



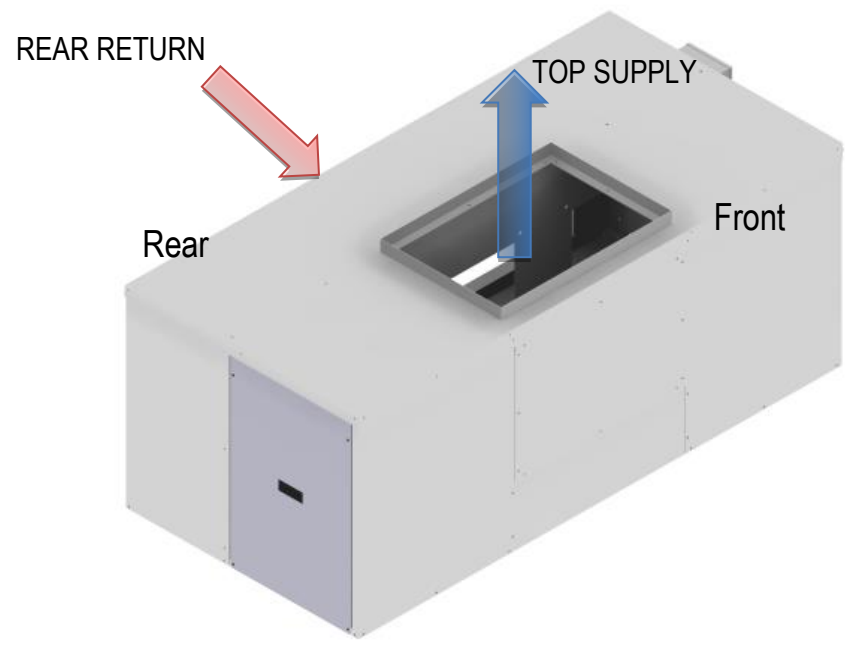
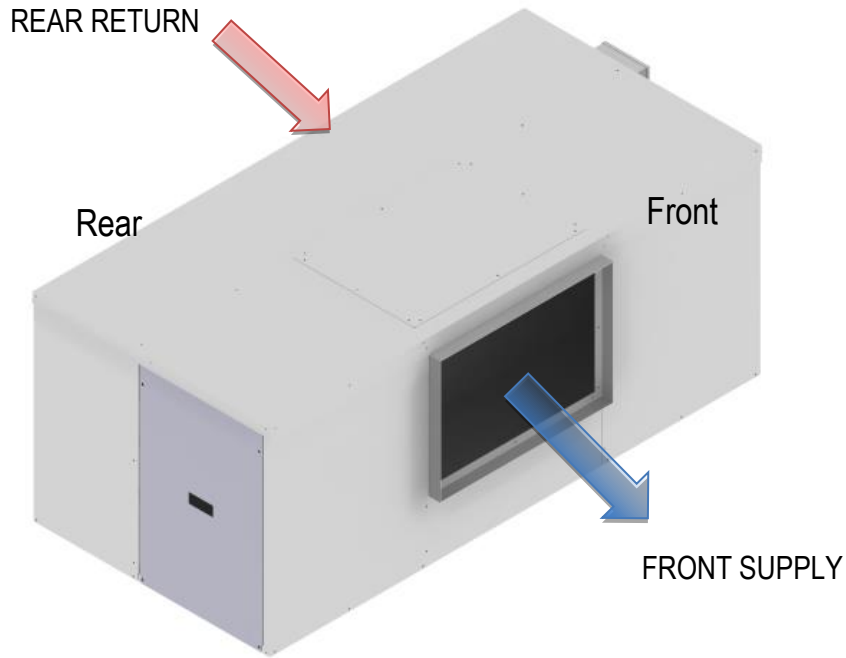
**SDU LOW PROFILE HANDING CONFIRMATION**

<b>SO NUMBER</b> (INTERNAL USE)		<b>WO NUMBER</b> (INTERNAL USE)	
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**SPLIT DUCTED UNITS (SDU IDH)**

