Design Conditions Datasheet

Unit Tag	Qty	Model No	Net Cooling Capacity (ton.R)	Nominal Voltage	Refrigerant Type
CH-1	1	YLAA0120SE58XFBSDTX	83.38	575-3-60.0	R410A

PIN:								
YLAA0120SE	58XFBSDTXH	SXBLXCXX25	SEXXXXHXXX	YAXGXXX1XX	XXX1B1XXXX			
....5...10	....5...20	....5...30	....5...40	....5...50	....5...60	....5...70	....5...80	....5...90

Evaporator Data		Evaporator Data (Cont.)		Performance Data	
EWT (°F)	37.00	Fluid Volume (USGAL)	13.21	EER (Btu/W·h)	7.386
LWT (°F)	25.00	Min. Flow Rate (USGPM)	150.0	IPLV.IP (Btu/W·h)	15.63
				NPLV.IP (Btu/W·h)	11.98
Design Flow Rate (USGPM)	178.1	Max. Flow Rate (USGPM)	625.0		
Evap. Press. Drop (ft H2O)	6.29				
Fluid	Propylene Glycol (%) 40	**Condenser Data**		**Physical Data**	
Strainer Press. Drop (ft H2O)	3.09	Ambient Temp. Design (°F)	95.0	Rigging Wt. (lb)	5216
Ext. Kit Press. Drop (ft H2O)	1.69	Altitude (ft)	0.000	Operating Wt. (lb)	5326
Total Press. Drop (ft H2O)	11.1	Compressor Type	Scroll - Hermetic	Refrigerant Charge (lb)	107.8
Fouling Factor (h.ft².F/Btu)	0.000100				

Electrical Data				
Circuit	1	2	3	4
Compressor RLA	42 / 42	42 / 42		
Fan QTY/FLA (each)	3 / 2.9	3 / 2.9		
High LRA Current	255 / 255	255 / 255		

Single Point				
Min. Circuit Ampacity	202			
Recommended Fuse/CB Rating	225			
Max. Inverse Time CB Rating	225			
Max. Dual Element Fuse Size (A)	225		**Operating Condition Electrical Data**	
Unit Short Circuit Withstand (STD)	5 [kA]		Compressor kW	125.4
Wires Per Phase	2 + 1		Total Fan kW	10.08
Wire Range (Lug Size)	#3/0 AWG - 250 kcmil + 250 - 500 kcmil		Total kW	135.5
Starter Type	Across The Line			

Notes:

This unit does not have a coil coating selected.
Outside the scope of AHRI Air-Cooled Water-Chilling Packages Using Vapor Compression Cycle Certification Program, but is rated in accordance with AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Auxiliary components included in total KW - Oil heaters, Chiller controls. Auxiliary power is already included in the compressor and fan power

ASHRAE Standard 90.1-2010 and ASHRAE Standard 90.1-2013 & 2016 Compliant.

Compliant with the requirements of the LEED Energy and Atmosphere Enhanced Refrigerant Management Credit (EAc4).

Design Conditions Datasheet

Part Load Rating Data				
Stage	**Ambient (°F)**	**Capacity (ton.R)**	**Total kW**	**Unit Efficiency (Btu/W·h)**
1	95.0	83.38	135.5	7.386
2	84.3	68.40	86.46	9.494
3	71.7	50.86	49.69	12.28
4	55.0	24.33	20.37	14.33

Sound Power Levels (In Accordance with AHRI 370)										
Stage	**Ambient (°F)**	**63 Hz (dB)**	**125 Hz (dB)**	**250 Hz (dB)**	**500 Hz (dB)**	**1 kHz (dB)**	**2 kHz (dB)**	**4 kHz (dB)**	**8 kHz (dB)**	**LWA**
1	95.0	98	97	93	93	91	87	84	81	96
2	84.3	98	97	93	93	90	86	83	81	95
3	71.7	98	97	93	93	90	86	83	80	95
4	55.0	90	89	85	86	83	80	77	74	88

