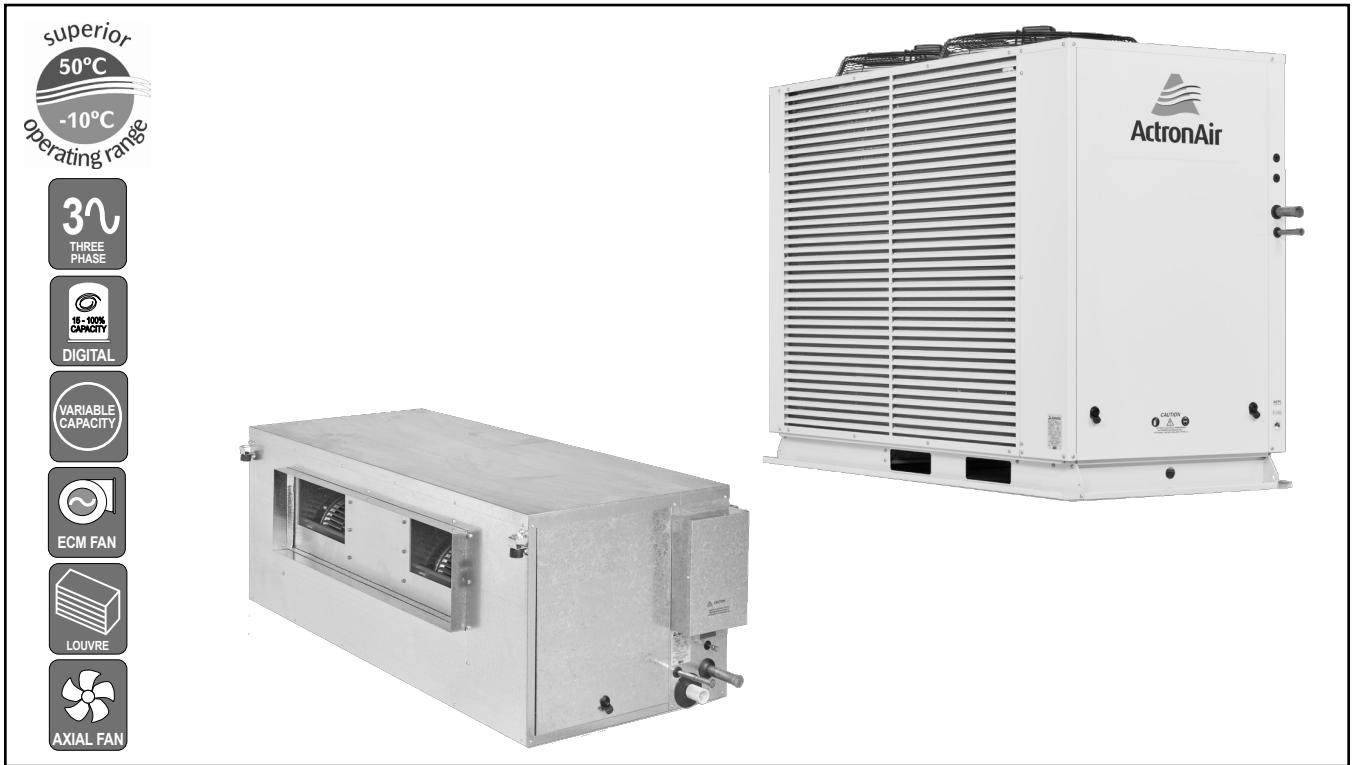


SPLIT DUCTED UNIT



UNIT FEATURES

- Compliant Digital Scroll Compressor
- Pre-charged with R-410A Refrigerant
- Multiple Speed Outdoor Fans
- 40-100% variable refrigeration capacity
- Electronic expansion valves
- Low ambient cooling operation to +5 deg
- Phase Protection
- Hydrophilic Blue Fin Coil Coat Protection - Indoor and Outdoor Coils
- Removable Louvred Outdoor Coil Guard
- Adaptive Demand Defrost
- EC Variable Speed Indoor Fan + Reduce Fan Airflow Feature
- Adjustable Indoor Airflow
- Foil Face Polyethylene Insulation - Indoor unit

UNIT OPTIONS

- Compressor Soft Starters
- Additional Full Coil Coat Protection

CONTROL OPTIONS AND FEATURES

ActronAir LC7-2 (BCA Compliant)

- Available in White or Grey
- 7-day Programmable Controller with 2 Events per Day
- 24-hour ON/OFF Timer
- Temperature Setback
- After Hours Time
- Auto / Cool / Heat / Fan Only / Night Modes Functions
- Auto / Continuous Indoor Fan Operation
- Optional 2nd and 3rd Controllers with Mimic Logic
- On-Board Temperature Sensor

