











AIRES SPLIT DUCTED UNIT

Technical Selection Data





-  SINGLE PHASE
-  THREE PHASE
-  SINGLE STAGE
-  ECM FAN
-  INVERTER
-  R-32 REFRIGERANT
-  SOFT START
-  DC AXIAL FAN

Model Numbers

Single Phase	Three Phase	Indoor Split Fan-Coil
CRS10AS / EVA10AS	CRS13AT / EVA13AS	ECA13AS and EFA13AS
CRS13AS / EVA13AS	CRS15AT / EVA15AS	ECA15AS and EFA15AS
CRS15AS / EVA15AS	CRS17AT / EVA17AS	ECA17AS and EFA17AS
CRS17AS / EVA17AS	CRS20AT / EVA20AS	ECA20AS and EFA20AS
	CRS23AT / EVA23AS	ECA23AS and EFA23AS

UNIT FEATURES

- Inverter Variable Speed Compressor and Drive Technology
- 28*-100% Superior Refrigeration Operating Capacity Range
- High efficient variable speed Indoor and Outdoor Fan Motor
- Pre-charged with Low GWP R-32 Refrigerant
- Adaptive Demand Defrost
- Active Power Factor Correction
- 20m Cat5e wall controller cable included
- Low ambient cooling operation to +5 degree
- Fault and Run Indication - Relay Output
- Up to 3 Wall Controllers and 3 Remote Temperature Sensors
- Ready for up to 8 zones
- Compressor Soft Start via Variable Speed Drive Control
- Hydrophilic Blue Fin Coil Coat Protection - Indoor and Outdoor Coils
- Integrated Fan Coil Safety Tray with Drain Kit
- Bi-Flow Electronic Expansion Valve
- Powder Coated Outdoor Unit
- Turbo Mode

UNIT OPTIONS

- Additional Full Coil Coat Protection - Indoor Coil Only
- Split Fan Coil Unit
- Vertical Fan Coil Unit

UNIT COMPLIANCE

- AS/NZS 3823.2 (MEPS)
- AS/NZS 4755.3.1:2012 (DRM 1, 2 and 3)
- AS/NZS CISPR 14.1 (EMC)
- AS/NZS 60335.2.40 in conjunction with AS/NZS 60335.1 (Electrical Safety - Air Conditioner)

* Minimum varies depending on model selected.

CONTROL OPTIONS AND FEATURES

ActronAir LR7-1/LC7-2

- Available in White or Grey
- 7-day Programmable Controller with 2 Events per Day
- 24-hour ON/OFF Timer
- Temperature Setback
- After Hours Time (LC7-2 Only)
- Auto, Heat, Cool, Turbo, Fan Modes and Night Mode Functions
- Fixed and 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

ActronAir BMS ICUNO-MOD (Modbus 485)

Third Party Control

- Optional Manual Inputs
- Optional Analogue Inputs

PLENUMS

See Plenum Matrix for details of spigots availability.



SPECIFICATION SUMMARY

OUTDOOR UNIT MODEL		CRS10AS	CRS13AS	CRS15AS	CRS17AS				
INDOOR UNIT MODEL		EVA10AS	EVA13AS	EVA15AS	EVA17AS				
		⁽¹⁾ TOTAL	⁽²⁾ NETT	⁽¹⁾ TOTAL	⁽²⁾ NETT	⁽¹⁾ TOTAL	⁽²⁾ NETT	⁽¹⁾ TOTAL	⁽²⁾ NETT
⁽³⁾ COOLING CAPACITY (kW)	Rated	10.40	10.00	13.30	13.02	15.75	15.4	17.40	17.00
	Max ⁽¹⁰⁾	-	12.34	-	15.01	-	17.26	-	19.32
	Min	-	3.89	-	5.55	-	5.94	-	6.54
⁽⁴⁾ HEATING CAPACITY (kW)	Rated	10.15	10.52	14.70	15.00	16.40	16.74	18.90	19.29
	Max ⁽¹⁰⁾	-	13.57	-	17.03	-	18.57	-	21.61
	Min	-	3.13	-	4.69	-	5.10	-	5.32
⁽³⁾ SENSIBLE CAPACITY (kW)	Rated	8.50	8.10	10.83	10.55	12.98	12.63	14.17	13.77
⁽⁵⁾ COOLING INPUT POWER (kW)	Rated	2.97		3.89		4.41		5.02	
⁽⁵⁾ HEATING INPUT POWER (kW)	Rated	3.06		4.27		4.72		5.50	
EER	Rated	3.36		3.35		3.49		3.39	
COP	Rated	3.43		3.51		3.55		3.51	
Total Cooling Seasonal Performance Factor Residential - Cold / Mixed / Hot		4.22 / 4.10 / 4.45		4.37 / 4.21 / 4.50		4.55 / 4.39 / 4.68		4.35 / 4.20 / 4.45	
Heating Seasonal Performance Factor Residential - Cold / Mixed / Hot		3.21 / 3.64 / 4.13		3.42 / 3.86 / 4.33		3.41 / 3.86 / 4.32		3.45 / 3.89 / 4.39	
⁽⁶⁾ INDOOR AIRFLOW (l/s) MIN. / NOMINAL / MAX.		400 / 500 / 600		520 / 650 / 780		620 / 770 / 920		710 / 890 / 1060	
⁽⁷⁾ OUTDOOR SOUND PRESS. LEVEL @ 3M dB(A) - Quiet / Rated Cooling / Rated Heating / Max		49.9 / 50.6 / 52.1 / 53.8		47.0 / 52.9 / 54.2 / 55.2		46.0 / 52.2 / 54.9 / 55.1		50.1 / 55.0 / 56.8 / 56.9	
OUTDOOR SOUND POWER LEVEL dB(A) - Quiet / Rated Cooling / Rated Heating / Max		65.3 / 67.8 / 68.1 / 69.9		64.2 / 69.2 / 70.0 / 71.0		63.6 / 69.1 / 71.6 / 72.0		67.3 / 71.7 / 72.8 / 73.2	
POWER SUPPLY - OUTDOOR		230V / 1Ph+N / 50Hz							
VOLTAGE RANGE (MIN - MAX)		216V - 243V							
IP RATING		IPX4							
POWER SUPPLY - INDOOR		230V / 1Ph+N / 50Hz							
VOLTAGE RANGE (MIN - MAX)		216V - 243V							
IP RATING		IP20							
⁽²⁾ RATED LOAD AMPS** - TOTAL		13.83		18.62		20.83		24.34	
⁽⁸⁾ FULL LOAD AMPS OUTDOOR / INDOOR / TOTAL		17.26 / 3.62 / 20.88		17.77 / 4.30 / 22.07		21.45 / 4.30 / 25.75		23.98 / 4.30 / 28.28	
OUTDOOR AND INDOOR UNIT (TOTAL)									
FULL LOAD AMPS* - PHASE 1		20.88		22.07		25.75		28.28	
FULL LOAD AMPS* - PHASE 2 AND 3		-							
⁽⁹⁾ CIRCUIT BREAKER		25		25		32		32	
APPROXIMATE STARTING AMPS		10.52		15.04		15.45		17.72	
CABLE SIZE (MAIN LINE) SUGGESTED MINIMUM		Refer to latest edition of AS/NZS 3000 or AS/NZS 3008 Australian/New Zealand Wiring Rules to determine required cable size.							
DATA CABLE FIELD WIRING (OUTDOOR TO INDOOR)		2 Core 7 / 0.30 (0.5mm ²) Twisted Shielded Data Cable							
WEIGHT (kg) -- INDOOR / OUTDOOR		36 / 64		44 / 85		53 / 99		61 / 110	

- ⁽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⁾ Total input power includes indoor fan kW.
- ⁽⁶⁾ Max. - Min. airflow application range.
- ⁽⁷⁾ Outdoor sound pressure level is determined in an anechoic chamber and may differ once the unit is installed due to environment conditions.
- ⁽⁸⁾ Full Load Amps are based on compressor and fan motors' maximum expected current.
- ⁽⁹⁾ See Specifications sheet for cable size and circuit breaker size details.
- ⁽¹⁰⁾ MAX - Maximum Capacity
- * 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.

Note: Use Total input power to estimate running cost.