Note: Unit is equipped with Low Sound Fans.
Measurement of sound pressure used to obtain the sound power data presented is based on AHRI-370.
Air-cooled chillers are rated in terms of sound power not sound pressure. Johnson Controls provides estimates of sound pressure, but this is not the rating metric.
For an air-cooled chiller, sound pressure calculated from sound power varies depending on how the chiller is assumed to behave, i.e. the radiation model. In other words, determining sound pressure from sound power requires making assumptions that result in different answers at a given distance from the chiller. The environment also influences sound pressure in the field installation. Sound pressure estimation radiation models pertaining to air-cooled chillers include the 'traditional' hemispherical model, parallelepiped model and equivalent hemispherical model.
Regarding sound power, Johnson Controls references tolerance limits based on ASHRAE guidelines. These are +/- 6dB in the 63Hz octave band, +/- 4dB in all other octave bands and +/- 3dB for the overall dBA.
Tolerance limits are based on uncertainties associated with:
1. Measurement Test Procedure
2. Repeatability
3. Production / Manufacturing Variability
Standard deviation associated with air-cooled chiller sound data is a measure of spread i.e. it indicates the range of probability of sound levels. Note that for operating conditions other than AHRI's Standard Rating Condition, higher levels of uncertainty can be expected.
Lead times for factory performance testing depend on test laboratory availability. Please confirm with Johnson Controls Customer Service.

Performance at AHRI Conditions					
Evaporator Data		**Condenser Data**		**Performance Data**	
EWT (°F)	54.00	Ambient Temp. (°F)	95.0	EER (Btu/W·h)	9.787
LWT (°F)	44.00	Altitude (ft)	0.000	IPLV.IP (Btu/W·h)	15.63
Flow Rate (USGPM)	286.5			Net Cooling Capacity (ton.R)	120.0
Pressure Drop (ft H2O)	8.48				
Fluid	Water				
Fouling Factor (h.ft².F/Btu)	0.000100				
Fluid Volume (USGAL)	13.21				

Note: Unit rated at design condition capacity.

NOTES:

1. PLACEMENT ON A LEVEL SURFACE FREE OF OBSTRUCTIONS (INCLUDING SNOW, FOR WINTER OPERATION) OR AIR RE-CIRCULATION ENSURES RATED PERFORMANCE, RELIABLE OPERATION AND EASE OF MAINTENANCE. SITE RESTRICTIONS MAY COMPROMISE MINIMUM CLEARANCES INDICATED BELOW, RESULTING IN UNPREDICTABLE AIR FLOW PATTERNS AND POSSIBLE DIMINISHED PERFORMANCE. JOHNSON CONTROLS UNIT CONTROLS WILL OPTIMIZE OPERATION WITHOUT NUISANCE HIGH PRESSURE SAFETY CUTOUT. HOWEVER, THE SYSTEM DESIGNER MUST CONSIDER POTENTIAL PERFORMANCE DEGRADATION.

   1.1. RECOMMENDED MINIMUM CLEARANCES:
      1.1.1. SIDE TO WALL - 1828.8mm[6']
      1.1.2. REAR TO WALL - 1828.8mm[6']
      1.1.3. CONTROL PANEL TO WALL - 1219.2mm[4']
      1.1.4. TOP - NO OBSTRUCTIONS ALLOWED.
      1.1.5. DISTANCE BETWEEN ADJACENT UNITS - 3048mm[10']
      1.1.6. NO MORE THAN ONE ADJACENT WALL MAY BE HIGHER THAN UNIT.

2. WEIGHT AND CENTER OF GRAVITY - REFER TO AVM REPORT.

3. INSTALLING CONTRACTOR MUST INCLUDE VENT AND DRAIN ACCOMMODATIONS IN CHILLED WATER PIPING NEAR THE EVAPORATOR.

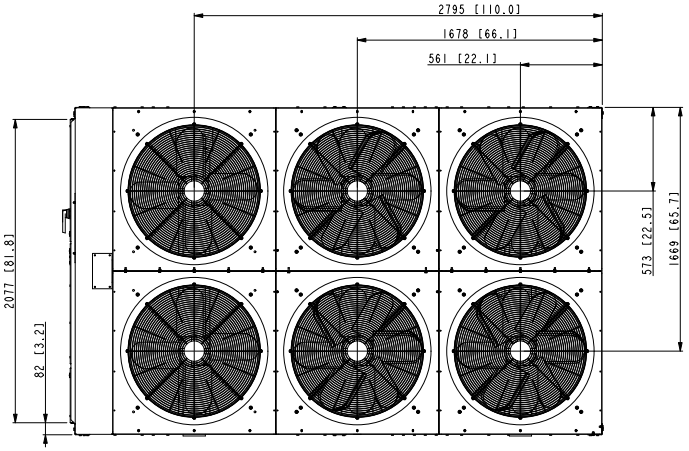
4. NUMBER OF COMPRESSORS MAY VARY FROM DRAWING.
   4.1. REFER TO YORKworks REPORTS.