ActronAir Neo

- 7" Colour Touch Screen Master Controller
- In-built Wi-Fi and Blue-Tooth
- Neo Connect App
- On-Board Temperature, Humidity and Proximity Sensor
- Optional wireless Zone Sensor
- Available in White or Black

ActronAir Group Control

3rd PARTY CONTROL

- Manual Control Inputs
- BMS Compatibility (Modbus 485)

SPECIFICATION SUMMARY

OUTDOOR UNIT MODEL		CRV290T	
INDOOR UNIT MODEL		EVA290T	
		⁽¹⁾ TOTAL	⁽²⁾ NETT
⁽³⁾ COOLING CAPACITY (kW)	MINIMUM	12.28	11.96
	RATED	30.40	29.6
⁽⁴⁾ HEATING CAPACITY (kW)	MINIMUM	11.84	12.18
	RATED	29.00	29.80
⁽³⁾ SENSIBLE CAPACITY (kW)		25.96	25.16
⁽⁵⁾ COOLING INPUT POWER (kW)		8.63	
⁽⁶⁾ HEATING INPUT POWER (kW)		7.91	
EER		RATED	3.43
COP		RATED	3.77
⁽⁶⁾ INDOOR AIRFLOW (l/s) - MIN. / NOMINAL / MAX.		1200 / 1500 / 1800	
OUTDOOR SOUND PRESS. LEVEL @ 3M dB(A) - LOW / HIGH		55.9 / 59.9	
OUTDOOR SOUND POWER LEVEL dB(A) - LOW / HIGH		72.9 / 76.9	
POWER SUPPLY - OUTDOOR		400V / 3Ph+N / 50Hz	
POWER SUPPLY - INDOOR		400V / 3Ph+N / 50Hz	
⁽²⁾ RATED LOAD AMPS - OUTDOOR / INDOOR / MAX		15.2 / 2.8 / 15.2	
⁽⁷⁾ FULL LOAD AMPS - OUTDOOR / INDOOR / MAX ⁽⁸⁾		22.6 / 5.0 / 25.0 ⁽⁸⁾	
⁽⁹⁾ CIRCUIT BREAKER AMPS		32.0	
APPROXIMATE STARTING AMPS		128.0	
WEIGHT (kg) -- INDOOR / OUTDOOR		122 / 263	

⁽¹⁾ Based on unit rating excluding indoor fan kW.

⁽²⁾ Measured and tested in accordance with AS/NZS 3823.1.2.

⁽³⁾ At 27°C DB / 19°C WB entering air temperatures and 35°C ambient.

⁽⁴⁾ At 20°C DB entering air temperature and 7°C DB / 6°C WB ambient.

⁽⁵⁾ Input power includes indoor fan kW.

⁽⁶⁾ Max. - Min. airflow application range.

⁽⁷⁾ Full Load Amps are based on compressor and fan motors' maximum expected current.

⁽⁸⁾ See Specifications sheet for detailed FLA.

⁽⁹⁾ See Specifications sheet for circuit breaker size details.

Note: Use input power to estimate running cost.

APPLICATION RANGE (COMPRESSOR ON)

AIRFLOW (l/s)	EXTERNAL STATIC PRESSURE (Pa)											
	50		100		150		200		250		300	
	% PWM	W	% PWM	W	% PWM	W	% PWM	W	% PWM	W	% PWM	W
1200	33	333	38	452	42	557	46	668	50	787	54	905
1250	36	380	40	480	44	585	48	698	52	821	56	950
1300	38	408	42	508	47	642	51	760	54	859	60	1003
1350	40	434	45	559	49	670	53	794	57	919	62	1069
1400	43	484	47	587	51	700	55	826	60	981	66	1107
1450	45	507	50	639	54	763	58	886	63	1037	71	1171
1500	48	559	52	671	57	822	61	943	66	1091	74	1225
1550	51	612	55	730	59	848	64	1000	69	1156	78	1292
1600	53	641	58	785	62	903	67	1060	72	1205	83	1355
1650	56	694	61	838	66	989	70	1121	75	1276	88	1426
1700	59	750	64	890	69	1048	73	1181	79	1344	93	1500
1750	62	797	67	945	72	1106	77	1271	83	1414	99	1551
1800	66	877	70	1000	75	1163	79	1316	88	1497	MOTOR LIMIT	

REDUCED AIRFLOW * (COMPRESSOR OFF)

AIRFLOW (l/s)	EXTERNAL STATIC PRESSURE (Pa)												
	50		100		150		200		250		300		
	% PWM	W	% PWM	W	% PWM	W	% PWM	W	% PWM	W	% PWM	W	
350											21	333	
400									20	295	23	372	
450									22	331	24	381	
500											26	408	
550								21	291	23	330	26	408
600								22	301	25	371	28	439
650								23	310	27	406	30	480
700								22	310	27	406	30	480
750								25	341	28	418	32	521
800								26	351	30	452	34	555
850								28	385	31	460	35	561
900								30	416	33	493	37	592
950								31	423	35	524	39	621
1000								33	454	37	563	41	675
1050								35	483	40	622	43	710
1100								38	542	42	656	45	744
1150								40	574	44	689	48	804
1200								42	606	46	719	50	831
1250								44	637	48	754	52	874