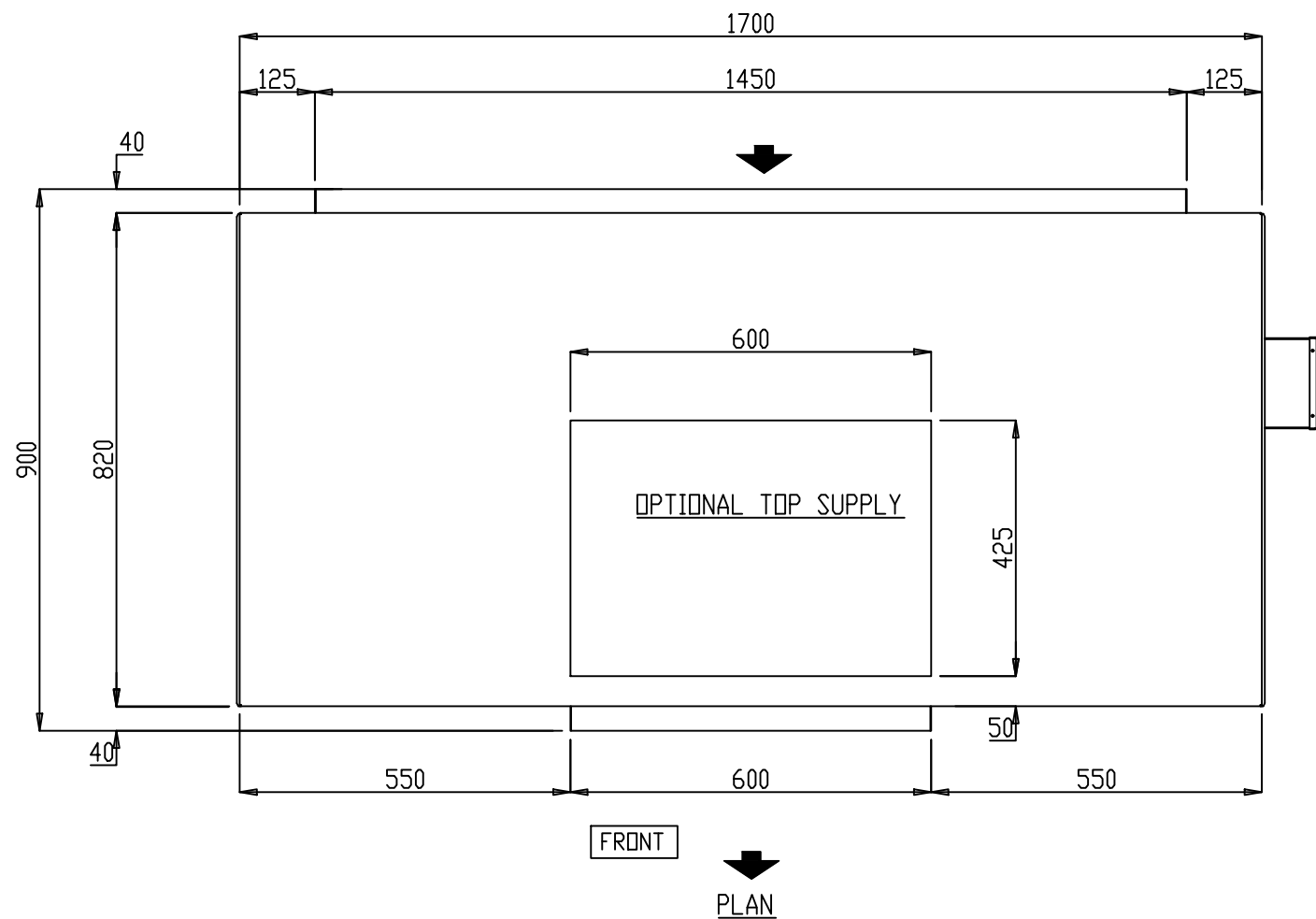
<b>MODELS</b>	S024-045ILR3SA
<b>GENERAL</b>	This document details the airside configurations available on 024-045 models.
<b>SOURCING</b>	Standard configuration is Front Supply / Rear Return. Optional airside configurations to be specified at time of order.
<b>HOW TO USE THIS DOCUMENT</b>	<ol style="list-style-type: none"> <li>1. Circle the required supply air outlet.</li> <li>2. Complete the information at the bottom of this document and return to your APAC representative.</li> </ol>