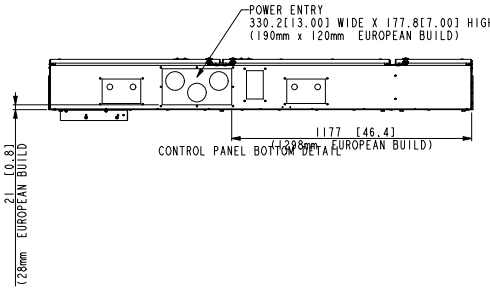
5. OVERALL HEIGHT OF UNIT IS 2394.6mm-[94.27"] ON MONTERREY, MEXICO AND SAN ANTONIO, TEXAS BUILDS AND EUROPEAN BUILDS (VSD FANS ONLY).

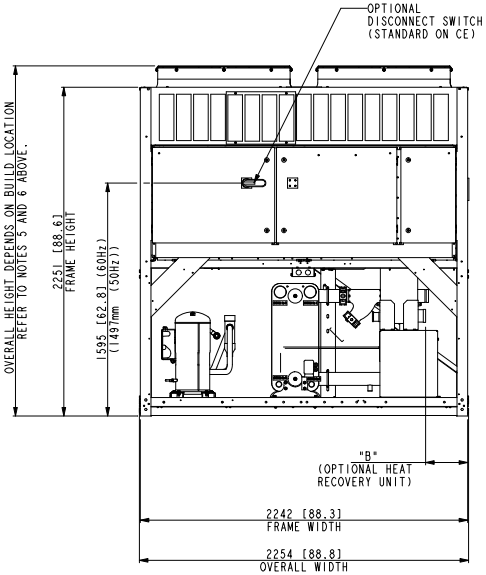
6. ON EUROPEAN BUILDS, OVERALL HEIGHT OF UNIT IS 2507.0mm-[98.70"] WITH STANDARD FANS AND IS 2541.0mm [100.04"] WITH LOW AMBIENT KIT AND WITH C FAN.

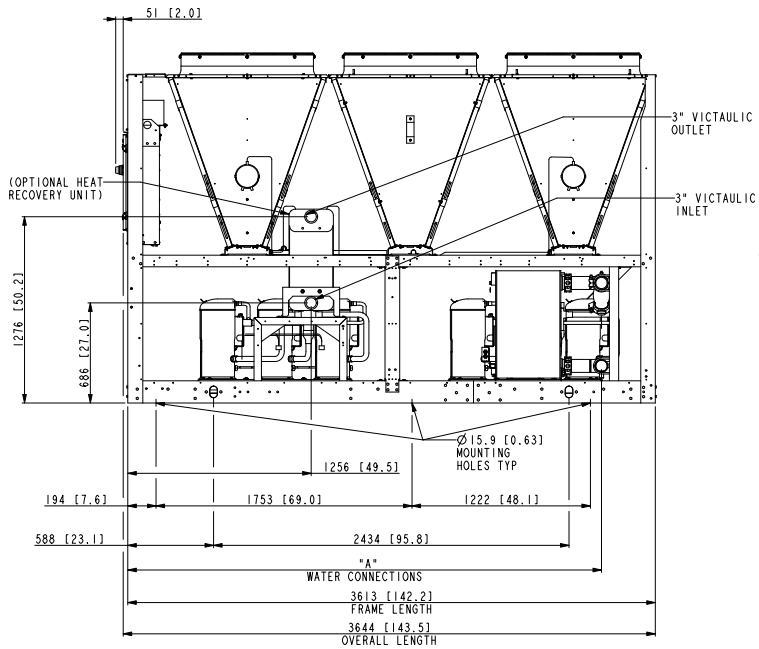
7. FOR MONTERREY, MEXICO, SAN ANTONIO, TEXAS AND EUROPEAN BUILDS ONLY.