NOTES:

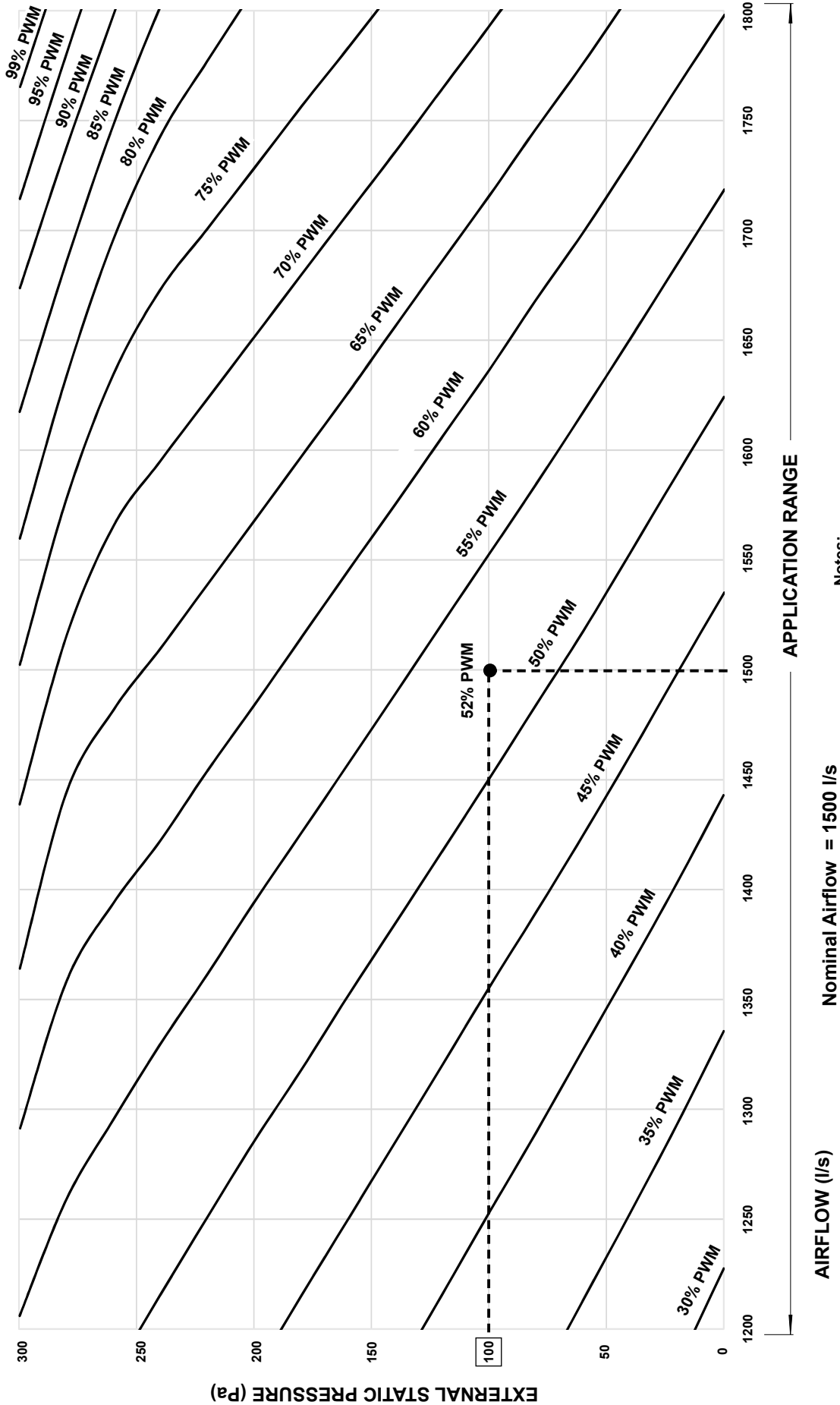
*Reduced fan airflow is the airflow during compressor OFF operation (optional feature)

W = Indoor Fan Power, Watts

PWM = Pulse Width Modulation Setting, % PWM (Adjustable through NEO / LC7-2 Control Interface or Outdoor Board)

Default Fan Speed Value at 100 Pa	
Speed	Default PWM
High PWM (%)	70 (adjustable)
Medium PWM (%)	52 (adjustable)
Low PWM (%)	38 (adjustable)

Indoor Fan PWM Limits	
High PWM (%)	99
Low PWM (%)	33



Notes:

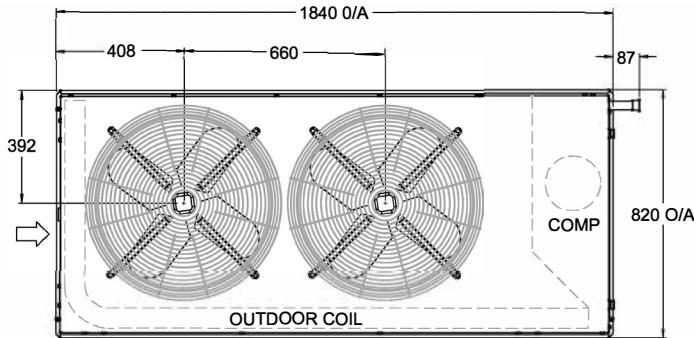
1. Performance Fan Curve shown is at Dry Coil Condition.
2. Airflow should be reduced with respect to the moisture content in the air.
3. All data provided does not include filters. Please review filter manufacturer for application.
4. 2.5 m/s face velocity point will occur at 2150 l/s.

OUTDOOR UNIT DIMENSIONS

CRV290T / EVA290T

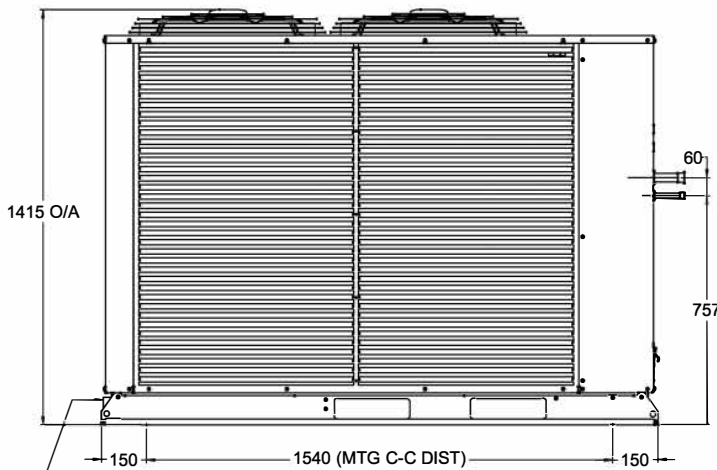
C OUTDOOR UNIT - STANDARD MODEL

UNIT MODEL NUMBER	UNIT WEIGHT (kg)	CORNER WEIGHTS (kg)			
		A	B	C	D
CRV290T	263	48	79	61	75



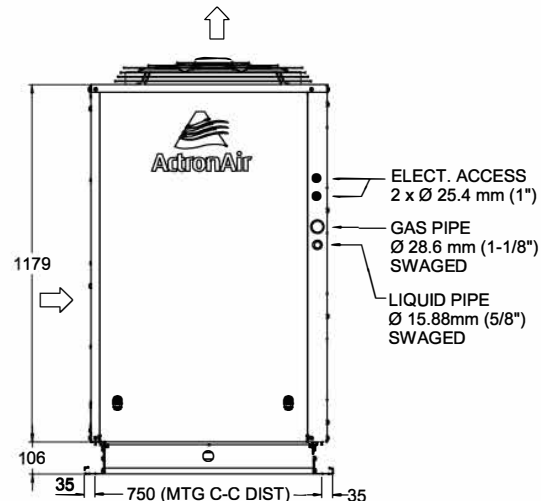
TOP VIEW

OVERALL NOMINAL DIMENSION (H x W x L)
= 1415 x 1840 x 820



SIDE VIEW

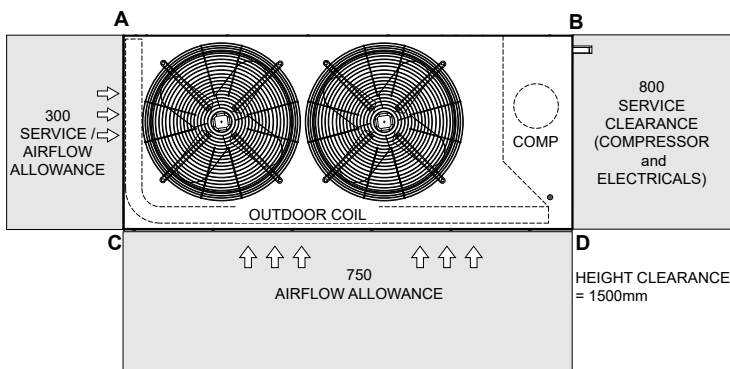
DRAIN POINT
DN 25mm PN12



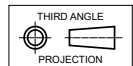
FRONT VIEW

ELECT. ACCESS
2 x Ø 25.4 mm (1")
GAS PIPE
Ø 28.6 mm (1-1/8")
SWAGED
LIQUID PIPE
Ø 15.88mm (5/8")
SWAGED

MINIMUM SERVICE ACCESS CLEARANCES and AIRFLOW SPACE ALLOWANCES



NOTES:



- Do not scale drawing.
- All dimensions are in mm unless specified. Refer to corresponding unit dimensional drawing for mounting hole details
- Suggested Service Clearance and Airflow Allowances are based on conditions that the spaces are free from obstructions and walkway passage of 1m is available to allow coil replacement without lifting coil over the top of the unit.
- Minimum service access areas and space for airflow clearances are responsibilities of the installer.
- Under circumstances, condenser air must not recirculate back onto condenser coil. Keep all clearances free of any obstructions.
- STACKING OF UNITS: Ensure that minimum airflow and service clearances are met.
- MTG C-C DIST = Mounting Centre to Centre Distance.
- Use M12 bolt for feet mounting.

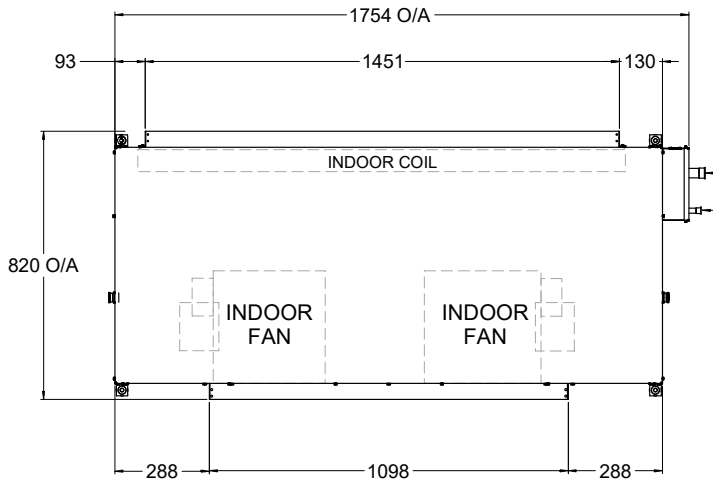


INDOOR UNIT DIMENSIONS

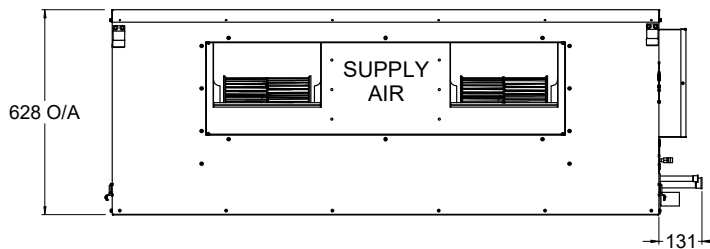
CRV290T / EVA290T

INDOOR UNIT - STANDARD MODEL

UNIT MODEL NUMBER	UNIT WEIGHT (kg)
EVA290T	122



TOP VIEW

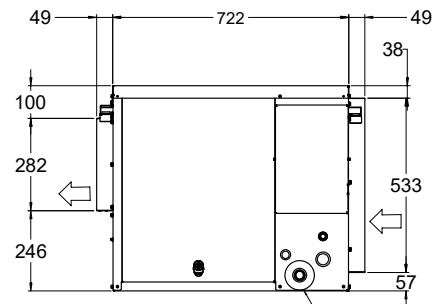


FRONT VIEW

GAS PIPES
 Ø 28.58 mm (1-1/8")
 SWAGED

LIQUID PIPE
 Ø 15.88 mm (5/8")
 SWAGED

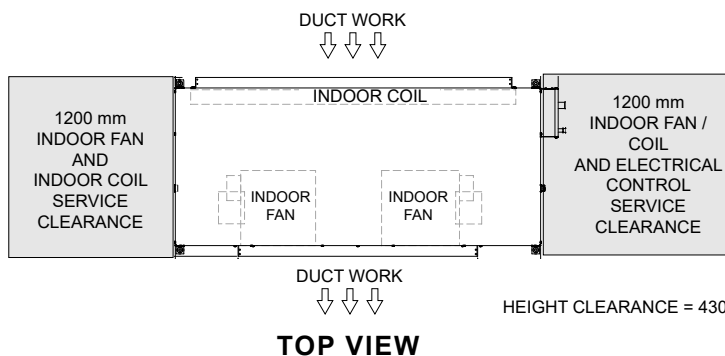
OVERALL NOMINAL DIMENSION (H x W x L)
 = 628 x 1754 x 820
 SUPPLY DUCT (H x W) = 282 x 1098
 RETURN DUCT = 533 x 1451
 DRAIN CONNECTION = DN 25mm PN12



SIDE VIEW

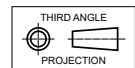
PRIMARY DRAIN
 DN 25mm PN12

MINIMUM SERVICE ACCESS CLEARANCES and AIRFLOW SPACE ALLOWANCES



TOP VIEW

NOTES:



1. Do not scale drawing. All dimensions are in mm unless specified. Refer to corresponding unit dimensional drawing for mounting hole details.
2. Service Access Areas and Spaces for Airflow Clearances given are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkway passage of 1000mm between the units or between the unit and the outside perimeter is available.
3. Minimum service access areas and spaces for airflow clearances are responsibilities of the installer, ActronAir will not be held liable for any extra charges incurred due to lack of access and space for airflow.