<b>FS/RR – FRONT SUPPLY / REAR RETURN</b>	<b>TS/RR – TOP SUPPLY / REAR RETURN</b>
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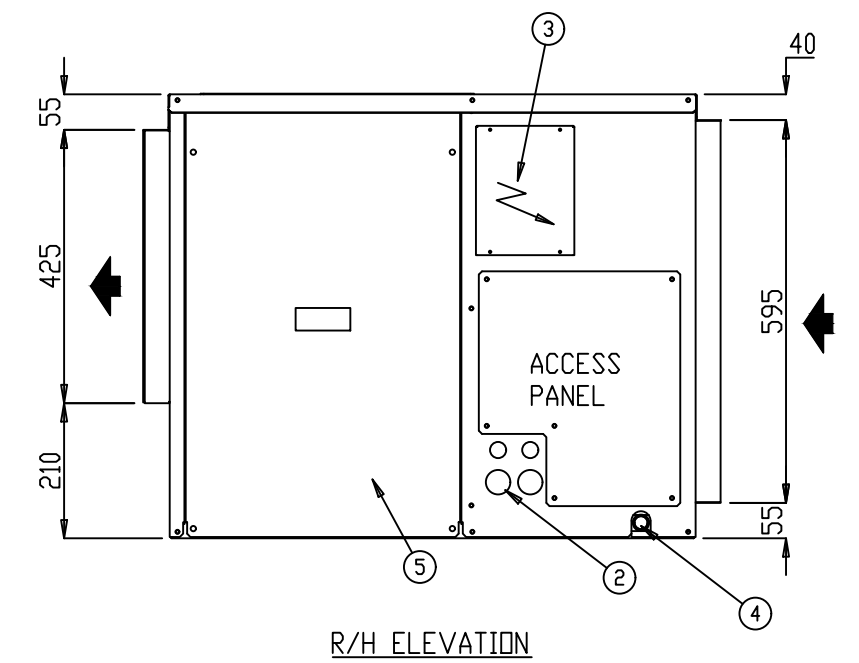
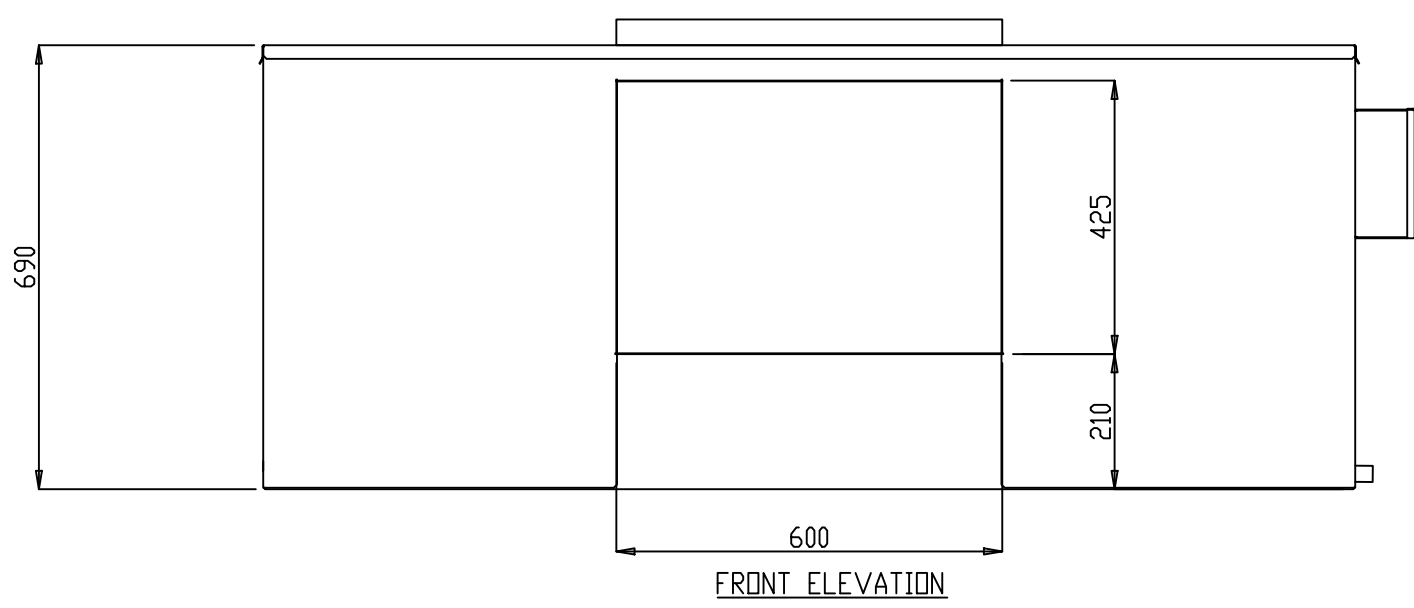
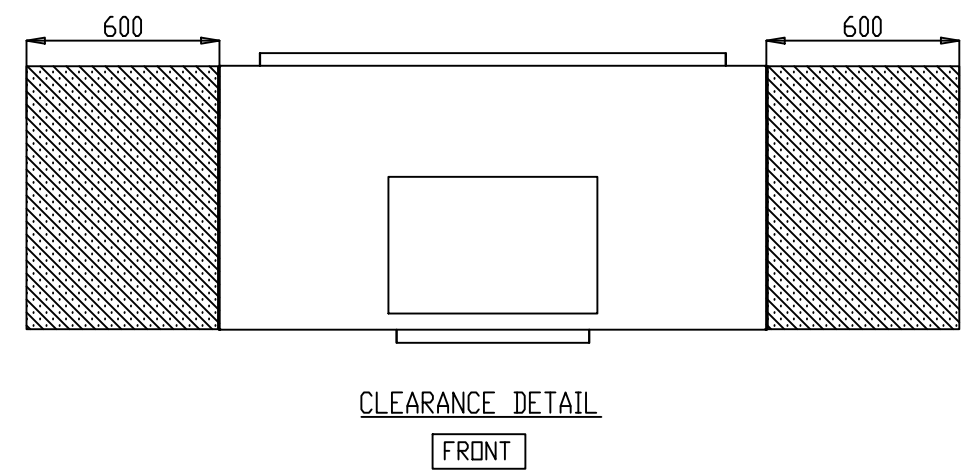


**CUSTOMER TO COMPLETE AND RETURN**

CUSTOMER	PROJECT	UNIT REF	NAME / SIGN	DATE



- NOTES:**
1. DRAWING REFLECTS A HORIZONTAL FAN COIL UNIT
  2. GAS DRAIN AND ELECTRICAL ENTRIES ON SAME SIDE
  3. ELECTRICAL CABLE ENTRY 25 $\phi$
  4. CONDENSATE DRAIN OUTLET 25 $\phi$
  5. ACCESS PANEL
  6. OPTIONAL TOP SUPPLY CONFIGURABLE ON SITE
  7. REFER TO INSTALLATION AND OPERATIONAL MANUAL FOR PIPE SIZING



- ALL DIMENSIONS IN mm.
- GENERAL TOLERANCE  $\pm 1$ mm.
- 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.