SPECIFICATION SUMMARY

OUTDOOR UNIT MODEL		CRS13AT	CRS15AT	CRS17AT	CRS20AT	CRS23AT					
INDOOR UNIT MODEL		EVA13AS	EVA15AS	EVA17AS	EVA20AS	EVA23AS					
		(1) TOTAL	(2) NETT	(1) TOTAL	(2) NETT	(1) TOTAL	(2) NETT	(1) TOTAL	(2) NETT	(1) TOTAL	(2) NETT
(3) COOLING CAPACITY (kW)	Rated	13.30	13.00	15.55	15.20	17.40	17.00	20.32	19.80	23.12	22.60
	Max ⁽¹⁰⁾	-	15.32	-	17.21	-	19.16	-	22.60	-	26.00
	Min	-	5.49	-	6.00	-	6.48	-	7.72	-	8.97
(4) HEATING CAPACITY (kW)	Rated	14.70	15.00	16.35	16.7	18.70	19.08	21.48	22.00	23.98	24.50
	Max ⁽¹⁰⁾	-	17.29	-	18.59	-	21.18	-	26.10	-	28.40
	Min	-	4.74	-	5.05	-	5.27	-	6.60	-	7.50
(5) SENSIBLE CAPACITY (kW)	Rated	10.44	10.14	12.81	12.46	14.17	13.77	17.55	17.03	18.55	17.85
(5) COOLING INPUT POWER (kW)	Rated	3.91		4.43		5.02		5.70		6.44	
(5) HEATING INPUT POWER (kW)	Rated	4.13		4.64		5.42		6.12		6.62	
EER	Rated	3.33		3.43		3.39		3.47		3.51	
COP	Rated	3.63		3.6		3.52		3.60		3.70	
Total Cooling Seasonal Performance Factor Residential - Cold / Mixed / Hot		4.34 / 4.19 / 4.48		4.61 / 4.43 / 4.72		4.35 / 4.20 / 4.46		4.32 / 4.20 / 4.53		4.34 / 4.22 / 4.51	
Heating Seasonal Performance Factor Residential - Cold / Mixed / Hot		3.46 / 3.97 / 4.50		3.42 / 3.87 / 4.31		3.41 / 3.90 / 4.41		3.42 / 3.85 / 4.25		3.51 / 3.92 / 4.30	
(6) INDOOR AIRFLOW (l/s) MIN. / NOMINAL / MAX.		520 / 650 / 780		620 / 770 / 920		710 / 890 / 1060		850 / 1050 / 1250		950 / 1200 / 1450	
(7) OUTDOOR SOUND PRESS. LEVEL @ 3M dB(A) - Quiet / Rated Cooling / Rated Heating / Max		46.7 / 53.1 / 54.0 / 54.9		45.8 / 53.6 / 55.1 / 55.4		50.0 / 55.1 / 56.9 / 57.0		48.8 / 57.8 / 59.4 / 59.6		51.5 / 58.3 / 60.3 / 60.7	
OUTDOOR SOUND POWER LEVEL dB(A) - Quiet / Rated Cooling / Rated Heating / Max		64.2 / 69.3 / 70.3 / 71.1		63.4 / 71.1 / 71.8 / 72.1		66.9 / 71.6 / 72.8 / 73.1		66.2 / 73.8 / 75.4 / 75.7		71.2 / 74.8 / 76.2 / 76.9	
POWER SUPPLY - OUTDOOR		400V / 3Ph+N / 50Hz									
VOLTAGE RANGE (MIN - MAX)		376V - 424V									
IP RATING		IPX4									
POWER SUPPLY - INDOOR		230V / 1Ph+N / 50Hz									
VOLTAGE RANGE (MIN - MAX)		216V - 243V									
IP RATING		IP20									
(2) RATED LOAD AMPS** - TOTAL		7.41		8.38		9.95		12.59		12.92	
(8) FULL LOAD AMPS OUTDOOR / INDOOR / TOTAL		5.75 / 4.30 / 10.05		6.80 / 4.30 / 11.10		8.00 / 4.30 / 12.30		12.48 / 5.75 / 18.23		12.41 / 7.15 / 19.56	
OUTDOOR AND INDOOR UNIT (TOTAL)		FULL LOAD AMPS* - PHASE 1		10.05		11.10		9.55		13.99	
		FULL LOAD AMPS* - PHASE 2 AND 3		7.70 / 7.83		8.50 / 8.60		12.30 / 9.53		14.86 / 18.23	
(9) CIRCUIT BREAKER		16		16		16		20		20	
APPROXIMATE STARTING AMPS		7.01		7.38		8.40		9.05		9.05	
CABLE SIZE (MAIN LINE) SUGGESTED MINIMUM		Refer to latest edition of AS/NZS 3000 or AS/NZS 3008 Australian/New Zealand Wiring Rules to determine required cable size.									
DATA CABLE FIELD WIRING (OUTDOOR TO INDOOR)		2 Core 7 / 0.30 (0.5mm ²) Twisted Shielded Data Cable									
WEIGHT (kg) -- INDOOR / OUTDOOR		44 / 85		53 / 99		61 / 110		72 / 142		81 / 149	

- (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) Total input power includes indoor fan kW.
- (6) Max. - Min. airflow application range.
- (7) Outdoor sound pressure level is determined in an anechoic chamber and may differ once the unit is installed due to environment conditions.
- (8) Full Load Amps are based on compressor and fan motors' maximum expected current.
- (9) See Specifications sheet for cable size and circuit breaker size details.
- (10) MAX - Maximum Capacity
- * 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.

Note: Use Total input power to estimate running cost.



CAPACITY SELECTION DATA

CRS10AS / EVA10AS

COOLING PERFORMANCE

AIR ENTERING		TOTAL CAPACITY kW	TOTAL SENSIBLE CAPACITY - kW AT DB TEMPERATURE ONTO INDOOR COIL - °C										
OUTDOOR DB - °C	INDOOR WB - °C		20	21	22	23	24	25	26	27	28	29	30
25	16	10.88	6.52	7.13	7.74	8.34	8.92	9.41					
	17	10.98	5.92	6.51	7.12	7.73	8.33	8.92	9.44				
	18	11.10	5.28	5.90	6.50	7.11	7.72	8.31	8.92	9.47	9.97		
	19	11.37	4.62	5.26	5.90	6.48	7.09	7.70	8.31	8.91	9.47	10.00	10.46
	20	11.63	3.95	4.60	5.24	5.88	6.46	7.07	7.68	8.29	8.89	9.47	10.01
	21	11.96		3.93	4.57	5.22	5.85	6.43	7.06	7.66	8.26	8.87	9.45
	22	12.26			3.92	4.55	5.20	5.83	6.46	7.03	7.64	8.24	8.85
30	16	10.50	6.34	6.95	7.56	8.15	8.70	9.13					
	17	10.59	5.74	6.33	6.95	7.55	8.14	8.72	9.24				
	18	10.68	5.10	5.73	6.31	6.93	7.53	8.13	8.72	9.27	9.70		
	19	10.90	4.45	5.09	5.72	6.31	6.92	7.53	8.12	8.71	9.28	9.79	
	20	11.16	3.79	4.44	5.08	5.71	6.29	6.91	7.51	8.11	8.70	9.28	9.81
	21	11.48		3.77	4.41	5.05	5.69	6.28	6.88	7.49	8.10	8.69	9.26
	22	11.77			3.75	4.39	5.03	5.66	6.25	6.86	7.47	8.07	8.66
35	16	10.10	6.14	6.75	7.36	7.94	8.47						
	17	10.13	5.55	6.14	6.75	7.35	7.94	8.49	8.98				
	18	10.23	4.92	5.54	6.12	6.74	7.34	7.93	8.51	9.05			
	19	10.40	4.26	4.91	5.54	6.11	6.73	7.34	7.93	8.50	9.06		
	20	10.68	3.61	4.25	4.89	5.52	6.10	6.71	7.31	7.91	8.49	9.07	9.59
	21	10.94		3.60	4.24	4.88	5.50	6.09	6.69	7.30	7.89	8.48	9.06
	22	11.21			3.58	4.22	4.85	5.49	6.06	6.67	7.27	7.87	8.47
40	16	9.64	5.76	6.36	6.93	7.48	7.94						
	17	9.65	5.16	5.76	6.35	6.92	7.50	8.01					
	18	9.71	4.58	5.19	5.75	6.35	6.93	7.49	8.03	8.48			
	19	9.87	3.95	4.57	5.22	5.73	6.33	6.92	7.48	8.04	8.55		
	20	10.10	3.31	3.94	4.56	5.16	5.72	6.32	6.90	7.48	8.04	8.57	9.01
	21	10.35		3.30	3.92	4.54	5.15	5.71	6.29	6.89	7.47	8.02	8.58
	22	10.61			3.28	3.91	4.52	5.13	5.70	6.27	6.87	7.44	8.02
45	16	8.33	5.42	6.01	6.57	7.08							
	17	8.34	4.84	5.42	6.00	6.57	7.10	7.54					
	18	8.40	4.28	4.84	5.42	5.99	6.57	7.11	7.61				
	19	8.47	3.67	4.27	4.83	5.41	5.99	6.56	7.11	7.64	8.05		
	20	8.66	3.04	3.65	4.26	4.85	5.40	5.97	6.54	7.10	7.64	8.13	
	21	8.87		3.03	3.64	4.24	4.84	5.39	5.96	6.53	7.10	7.64	8.15
	22	9.11			3.02	3.62	4.23	4.82	5.37	5.95	6.51	7.08	7.63
50	16	5.62	3.80	4.23	4.62	4.94							
	17	5.63	3.38	3.80	4.23	4.63	5.00						
	18	5.65	2.97	3.38	3.80	4.22	4.63	5.02					
	19	5.67	2.52	2.96	3.37	3.80	4.21	4.63	5.02	5.37			
	20	5.78	2.07	2.51	2.95	3.37	3.79	4.20	4.62	5.02	5.40		
	21	5.92		2.06	2.51	2.95	3.38	3.78	4.19	4.62	5.03	5.41	5.75
	22	6.07			2.05	2.49	2.94	3.37	3.77	4.19	4.61	5.01	5.41

HEATING PERFORMANCE

WB TEMP ON OUTDOOR COIL - °C	HEATING CAPACITY - kW AT DB ENTERING INDOOR - °C									
	16		18		20		22		24	
	TH	IH	TH	IH	TH	IH	TH	IH	TH	IH
-10	6.73	6.46	6.69	6.42	6.66	6.39	6.63	6.36	6.59	6.33
-8	7.10	6.75	7.07	6.71	7.03	6.67	6.99	6.64	6.95	6.60
-6	7.50	7.05	7.46	7.01	7.41	6.97	7.37	6.92	7.32	6.88
-4	7.93	7.29	7.87	7.24	7.82	7.20	7.77	7.15	7.72	7.10
-2	8.37	7.45	8.31	7.40	8.25	7.34	8.19	7.29	8.13	7.24
0	8.84	7.78	8.78	7.73	8.72	7.67	8.65	7.61	8.58	7.55
2	9.30	8.46	9.23	8.40	9.16	8.33	9.08	8.26	9.01	8.20
4	9.79	9.79	9.71	9.71	9.63	9.63	9.55	9.55	9.46	9.46
6	10.29	10.29	10.21	10.21	10.12	10.12	10.06	10.06	9.96	9.96
8	10.84	10.84	10.78	10.78	10.68	10.68	10.58	10.58	10.48	10.48
10	11.45	11.45	11.35	11.35	11.24	11.24	11.13	11.13	11.02	11.02
12	12.05	12.05	11.94	11.94	11.82	11.82	11.70	11.70	11.59	11.59
14	12.69	12.69	12.56	12.56	12.43	12.43	12.30	12.30	12.17	12.17
16	13.33	13.33	13.19	13.19	13.05	13.05	12.91	12.91	12.78	12.78
18	14.00	14.00	13.86	13.86	13.71	13.71	13.56	13.56	13.40	13.40

TH - Total Heating Capacity (kW)
IH - Integrated Heating Capacity (kW) Includes defrost losses.

AIRFLOW CORRECTION MULTIPLIER

% VARIATION	-15%	-10%	-5%	Nominal	+5%	+10%	+15%
INDOOR AIRFLOW (l/s)	425	450	475	500	525	550	575
TOTAL COOLING	0.971	0.982	0.992	1.000	1.008	1.016	1.020
SENSIBLE COOLING	0.913	0.943	0.971	1.000	1.029	1.056	1.081
HEATING FACTOR	0.994	0.996	0.998	1.000	1.002	1.003	1.004

NOTES:

- No allowance has been made for the effect of indoor fan motor.
- Selection tables are based on nominal airflows. Correction factors must be applied for selection away from these conditions.

PIPE LENGTH CORRECTION MULTIPLIER

	5m	10m	20m	30m	40m	50m	60m
COOLING	1.000	0.992	0.975	0.959	0.943	0.927	0.912
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.