Outdoor Radiated

Sound Power Level (SWL)

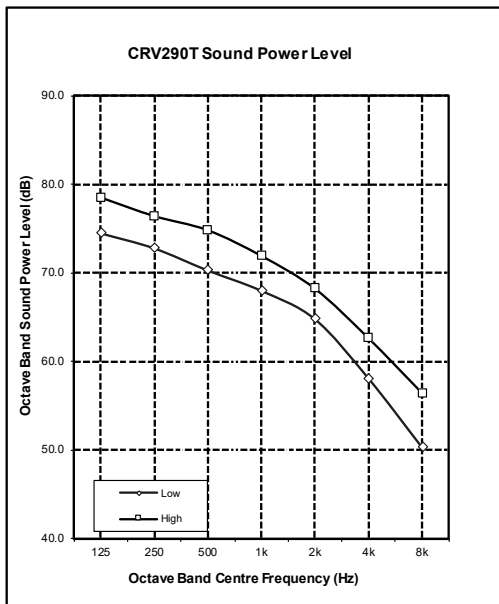
Fan Speed	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
		125	250	500	1k	2k	4k	8k
Low	72.9	74.5	72.8	70.3	68.0	64.8	58.1	50.3
High	76.9	78.5	76.4	74.8	71.9	68.2	62.6	56.4

Indoor Outlet

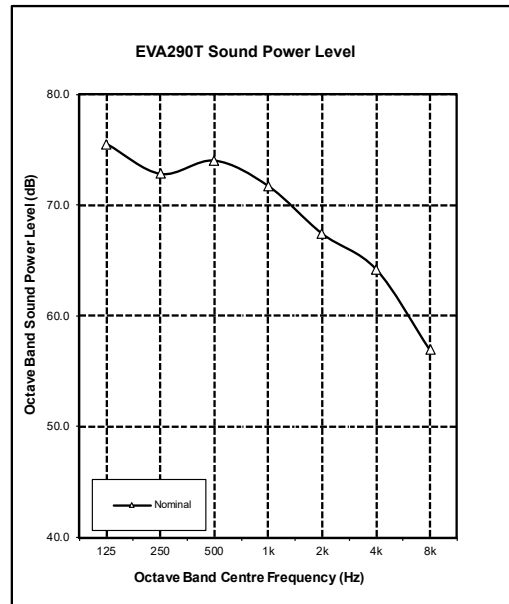
Sound Power Level (SWL)

Airflow Setting	Airflow Li/s	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
			125	250	500	1k	2k	4k	8k
Nominal	1500	76.2	75.5	72.8	74.0	71.7	67.4	64.2	56.9

OUTDOOR RADIATED



INDOOR OUTLET



NOTE:

Radiated sound power levels are based on ISO 3743-1.

SPECIFICATIONS

CRV290T / EVA290T

CONSTRUCTION	
CABINET (Indoor Unit)	0.5 - 1.2 mm Galvanized Steel
CABINET (Outdoor Unit)	0.9 - 1.6 mm Galvanized Steel
SURFACE FINISH (Outdoor Unit)	65 μ Baked Polyester Powder Coat

INSULATION (Indoor Unit)	
TYPE	Foil Faced Polyethylene

ELECTRICAL	
OUTDOOR UNIT	
Power Supply - 50 Hz	400 Volts x 3 Phase + Neutral
Voltage Range (min - max)	376 V - 424 V
Full Load Amps* - (L1 / L2 / L3)	22.6 / 20.0 / 19.2
Rated Load Amps**	15.2
Approximate Starting Amps	128.0
IP Rating	IP44

INDOOR UNIT	
Power Supply - 50 Hz	400 Volts x 3 Phase + Neutral
Voltage Range (min - max)	380 V - 440 V
Full Load Amps* - (L1 / L2 / L3)	0.8 / 5.0 / 5.0
IP Rating	IP20

OUTDOOR AND INDOOR UNIT (TOTAL)	
Full Load Amps* - (L1 / L2 / L3)	23.4 / 25.0 / 24.2
Rated Load Amps**	15.2

IMPORTANT - The local electricity authority may require limits on starting current and voltage drop, please check prior to purchase.

* Full Load Amps are based on Compressor and Fan Motor's maximum expected current.