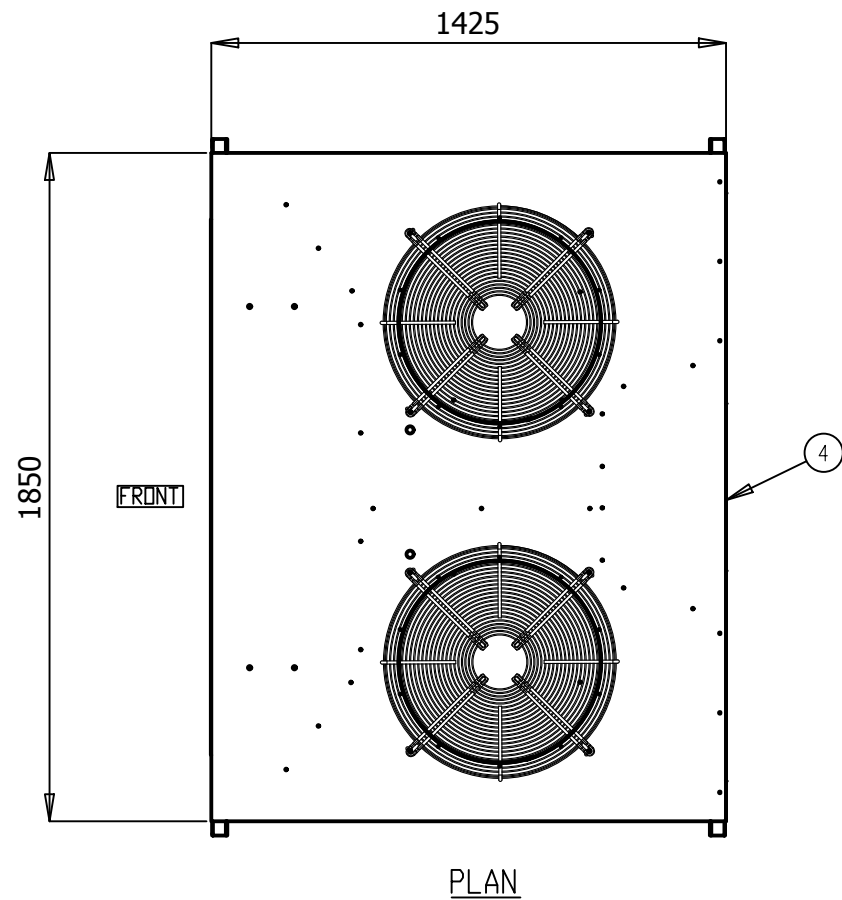
## GENERAL ARRANGEMENT

S024ILR3SA- S030ILR3SA- S035ILR3SA-

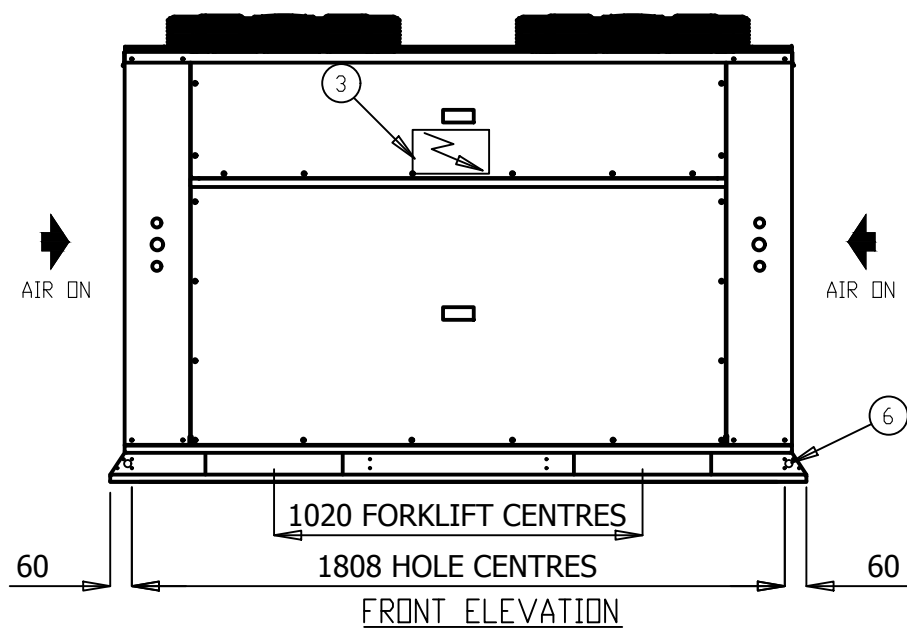
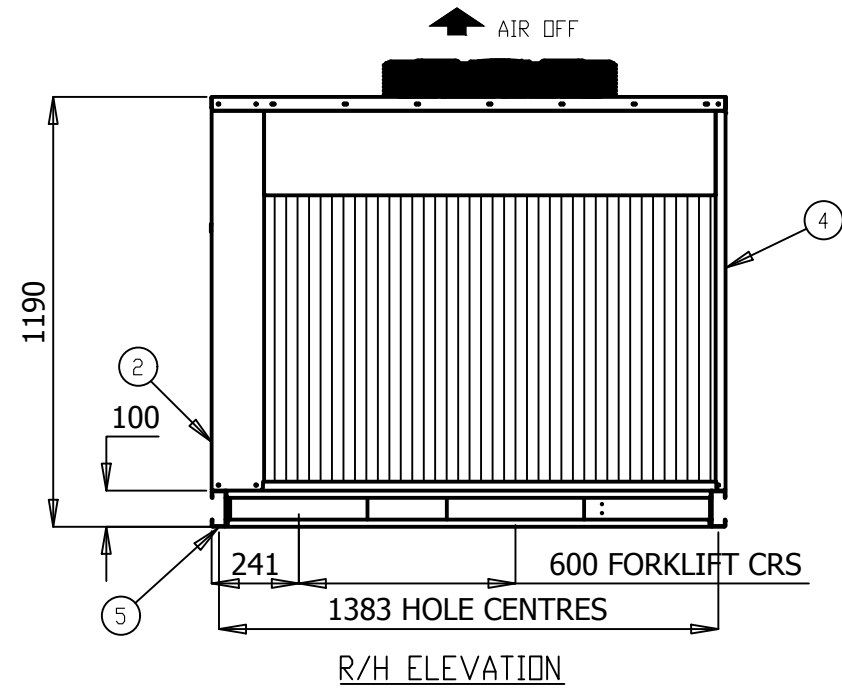
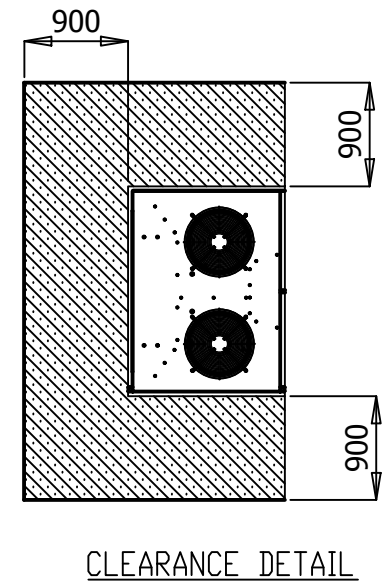
www.apacair.com.au

