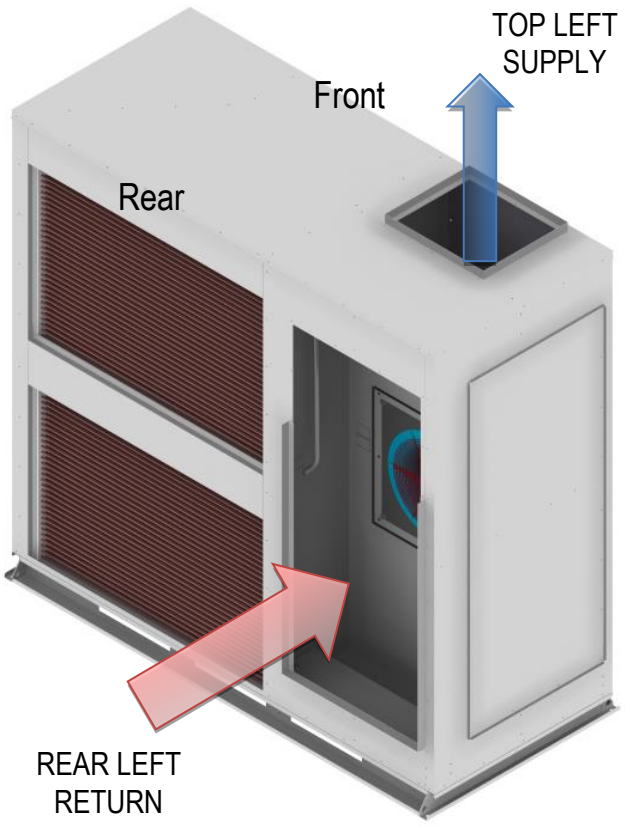
	APPLICATION DATA	AD0003E
	VPU HANDING CONFIRMATION	

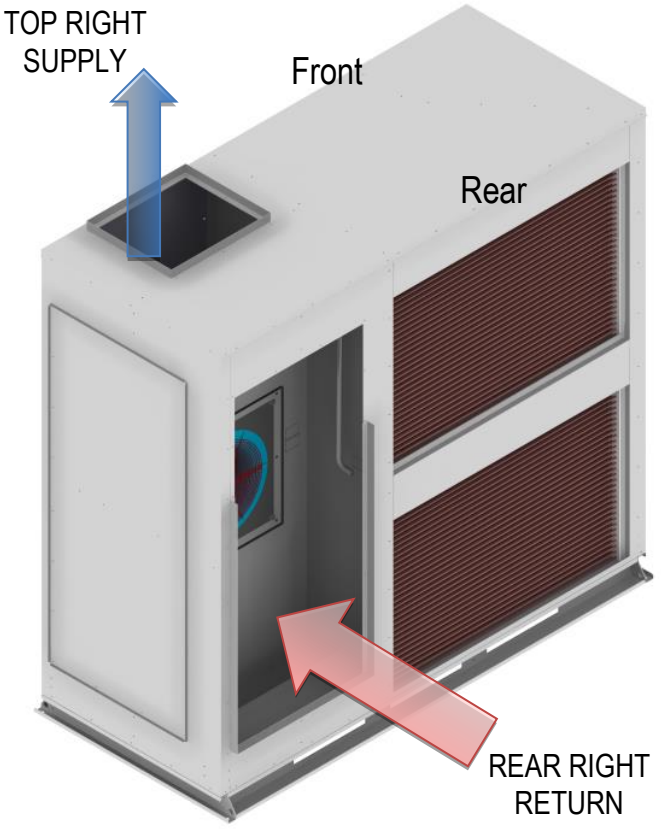
DO NUMBER (INTERNAL USE)		**WO NUMBER** (INTERNAL USE)	

VERTICAL PACKAGED UNITS (VPU)	
MODELS	P024-045AVR3SA-
GENERAL	This document details the airside configurations available on 024-045 VPU models.
SOURCING	Standard configuration is LTR. Optional airside configurations to be specified at time of order.
HOW TO USE THIS DOCUMENT	1. Choose if the supply air fan position is required on the left or right. 2. Circle the required supply air outlet. 3. Circle the required return air inlet. 4. Complete the information at the bottom of this document and return to your APAC representative.

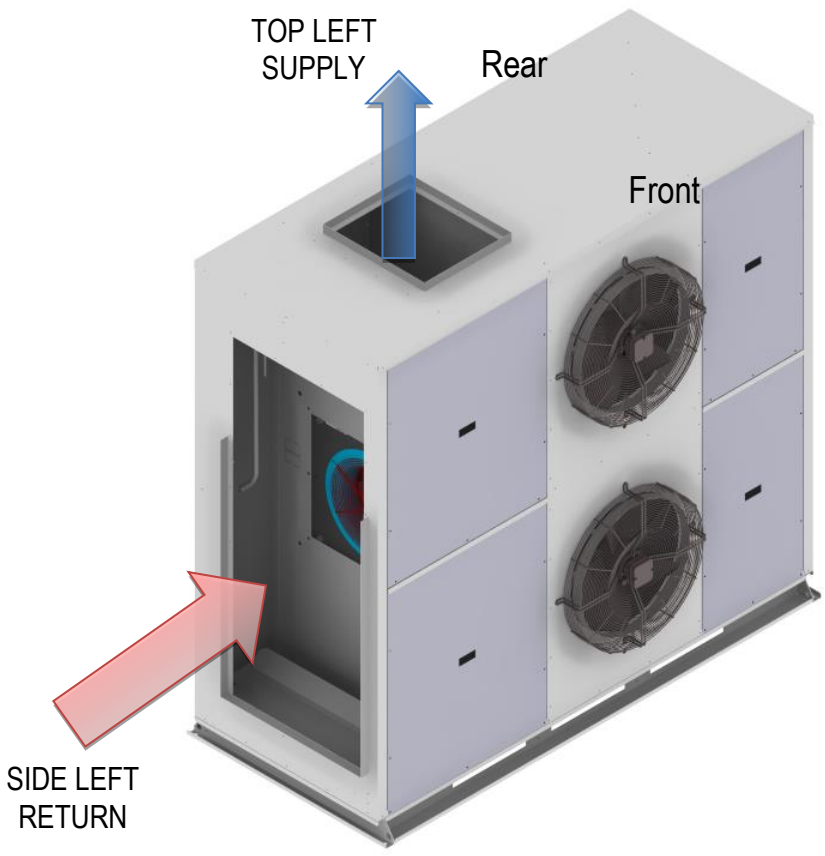
LTR – TOP LEFT SUPPLY / REAR LEFT RETURN
(REPLACEMENT FOR FRIGIPOL & APAC S25, 30, 35, 45)



