLING	24" SUPER STAND - TYPE D MODEL NO. QSSS1019-24"	www.quick-sling.com email: info@quick-sling.com fax: 1-(800)-699-0423	Quick Sling, LLC 391 W. Water Street Taunton, MA 02780 1-(800)-699-0453

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Inspections Division
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Date: 03/21/17

Note - Cross Rails may be individually rotated 180° to increasing range of adjustability of mounting holes.

Plan View

Side View

End View Expanded

End View Retracted

(*) - Width is adjustable in 1" increments.

(**) - Height is adjustable in ¼" or ½" increments up to 1 ¾".

Important Note: The installer is responsible for tethering and bolting units to withstand wind and/or seismic loads.

PARTS LIST

- (A1) (2) - Single 1 ½" x 1 ½" Steel Adjustable L-Bar w/Feet (SS100L24)
- (A2) (2) - Single 1 ½" x 1 ½" Steel Adjustable L-Bar w/Feet (SS100R24)
- (B) (2) - Double 1 ½" x 1 ½" Steel L-Bar w/Feet (SS101-24)
- (F) (4) - 11 Gauge Type "D" Cross Rails (SS55)
- (G) (3) - 1 ¼" x 1 ¼" Steel Adjustment Bars (SS103)

Note - All assembly hardware is included

QUICK-SLING	24" SUPER STAND - TYPE D-D MODEL NO. QSSS1020-24"	www.quick-sling.com email: info@quick-sling.com fax: 1-(800)-699-0423	Quick Sling, LLC 391 W. Water Street Taunton, MA 02780 1-(800)-699-0453

ODU-7

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Inspections Division
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Date: 03/21/17

Submittal Data Sheet

8-Ton VRV-IV Heat Recovery Unit - 230V

REYQ96TTJU

FEATURES

- Variable Refrigerant Temperature (VRT) control allows the VRV IV to deliver up to 28% of improvement in seasonal cooling efficiency compared to previous Daikin VRV heat recovery systems
- Improved efficiency with IEER values now up to 29.3
- Can provide heating down to -13°F WB as standard
- Larger capacity single modules ranging up to 14 tons and systems up to 38 tons allow for a more flexible system design, when compared to VRV III
- New configurator software designed to simplify the commissioning and maintenance of the system
- Standard Limited Warranty: 10-year warranty on compressor and all parts
- Larger capacity single modules allow for opportunity to reduce electrical connections, piping connections and outdoor unit mounting fixtures
- All inverter compressors to increase the efficiency and avoid starting current inrush
- Assembled in the US to increase flexibility and reduce lead times
- Factory standard coil guards

BENEFITS

- Can operate up to 64 indoor units on a single piping network
- Inverter control board cooled by refrigerant to avoid influence from ambient temperatures
- Integrated inverter technology deliver maximum efficiency during part load conditions and provide precise individual zone control
- Heat exchanger coil wraps around on all 4 sides of the unit to increase the surface area/efficiency
- Modular and lightweight - enables flexibility in system layout and installation
- Ultra gold fin coating with a salt spray test rating of 1000 hours provides superior corrosion resistance for applications near seacoasts and other corrosive environments
- Design flexibility with long piping lengths up to 3,280 ft. total and 100 ft. vertical separation between indoor units
- Designed with reduced MOP to optimize installation cost
- Digital display on the unit for improved and faster configuration, commissioning, and troubleshooting

(Daikin's products are subject to continuous improvements. Daikin reserves the right to modify product design, specifications and information in this data sheet without notice and without incurring any obligations)

Submittal Data Sheet

8-Ton VRV-IV Heat Recovery Unit - 230V

REYQ96TTJU

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

PERFORMANCE			
Outdoor Unit Model No.	REYQ96TTJU	Outdoor Unit Name:	8-Ton VRV-IV Heat Recovery Unit - 230V
Type:	Heat Recovery	Unit Combination:	
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 /	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	90,000	Rated Heating Capacity (Btu/hr):	100,000
Nom Cooling Capacity (Btu/hr):	96,000	Nom Heating Capacity (Btu/hr):	108,000
Cooling Input Power (kW):	5.59	Heating Input Power (kW):	7.69
EER (Non-Ducted/Ducted):	15.10 / 13.10	Heating COP (Non-Ducted/Ducted):	4.3 / 3.7
IEER (Non-Ducted/Ducted):	29.30 / 21.00	Heating COP 17F (Non-Ducted/Ducted):	2.6 / 2.3
		SCHE (Non-Ducted/Ducted):	27.30 / 23.00