CAPACITY SELECTION DATA

CRS13AS / EVA13AS

COOLING PERFORMANCE													
OUTDOOR DB - °C	AIR ENTERING INDOOR WB - °C	TOTAL CAPACITY kW	TOTAL SENSIBLE CAPACITY - kW AT DB TEMPERATURE ONTO INDOOR COIL - °C										
			20	21	22	23	24	25	26	27	28	29	30
25	16	13.92	8.25	9.05	9.84	10.62	11.38	12.01					
	17	14.05	7.47	8.24	9.04	9.83	10.61	11.37	12.06				
	18	14.21	6.63	7.45	8.22	9.02	9.81	10.59	11.38	12.10	12.75		
	19	14.57	5.78	6.61	7.44	8.20	9.00	9.79	10.58	11.36	12.09	12.78	13.38
	20	14.90	4.90	5.75	6.59	7.42	8.18	8.97	9.76	10.56	11.34	12.09	12.80
	21	15.33		4.88	5.72	6.56	7.38	8.14	8.95	9.74	10.52	11.31	12.07
30	16	13.43	8.02	8.81	9.60	10.37	11.10	11.66					
	17	13.55	7.24	8.00	8.81	9.59	10.36	11.11	11.79				
	18	13.66	6.41	7.23	7.98	8.79	9.57	10.35	11.12	11.84	12.40		
	19	13.95	5.56	6.39	7.21	7.97	8.77	9.56	10.34	11.10	11.84	12.50	
	20	14.29	4.70	5.54	6.38	7.19	7.95	8.75	9.54	10.32	11.09	11.85	12.54
	21	14.71		4.67	5.50	6.34	7.17	7.93	8.72	9.52	10.31	11.07	11.82
35	16	12.91	7.76	8.56	9.34	10.10	10.78						
	17	12.95	6.99	7.76	8.55	9.33	10.09	10.82	11.45				
	18	13.07	6.17	6.97	7.74	8.53	9.32	10.08	10.84	11.54			
	19	13.30	5.31	6.15	6.97	7.72	8.52	9.31	10.09	10.83	11.56		
	20	13.66	4.46	5.30	6.13	6.95	7.70	8.50	9.29	10.06	10.82	11.57	12.25
	21	14.01		4.44	5.28	6.11	6.92	7.69	8.47	9.26	10.03	10.81	11.56
40	16	12.18	7.33	8.12	8.86	9.59	10.19						
	17	12.19	6.54	7.32	8.10	8.86	9.61	10.28					
	18	12.28	5.78	6.58	7.31	8.10	8.86	9.60	10.31	10.91			
	19	12.48	4.95	5.76	6.62	7.29	8.08	8.86	9.59	10.33	10.99		
	20	12.78	4.11	4.94	5.75	6.54	7.28	8.06	8.83	9.58	10.32	11.02	11.60
	21	13.10		4.10	4.91	5.73	6.52	7.27	8.03	8.81	9.57	10.30	11.03
45	16	10.42	6.82	7.59	8.31	8.98							
	17	10.43	6.07	6.82	7.57	8.31	9.01	9.58					
	18	10.51	5.34	6.07	6.81	7.57	8.31	9.01	9.67				
	19	10.60	4.54	5.32	6.05	6.81	7.56	8.30	9.02	9.70	10.24		
	20	10.83	3.73	4.52	5.31	6.08	6.79	7.53	8.28	9.01	9.71	10.35	
	21	11.10		3.71	4.51	5.29	6.07	6.78	7.52	8.26	9.01	9.71	10.37
50	16	6.96	4.73	5.29	5.79	6.21							
	17	6.97	4.19	4.73	5.28	5.80	6.27						
	18	7.00	3.66	4.18	4.72	5.27	5.80	6.30					
	19	7.02	3.08	3.65	4.18	4.72	5.26	5.80	6.30	6.76			
	20	7.16	2.50	3.07	3.64	4.17	4.71	5.25	5.78	6.31	6.79		
	21	7.33		2.49	3.07	3.63	4.18	4.70	5.23	5.78	6.31	6.80	7.24

HEATING PERFORMANCE										
WB TEMP ON OUTDOOR COIL - °C	HEATING CAPACITY - kW AT DB ENTERING INDOOR - °C									
	16		18		20		22		24	
	TH	IH	TH	IH	TH	IH	TH	IH	TH	IH
-10	9.88	9.29	9.83	9.24	9.78	9.19	9.74	9.16	9.69	9.11
-8	10.42	9.69	10.37	9.64	10.31	9.59	10.25	9.54	10.20	9.49
-6	10.99	10.11	10.92	10.05	10.86	9.99	10.79	9.93	10.72	9.86
-4	11.59	10.38	11.52	10.31	11.44	10.24	11.37	10.18	11.30	10.11
-2	12.22	10.63	12.14	10.56	12.06	10.49	11.97	10.41	11.89	10.34
0	12.90	11.09	12.81	11.02	12.72	10.94	12.62	10.86	12.53	10.78
2	13.55	12.06	13.45	11.97	13.34	11.88	13.24	11.78	13.13	11.69
4	14.25	13.53	14.13	13.42	14.02	13.32	13.90	13.21	13.78	13.09
6	14.97	14.97	14.84	14.84	14.72	14.72	14.63	14.63	14.50	14.50
8	15.75	15.75	15.66	15.66	15.52	15.52	15.38	15.38	15.24	15.24
10	16.62	16.62	16.47	16.47	16.32	16.32	16.17	16.17	16.01	16.01
12	17.48	17.48	17.31	17.31	17.15	17.15	16.98	16.98	16.81	16.81
14	18.38	18.38	18.20	18.20	18.01	18.01	17.83	17.83	17.64	17.64
16	19.30	19.30	19.10	19.10	18.90	18.90	18.70	18.70	18.51	18.51
18	20.26	20.26	20.05	20.05	19.84	19.84	19.62	19.62	19.40	19.40

TH - Total Heating Capacity (kW)
IH - Integrated Heating Capacity (kW) Includes defrost losses.

AIRFLOW CORRECTION MULTIPLIER									
% VARIATION	-20%	-15%	-10%	-5%	Nominal	5%	10%	15%	20%
INDOOR AIRFLOW (l/s)	520	552.5	585	617.5	650	682.5	715	747.5	780
TOTAL COOLING	0.965	0.982	0.989	0.997	1.000	1.004	1.009	1.015	1.020
SENSIBLE COOLING	0.884	0.916	0.945	0.974	1.000	1.024	1.046	1.072	1.092
HEATING FACTOR	0.969	0.976	0.983	0.991	1.000	1.011	1.022	1.033	1.044

- NOTES:
- No allowance has been made for the effect of indoor fan motor.
 - Selection tables are based on nominal airflows. Correction factors must be applied for selection away from these conditions.

PIPE LENGTH CORRECTION MULTIPLIER							
	5m	10m	20m	30m	40m	50m	60m
COOLING	1.000	0.992	0.975	0.959	0.943	0.927	0.912
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.



CAPACITY SELECTION DATA

CRS15AS / EVA15AS

COOLING PERFORMANCE

AIR ENTERING		TOTAL CAPACITY kW	TOTAL SENSIBLE CAPACITY - kW AT DB TEMPERATURE ONTO INDOOR COIL - °C										
OUTDOOR DB - °C	INDOOR WB - °C		20	21	22	23	24	25	26	27	28	29	30
25	16	16.49	9.89	10.85	11.79	12.72	13.64	14.39					
	17	16.64	8.95	9.87	10.83	11.78	12.72	13.63	14.45				
	18	16.82	7.95	8.93	9.85	10.82	11.76	12.69	13.64	14.50	15.28		
	19	17.25	6.93	7.93	8.92	9.83	10.79	11.74	12.68	13.62	14.49	15.31	16.04
	20	17.64	5.88	6.90	7.90	8.89	9.80	10.75	11.70	12.65	13.59	14.49	15.34
	21	18.15		5.86	6.86	7.87	8.85	9.76	10.73	11.67	12.61	13.56	14.47
	22	18.62			5.84	6.82	7.84	8.82	9.80	10.69	11.63	12.58	13.52
30	16	15.91	9.62	10.56	11.51	12.43	13.30	13.97					
	17	16.05	8.68	9.59	10.56	11.50	12.42	13.32	14.13				
	18	16.17	7.68	8.67	9.57	10.53	11.47	12.41	13.32	14.19	14.85		
	19	16.51	6.67	7.67	8.65	9.56	10.51	11.46	12.39	13.31	14.19	14.98	
	20	16.92	5.64	6.65	7.65	8.62	9.53	10.49	11.44	12.37	13.30	14.20	15.03
	21	17.42		5.60	6.60	7.61	8.60	9.51	10.45	11.41	12.36	13.27	14.17
	22	17.86			5.57	6.57	7.57	8.56	9.46	10.42	11.37	12.32	13.23
35	16	15.28	9.31	10.26	11.20	12.10	12.93			0.00			
	17	15.34	8.38	9.30	10.25	11.18	12.10	12.97	13.72				
	18	15.48	7.40	8.36	9.28	10.23	11.17	12.09	12.99	13.83			
	19	15.75	6.38	7.37	8.36	9.26	10.22	11.16	12.09	12.98	13.86		
	20	16.17	5.35	6.35	7.35	8.33	9.24	10.19	11.13	12.06	12.97	13.87	14.68
	21	16.58		5.33	6.33	7.33	8.30	9.22	10.15	11.11	12.02	12.95	13.85
	22	16.99			5.30	6.30	7.28	8.28	9.18	10.12	11.06	12.00	12.94
40	16	14.44	8.84	9.78	10.69	11.56	12.28						
	17	14.45	7.89	8.83	9.77	10.68	11.58	12.39					
	18	14.55	6.97	7.93	8.81	9.76	10.68	11.57	12.43	13.15			
	19	14.79	5.97	6.95	7.99	8.80	9.74	10.68	11.56	12.45	13.25		
	20	15.14	4.97	5.96	6.94	7.89	8.78	9.72	10.64	11.55	12.44	13.28	13.98
	21	15.52		4.95	5.93	6.91	7.87	8.76	9.68	10.62	11.54	12.41	13.29
	22	15.91			4.92	5.91	6.88	7.84	8.74	9.65	10.58	11.50	12.41
45	16	12.37	8.23	9.16	10.02	10.83							
	17	12.38	7.33	8.23	9.13	10.02	10.86	11.55					
	18	12.47	6.44	7.32	8.22	9.13	10.02	10.87	11.66				
	19	12.57	5.48	6.42	7.30	8.21	9.12	10.01	10.87	11.70	12.34		
	20	12.85	4.50	5.46	6.41	7.33	8.20	9.09	9.99	10.86	11.71	12.47	
	21	13.17		4.49	5.44	6.38	7.32	8.17	9.07	9.96	10.86	11.71	12.51
	22	13.54			4.46	5.41	6.37	7.29	8.15	9.05	9.94	10.82	11.68
50	16	8.26	5.68	6.34	6.94	7.44							
	17	8.27	5.02	5.67	6.34	6.95	7.52						
	18	8.30	4.39	5.02	5.67	6.32	6.96	7.56					
	19	8.33	3.70	4.38	5.02	5.67	6.31	6.96	7.56	8.11			
	20	8.50	3.01	3.69	4.37	5.01	5.66	6.30	6.94	7.57	8.15		
	21	8.71		2.99	3.68	4.36	5.02	5.64	6.28	6.94	7.57	8.16	8.68
	22	8.93			2.97	3.66	4.35	5.01	5.63	6.28	6.92	7.55	8.16