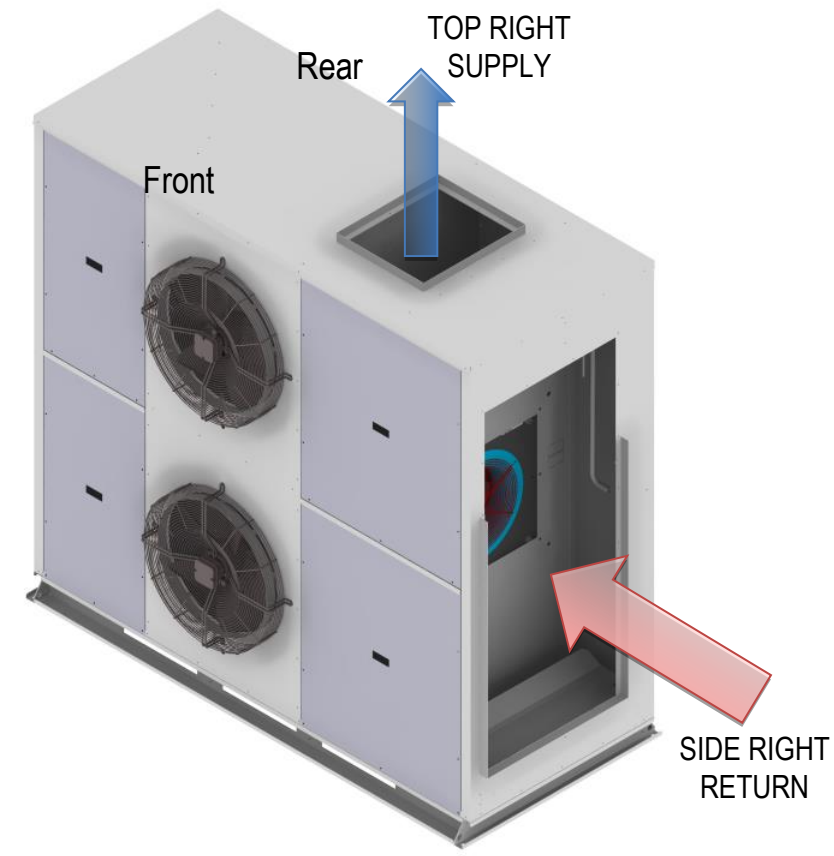
RTR – TOP RIGHT SUPPLY / REAR RIGHT RETURN
(REPLACEMENT FOR FRIGIPOL & APAC S25, 30, 35, 45)



LTS – TOP LEFT SUPPLY / SIDE LEFT RETURN
(REPLACEMENT FOR FRIGIPOL & APAC S25, 30, 35, 45)



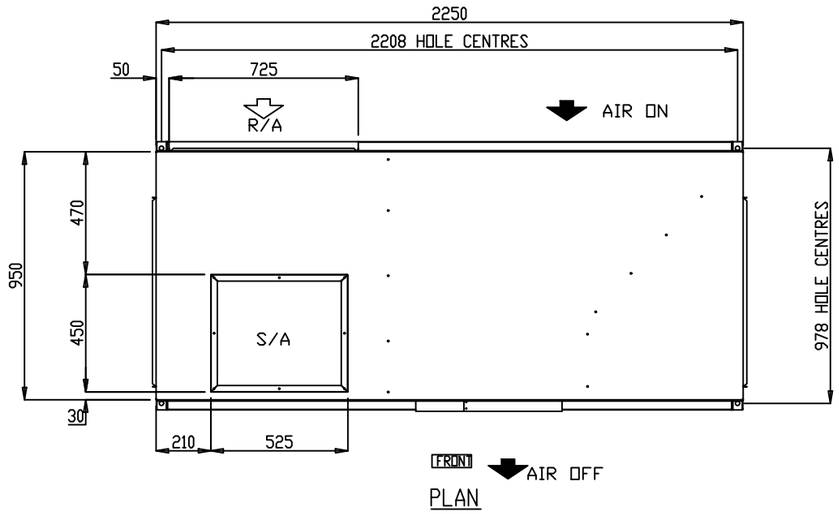
RTS – TOP RIGHT SUPPLY / SIDE RIGHT RETURN
(REPLACEMENT FOR FRIGIPOL & APAC S25, 30, 35, 45)



CUSTOMER TO COMPLETE AND RETURN

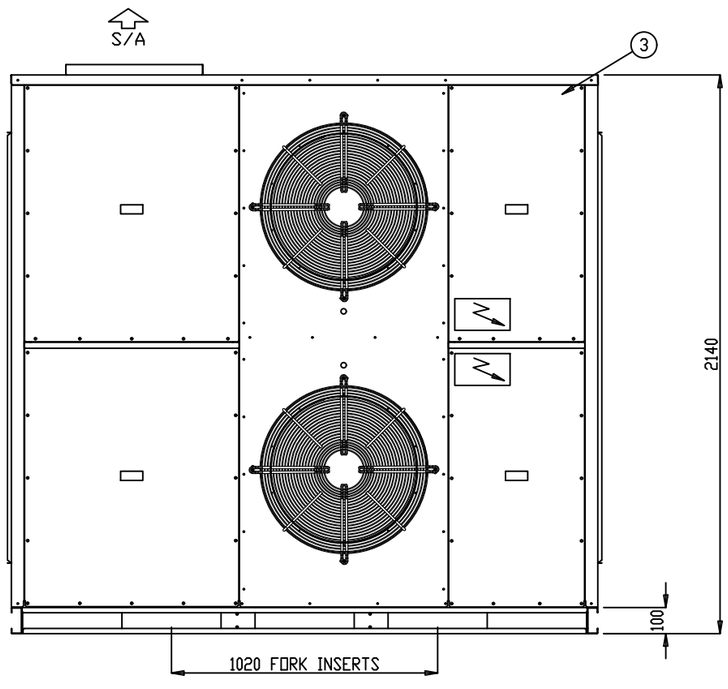
CUSTOMER	PROJECT	UNIT REF	NAME / SIGN	DATE