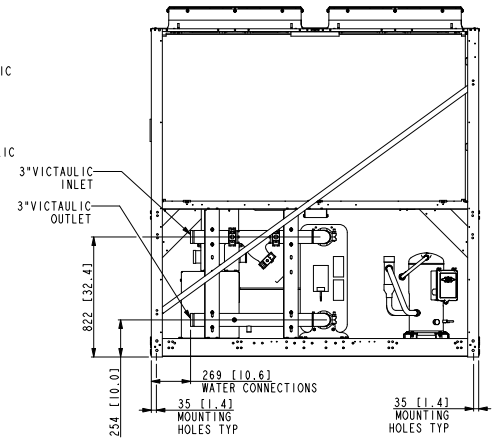
MODEL NUMBER	DIMENSION "A"	DIMENSION "B"
YLAA 0092 HE	3244 [127.7]	288 [11.3]
YLAA 0101 HE	3249 [127.9]	288 [11.3]
YLAA 0115 SE	3246 [127.8]	288 [11.3]
YLAA 0120 SE	3361 [132.3]	288 [11.3]
YLAA 0350 HE	3245 [127.8]	288 [11.3]
YLAA 0350 HJ	3245 [127.8]	288 [11.3]
YLAA 0390 HE	3360 [132.3]	288 [11.3]
YLAA 0391 HE	3360 [132.3]	288 [11.3]
YLAA 0392 HE	3245 [127.8]	288 [11.3]
YLAA 0392 HJ	3245 [127.8]	288 [11.3]
YLAA 0435 SE	3245 [127.8]	221 [8.7]
YLAA 0485 SE	3364 [132.4]	221 [8.7]











THIS DRAWING PERTAINS TO THE FOLLOWING MODELS:		
YLAA 0092 HE	YLAA 0350 HE	YLAA 0391 HE
YLAA 0101 HE	YLAA 0390 HE	YLAA 0392 HE
YLAA 0115 SE	YLAA 0435 SE	YLAA 0350 HJ
YLAA 0120 SE	YLAA 0485 SE	YLAA 0392 HJ

REVISION

REV.	DATE	EC. NO.	DR.	CHK.	ENG.
K	09-JUN-2020	ECN20-0441	GT	AS	XW

NOTE 6 AMENDED DIM 2541MM WAS 2535MM. FAN TERMINAL BOX 6MM HIGHER.

CONTINUED

THIRD ANGLE

Johnson Controls

JOHNSON CONTROLS - BUILDING EFFICIENCY
507 EAST MICHIGAN STREET, MILWAUKEE, WI, 53202 USA

DO NOT SCALE

YLAA 6-FAN
50HZ & 60HZ
WITH OPTIONAL HEAT RECOVERY

MATERIAL N/A
ENG. STD. N/A
PART NO.
CUT SIZE N/A

DRAWN	W.LUPTON	06-DEC-2013
MODELER	W.LUPTON	06-DEC-2013
CHKD	A.SAYCH	06-DEC-2013
ENG		

SCALE: 0.060 MASS (kg): 0.000

A1 | CAGE NUMBER 66935 | DRAWING NUMBER 035-24059-006 | REVISION & VERSION K | ORIG. NO.: | SHEET 1 OF 1 | Released

Refroidisseur YLAA0170

Le Groupe Master S.E.C., 1675 boul. de Montarville, Qué., J4B 7W4
Tél. : (514) 527-2301 1-800-361-6805 Fax : (514) 527-8439

Design Conditions Datasheet

Unit Tag	Qty	Model No	Net Cooling Capacity (ton.R)	Nominal Voltage	Refrigerant Type
CH-2	1	YLAA0170SE58XFBSDTX	116.3	575-3-60.0	R410A

PIN:								
YLAA0170SE	58XFBSDTXH	SXBLXCXX25	SE1XXXHXXX	YAXGXXX1XX	XXX1B1XXXX			
....5...10	....5...20	....5...30	....5...40	....5...50	....5...60	....5...70	....5...80	....5...90

Evaporator Data		Evaporator Data (Cont.)		Performance Data	
EWT (°F)	39.00	Fluid Volume (USGAL)	10.04	EER (Btu/W·h)	7.146
LWT (°F)	25.00	Min. Flow Rate (USGPM)	149.9	IPLV.IP (Btu/W·h)	16.21
				NPLV.IP (Btu/W·h)	12.15
Design Flow Rate (USGPM)	213.0	Max. Flow Rate (USGPM)	624.5		
Evap. Press. Drop (ft H2O)	11.6				
Fluid	Propylene Glycol (%) 40	**Condenser Data**		**Physical Data**	
Strainer Press. Drop (ft H2O)	1.19	Ambient Temp. Design (°F)	95.0	Rigging Wt. (lb)	7939
Ext. Kit Press. Drop (ft H2O)	2.78	Altitude (ft)	0.000	Operating Wt. (lb)	8025
Total Press. Drop (ft H2O)	15.6	Compressor Type	Scroll - Hermetic	Refrigerant Charge (lb)	177
Fouling Factor (h.ft².F/Btu)	0.000100				