OUTDOOR UNIT DETAILS			
Power Supply (V/Hz/Ph):	208-230 / 60 / 3	Compressor Type	Inverter
Power Supply Connections:	L1, L2, L3 Ground	Capacity Control Range (%):	11 - 100
Min. Circuit Amps MCA (A):	38.00	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	45.00	Airflow Rate (H) (CFM):	5827
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	7/8
Rated Load Amps RLA(A):	13.7+13.7	Liquid Pipe Connection (inch):	3/8
Dimensions (Height) (in):	66-11/16	H/L Pressure Connection (inch)	3/4
Dimensions (Width) (in):	48-7/8	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-3/16	Sound Pressure (H) (dBA):	61
Net Weight (lb):	703	Sound Power Level (dBA):	81
		Max. No. of Indoor Units:	16

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Submittal Data Sheet
8-Ton VRV-IV Heat Recovery Unit - 230V
REYQ96TTJU

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

SYSTEM DETAILS			
Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (lb/ft):		Max. Pipe Length (Vertical) (ft):	295
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	540	Heating Range w/Baffle (°F WB):	-
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING

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ODU - 2, 3, 4, 5

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Date: 03/21/17

Submittal Data Sheet

12-Ton VRV-IV Heat Recovery Unit - 230V

REYQ144TTJU

FEATURES

- Variable Refrigerant Temperature (VRT) control allows the VRV IV to deliver up to 28% of improvement in seasonal cooling efficiency compared to previous Daikin VRV heat recovery systems
- Improved efficiency with IEER values now up to 29.3
- Can provide heating down to -13°F WB as standard
- Larger capacity single modules ranging up to 14 tons and systems up to 38 tons allow for a more flexible system design, when compared to VRV III
- New configurator software designed to simplify the commissioning and maintenance of the system
- Standard Limited Warranty: 10-year warranty on compressor and all parts
- Larger capacity single modules allow for opportunity to reduce electrical connections, piping connections and outdoor unit mounting fixtures
- All inverter compressors to increase the efficiency and avoid starting current inrush
- Assembled in the US to increase flexibility and reduce lead times
- Factory standard coil guards

BENEFITS

- Can operate up to 64 indoor units on a single piping network
- 3 row 7mm heat exchanger coil improves efficiency
- Inverter control board cooled by refrigerant to avoid influence from ambient temperatures
- Integrated inverter technology deliver maximum efficiency during part load conditions and provide precise individual zone control
- Heat exchanger coil wraps around on all 4 sides of the unit to increase the surface area/efficiency
- Modular and lightweight - enables flexibility in system layout and installation
- Ultra gold fin coating with a salt spray test rating of 1000 hours provides superior corrosion resistance for applications near seacoasts and other corrosive environments
- Design flexibility with long piping lengths up to 3,280 ft. total and 100 ft. vertical separation between indoor units
- Designed with reduced MOP to optimize installation cost
- Digital display on the unit for improved and faster configuration, commissioning, and troubleshooting

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Submittal Data Sheet

12-Ton VRV-IV Heat Recovery Unit - 230V

REYQ144TTJU

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

PERFORMANCE

Outdoor Unit Model No.	REYQ144TTJU	Outdoor Unit Name:	12-Ton VRV-IV Heat Recovery Unit - 230V
Type:	Heat Recovery	Unit Combination:	
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 /	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	135,000	Rated Heating Capacity (Btu/hr):	150,000
Nom Cooling Capacity (Btu/hr):	144,000	Nom Heating Capacity (Btu/hr):	162,000
Cooling Input Power (kW):	10.80	Heating Input Power (kW):	13.70
EER (Non-Ducted/Ducted):	12.90 / 11.90	Heating COP (Non-Ducted/Ducted):	3.8 / 3.6
IEER (Non-Ducted/Ducted):	24.20 / 20.70	Heating COP 17F (Non-Ducted/Ducted):	2.6 / 2.4
		SCHE (Non-Ducted/Ducted):	25.50 / 23.80