NOTES:
1. GENERAL ARRANGEMENT OF A VERTICAL AIR COOLED PACKED UNIT
2. POWER AND FIELD CABLE ENTRIES, 1 x 32ø AND 2 x 25ø (BOTH SIDES)
3. ELECTRICAL PANEL LOCATED BEHIND SERVICE ACCESS
4. CONDENSATE OUTLET 25ø
5. UNIT BASE 4 x 16ø FIXING POINTS
6. UNIT HAS 4 x 25.4ø LIFTING POINTS
7. UNIT CONFIGURATION IS TOP LEFT SUPPLY, REAR LEFT RETURN, OTHER CONFIGURATIONS AVAILABLE.

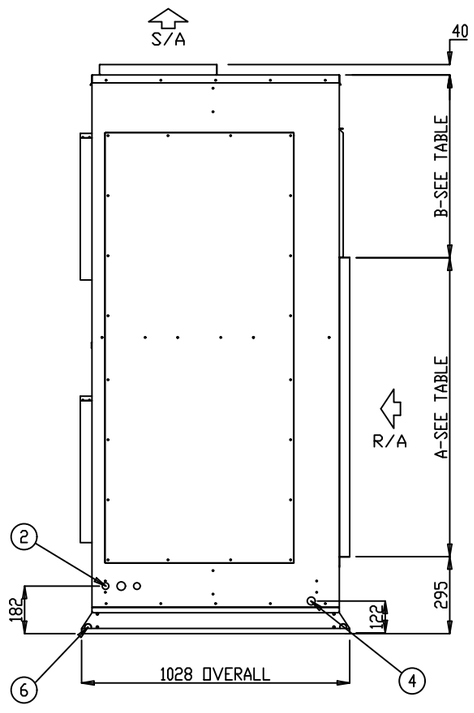


PLAN

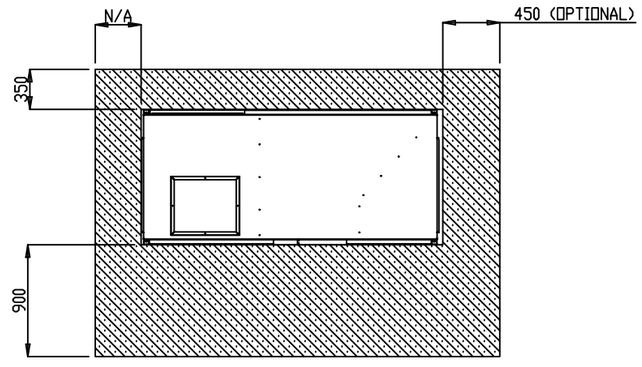
DIMENSION	P024-035	P040-045
A	1145	1600
B	700	245



FRONT ELEVATION



R/H ELEVATION



CLEARANCE DETAIL

- ALL DIMENSIONS IN mm.
- GENERAL TOLERANCE ±1mm.
- DO NOT SCALE DRAWING.
- MASTER DRAWINGS ARE HELD ELECTRONICALLY. ANY COPY IS DEEMED UNCONTROLLED AND THEREFORE NOT NECESSARILY THE LATEST REVISION.
- ALL INFORMATION REMAINS THE PROPERTY OF THE COMPANY.

GENERAL ARRANGEMENT

P024AVR3SA-LTR P030AVR3SA-LTR P035AVR3SA-LTR
P040AVR3SA-LTR P045AVR3SA-LTR

www.apacair.com.au ABN: 74 005 138 769

ATLANTIC DR.
KEYSBOROUGH
VIC 3173
1300 555 545

REVISION	REVISED NAMEPLATE WITH APAC DETAILS				
DRAWN	MT	DRAWING No.	A4		
DATE	26.11.13	GAD0003			
SCALE	N.T.S.				
CHECKED	HA	APP'D.	CM	REV.	B

NOTES:
1. GENERAL ARRANGEMENT OF A VERTICAL AIR COOLED PACKED UNIT
2. POWER AND FIELD CABLE ENTRIES, 1 x 32ø AND 2 x 25ø (BOTH SIDES)
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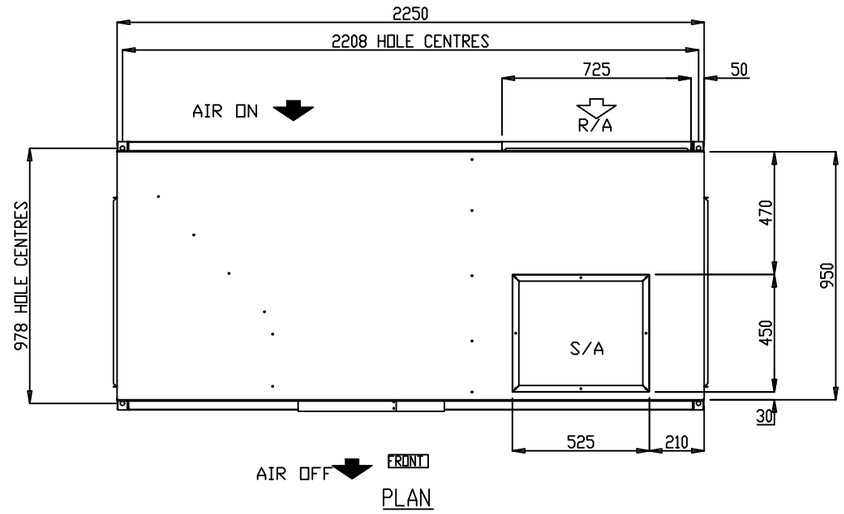