HEATING PERFORMANCE

WB TEMP ON OUTDOOR COIL - °C	HEATING CAPACITY - kW AT DB ENTERING INDOOR - °C									
	16		18		20		22		24	
	TH	IH	TH	IH	TH	IH	TH	IH	TH	IH
-10	10.99	10.33	10.94	10.28	10.88	10.22	10.83	10.18	10.78	10.13
-8	11.59	10.78	11.53	10.72	11.47	10.66	11.41	10.61	11.35	10.55
-6	12.22	11.25	12.15	11.18	12.08	11.11	12.01	11.05	11.93	10.97
-4	12.90	11.55	12.82	11.47	12.73	11.40	12.65	11.33	12.57	11.25
-2	13.60	11.83	13.51	11.75	13.42	11.67	13.32	11.59	13.23	11.51
0	14.36	12.35	14.26	12.26	14.16	12.17	14.05	12.08	13.95	11.99
2	15.08	13.42	14.97	13.33	14.86	13.22	14.74	13.12	14.62	13.01
4	15.86	15.07	15.73	14.94	15.61	14.83	15.48	14.70	15.34	14.57
6	16.66	16.66	16.53	16.53	16.39	16.39	16.29	16.29	16.14	16.14
8	17.54	17.54	17.44	17.44	17.28	17.28	17.13	17.13	16.96	16.96
10	18.51	18.51	18.34	18.34	18.17	18.17	18.00	18.00	17.83	17.83
12	19.47	19.47	19.28	19.28	19.10	19.10	18.91	18.91	18.72	18.72
14	20.47	20.47	20.27	20.27	20.06	20.06	19.86	19.86	19.65	19.65
16	21.50	21.50	21.28	21.28	21.06	21.06	20.83	20.83	20.62	20.62
18	22.57	22.57	22.33	22.33	22.10	22.10	21.86	21.86	21.61	21.61

TH - Total Heating Capacity (kW)
IH - Integrated Heating Capacity (kW) Includes defrost losses.

AIRFLOW CORRECTION MULTIPLIER

% VARIATION	-19%	-15%	-10%	-5%	Nominal	5%	10%	15%	19.48%
INDOOR AIRFLOW (l/s)	620	654.5	693	731.5	770	808.5	847	885.5	920
TOTAL COOLING	0.967	0.982	0.989	0.997	1.000	1.004	1.009	1.015	1.020
SENSIBLE COOLING	0.887	0.916	0.945	0.974	1.000	1.024	1.046	1.072	1.092
HEATING FACTOR	0.970	0.976	0.983	0.991	1.000	1.011	1.022	1.033	1.044

- NOTES:
 1. No allowance has been made for the effect of indoor fan motor.
 2. Selection tables are based on nominal airflows. Correction factors must be applied for selection away from these conditions.

PIPE LENGTH CORRECTION MULTIPLIER

	5m	10m	20m	30m	40m	50m	60m
COOLING	1.000	0.992	0.975	0.959	0.943	0.927	0.912
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.



CAPACITY SELECTION DATA

CRS13AT / EVA13AS

COOLING PERFORMANCE

AIR ENTERING		TOTAL CAPACITY kW	TOTAL SENSIBLE CAPACITY - kW AT DB TEMPERATURE ONTO INDOOR COIL - °C										
OUTDOOR DB - °C	INDOOR WB - °C		20	21	22	23	24	25	26	27	28	29	30
25	16	13.92	7.96	8.73	9.49	10.23	10.97	11.57					
	17	14.05	7.21	7.95	8.72	9.48	10.23	10.96	11.62				
	18	14.21	6.40	7.19	7.93	8.70	9.46	10.21	10.97	11.66	12.28		
	19	14.57	5.58	6.39	7.18	7.91	8.68	9.44	10.20	10.95	11.66	12.31	12.89
	20	14.90	4.74	5.56	6.36	7.16	7.89	8.65	9.41	10.18	10.93	11.65	12.33
	21	15.33		4.72	5.53	6.34	7.12	7.85	8.64	9.39	10.14	10.90	11.63
30	22	15.72			4.71	5.50	6.31	7.10	7.89	8.60	9.36	10.12	10.87
	16	13.43	7.74	8.50	9.26	10.00	10.70	11.23					
	17	13.55	6.99	7.72	8.50	9.25	9.99	10.71	11.36				
	18	13.66	6.19	6.98	7.70	8.47	9.23	9.98	10.72	11.41	11.94		
	19	13.94	5.37	6.18	6.96	7.69	8.46	9.22	9.97	10.70	11.41	12.05	
	20	14.29	4.55	5.36	6.16	6.94	7.67	8.44	9.20	9.95	10.69	11.42	12.08
35	21	14.71		4.52	5.32	6.13	6.92	7.66	8.41	9.18	9.94	10.67	11.40
	22	15.08			4.49	5.29	6.10	6.89	7.62	8.38	9.15	9.91	10.64
	16	12.91	7.49	8.25	9.01	9.74	10.40	0.00					
	17	12.95	6.75	7.49	8.25	9.00	9.73	10.43	11.04				
	18	13.07	5.96	6.73	7.47	8.23	8.99	9.72	10.45	11.13			
	19	13.30	5.14	5.94	6.73	7.45	8.22	8.98	9.72	10.44	11.14		
40	20	13.66	4.32	5.12	5.92	6.71	7.44	8.20	8.96	9.70	10.43	11.15	11.80
	21	14.00		4.30	5.10	5.91	6.68	7.42	8.17	8.94	9.67	10.42	11.14
	22	14.35			4.28	5.08	5.87	6.67	7.39	8.14	8.90	9.66	10.41
	16	12.19	7.07	7.82	8.54	9.24	9.82						
	17	12.21	6.31	7.06	7.81	8.54	9.26	9.90					
	18	12.29	5.58	6.35	7.05	7.81	8.54	9.25	9.93	10.50			
45	19	12.49	4.78	5.57	6.39	7.04	7.79	8.54	9.24	9.95	10.59		
	20	12.79	3.98	4.78	5.56	6.31	7.02	7.77	8.51	9.23	9.94	10.61	11.17
	21	13.11		3.97	4.75	5.53	6.30	7.01	7.74	8.49	9.22	9.92	10.62
	22	13.44			3.94	4.73	5.51	6.28	6.99	7.71	8.46	9.19	9.92
	16	10.45	6.59	7.33	8.02	8.66							
	17	10.46	5.87	6.59	7.31	8.02	8.69	9.24					
50	18	10.54	5.16	5.86	6.58	7.30	8.02	8.69	9.33				
	19	10.62	4.40	5.14	5.84	6.58	7.30	8.01	8.70	9.36	9.87		
	20	10.86	3.62	4.38	5.14	5.87	6.56	7.27	7.99	8.69	9.37	9.98	
	21	11.13		3.60	4.36	5.12	5.86	6.54	7.26	7.97	8.69	9.37	10.00
	22	11.44			3.58	4.34	5.10	5.84	6.53	7.25	7.95	8.66	9.34
	16	6.98	4.57	5.11	5.59	5.99							

HEATING PERFORMANCE

WB TEMP ON OUTDOOR COIL - °C	HEATING CAPACITY - kW AT DB ENTERING INDOOR - °C									
	16		18		20		22		24	
	TH	IH	TH	IH	TH	IH	TH	IH	TH	IH
-10	9.86	9.27	9.81	9.22	9.76	9.17	9.72	9.14	9.67	9.09
-8	10.40	9.67	10.35	9.62	10.29	9.57	10.23	9.52	10.18	9.47
-6	10.97	10.09	10.90	10.03	10.84	9.97	10.77	9.91	10.70	9.85
-4	11.57	10.36	11.50	10.29	11.42	10.22	11.35	10.16	11.28	10.09
-2	12.20	10.61	12.12	10.54	12.04	10.47	11.95	10.40	11.87	10.32
0	12.88	11.08	12.79	11.00	12.70	10.92	12.60	10.84	12.51	10.76
2	13.53	12.04	13.43	11.95	13.32	11.86	13.22	11.77	13.11	11.67
4	14.23	13.51	14.11	13.40	14.00	13.30	13.88	13.19	13.76	13.07
6	14.95	14.95	14.82	14.82	14.70	14.70	14.61	14.61	14.48	14.48
8	15.73	15.73	15.64	15.64	15.50	15.50	15.36	15.36	15.22	15.22
10	16.60	16.60	16.45	16.45	16.30	16.30	16.15	16.15	15.99	15.99
12	17.46	17.46	17.29	17.29	17.13	17.13	16.96	16.96	16.79	16.79
14	18.36	18.36	18.18	18.18	17.99	17.99	17.81	17.81	17.62	17.62
16	19.28	19.28	19.08	19.08	18.88	18.88	18.68	18.68	18.49	18.49
18	20.24	20.24	20.03	20.03	19.82	19.82	19.60	19.60	19.38	19.38

TH - Total Heating Capacity (kW)
IH - Integrated Heating Capacity (kW) Includes defrost losses.

AIRFLOW CORRECTION MULTIPLIER

% VARIATION	-20%	-15%	-10%	-5%	Nominal	5%	10%	15%	20%
INDOOR AIRFLOW (l/s)	520	552.5	585	617.5	650	682.5	715	747.5	780
TOTAL COOLING	0.965	0.982	0.989	0.997	1.000	1.004	1.009	1.015	1.020
SENSIBLE COOLING	0.884	0.916	0.945	0.974	1.000	1.024	1.046	1.072	1.092
HEATING FACTOR	0.969	0.976	0.983	0.991	1.000	1.011	1.022	1.033	1.044

NOTES:

- No allowance has been made for the effect of indoor fan motor.
- Selection tables are based on nominal airflows. Correction factors must be applied for selection away from these conditions.

PIPE LENGTH CORRECTION MULTIPLIER

	5m	10m	20m	30m	40m	50m	60m
COOLING	1.000	0.992	0.975	0.959	0.943	0.927	0.912
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.