ABN: 74 005 138 769

	REVISION				REVISED NAMEPLATE WITH APAC DETAILS			
		DRAWN	MT	DRAWING No.		A4		
	ATLANTIC DR. KEYSBOROUGH VIC 3173	DATE	02.10.15	<b>GAD0049</b>				
	1300 555 545	SCALE	N.T.S.					
	CHECKED	HA	APP'D.	CM	REV.	C		



- NOTES:
1. GENERAL ARRANGEMENT OF A OUTDOOR SPLIT AIR COOLED VERTICAL UNIT
  2. POWER AND FIELD CABLE ENTRIES, 1 x 32 $\phi$  AND 2 x 25 $\phi$
  3. ELECTRICAL PANEL LOCATED BEHIND SERVICE ACCESS
  4. FIELD PIPE CONNECTIONS
  5. UNIT BASE 4 x 16 $\phi$  FIXING POINTS
  6. UNIT HAS 4 x 20 $\phi$  LIFTING POINTS
  7. REFER TO INSTALLATION AND OPERATIONAL MANUAL FOR PIPE SIZING



- ALL DIMENSIONS IN mm.
- GENERAL TOLERANCE  $\pm 1$ mm.
- 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

S0240VR3SA- S0300VR3SA- S0350VR3SA- S0400VR3SA- S0450VR3SA-

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ABN: 74 005 138 769

	REVISION					REVISED NAMEPLATE WITH APAC DETAILS				
	DRAWN		MT		DRAWING No.			A4		
	DATE		24.08.14		<b>GAD0028</b>					
	SCALE		N.T.S.							
CHECKED		HA		APP'D.		CM		REV. D		