Electrical Data				
Circuit	1	2	3	4
Compressor RLA	42 / 42 / 42	42 / 42 / 42		
Fan QTY/FLA (each)	5 / 2.9	5 / 2.9		
High LRA Current	255 / 255 / 255	255 / 255 / 255		

Single Point				
Min. Circuit Ampacity	298			
Recommended Fuse/CB Rating	300			
Max. Inverse Time CB Rating	300			
Max. Dual Element Fuse Size (A)	300		**Operating Condition Electrical Data**	
Unit Short Circuit Withstand (STD)	5 [kA]		Compressor kW	178.5
Wires Per Phase	2 + 1		Total Fan kW	16.80
Wire Range (Lug Size)	#3/0 AWG - 250 kcmil + 250 - 500 kcmil		Total kW	195.3
Starter Type	Across The Line			

Notes:

This unit does not have a coil coating selected.
Outside the scope of AHRI Air-Cooled Water-Chilling Packages Using Vapor Compression Cycle Certification Program, but is rated in accordance with AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Auxiliary components included in total KW - Oil heaters, Chiller controls. Auxiliary power is already included in the compressor and fan power

ASHRAE Standard 90.1-2010 and ASHRAE Standard 90.1-2013 & 2016 Compliant.

Compliant with the requirements of the LEED Energy and Atmosphere Enhanced Refrigerant Management Credit (EAc4).

Design Conditions Datasheet

Part Load Rating Data				
Stage	**Ambient (°F)**	**Capacity (ton.R)**	**Total kW**	**Unit Efficiency (Btu/W·h)**
1	95.0	116.3	195.3	7.146
2	88.5	103.6	147.4	8.433
3	81.3	89.57	107.9	9.958
4	72.1	71.66	75.69	11.36
5	61.1	50.22	41.77	14.43
6	55.0	24.88	19.21	15.55

Sound Power Levels (In Accordance with AHRI 370)										
Stage	**Ambient (°F)**	**63 Hz (dB)**	**125 Hz (dB)**	**250 Hz (dB)**	**500 Hz (dB)**	**1 kHz (dB)**	**2 kHz (dB)**	**4 kHz (dB)**	**8 kHz (dB)**	**LWA**
1	95.0	100	99	95	96	93	89	86	83	98
2	88.5	100	99	95	96	92	89	85	83	98
3	81.3	100	99	95	95	92	88	85	83	97
4	72.1	100	99	95	95	92	88	85	82	97
5	61.1	96	95	91	92	88	85	81	79	94
6	55.0	93	92	88	88	85	82	78	76	91

Note: Unit is equipped with Low Sound Fans.
Measurement of sound pressure used to obtain the sound power data presented is based on AHRI-370.
Air-cooled chillers are rated in terms of sound power not sound pressure. Johnson Controls provides estimates of sound pressure, but this is not the rating metric.
For an air-cooled chiller, sound pressure calculated from sound power varies depending on how the chiller is assumed to behave, i.e. the radiation model. In other words, determining sound pressure from sound power requires making assumptions that result in different answers at a given distance from the chiller. The environment also influences sound pressure in the field installation. Sound pressure estimation radiation models pertaining to air-cooled chillers include the 'traditional' hemispherical model, parallelepiped model and equivalent hemispherical model.
Regarding sound power, Johnson Controls references tolerance limits based on ASHRAE guidelines. These are +/- 6dB in the 63Hz octave band, +/- 4dB in all other octave bands and +/- 3dB for the overall dBA.
Tolerance limits are based on uncertainties associated with:
1. Measurement Test Procedure
2. Repeatability
3. Production / Manufacturing Variability
Standard deviation associated with air-cooled chiller sound data is a measure of spread i.e. it indicates the range of probability of sound levels. Note that for operating conditions other than AHRI's Standard Rating Condition, higher levels of uncertainty can be expected.
Lead times for factory performance testing depend on test laboratory availability. Please confirm with Johnson Controls Customer Service.