CAPACITY SELECTION DATA

CRS15AT / EVA15AS

COOLING PERFORMANCE

AIR ENTERING		TOTAL CAPACITY kW	TOTAL SENSIBLE CAPACITY - kW AT DB TEMPERATURE ONTO INDOOR COIL - °C										
OUTDOOR DB - °C	INDOOR WB - °C		20	21	22	23	24	25	26	27	28	29	30
25	16	16.28	9.77	10.71	11.64	12.56	13.46	14.20					
	17	16.43	8.84	9.75	10.69	11.63	12.55	13.45	14.26				
	18	16.61	7.85	8.81	9.73	10.68	11.61	12.52	13.46	14.31	15.08		
	19	17.03	6.84	7.83	8.81	9.70	10.65	11.58	12.51	13.44	14.30	15.11	15.82
	20	17.42	5.81	6.81	7.80	8.78	9.68	10.61	11.55	12.49	13.41	14.30	15.14
	21	17.92		5.79	6.77	7.77	8.74	9.63	10.60	11.52	12.44	13.38	14.28
22	18.38			5.76	6.74	7.74	8.71	9.67	10.55	11.48	12.42	13.34	
30	16	15.70	9.49	10.42	11.36	12.26	13.12	13.79					
	17	15.84	8.57	9.47	10.42	11.35	12.26	13.14	13.94				
	18	15.97	7.59	8.56	9.44	10.40	11.32	12.24	13.15	14.00	14.66		
	19	16.30	6.58	7.57	8.54	9.44	10.38	11.31	12.23	13.13	14.01	14.79	
	20	16.71	5.57	6.56	7.55	8.51	9.41	10.36	11.29	12.21	13.12	14.02	14.83
	21	17.20		5.53	6.52	7.51	8.49	9.39	10.32	11.26	12.20	13.10	13.98
22	17.63			5.50	6.49	7.48	8.45	9.34	10.28	11.22	12.16	13.06	
35	16	15.09	9.19	10.12	11.05	11.94	12.76						
	17	15.15	8.27	9.18	10.11	11.04	11.94	12.80	13.54				
	18	15.28	7.30	8.26	9.16	10.10	11.02	11.93	12.82	13.65			
	19	15.55	6.30	7.28	8.25	9.14	10.08	11.02	11.93	12.81	13.67		
	20	15.97	5.29	6.27	7.26	8.23	9.12	10.05	10.99	11.90	12.80	13.69	14.48
	21	16.37		5.27	6.25	7.24	8.19	9.10	10.02	10.96	11.87	12.78	13.67
22	16.78			5.24	6.22	7.19	8.17	9.06	9.99	10.92	11.85	12.77	
40	16	14.25	8.72	9.66	10.54	11.40	12.12						
	17	14.26	7.79	8.71	9.64	10.54	11.43	12.22					
	18	14.36	6.88	7.83	8.70	9.64	10.54	11.41	12.26	12.97			
	19	14.60	5.89	6.86	7.88	8.68	9.61	10.53	11.41	12.28	13.07		
	20	14.94	4.90	5.89	6.85	7.79	8.67	9.59	10.50	11.40	12.27	13.10	13.79
	21	15.32		4.88	5.85	6.82	7.77	8.65	9.55	10.48	11.38	12.25	13.12
22	15.71			4.86	5.83	6.79	7.74	8.62	9.52	10.44	11.34	12.24	
45	16	12.20	8.12	9.04	9.89	10.69							
	17	12.22	7.23	8.13	9.02	9.90	10.72	11.40					
	18	12.30	6.36	7.23	8.12	9.01	9.90	10.73	11.51				
	19	12.41	5.42	6.34	7.21	8.11	9.00	9.88	10.74	11.55	12.18		
	20	12.68	4.45	5.39	6.33	7.24	8.09	8.97	9.86	10.73	11.56	12.31	
	21	13.00		4.43	5.38	6.31	7.23	8.07	8.96	9.83	10.73	11.56	12.35
22	13.36			4.41	5.34	6.29	7.20	8.05	8.94	9.81	10.69	11.53	
50	16	8.15	5.61	6.26	6.86	7.35							
	17	8.16	4.96	5.60	6.26	6.87	7.43						
	18	8.20	4.34	4.96	5.60	6.24	6.87	7.46					
	19	8.22	3.66	4.33	4.96	5.60	6.24	6.87	7.47	8.00			
	20	8.39	2.97	3.64	4.32	4.95	5.59	6.22	6.85	7.47	8.04		
	21	8.59		2.95	3.64	4.31	4.96	5.57	6.20	6.85	7.48	8.05	8.57
22	8.82			2.93	3.62	4.29	4.95	5.56	6.20	6.83	7.45	8.05	

HEATING PERFORMANCE

WB TEMP ON OUTDOOR COIL - °C	HEATING CAPACITY - kW AT DB ENTERING INDOOR - °C									
	16		18		20		22		24	
	TH	IH	TH	IH	TH	IH	TH	IH	TH	IH
-10	10.96	10.30	10.91	10.25	10.85	10.20	10.81	10.16	10.75	10.11
-8	11.56	10.75	11.50	10.70	11.44	10.64	11.38	10.58	11.32	10.53
-6	12.19	11.22	12.12	11.15	12.05	11.09	11.98	11.02	11.90	10.95
-4	12.87	11.52	12.79	11.44	12.70	11.37	12.62	11.30	12.54	11.22
-2	13.57	11.80	13.48	11.72	13.39	11.65	13.29	11.56	13.20	11.48
0	14.32	12.32	14.23	12.23	14.12	12.14	14.02	12.05	13.91	11.97
2	15.05	13.39	14.94	13.29	14.82	13.19	14.70	13.08	14.58	12.98
4	15.82	15.03	15.69	14.91	15.57	14.79	15.44	14.67	15.30	14.54
6	16.62	16.62	16.49	16.49	16.35	16.35	16.25	16.25	16.10	16.10
8	17.50	17.50	17.39	17.39	17.24	17.24	17.09	17.09	16.92	16.92
10	18.46	18.46	18.30	18.30	18.13	18.13	17.96	17.96	17.78	17.78
12	19.42	19.42	19.24	19.24	19.05	19.05	18.87	18.87	18.68	18.68
14	20.42	20.42	20.22	20.22	20.01	20.01	19.81	19.81	19.60	19.60
16	21.45	21.45	21.23	21.23	21.01	21.01	20.78	20.78	20.57	20.57
18	22.51	22.51	22.28	22.28	22.04	22.04	21.81	21.81	21.56	21.56

TH - Total Heating Capacity (kW)
IH - Integrated Heating Capacity (kW) Includes defrost losses.

AIRFLOW CORRECTION MULTIPLIER

% VARIATION	-20%	-15%	-10%	-5%	Nominal	5%	10%	15%	20%
INDOOR AIRFLOW (l/s)	620	654.5	693	731.5	770	808.5	847	885.5	920
TOTAL COOLING	0.967	0.982	0.989	0.997	1.000	1.004	1.009	1.015	1.020
SENSIBLE COOLING	0.887	0.916	0.945	0.974	1.000	1.024	1.046	1.072	1.092
HEATING FACTOR	0.970	0.976	0.983	0.991	1.000	1.011	1.022	1.033	1.044

- NOTES:**
- No allowance has been made for the effect of indoor fan motor.
 - Selection tables are based on nominal airflows. Correction factors must be applied for selection away from these conditions.

PIPE LENGTH CORRECTION MULTIPLIER

	5m	10m	20m	30m	40m	50m	60m
COOLING	1.000	0.992	0.975	0.959	0.943	0.927	0.912
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.



CAPACITY SELECTION DATA

CRS20AT / EVA20AS

COOLING PERFORMANCE													
AIR ENTERING		TOTAL CAPACITY kW	TOTAL SENSIBLE CAPACITY - kW AT DB TEMPERATURE ONTO INDOOR COIL - °C										
OUTDOOR DB - °C	INDOOR WB - °C		20	21	22	23	24	25	26	27	28	29	30
25	16	19.07	8.54	10.46	12.38	14.30	16.31	18.14					
	17	19.33	7.89	9.65	11.42	13.18	15.03	16.71	18.47				
	18	19.59	7.24	8.84	10.45	12.06	13.74	15.28	16.88	18.34			
	19	19.85	6.59	8.04	9.49	10.94	12.46	13.85	15.30	16.61	18.20		
	20	20.11	5.93	7.23	8.53	9.82	11.18	12.41	13.71	14.88	16.30	17.60	18.96
	21	20.37		6.42	7.56	8.70	9.90	10.98	12.12	13.16	14.40	15.54	16.74
22	20.63			6.60	7.58	8.62	9.55	10.54	11.43	12.51	13.49	14.52	
30	16	19.29	8.55	10.55	12.55	14.55	16.63	18.56					
	17	19.56	7.90	9.74	11.57	13.41	15.32	17.09	18.93				
	18	19.82	7.24	8.92	10.60	12.27	14.01	15.63	17.30	18.86			
	19	20.08	6.59	8.11	9.62	11.13	12.71	14.16	15.68	17.08	18.71		
	20	20.35	5.94	7.29	8.64	10.00	11.40	12.70	14.05	15.30	16.75	18.10	19.51
	21	20.61		6.48	7.67	8.86	10.09	11.23	12.42	13.52	14.80	15.99	17.22
22	20.87			6.69	7.72	8.78	9.77	10.80	11.75	12.85	13.87	14.94	
35	16	19.52	8.55	10.64	12.72	14.81	16.95	18.98					
	17	19.78	7.90	9.82	11.73	13.65	15.62	17.48	19.40				
	18	20.05	7.25	8.99	10.74	12.49	14.28	15.98	17.73	19.38			
	19	20.32	6.59	8.17	9.75	11.33	12.95	14.48	16.06	17.55	19.22		
	20	20.58	5.94	7.35	8.76	10.17	11.61	12.98	14.39	15.72	17.21	18.62	20.06
	21	20.85		6.53	7.77	9.01	10.28	11.48	12.72	13.90	15.20	16.44	17.71
22	21.12			6.78	7.85	8.95	9.99	11.06	12.07	13.19	14.26	15.36	
40	16	17.90	7.90	9.90	11.90	13.90	15.93	17.89					
	17	18.15	7.30	9.14	10.98	12.81	14.68	16.48	18.36				
	18	18.39	6.71	8.38	10.05	11.73	13.43	15.07	16.75	18.36			
	19	18.63	6.11	7.62	9.13	10.64	12.18	13.66	15.17	16.63	18.19		
	20	18.88	5.51	6.85	8.20	9.55	10.93	12.25	13.60	14.90	16.30	17.65	
	21	19.12		6.09	7.28	8.47	9.67	10.84	12.03	13.17	14.40	15.59	16.79
22	19.37			6.36	7.38	8.42	9.43	10.45	11.44	12.50	13.53	14.57	
45	16	16.29	7.28	9.18	11.09	12.99	14.91						
	17	16.51	6.73	8.48	10.23	11.98	13.74	15.48					
	18	16.73	6.18	7.78	9.37	10.96	12.57	14.15	15.75				
	19	16.95	5.63	7.07	8.51	9.95	11.40	12.83	14.27	15.69			
	20	17.17	5.08	6.37	7.65	8.94	10.24	11.51	12.80	14.06	15.37	16.65	
	21	17.39		5.66	6.80	7.93	9.07	10.19	11.32	12.43	13.58	14.71	15.85
22	17.61			5.94	6.91	7.90	8.87	9.84	10.80	11.80	12.77	13.76	
50	16	15.76	7.02	8.92	10.83	12.74	14.64						
	17	15.97	6.49	8.24	9.99	11.75	13.50	15.25					
	18	16.19	5.96	7.56	9.16	10.75	12.35	13.95	15.54				
	19	16.40	5.43	6.88	8.32	9.76	11.20	12.65	14.09	15.53			
	20	16.61	4.91	6.19	7.48	8.77	10.06	11.34	12.63	13.92	15.21	16.49	
	21	16.83		5.51	6.64	7.78	8.91	10.04	11.17	12.31	13.44	14.57	15.70
22	17.04			5.81	6.78	7.76	8.74	9.72	10.70	11.67	12.65	13.63	