# TECHNICAL DATA SHEET

MODEL NUMBER	Indoor Outdoor	S024ILR3SA- S024OVR3SA-	S030ILR3SA- S030OVR3SA-	S035ILR3SA- S035OVR3SA-	S040ILR3SA- S040OVR3SA-	S045ILR3SA- S045OVR3SA-	
MEPS REGISTRATION NUMBER		AAC3274	AAC3287	AAC3276	AAC3286	AAC3277	
<b>OUTDOOR SECTION</b>	<b>CAPACITY</b>						
	<b>Cooling</b>	kW TOTAL*	25.15	31.02	34.13	39.78	45.27
		kW SENSIBLE*	19.39	25.97	28.12	32.42	36.62
		EER (kW / ikW)*	3.59	3.60	3.44	3.40	3.27
	<b>Heating</b>	kW TOTAL	23.80	30.20	33.60	40.10	43.50
		COP	3.66	3.60	3.78	3.61	3.71
	CAPACITY STEPS (%)		50/100	50/100	50/100	50/100	50/100
	<b>COMPRESSOR</b>						
	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						
	<b>FAN</b>						
	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
	<b>HEAT EXCHANGER</b>						
	TYPE		PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL	PLATE FIN COIL
	NOM. AIRFLOW l/s		-	-	-	-	-
	<b>REFRIGERANT SYSTEM</b>						
	TYPE		<b>R410A</b>				
FACTORY 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					
<b>DIMENSIONS</b>							
H X W X D (mm)		1190 x 1850 x 1425					
<b>WEIGHT</b>							
OPERATING KG		362	382	389	414	414	
SHIPPING KG		366	386	393	418	418	
<b>ELECTRICAL</b>							
POWER SUPPLY		415v / 3∅ / 50hz					
FLA / RLA (Amps)		19.6 / 12.8	24.2 / 14.7	27.2 / 18	35.2 / 19.2	35.2 / 20.9	
<b>INDOOR SECTION</b>	<b>FAN</b>						
	TYPE		CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
	ikW (MAX INPUT)		1.7	1.7	1.7	1.7	1.7
	PHASE		3∅	3∅	3∅	3∅	3∅
	No. OFF		2	2	2	2	2
	FAN SPEED CONTROL		VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED	VARIABLE SPEED
	<b>HEAT EXCHANGER</b>						
	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				
	<b>DIMENSIONS</b>						
	H X W X D (mm)		690 x 1700 x 820			690 x 2250 x 820	
	<b>WEIGHT</b>						
	OPERATING KG		192	200	200	225	225
	SHIPPING KG		195	211	203	228	228
<b>ELECTRICAL</b>							
POWER SUPPLY		415v / 3∅ / 50hz					
FLA / RLA (Amps)		5.2 / 0.6	5.2 / 1.1	5.2 / 1.2	5.2 / 1.4	5.2 / 1.8	
<b>COMBINED SECTIONS</b>	<b>ELECTRICAL</b>						
	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)		13.6	15.8	19.1	20.6	22.7
	MAX. F.L.A. (TOTAL SYSTEM)		24.8	29.4	32.4	40.4	40.4
	<b>GENERAL</b>						
	CABINET GALVANISED SHEET STEEL						
	INSULATION ALUMINIUM FOIL FACED POLYETHYLENE ACOUSTIC INSULATION						
	EXTERNAL FINISH POLYESTER POWDER COAT - COLOUR LIGHT GREY AS STANDARD - OPTIONS AVAILABLE						
	<b>INDOOR AND OUTDOOR PIPE CONNECTION</b>						
LIQUID mm (inch)		9.5 (3/8")	9.5 (3/8")	9.5 (3/8")	9.5 (3/8")	9.5 (3/8")	
GAS mm (inch)		15.9 (5/8")	19.1 (3/4")	19.1 (3/4")	22.2 (7/8")	22.2 (7/8")	
<b>ADDITIONAL REFRIGERATION CHARGE AND FIELD PIPING CONNECTIONS</b>							
REFER TO INSTALLATION AND OPERATION MANUAL							
<b>NOISE LEVELS</b> [Based on condenser fan's sound data]							
SOUND POWER db(A)		66.5	66.5	66.5	68.7	68.7	

**Note:**

\*Performance excludes ikW of evaporator fan motor.

R.L.A - Run Load Amps are based on current drawn at nominal conditions

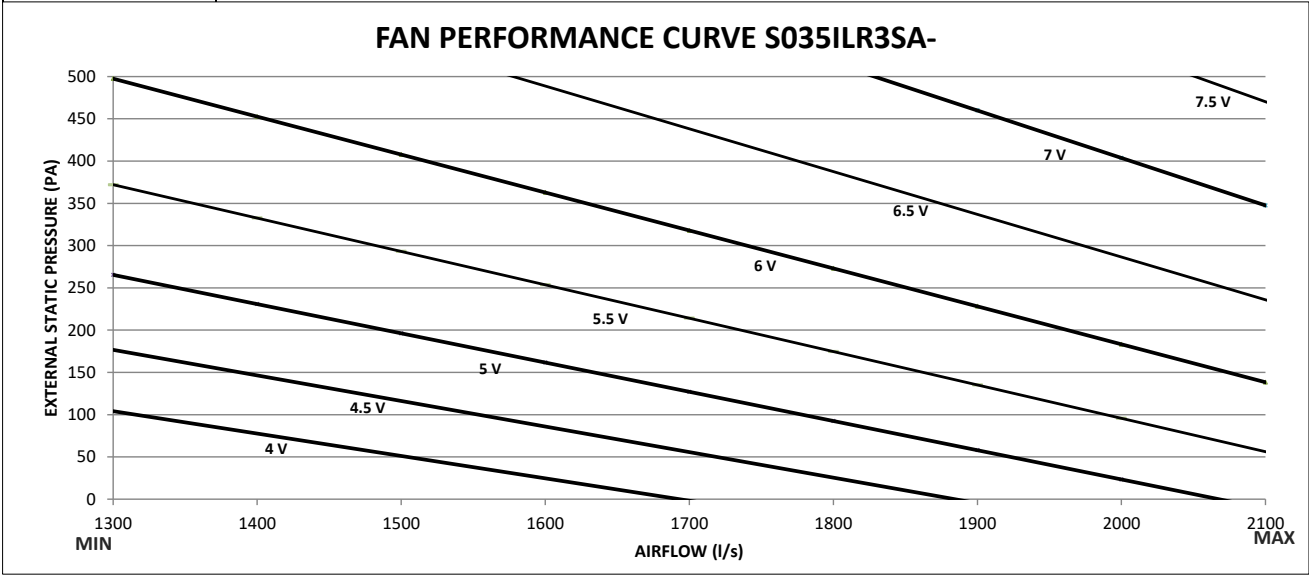
F.L.A - Full Load Amps are based on the overload settings [Max Current] of all Compressor and Fan Motor(s).