PLAN

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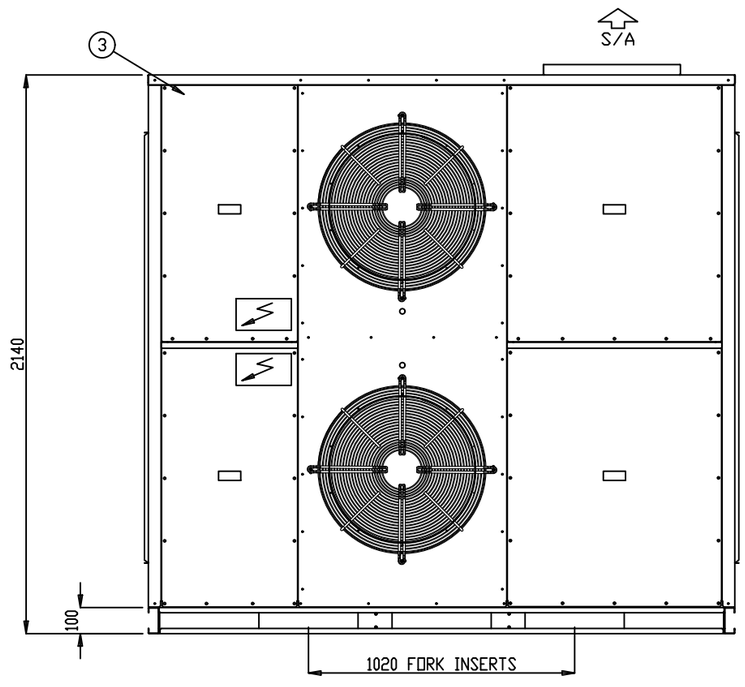
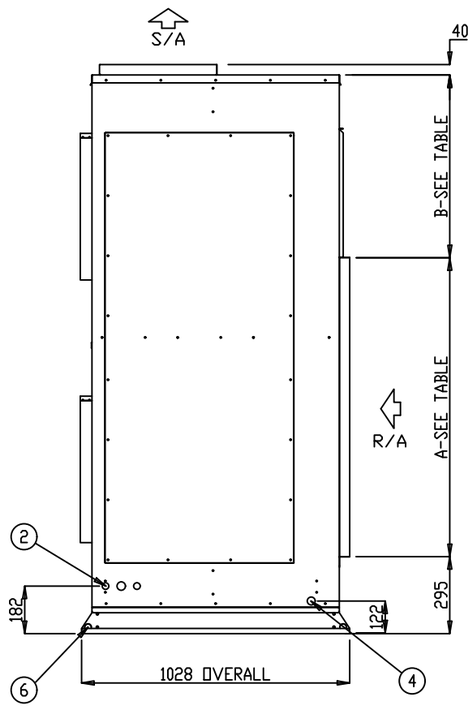
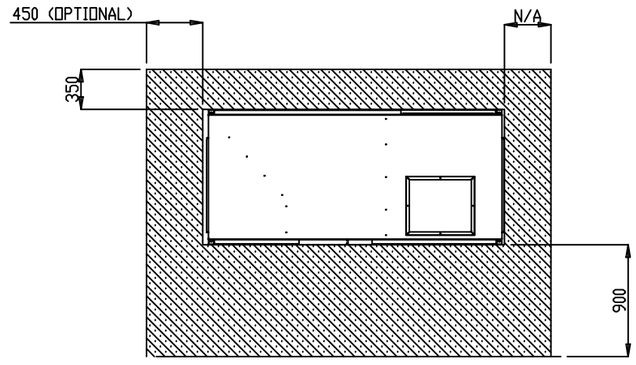


FRONT ELEVATION



R/H ELEVATION



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GENERAL ARRANGEMENT

P024AVR3SA-RTR P030AVR3SA-RTR P035AVR3SA-RTR
P040AVR3SA-RTR P045AVR3SA-RTR

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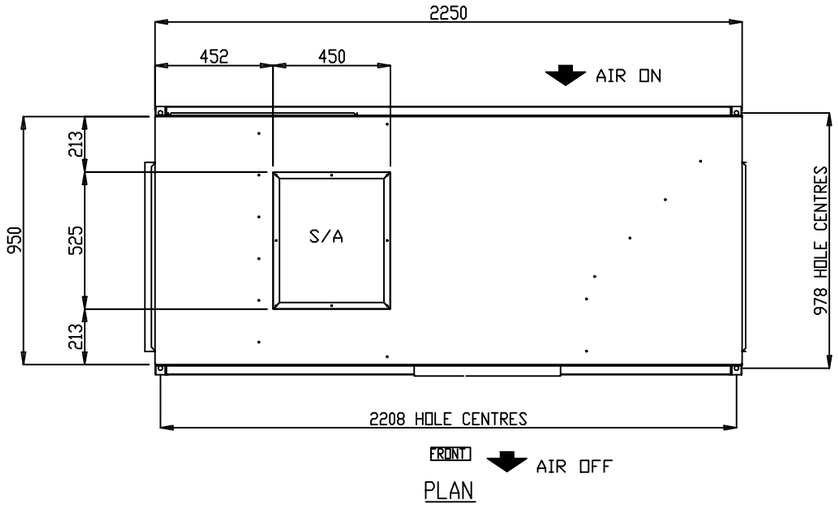
ATLANTIC DR.
KEYSBOROUGH
VIC 3173
1300 555 545

REVISION	REVISED NAMEPLATE WITH APAC DETAILS				
DRAWN	MT	DRAWING No.	A4		
DATE	26.11.13	GAD0004			
SCALE	N.T.S.				
CHECKED	HA	APP'D.	CM	REV.	B