HEATING PERFORMANCE										
WB TEMP ON OUTDOOR COIL - °C	HEATING CAPACITY - kW AT DB ENTERING INDOOR - °C									
	16		18		20		22		24	
	TH	IH	TH	IH	TH	IH	TH	IH	TH	IH
-10	17.38	14.26	17.29	14.19	17.20	14.12	17.13	14.06	17.04	13.99
-8	18.50	14.86	18.41	14.79	18.31	14.70	18.21	14.63	18.12	14.55
-6	19.48	15.57	19.36	15.48	19.25	15.39	19.13	15.29	19.01	15.19
-4	20.30	16.38	20.16	16.27	20.03	16.16	19.90	16.06	19.77	15.96
-2	20.93	17.27	20.79	17.15	20.65	17.04	20.49	16.91	20.35	16.80
0	21.40	18.26	21.26	18.14	21.10	18.01	20.94	17.87	20.79	17.74
2	21.72	19.36	21.56	19.22	21.39	19.07	21.22	18.92	21.05	18.77
4	21.87	20.56	21.69	20.39	21.52	20.23	21.34	20.06	21.15	19.88
6	21.84	21.84	21.66	21.66	21.48	21.48	21.35	21.35	21.15	21.15
8	22.99	22.99	22.85	22.85	22.66	22.66	22.45	22.45	22.24	22.24
10	24.26	24.26	24.05	24.05	23.82	23.82	23.60	23.60	23.37	23.37
12	25.52	25.52	25.28	25.28	25.04	25.04	24.79	24.79	24.54	24.54
14	26.84	26.84	26.58	26.58	26.30	26.30	26.04	26.04	25.76	25.76
16	28.19	28.19	27.91	27.91	27.62	27.62	27.32	27.32	27.03	27.03
18	29.60	29.60	29.29	29.29	28.98	28.98	28.67	28.67	28.34	28.34

TH - Total Heating Capacity (kW)
IH - Integrated Heating Capacity (kW) Includes defrost losses.

AIRFLOW CORRECTION MULTIPLIER									
% VARIATION	-20%	-15%	-10%	-5%	Nominal	5%	10%	15%	20%
INDOOR AIRFLOW (l/s)	850	893	945	998	1050	1103	1155	1208	1250
TOTAL COOLING	0.968	0.98	0.99	0.997	1.000	1.004	1.008	1.012	1.018
SENSIBLE COOLING	0.883	0.914	0.94	0.972	1.000	1.023	1.045	1.073	1.094
HEATING FACTOR	0.968	0.972	0.981	0.99	1.000	1.01	1.02	1.031	1.04

- NOTES:**
 1. No allowance has been made for the effect of indoor fan motor.
 2. Selection tables are based on nominal airflows. Correction factors must be applied for selection away from these conditions.

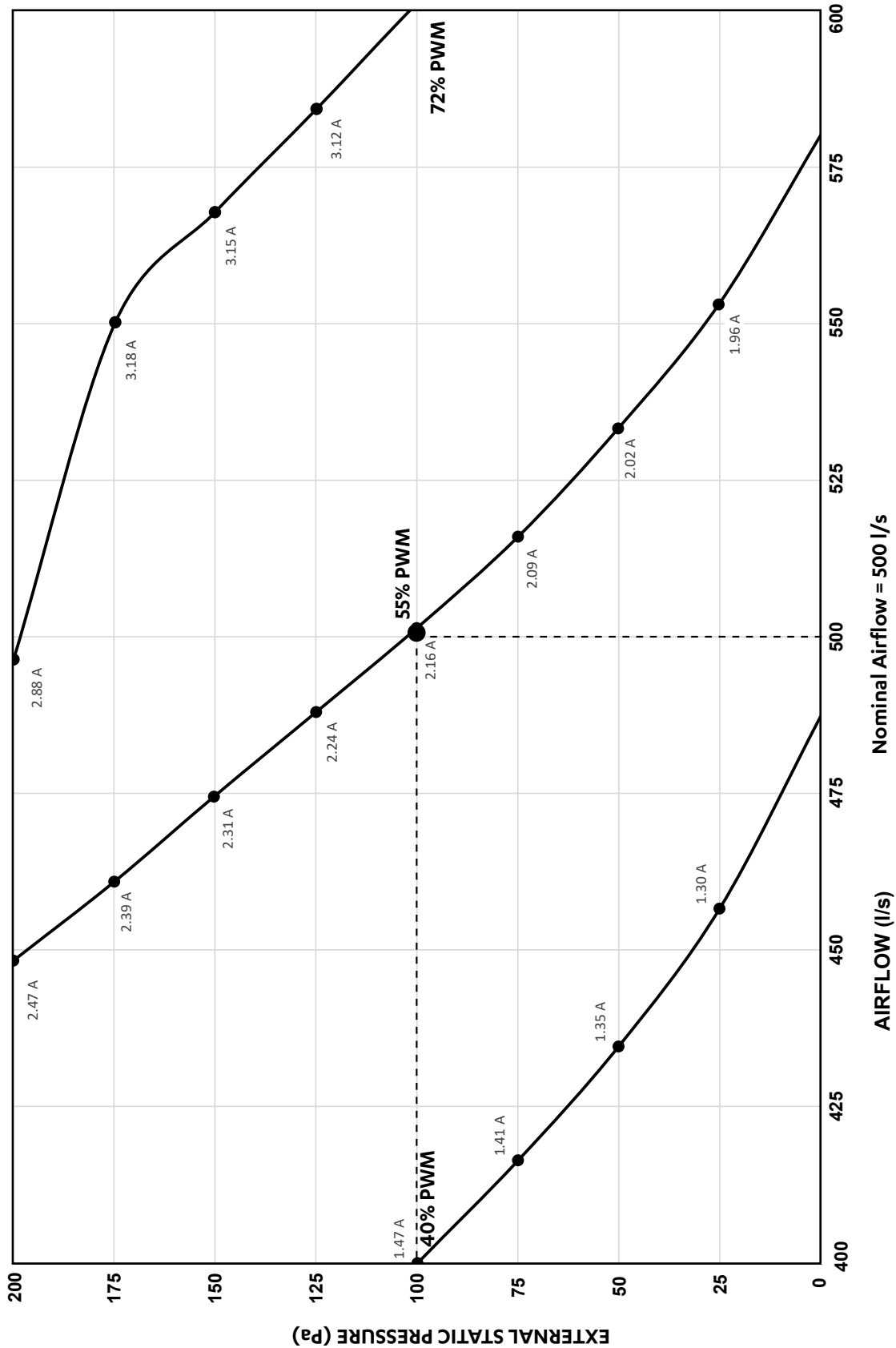
PIPE LENGTH CORRECTION MULTIPLIER - 7/8" (22.22mm)							
	5m	10m	20m	30m	40m	50m	60m
COOLING	1.000	0.991	0.974	0.959	0.941	0.924	0.91
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.