Date	Document #	Approved By	Revision
1/6/18	TDS0045	CM	C

**NOTE: Due to continuous improvement Rinnai Australia Pty Ltd reserve the right to change details without notice.**

# FAN PERFORMANCE CURVE

**S035IHL3SA-**



Note:

1. 5V, 5.5 V, 6V, 6.5V, 7V, 7.5V, 8V and 8.5V represents potentiometer voltage. Potentiometer can be adjusted to achieve desired flowrates.
2. Potentiometer voltage can be varied infinitely between 0 to 10V.

Date	Document #	Approved By	Revision
30.05.18	FPC0067	CM	B

**NOTE: Due to continuous improvement Rinnai Australia Pty Ltd reserve the right to change details without notice.**



## **SOUND DATA**

**MODEL NUMBER**

**S035ILR3SA- / S035OVR3SA-**

### **Outdoor Fan**

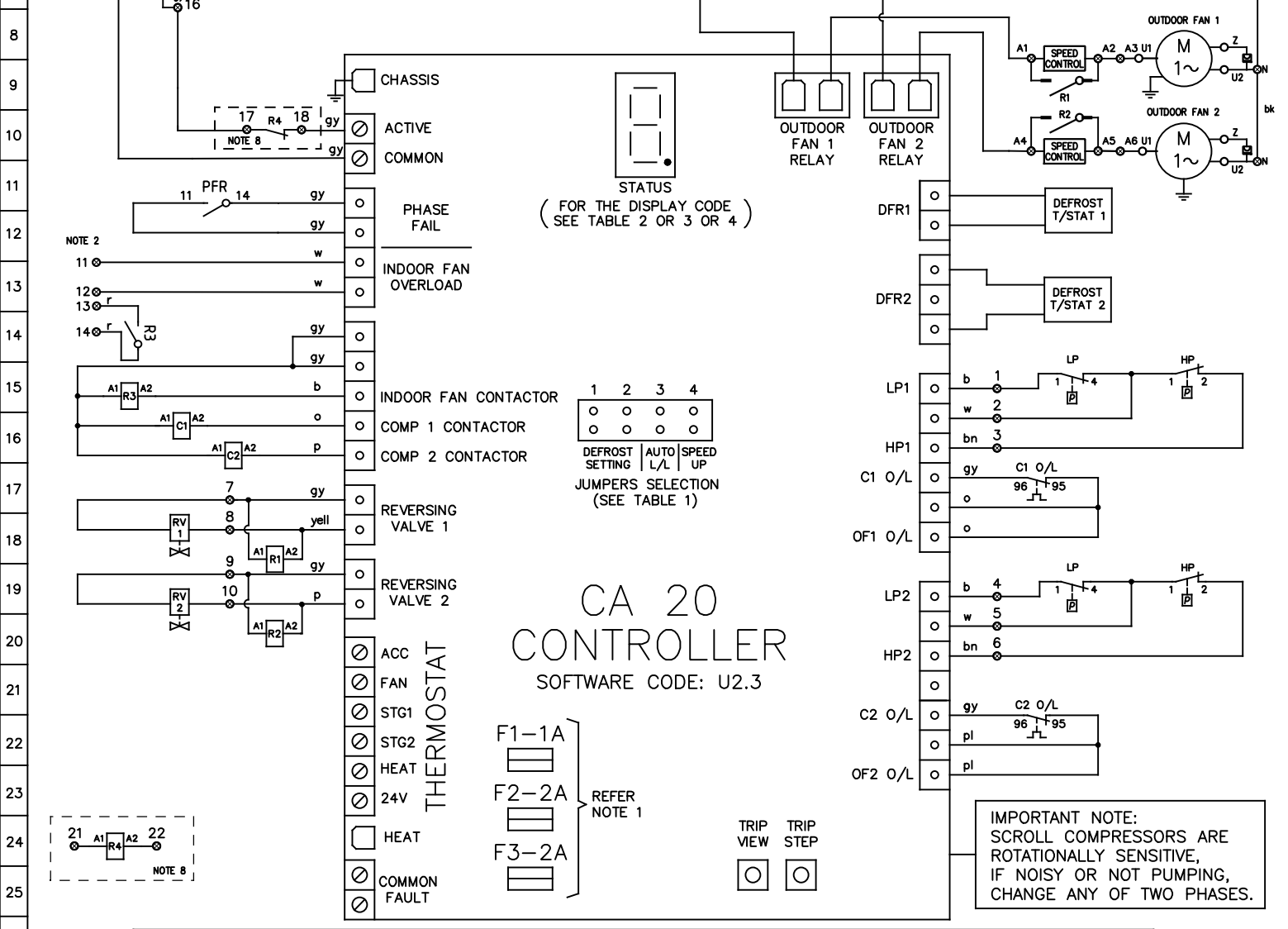
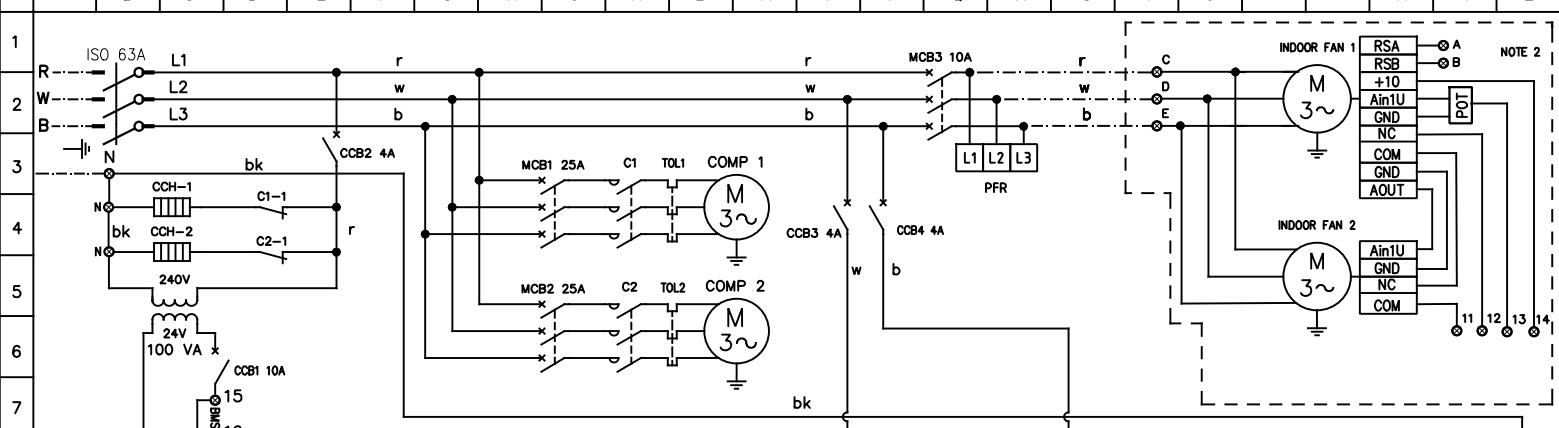
Sound Power Level dB(A)	Octave band Centre Frequency (Hz), dB						
	125	250	500	1k	2k	4k	8k
66.5	72.2	61.6	61.9	61.8	59.8	52.9	50.1