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DIMENSION	APH024-035	APH040-045
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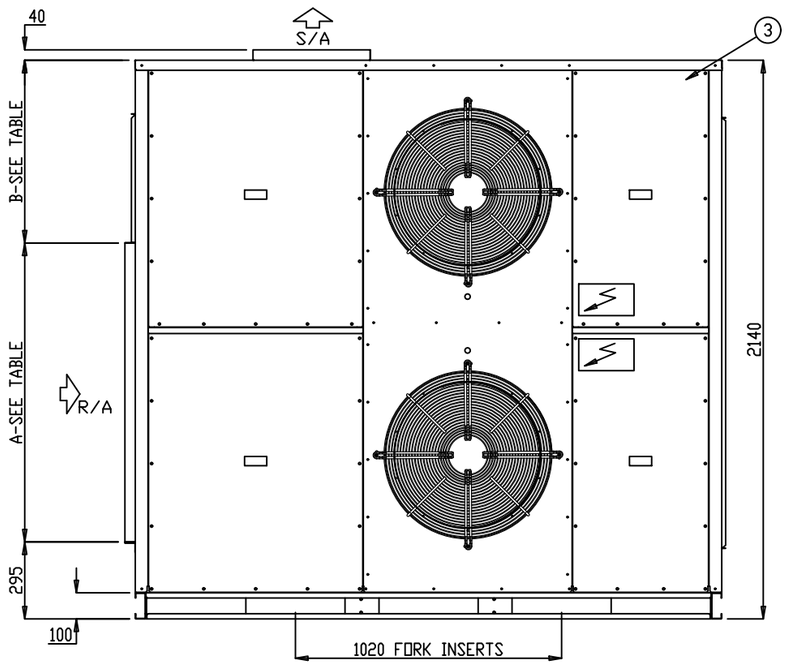

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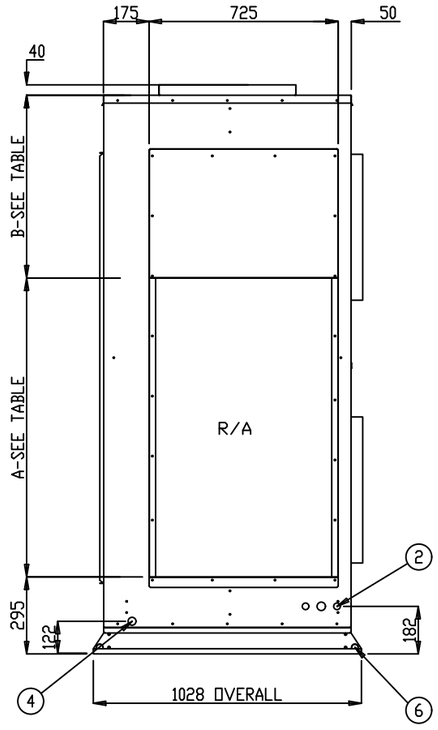
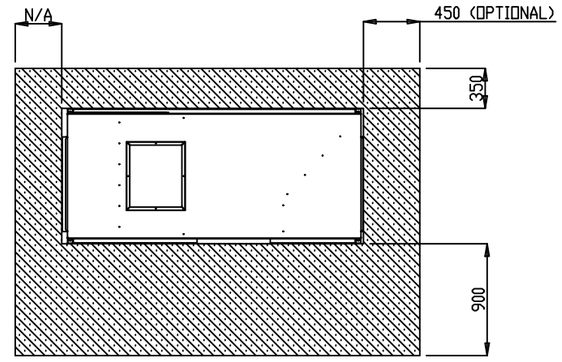


L/H ELEVATION



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GENERAL ARRANGEMENT

P024AVR3SA-LTS P030AVR3SA-LTS P035AVR3SA-LTS
P040AVR3SA-LTS P045AVR3SA-LTS

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REVISION: REVISED NAMEPLATE WITH APAC DETAILS

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DRAWN	MT	DRAWING No.	A4
DATE	26.11.13	GAD0005	
SCALE	N.T.S.		
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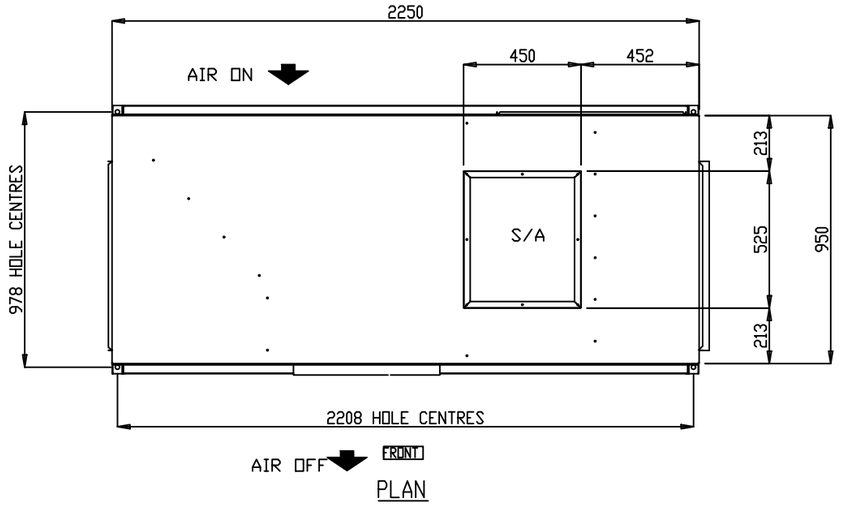

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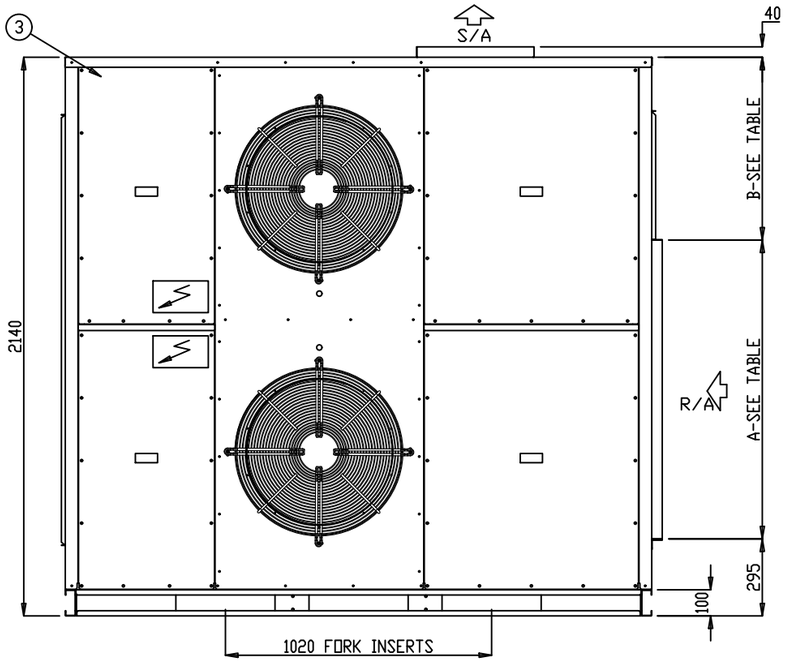