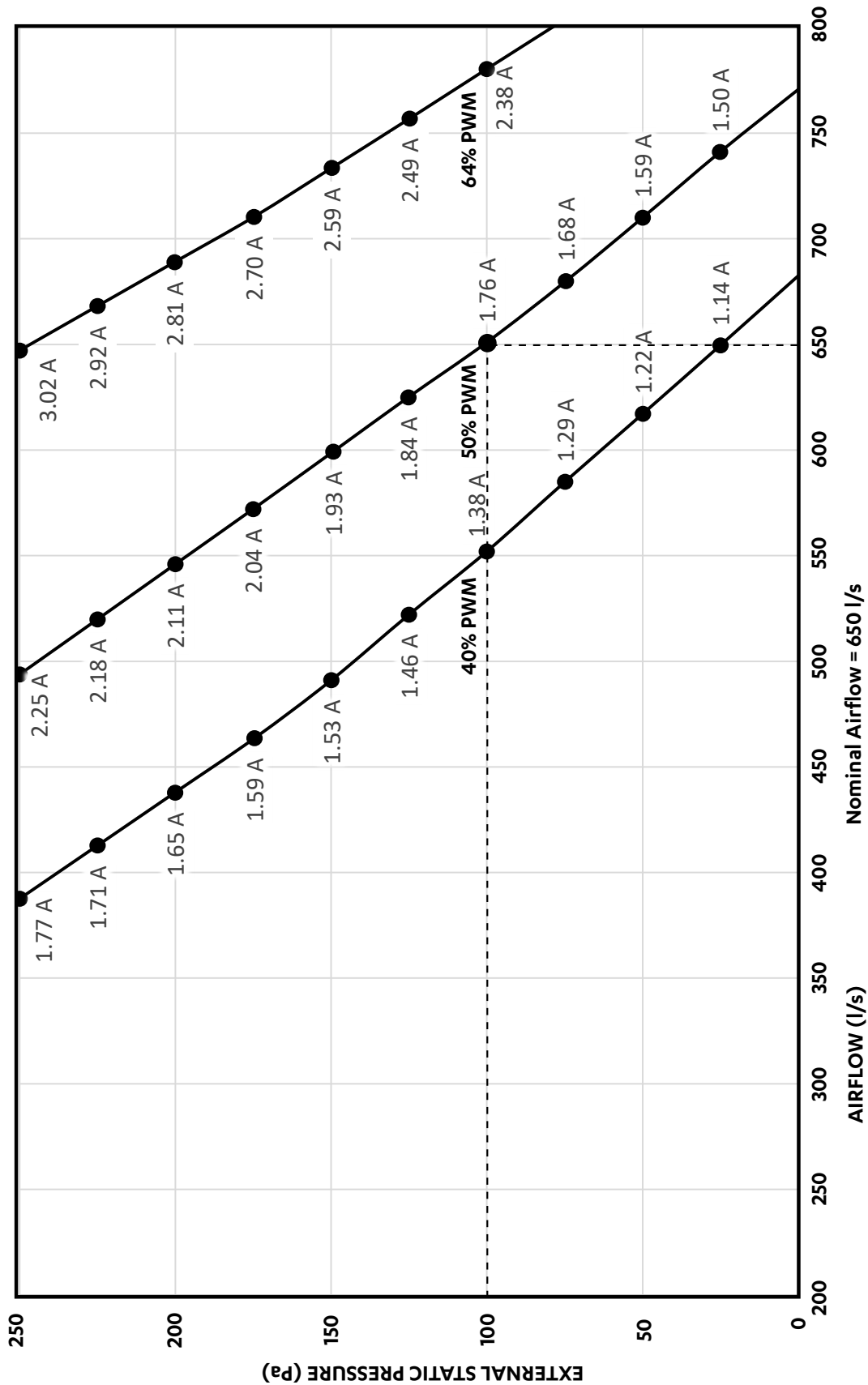
THREE SPEED FAN CURVE

EVA10AS



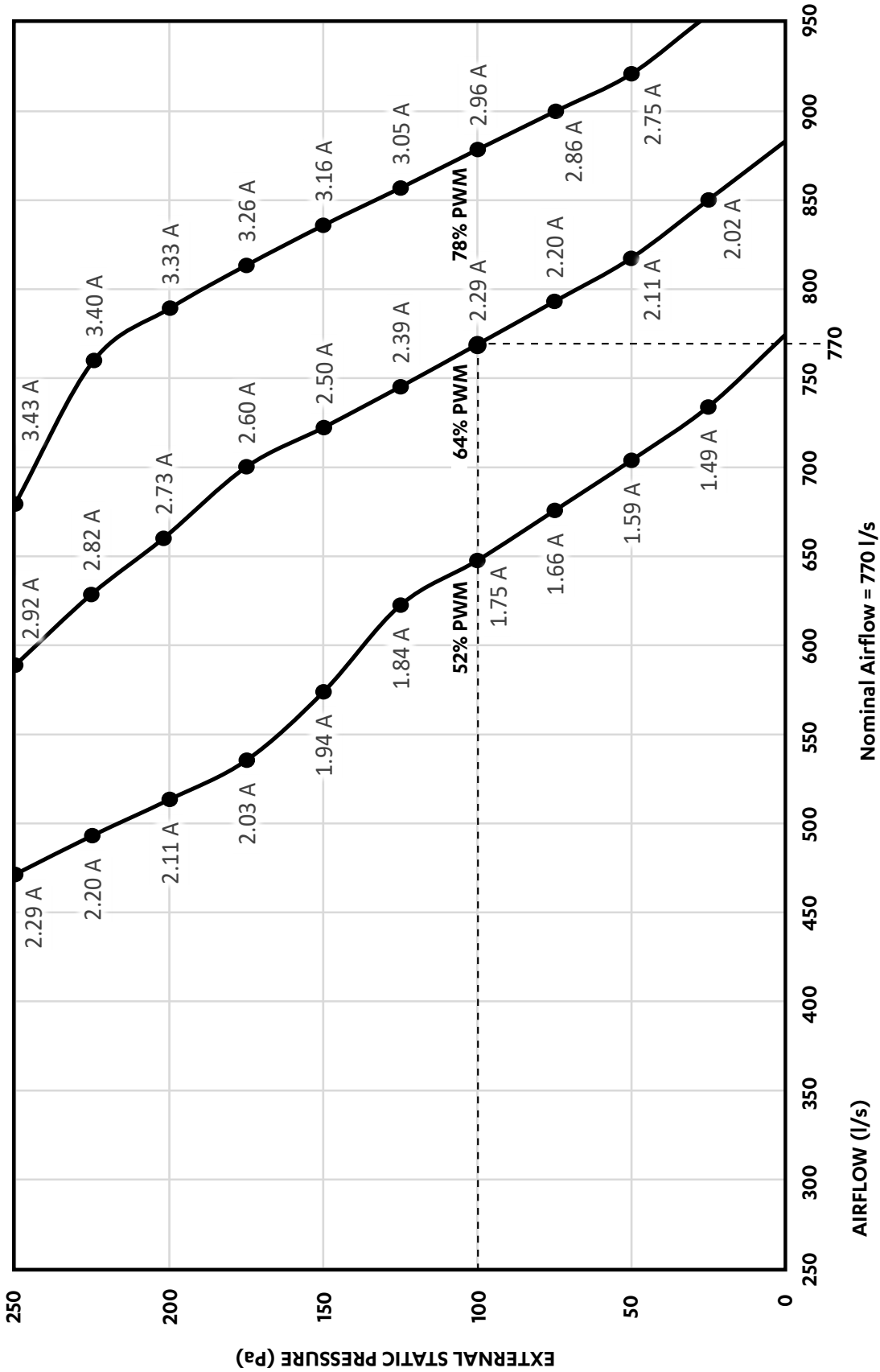
THREE SPEED FAN CURVE

EVA13AS



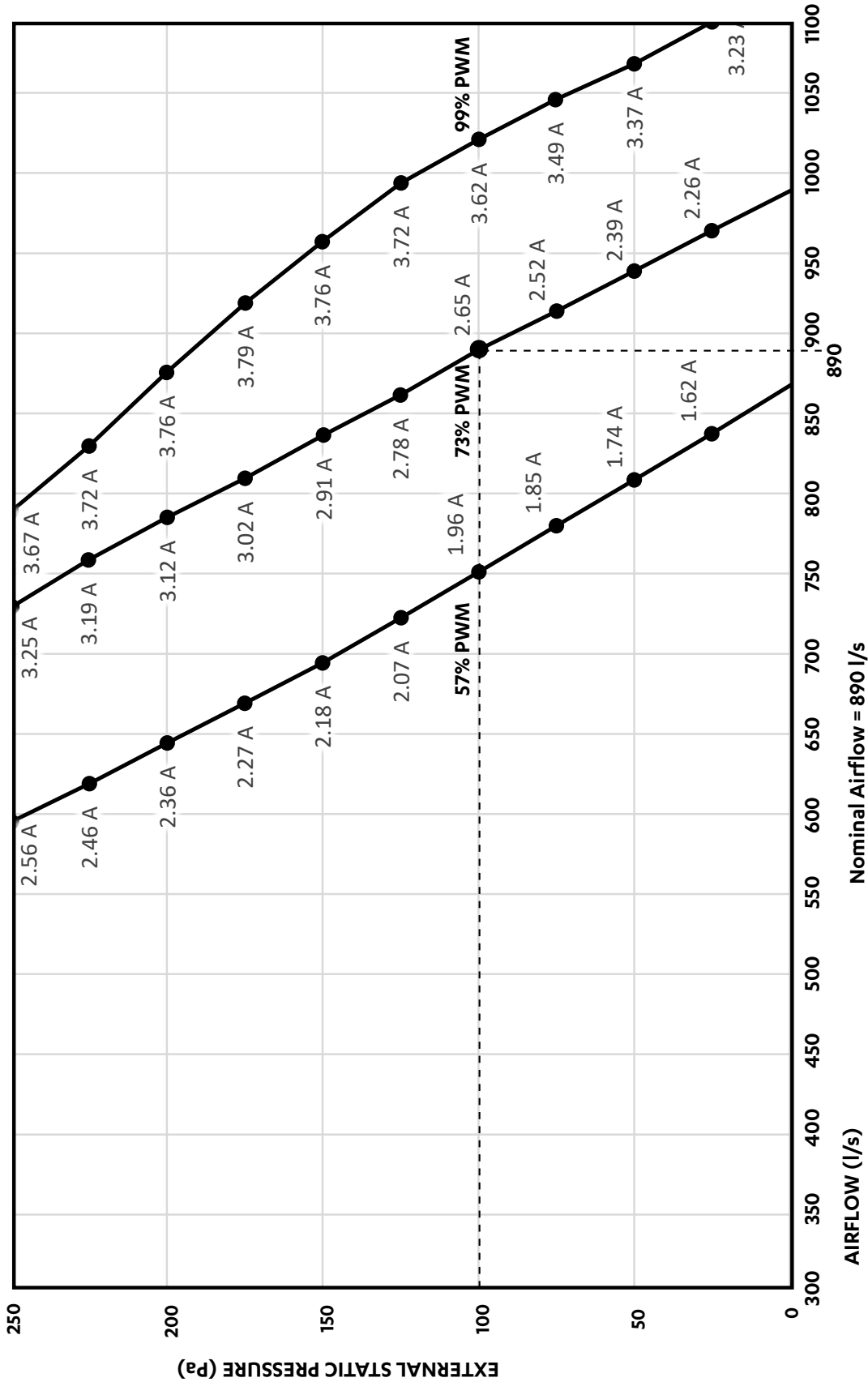
THREE SPEED FAN CURVE

EVA15AS