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 3	Compressor Type	Inverter
Power Supply Connections:	L1, L2, L3 Ground	Capacity Control Range (%):	10 - 100
Min. Circuit Amps MCA (A):	55.00	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	70.00	Airflow Rate (H) (CFM):	8228
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	16.2+22.6	Liquid Pipe Connection (inch):	1/2
Dimensions (Height) (in):	66-11/16	H/L Pressure Connection (inch)	7/8
Dimensions (Width) (in):	48-7/8	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-3/16	Sound Pressure (H) (dBA):	65
Net Weight (lb):	780	Sound Power Level (dBA):	86
		Max. No. of Indoor Units:	25

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Submittal Data Sheet

12-Ton VRV-IV Heat Recovery Unit - 230V

REYQ144TTJU

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 03/21/17

SYSTEM DETAILS			
Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (lb/ft):		Max. Pipe Length (Vertical) (ft):	295
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	540	Heating Range w/Baffle (°F WB):	-
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING

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Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

Submittal Data Sheet

14-Ton VRV-IV Heat Recovery Unit - 230V

REYQ168TTJU

FEATURES

- Variable Refrigerant Temperature (VRT) control allows the VRV IV to deliver up to 28% of improvement in seasonal cooling efficiency compared to previous Daikin VRV heat recovery systems
- Improved efficiency with IEER values now up to 29.3
- Can provide heating down to -13°F WB as standard
- Larger capacity single modules ranging up to 14 tons and systems up to 38 tons allow for a more flexible system design, when compared to VRV III
- New configurator software designed to simplify the commissioning and maintenance of the system
- Standard Limited Warranty: 10-year warranty on compressor and all parts
- Larger capacity single modules allow for opportunity to reduce electrical connections, piping connections and outdoor unit mounting fixtures
- All inverter compressors to increase the efficiency and avoid starting current inrush
- Assembled in the US to increase flexibility and reduce lead times
- Factory standard coil guards

BENEFITS

- Can operate up to 64 indoor units on a single piping network
- 3 row 7mm heat exchanger coil improves efficiency
- Inverter control board cooled by refrigerant to avoid influence from ambient temperatures
- Integrated inverter technology deliver maximum efficiency during part load conditions and provide precise individual zone control
- Heat exchanger coil wraps around on all 4 sides of the unit to increase the surface area/efficiency
- Modular and lightweight - enables flexibility in system layout and installation
- Ultra gold fin coating with a salt spray test rating of 1000 hours provides superior corrosion resistance for applications near seacoasts and other corrosive environments
- Design flexibility with long piping lengths up to 3,280 ft. total and 100 ft. vertical separation between indoor units
- Designed with reduced MOP to optimize installation cost
- Digital display on the unit for improved and faster configuration, commissioning, and troubleshooting

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Submittal Data Sheet

14-Ton VRV-IV Heat Recovery Unit - 230V

REYQ168TTJU

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

PERFORMANCE

Outdoor Unit Model No.	REYQ168TTJU	Outdoor Unit Name:	14-Ton VRV-IV Heat Recovery Unit - 230V
Type:	Heat Recovery	Unit Combination:	
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 /	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	156,000	Rated Heating Capacity (Btu/hr):	176,000
Nom Cooling Capacity (Btu/hr):	168,000	Nom Heating Capacity (Btu/hr):	188,000
Cooling Input Power (kW):	13.90	Heating Input Power (kW):	16.90
EER (Non-Ducted/Ducted):	11.70 / 11.30	Heating COP (Non-Ducted/Ducted):	3.8 / 3.3
IEER (Non-Ducted/Ducted):	22.00 / 19.50	Heating COP 17F (Non-Ducted/Ducted):	2.3 / 2.2
		SCHE (Non-Ducted/Ducted):	26.60 / 22.80

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 3	Compressor Type	Inverter
Power Supply Connections:	L1, L2, L3 Ground	Capacity Control Range (%):	10 - 100
Min. Circuit Amps MCA (A):	61.90	Capacity Index Limit:	84.0 - 336.0
Max Overcurrent Protection (MOP) (A):	70.00	Airflow Rate (H) (CFM):	8228
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	17.4+24.4	Liquid Pipe Connection (inch):	5/8
Dimensions (Height) (in):	66-11/16	H/L Pressure Connection (inch)	7/8
Dimensions (Width) (in):	48-7/8	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-3/16	Sound Pressure (H) (dBA):	65
Net Weight (lb):	780	Sound Power Level (dBA):	86
		Max. No. of Indoor Units:	29