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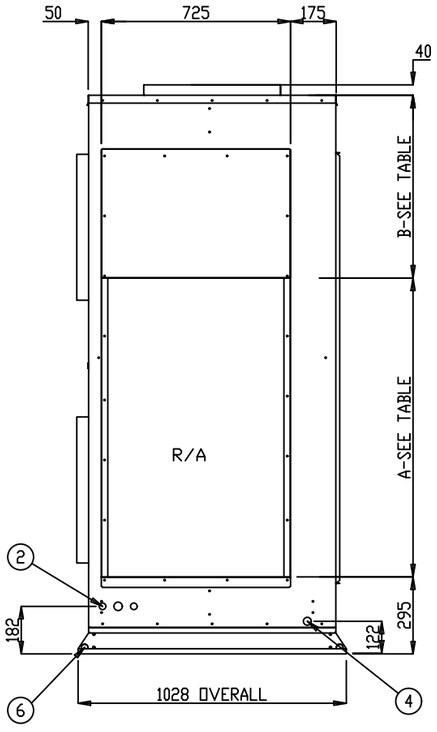

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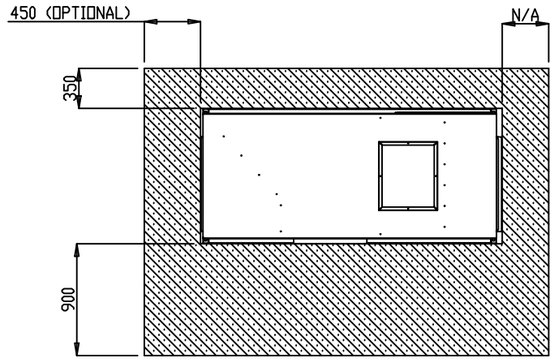

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GENERAL ARRANGEMENT

P024AVR3SA-RTS P030AVR3SA-RTS P035AVR3SA-RTS
P040AVR3SA-RTS P045AVR3SA-RTS

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VIC 3173
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DRAWN	MT	DRAWING No.	A4
DATE	26.11.13	GAD0006	
SCALE	N.T.S.		
CHECKED	HA	APP'D. CM	REV. B

HIGH EFFICIENCY
VERTICAL PACKAGED UNIT
R410A REFRIGERANT

TECHNICAL DATA SHEET

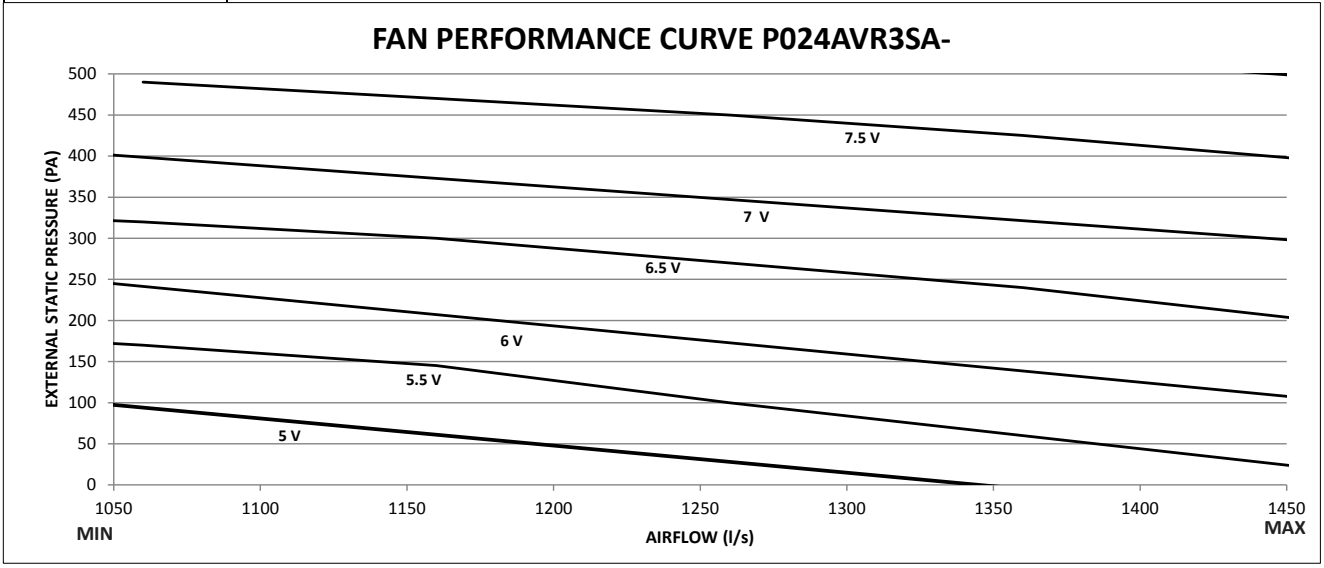
MODEL NUMBER			**P024AVR3SA-**	**P030AVR3SA-**	**P035AVR3SA-**	**P040AVR3SA-**	**P045AVR3SA-**
MEPS REGISTRATION NUMBER			**AAC3283**	**AAC3285**	**AAC3278**	**AAC3284**	**AAC3279**
CONDENSER SECTION	**CAPACITY**						
	Cooling	kW TOTAL*	25.14	31.00	34.13	39.78	45.27
		kW SENSIBLE*	18.86	25.25	27.06	31.25	35.00
		EER (kW / ikW)*	3.59	3.60	3.44	3.40	3.27
	Heating	kW TOTAL	23.80	30.20	34.25	40.09	43.53
		COP	3.66	3.60	3.85	3.61	3.71
	CAPACITY STEPS (%)		50/100	50/100	50/100	50/100	50/100
	COMPRESSOR						
	TYPE		SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
	STARTER TYPE		D.O.L (Opt Soft/Start)	D.O.L (Opt Soft/Start)	D.O.L (Opt Soft/Start)	D.O.L (Opt Soft/Start)	D.O.L (Opt Soft/Start)
	PHASE		3∅	3∅	3∅	3∅	3∅
	No. OFF		2	2	2	2	2
	PROTECTION DEVICES		HP SWITCH, LP SWITCH, MOTOR OVERLOAD'S				
	ALL COMPRESSORS HAVE		CRANKCASE HEATER				
	FAN						
	TYPE		AXIAL	AXIAL	AXIAL	AXIAL	AXIAL
	ikW (MAX INPUT)		0.39	0.39	0.39	0.60	0.60
	PHASE		1∅	1∅	1∅	1∅	1∅
	No. OFF		2	2	2	2	2
	FAN SPEED CONTROL		VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED
	HEAT EXCHANGER						
	TYPE		PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL
	NOM. AIRFLOW l/s		-	-	-	-	-
	REFRIGERANT SYSTEM						
	TYPE		**R410A**				
	CHARGE PER CIRCUIT (KG)		3.95	5.3	5.7	7.3	6.8
	No. OF CIRCUITS		2	2	2	2	2
	REFRIGERANT CONTROL		TXV				
	ALL SYSTEMS INCLUDE		DRIERS & SIGHT GLASSES				
EVAPORATOR SECTION	**FAN**						
	TYPE		CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
	ikW (MAX INPUT)		2.73	2.73	2.73	1.7	1.7
	PHASE		3∅	3∅	3∅	3∅	3∅
	No. OFF		1	1	1	2	2
	FAN SPEED CONTROL		VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED
	HEAT EXCHANGER						
	TYPE		PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL
	NOM. AIRFLOW l/s		1250	1670	1750	1985	2235
	EXT STATIC pa		100				
COMBINED SECTIONS	**ELECTRICAL**						
	MAINS POWER		415v / 3∅ / 50hz	415v / 3∅ / 50hz	415v / 3∅ / 50hz	415v / 3∅ / 50hz	415v / 3∅ / 50hz
	H.P. CUT OUT / IN kPa		4500 / 3450	4500 / 3450	4500 / 3450	4500 / 3450	4500 / 3450
	L.P. CUT OUT / IN kPa		175 / 345	175 / 345	175 / 345	175 / 345	175 / 345
	NOM. R.L.A. (TOTAL SYSTEM)		13.9	16.1	19.8	21.2	23.5
	MAX. F.L.A. (TOTAL SYSTEM)		23.8	28.4	31.4	40.5	40.5
	GENERAL						
	CABINET		GALVANISED SHEET STEEL				
	INSULATION		ALUMINIUM FOIL FACED POLYETHYLENE ACOUSTIC INSULATION				
	EXTERNAL FINISH		POLYESTER POWDER COAT - COLOUR LIGHT GREY AS STANDARD - OPTIONS AVAILABLE				
	DIMENSIONS						
	H X W X D (mm)		2140 X 2250 X 950				
	WEIGHT						
	OPERATING KG		570	580	590	610	620
	SHIPPING KG		575	585	595	615	625
	NOISE LEVELS [Based on condenser fan's sound data]						
	Sound Power db(A)		66.5	66.5	66.5	68.7	68.7