### **Indoor Fan**

Sound Power Level dB(A)	Air Flow (l/s)	Octave band Centre Frequency (Hz), dB						
		125	250	500	1k	2k	4k	8k
80	1750	63	69.9	72.8	75.7	72.9	71.2	70.9

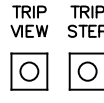
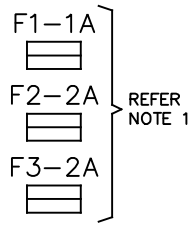
Date	Document #	Approved By	Revision
07.06.18	SD0063	CM	B

**NOTE: Due to continuous improvement Rinnai Australia Pty Ltd reserve the right to change details without notice.**



# CA 20 CONTROLLER

SOFTWARE CODE: U2.3



**IMPORTANT NOTE:**  
SCROLL COMPRESSORS ARE ROTATIONALLY SENSITIVE, IF NOISY OR NOT PUMPING, CHANGE ANY OF TWO PHASES.

**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:**
- 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.
  - FOR SPLIT SYSTEMS. OTHERS TO INSTALL ISOLATOR AND FIELD WIRING
  - HP CUT OUT & LP CUT OUT - AUTO RESET.
  - THERMAL OVERLOAD RELAYS - AUTO RESET, UNLESS OTHERWISE STATED.
  - DO NOT CONNECT ANY ADDITIONAL EQUIPMENT TO THE CONTROL TRANSFORMER OTHER THAN THE EQUIPMENT SHOWN ON THE ELECTRICAL DRAWING.
  - ALL FIELD WIRING IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR AND MUST COMPLY WITH AS/NZS 3000 AND LOCAL RULES.
  - 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.
  - OPTIONAL FIRE ALARM RELAY

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

UNIT MUST BE SWITCHED OFF BEFORE CHANGING THE JUMPER SELECTION

LEGEND		LEGEND		COLOUR CODE		COMPRESSOR (EACH)		MODEL: S0350VR3SA-L	
	TERMINAL SWITCHBOARD	TOL	THERMAL OVERLOAD RELAY	r	RED	KW		4.15	
	TERMINAL	R	RELAY	w	WHITE	RATED CURRENT		11.80	
	FIELD WIRING	C	CONTACTOR	b	BLUE	O/L SETTING		13.00	
	CONTROL PARAMETER	COMP	COMPRESSOR	bk	BLACK	FANS (EACH) KW		FLA	
	MAINS/CONTROL WIRING	ISO	ISOLATOR SWITCH	bn	BROWN	OUTDOOR	0.39	1.78	
	CCH	MCB	MINIATURE CIRCUIT BREAKER	o	ORANGE	INDOOR	1.70	2.60	
	PFR	CCB	CONTROL CIRCUIT BREAKER	p	PINK				
	RV	CCB	CONTROL CIRCUIT BREAKER	pl	PURPLE				
	HP	O/L	OVERLOAD	gy	GREY				
	LP	POT	POTENTIOMETER	yell	YELLOW				

**apac**  
by Rianni

DATE	2/07/2018		
DWN	S.P	APPD	ENG
REV	A	GRID	B266
DWG No.	EWS02249		