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Submittal Data Sheet

14-Ton VRV-IV Heat Recovery Unit - 230V

REYQ168TTJU

Reviewed for Code Compliance
Inspections Division
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Date: 03/21/17

SYSTEM DETAILS			
Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (lb/ft):		Max. Pipe Length (Vertical) (ft):	295
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	540	Heating Range w/Baffle (°F WB):	-
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING

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Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

Submittal Data Sheet

16-Ton VRV-IV Heat Recovery Unit - 230V

REYQ192TTJU

FEATURES

- Variable Refrigerant Temperature (VRT) control allows the VRV IV to deliver up to 28% of improvement in seasonal cooling efficiency compared to previous Daikin VRV heat recovery systems
- Improved efficiency with IEER values now up to 29.3
- Can provide heating down to -13°F WB as standard
- Larger capacity single modules ranging up to 14 tons and systems up to 38 tons allow for a more flexible system design, when compared to VRV III
- New configurator software designed to simplify the commissioning and maintenance of the system
- Standard Limited Warranty: 10-year warranty on compressor and all parts
- Larger capacity single modules allow for opportunity to reduce electrical connections, piping connections and outdoor unit mounting fixtures
- All inverter compressors to increase the efficiency and avoid starting current inrush
- Assembled in the US to increase flexibility and reduce lead times
- Factory standard coil guards

BENEFITS

- Can operate up to 64 indoor units on a single piping network
- Inverter control board cooled by refrigerant to avoid influence from ambient temperatures
- Integrated inverter technology deliver maximum efficiency during part load conditions and provide precise individual zone control
- Heat exchanger coil wraps around on all 4 sides of the unit to increase the surface area/efficiency
- Continuous heating during defrost and oil return allows constant comfort control
- Modular and lightweight - enables flexibility in system layout and installation
- Ultra gold fin coating with a salt spray test rating of 1000 hours provides superior corrosion resistance for applications near seacoasts and other corrosive environments
- Design flexibility with long piping lengths up to 3,280 ft. total and 100 ft. vertical separation between indoor units
- Designed with reduced MOP to optimize installation cost
- Digital display on the unit for improved and faster configuration, commissioning, and troubleshooting.

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Submittal Data Sheet

16-Ton VRV-IV Heat Recovery Unit - 230V

REYQ192TTJU

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 03/21/17

PERFORMANCE

Outdoor Unit Model No.	REYQ192TTJU	Outdoor Unit Name:	16-Ton VRV-IV Heat Recovery Unit - 230V
Type:	Heat Recovery	Unit Combination:	REYQ120TTJU + REYQ72TTJU
Rated Cooling Conditions:	Indoor (°F DB/WB): 80 / 67 Ambient (°F DB/WB): 95 /	Rated Heating Conditions:	Indoor (°F DB/WB): 70 / Ambient (°F DB/WB): 47 / 43
Rated Piping Length(ft):			
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	180,000	Rated Heating Capacity (Btu/hr):	200,000
Nom Cooling Capacity (Btu/hr):	192,000	Nom Heating Capacity (Btu/hr):	216,000
Cooling Input Power (kW):	13.90	Heating Input Power (kW):	17.40
EER (Non-Ducted/Ducted):	12.50 / 12.60	Heating COP (Non-Ducted/Ducted):	3.8 / 3.7
IEER (Non-Ducted/Ducted):	22.90 / 20.40	Heating COP 17F (Non-Ducted/Ducted):	2.6 / 2.4
		SCHE (Non-Ducted/Ducted):	26.60 / 22.90

OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 3	Compressor Type	Inverter
Power Supply Connections:	L1, L2, L3 Ground	Capacity Control Range (%):	5 - 100
Min. Circuit Amps MCA (A):	30.2+43.0	Capacity Index Limit:	-
Max Overcurrent Protection (MOP) (A):	35+50	Airflow Rate (H) (CFM):	5554+6286
Max Starting Current MSC(A):		Gas Pipe Connection (inch):	1-1/8
Rated Load Amps RLA(A):	20.7+(15.0+15.0)	Liquid Pipe Connection (inch):	5/8
Dimensions (Height) (in):	66-11/16	H/L Pressure Connection (inch)	1-1/8
Dimensions (Width) (in):	85-9/16	H/L Equalizing Connection (inch)	
Dimensions (Depth) (in):	30-3/16	Sound Pressure () (dBA):	
Net Weight (lb):	507+703	Sound Power Level (dBA):	
		Max. No. of Indoor Units:	33

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Submittal Data Sheet

16-Ton VRV-IV Heat Recovery Unit - 230V

REYQ192TTJU

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Date: 03/21/17

SYSTEM DETAILS			
Refrigerant Type:	R-410A	Cooling Operation Range (°F DB):	23 - 122
Holding Refrigerant Charge (lbs):	21.9+25.8	Heating Operation Range (°F WB):	-13 - 60
Additional Charge (lb/ft):		Max. Pipe Length (Vertical) (ft):	295
Pre-charge Piping (Length) (ft):		Cooling Range w/Baffle (°F DB):	-
Max. Pipe Length (Total) (ft):	540	Heating Range w/Baffle (°F WB):	-
Max Height Separation (Ind to Ind ft):			

DIMENSIONAL DRAWING

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Inspections Division
Approved with Conditions
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5.2. Service space

The space around the unit is adequate for servicing and the minimum space for air inlet and air outlet is available (refer to the figure below and choose one of the possibilities).

ABCD Sides along the installation site with obstacles
➡ Suction side

	A+B+C+D		A+B
1	a≥3/8 (10) b≥11-3/4 (300) c≥3/8 (10) d≥19-5/8 (500)	a≥2 (50) b≥3-7/8 (100) c≥2 (50) d≥19-5/8 (500)	a≥7-7/8 (200) b≥11-3/4 (300)
2	a≥3/8 (10) b≥11-3/4 (300) c≥3/8 (10) d≥19-5/8 (500) e≥3/4 (20)	a≥2 (50) b≥3-7/8 (100) c≥2 (50) d≥19-5/8 (500) e≥3-7/8 (100)	a≥7-7/8 (200) b≥11-3/4 (300) e≥15-3/4 (400)
3	a≥3/8 (10) b≥11-3/4 (300) c≥3/8 (10) d≥19-5/8 (500) e≥3/4 (20) f≥23-5/8 (100)	a≥2 (50) b≥3-7/8 (100) c≥2 (50) d≥19-5/8 (500) e≥3-7/8 (100) f≥19-5/8 (500)	Unit: in.(mm)
4	a≥3/8 (10) b≥11-3/4 (300) c≥3/8 (10) d≥19-5/8 (500) e≥3/4 (20)	a≥2 (50) b≥3-7/8 (100) c≥2 (50) d≥19-5/8 (500) e≥3-7/8 (100)	
5	a≥3/8 (10) b≥19-5/8 (500) c≥3/8 (10) d≥19-5/8 (500) e≥3/4 (20) f≥35-7/16 (900)	a≥2 (50) b≥19-5/8 (500) c≥2 (50) d≥19-5/8 (500) e≥3-7/8 (100) f≥23-5/8 (600)	

a 59 in. (1500 mm)
b 19-5/8 in. (500 mm)

- In case of an installation site where sides A+B+C+D have obstacles, the wall heights of sides A+C have no impact on service space dimensions. Refer to the foregoing figure for impact of wall heights of sides B+D on service space dimensions.
- In case of an installation site where only the sides A+B have obstacles, the wall heights have no influence on any indicated service space dimensions.
- The installation space required on these drawings are for full load heating operation without considering possible ice accumulation. If the location of the installation is in a cold climate, then all dimensions above should be >19-5/8 in. (500 mm) to avoid accumulation of ice in between the outdoor units.

INFORMATION

- The service space dimensions in above figure are based on cooling operation at 95°F (35°C) ambient temperature (standard conditions).
- If the design outdoor temperature exceeds 95°F (35°C) or the heat load exceeds maximum capacity in all the outdoor unit, take an even large space on the intake shown in figure in 5.2. Service space.

INFORMATION

Further specifications can be found in the Engineering Data Book.