Note: **Tested in accordance with AS/NZS3823.1.2**
***Performance excludes ikW of evaporator fan motor.**
R.L.A - Run Load Amps are based on current drawn at nominal conditions
F.L.A - Full Load Amps are based on the overload settings [Max Current] of all Compressor and Fan Motor(s).

Date	Document #	Approved By	Revision
31/5/18	TDS0015	CM	F

FAN PERFORMANCE CURVE

P024AVR3SA-



Note:

1. 5V, 5.5V, 6V, 6.5V, 7V and 7.5V represents potentiometer voltage. Potentiometer can be adjusted to achieve desired flowrates.
2. Potentiometer voltage can be varied infinitely beween 0 to 10V.

Date	Document #	Approved By	Revision
29.05.18	FPC0053	CM	B

HIGH EFFICIENCY
VERTICAL PACKAGED UNITS
R410A REFRIGERANT

SOUND DATA

MODEL NUMBER	P024AVR3SA-

Outdoor Fan

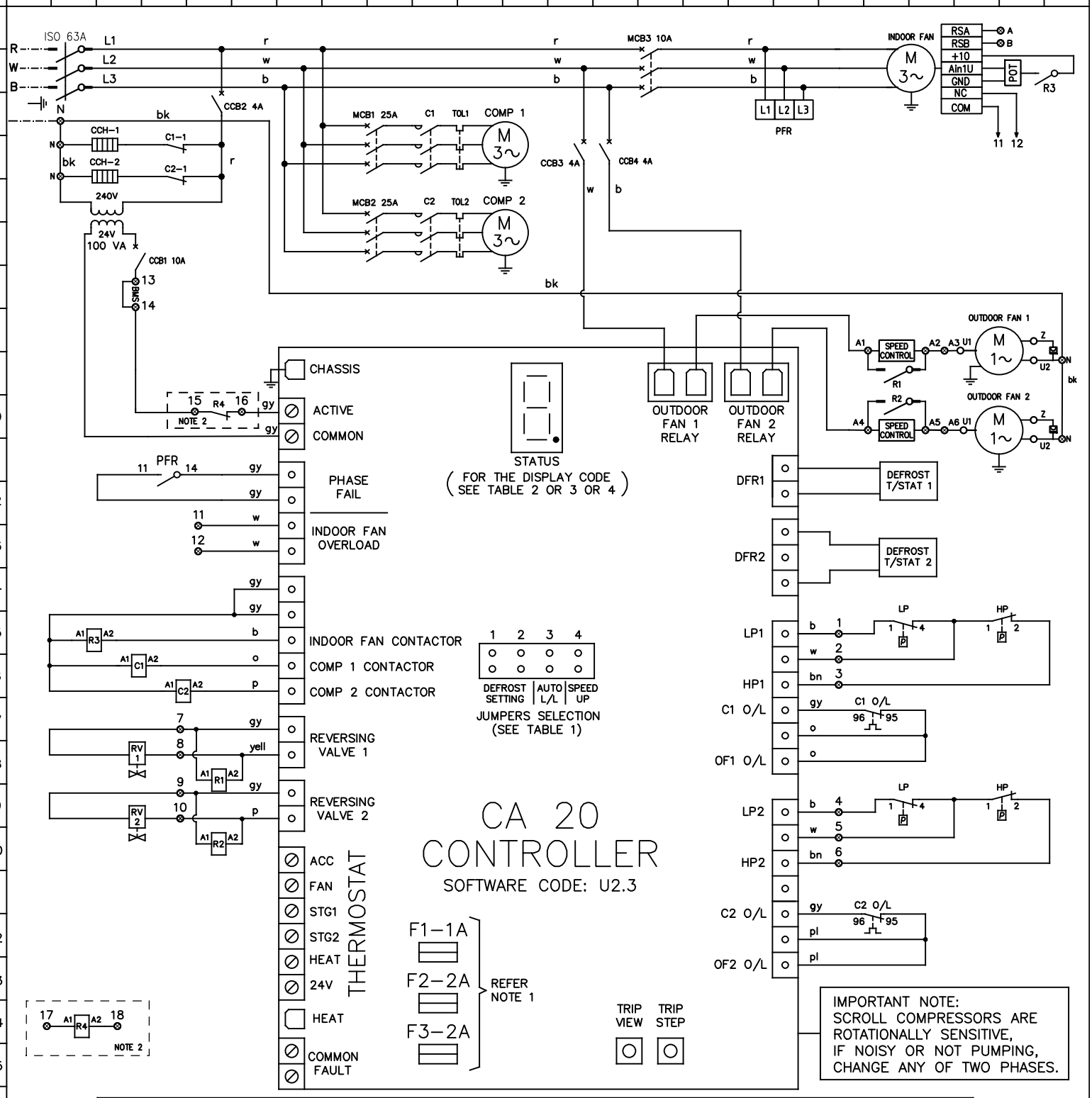
Sound Power Level dB(A)	Octave band Centre Frequency (Hz), dB						
	125	250	500	1k	2k	4k	8k
66.5	72.2	61.6	61.9	61.8	59.8	52.9	50.1