** Rated Load Amps are measured and tested in accordance with AS/NZS3823.1.2.

CABLE SIZE and CIRCUIT BREAKER SIZE	
Refer to latest edition of AS/ANZ 3000 or AS/ANZ 3008 Australian/New Zealand Wiring Rules to determine required cable size.	
Circuit Breaker Size	32.0 Amps

OUTDOOR COIL	
TUBE TYPE	Copper - Rifle Bore
FIN TYPE	Aluminium - Wave
FIN SPACING (per m)	630
COIL COATING	Hydrophilic Blue Coat Coil Fin Protection

OUTDOOR FAN	
NUMBER OF FANS x TYPE	2 x Axial
NUMBER OF BLADES PER FAN	4
DIAMETER (mm)	560
OUTPUT kW per FAN	0.37
MOTOR TYPE / DRIVE TYPE	6 Pole External Rotor / Direct Drive
FAN SPEED CONTROL	3 Speed via Capacitor
The standard type outdoor fans fitted to this unit will accept up to 5Pa of external static resistance.	

INDOOR COIL	
TUBE TYPE	Copper - Rifle Bore
FIN TYPE	Aluminium - Wave
FACE ARE (m sqr)	0.86
FIN SPACING (per m)	590
COIL COATING	Hydrophilic Blue Coat Coil Fin Protection

INDOOR FAN	
NUMBER OF FANS x TYPE	1 x Twin Deck Centrifugal EC Fan
DIAMETER / WIDTH (mm)	270 x 270
INPUT kW TOTAL	0.80
MOTOR TYPE / DRIVE TYPE	Variable Speed EC Motor / Direct

COMPRESSOR	
NUMBER PER UNIT x TYPE	1 x Digital Scroll (Hermetic)
FULL LOAD AMPS	20.0
LOCKED ROTOR AMPS	128.0
STARTING METHOD	D.O.L. (optional soft starter)

REFRIGERATION SYSTEM	
REFRIGERANT TYPE	R-410A
EXPANSION CONTROL	Direct Expansion Orifice
FACTORY CHARGE (grams)	9,600
PRE-CHARGE LENGTH (metres)	5
ADDITIONAL REF. CHARGE (gm/m)	165

INTERCONNECTING PIPE RUN	
MAX PIPE LENGTH (metres)	60
MAX. VERTICAL LENGTH (metres)	20 (Included in Max. Pipe Length)
RECOMMENDED FIELD PIPE SIZES (SOLDER)	
Liquid Pipe	15.88 mm (5/8")
Gas Pipe	28.6 mm (1-1/8")

PIPE CONNECTIONS		
Indoor	Liquid Pipe	15.88 mm (5/8") Swaged to fit 15.88 mm (5/8") field pipe
	Gas Pipe	28.6 mm (1-1/8") Swaged to fit 28.6 mm (1-1/8") field pipe
Outdoor	Liquid Pipe	15.88 mm (5/8") Swaged to fit 15.88 mm (5/8") field pipe
	Gas Pipe	28.6 mm (1-1/8") Swaged to fit 28.6 mm (1-1/8") field pipe
CONNECTION TYPE		Solder
Insulate both gas and liquid pipes separately.		

PROTECTION DEVICES	
HIGH PRESSURE CUTOUT SWITCH	Nonadjustable (Automatic Reset)
LOW PRESSURE CUTOUT SWITCH	Nonadjustable (Automatic Reset)
COMPRESSOR MOTOR TEMP.	Internal Thermal Cut-Out
INDOOR FAN OVERLOAD	Internal Thermal Cut-Out
OUTDOOR FAN OVERLOAD	Internal Thermal Cut-Out
SUMP HEATER WATTS	50.0 W during Comp. Off Cycle

ELECTRIC CONTROLS	
DEFROST METHOD	Reverse Cycle
DEFROST TYPE	Adaptive Demand Defrost
CONTROL CIRCUIT BREAKER	10.0 Amps
LC7 FIELD CONTROL WIRING	Cat5e UTP (AWG24) Data Cable
INDOOR TO OUTDOOR DATA CABLE	RS485 / 2 Core (1 Pair) Twisted Pair 7/0.30 (0.5mm ²) Shielded Data Cable