Performance at AHRI Conditions					
Evaporator Data		**Condenser Data**		**Performance Data**	
EWT (°F)	54.00	Ambient Temp. (°F)	95.0	EER (Btu/W·h)	9.722
LWT (°F)	44.00	Altitude (ft)	0.000	IPLV.IP (Btu/W·h)	16.21
Flow Rate (USGPM)	406.1			Net Cooling Capacity (ton.R)	170.1
Pressure Drop (ft H2O)	22.0				
Fluid	Water				
Fouling Factor (h.ft².F/Btu)	0.000100				
Fluid Volume (USGAL)	10.04				

Note: Unit rated at design condition capacity.

NOTE:

1. PLACEMENT ON A LEVEL SURFACE FREE OF OBSTRUCTIONS (INCLUDING SNOW, FOR WINTER OPERATION) OR AIR-CIRCULATION ENSURES RATE PERFORMANCE, RELIABLE OPERATION AND EASE OF MAINTENANCE. SITE RESTRICTIONS MAY COMPROMISED MINIMUM CLEARANCES INDICATED BELOW, RESULTING IN UNPREDICTABLE AIR FLOW PATTERNS AND POSSIBLE DIMINISHED PERFORMANCE. JOHNSON CONTROLS UNIT CONTROLS WILL OPTIMIZE OPERATION WITHOUT NUISANCE HIGH PRESSURE SAFETY CUTOUT. HOWEVER, THE SYSTEM DESIGNER MUST CONSIDER POTENTIAL PERFORMANCE DEGRADATION.

   1.1. RECOMMENDED MINIMUM CLEARANCES:
   - 1.1.1. SIDE TO WALL - 1828.8mm [72.00]
   - 1.1.2. REAR TO WALL - 1828.8mm [72.00]
   - 1.1.3. CONTROL PANEL TO WALL - 1219.2mm [48.00]
   - 1.1.4. TOP - NO OBSTRUCTIONS ALLOWED.
   - 1.1.5. DISTANCE BETWEEN ADJACENT UNITS - 3048mm [120.00]
   - 1.1.6. NO MORE THAT ONE ADJACENT WALL MAY BE HIGHER THAN UNIT.

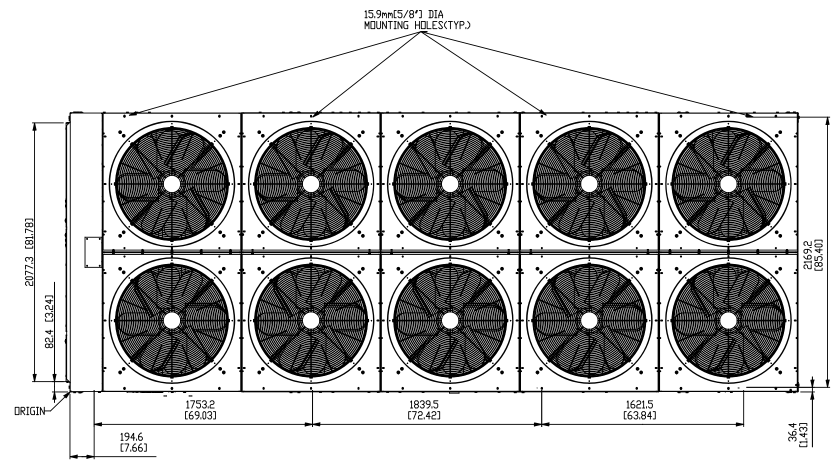
2. WEIGHT AND CENTRE OF GRAVITY- REF TO AVM REPORT.

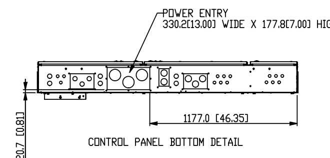
3. INSTALLING CONTRACTOR MUST INCLUDE VENT AND DRAIN ACCOMMODATIONS IN CHILLED WATER PIPING NEAR EVAPORATOR.