Indoor Fan

Sound Power Level dB(A)	Air Flow (l/s)	Octave band Centre Frequency (Hz), dB						
		125	250	500	1k	2k	4k	8k
76.3	1250	59.2	68.4	72.1	72.4	68.3	66.1	64.4

Date	Document #	Approved By	Revision
01.06.18	SD0044	CM	B

NOTE: Due to continuous improvement Rinnai Australia Pty Ltd reserve the right to change details



WARNING! THE SOFTWARE OF THE CA20 CONTROLLER IS NOT DESIGNED TO FUNCTION AS A PRIMARY PERSONAL SAFETY DEVICE, AS CONNECTED EQUIPMENT CAN START AUTOMATICALLY WITHOUT WARNING.
ALSO, OPENING THERMOSTAT CONTACTS MAY NOT CAUSE THE EQUIPMENT TO STOP.
OUTDOOR FAN MOTORS HAVE INTERNAL OVERLOADS AND MAY RESTART AUTOMATICALLY.

NOTES:
1. TIME DELAY GLASS FUSES ON THE PCB CONTROLLER ARE THE FOLLOWING:
   - F1 PROTECTS THE THERMOSTAT CIRCUIT.
   - F2 PROTECTS THE REVERSING VALVE CIRCUITS AND THE "HEAT" OUTPUT. THIS FUSE F2 ALSO SUPPLIES FUSE F1.
   - F3 PROTECTS BOTH COMPRESSOR CONTACTOR CIRCUITS. AND THE INDOOR FAN CONTACTOR CIRCUIT.
2. OPTIONAL FIRE ALARM RELAY
3. HP CUT OUT & LP CUT OUT – AUTO RESET.
4. THERMAL OVERLOAD RELAYS – AUTO RESET, UNLESS OTHERWISE STATED.
5. DO NOT CONNECT ANY ADDITIONAL EQUIPMENT TO THE CONTROL TRANSFORMER OTHER THAN THE EQUIPMENT SHOWN ON THE ELECTRICAL DRAWING.
6. ALL FIELD WIRING IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND MUST COMPLY WITH AS/NZS 3000 AND LOCAL RULES.
7. SOFTWARE CODE MUST BE CHECKED AFTER REPLACEMENT OF THE CA–20 CONTROLLER BY CHECKING THE DISPLAY CODE ON THE 7 SEGMENT DISPLAY AFTER THE CONTROLLER IS ACTIVATED.

TABLE 1

JUMPERS SELECTION	DEFROST INTERVAL TIME SETTING	JUMPERS SELECTION	AUTO LEAD/LAG	JUMPERS SELECTION	SPEED UP
1 2	15 min	3	OFF	4	OFF
1 2	FACTORY SETTING 30 min	3	ON	4	ON
1 2	45 min				

UNIT MUST BE SWITCHED OFF BEFORE CHANGING THE JUMPER SELECTION

LEGEND		LEGEND		COLOUR CODE	
○	TERMINAL	TOL	THERMAL OVERLOAD RELAY	r	RED
⊗	SWITCHBOARD TERMINAL	C	CONTACTOR	w	WHITE
	FIELD WIRING	OF	OUTDOOR FAN	b	BLUE
	CONTROL PARAMETER	COMP	COMPRESSOR	bk	BLACK
	MAINS/CONTROL WIRING	ISO	ISOLATOR SWITCH	bn	BROWN
CCH	CRANK CASE HEATER	MCB	MINIATURE CIRCUIT BREAKER	o	ORANGE
PFR	PHASE FAILURE RELAY	CCB	CONTROL CIRCUIT BREAKER	p	PINK
RV	REVERSING VALVE	O/L	OVERLOAD	pl	PURPLE
HP	HIGH PRESSURE SWITCH	POT	POTENTIOMETER	gy	GREY
LP	LOW PRESSURE SWITCH			yell	YELLOW

COMPRESSOR (EACH)		
KW		2.83
RATED CURRENT		8.00
O/L SETTING		8.80
FANS (EACH)	KW	FLA
OUTDOOR	0.39	1.78
INDOOR	2.73	4.20

MODEL: P024AVR3SA

OPTIONS	
REF	DESCRIPTION
A	STANDARD

apac by Rinnai

DATE	28/06/2018		
DWN	S.P	APPD	ENG
REV	A	GRID	B119
DWG No.	EWS02113		