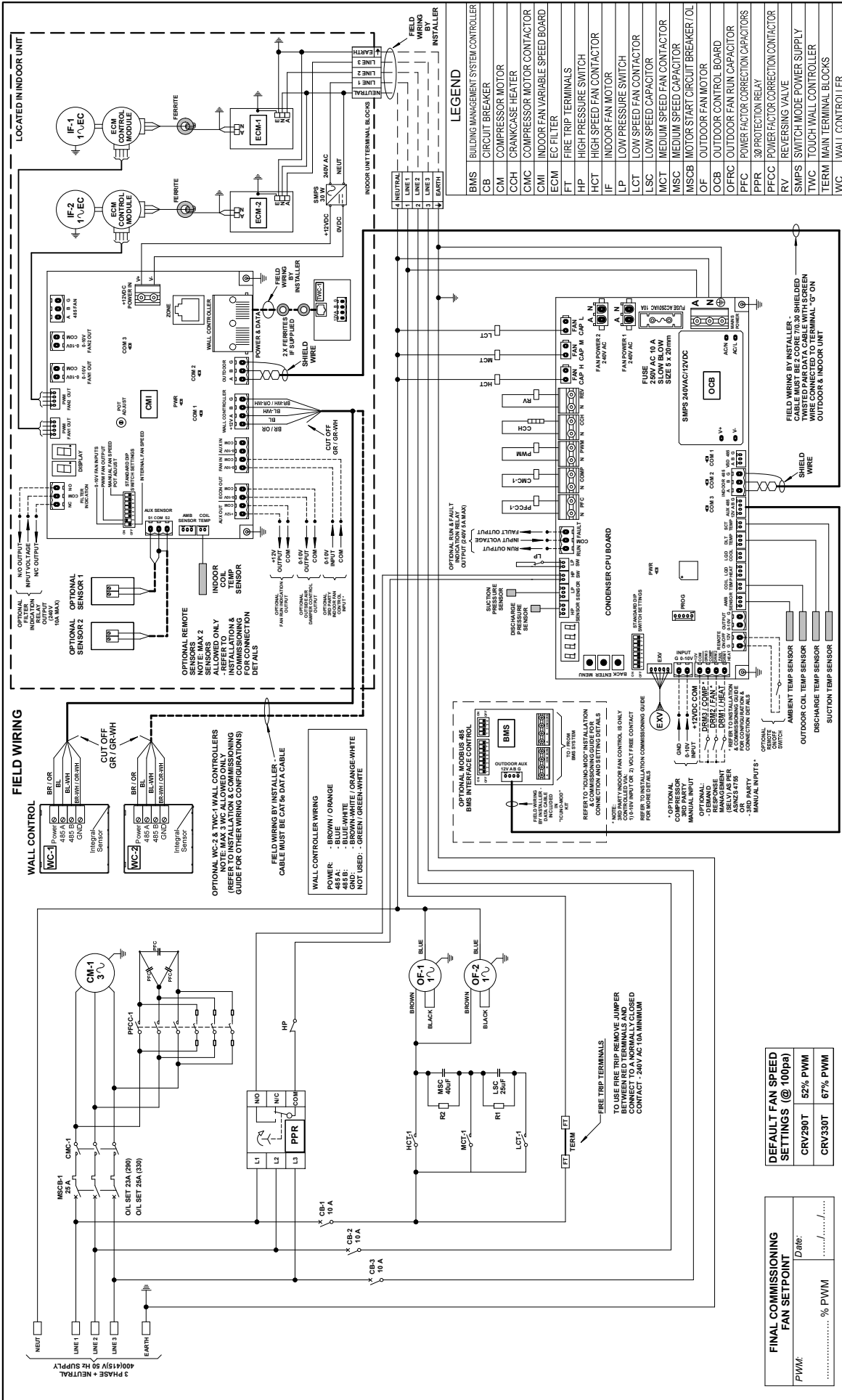
OPERATING RANGE
It is essential that the unit is correctly sized for the application and operates within its recommended range of operating conditions as shown below.

MODE	RANGE	INDOOR AIR INTAKE TEMPERATURE	OUTDOOR AIR INTAKE TEMPERATURE
Cooling	Max.	30°C DB / 22°C WB	50°C DB
	Min.	20°C DB / 16°C WB	5°C DB
Heating	Max.	24°C DB	19.5°C DB / 18°C WB
	Min.	16°C DB	-10°C WB

AIR FILTERS
All return air including fresh air must have adequate filters supplied and fitted by the installing contractor. Filters must be located in accessible location between the return air grille and the unit.
ActronAir does not supply or make any provisions for return air filter.

UNIT COMPLIANCE
• AS/NZS 3823.2 (MEPS)
• AS/NZS 4755.3.1:2012 (DRM1, 2 and 3)
• AS/NZS CISPR 11, Group 1 Class A (EMC)





Model No: CRV290/330T Description: UNO SERIES CONTROL SYSTEM WIRING DIAGRAM WITH C SERIES WALL CONTROL, CMI VARIABLE SPEED INDOOR FAN CONTROL BOARD & PFC		Revision E	Size: A3
Drawn: RL Date: 18-01-2019	Approved: JL Date: 20-09-2022	Drawing No.: WD2100	
Rev. E ADDED FERRITE TO TWC-1	Description	By PCR	Date 16-09-2022
D	ORIGINAL		



This drawing remains the intellectual property of Actron Engineering Pty Ltd. Reproduction, modification and/or distribution are prohibited without written consent.