4. NUMBER OF COMPRESSORS MAY VARY FROM DRAWING.

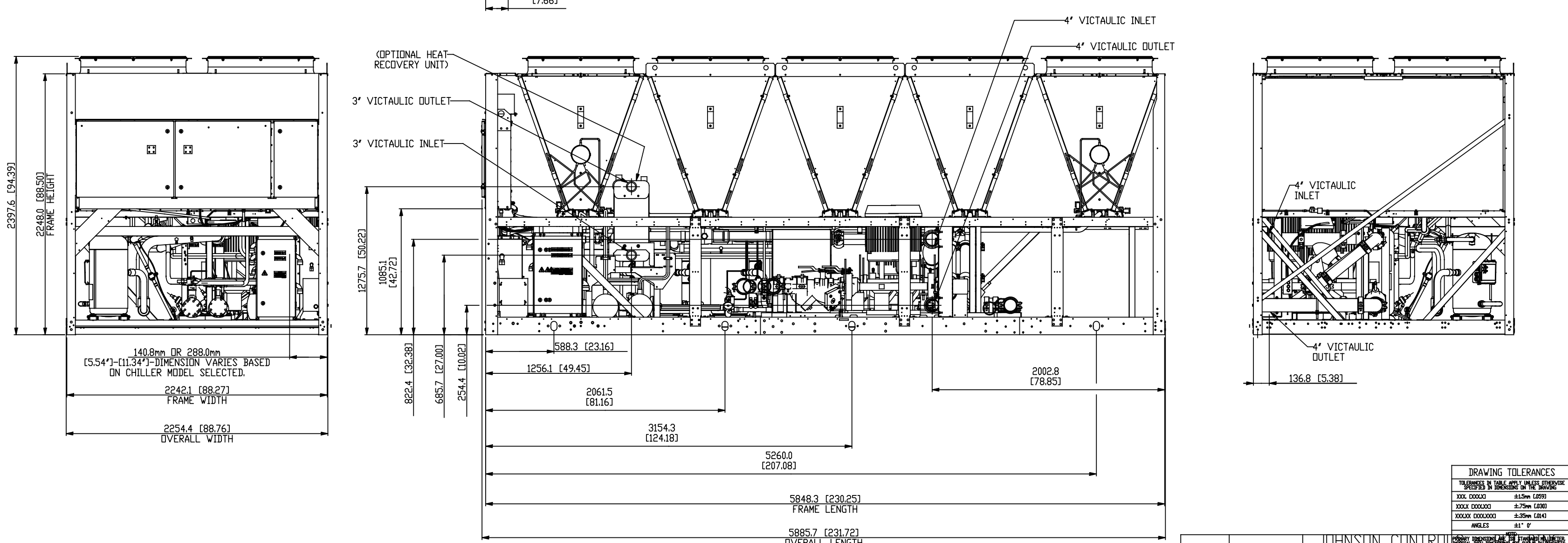
   4.1. REFER TO YORKWORKS REPORTS.

5. FOR MONTERREY, MEXICO AND SAN ANTONIO, TEXAS BUILDS ONLY.





CONTROL PANEL BOTTOM DETAIL



THIS DRAWING PERTAINS TO THE FOLLOWING MODELS:		
YLAA 0156 HE	YLAA 0170 SE	YLAA 0175 HE

REVISION

REV.	DATE	EC. NO.	DR.	CHK.	ENG.
B	22-AUG-2016	DX16-0278	AJF	AJF	
CHANGED "INLET" AND "OUTLET" NOTES AT F12.					
ADDED "HEAT RECOVERY UNIT" NOTE AT G12.					

CONTINUED

DRAWING TOLERANCES	
TOLERANCES IN TABLE APPLY UNLESS OTHERWISE SPECIFIED IN DIMENSIONS ON THE DRAWING	
XXX. [XXX.X]	±1.5mm [.059]
XXX.X [XXX.XX]	±.75mm [.030]
XXX.XX [XXX.XXX]	±.35mm [.014]
ANGLES	±1° 0'
NOTE: PRIMARY DIMENSIONS ARE ISO STANDARD MILLIMETER. IMPERIAL INCH DIMENSIONS ARE SHOWN IN BRACKETS.	

THIRD ANGLE

Johnson Controls

JOHNSON CONTROLS BUILDING EFFICIENCY

507 EAST MICHIGAN STREET, MILWAUKEE, WI, 53202 USA

DO NOT SCALE

YLAA 10-FAN 50 & 60HZ WITH OPTIONAL HEAT RECOVERY

DRAWN	M.LUPTON	06-DEC-2013
MODELER	M.LUPTON	06-DEC-2013
CHKD	A.SAYCH	06-DEC-2013
ENG		

SCALE: 1.000 | MASS (kg): 0.000

MATERIAL	N/A
ENG. STD.	N/A
PART NO.	
CUT SIZE	N/A

A1	CAGE NUMBER 66935	DRAWING NUMBER 035-24059-012	REVISION B / VERSION 3
ORIG. NO.:		SHEET 1 OF 1	Released