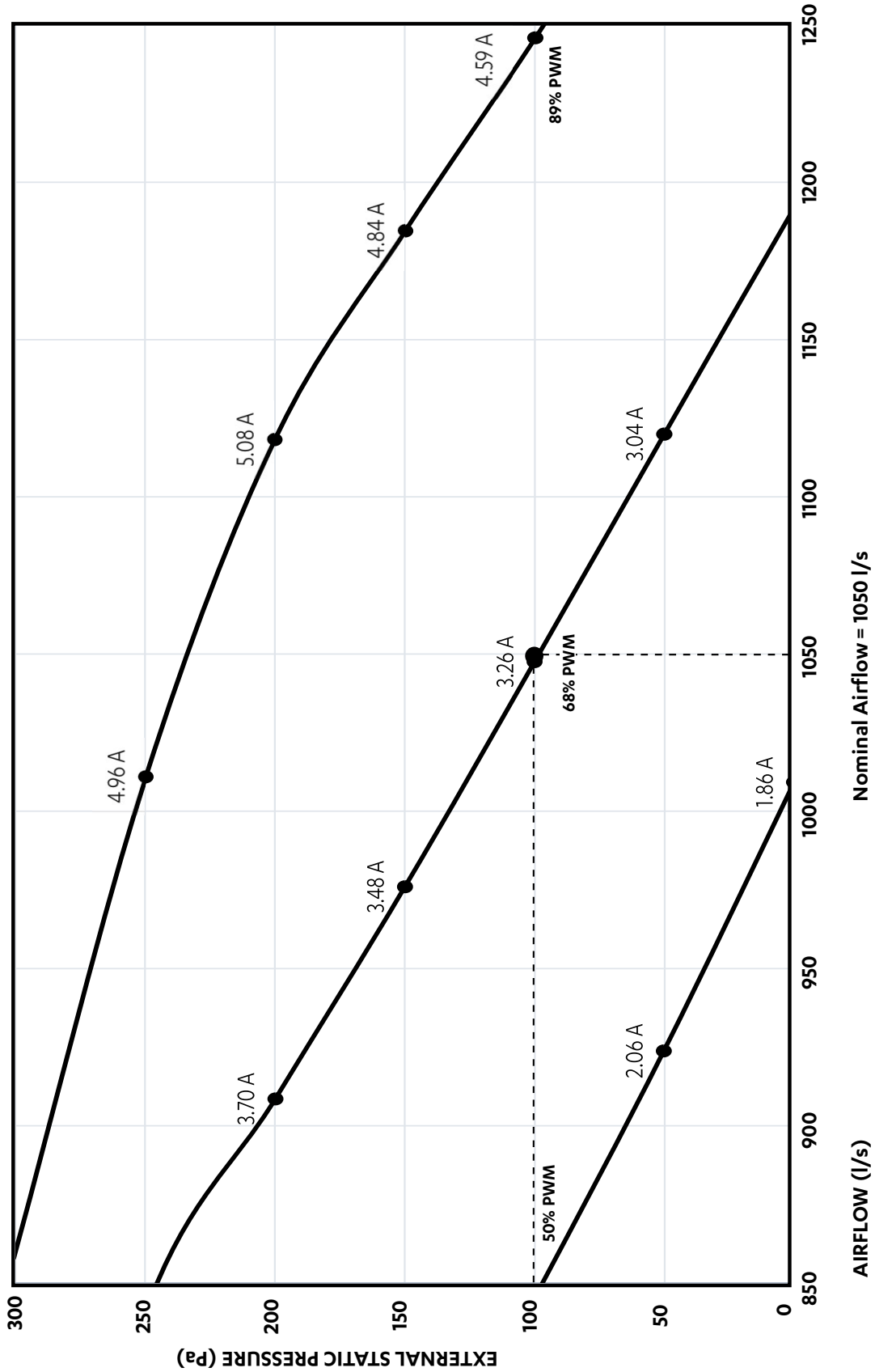
THREE SPEED FAN CURVE

EVA17AS



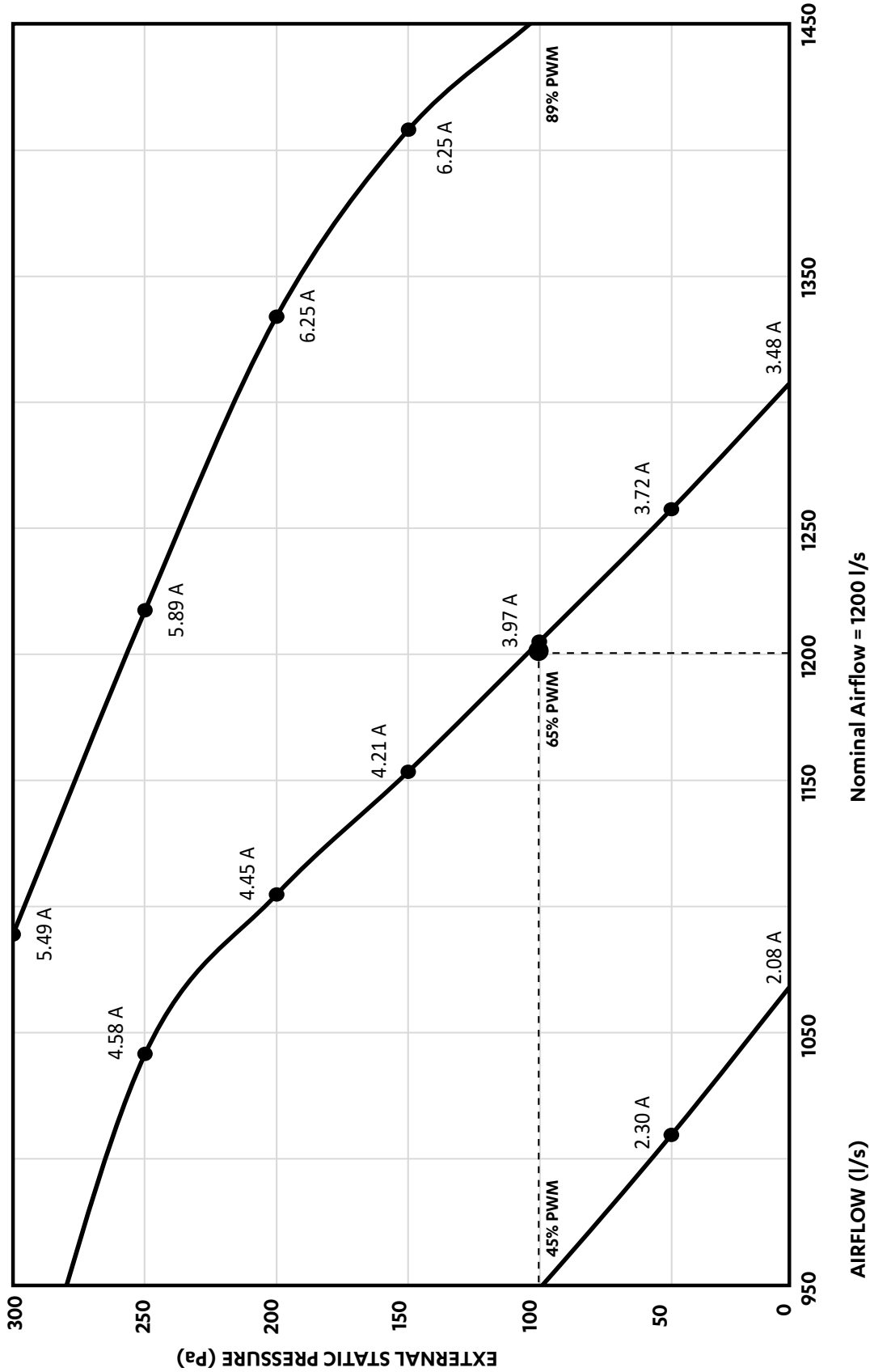
THREE SPEED FAN CURVE

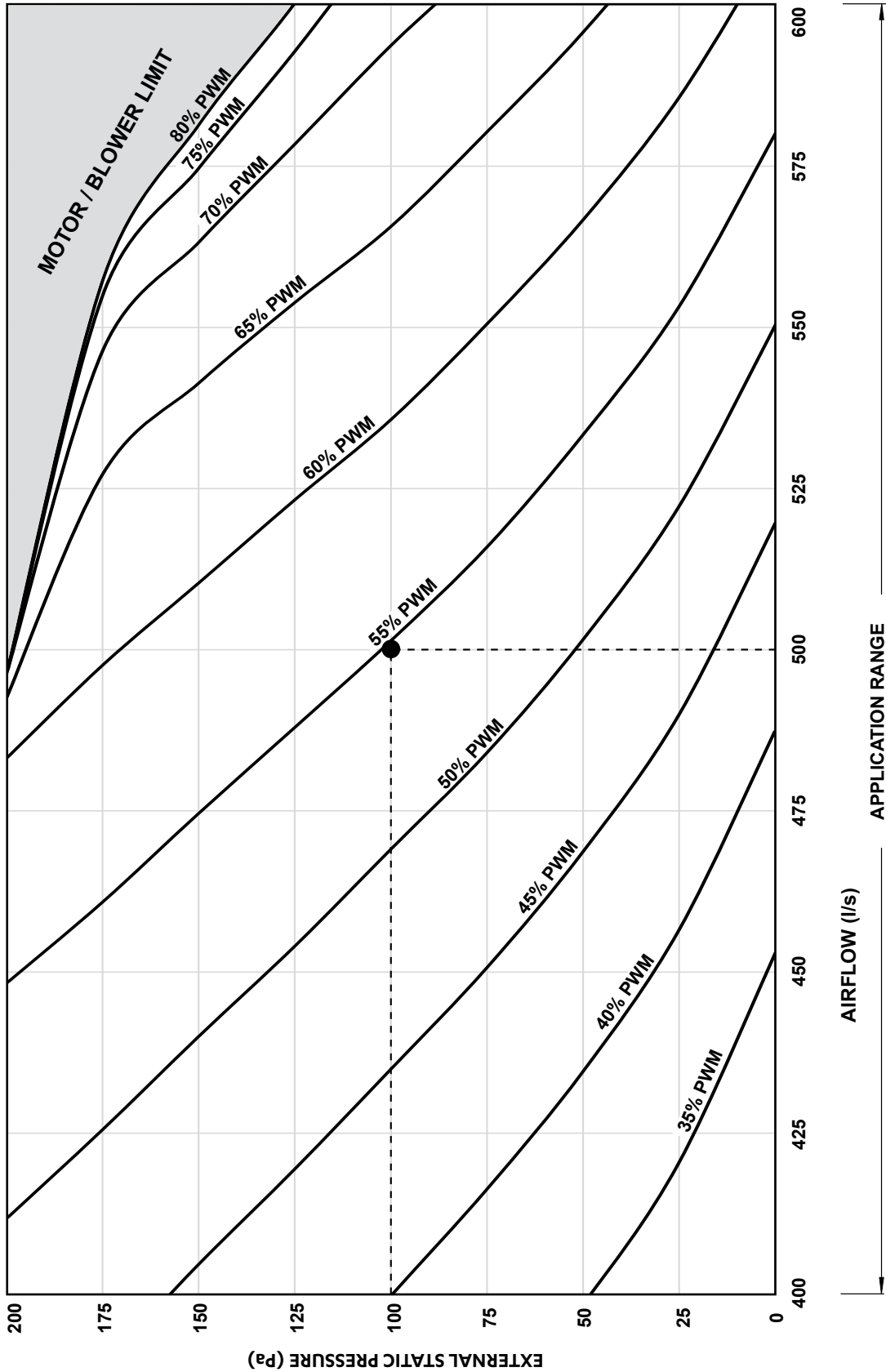
EVA20AS



THREE SPEED FAN CURVE

EVA23AS



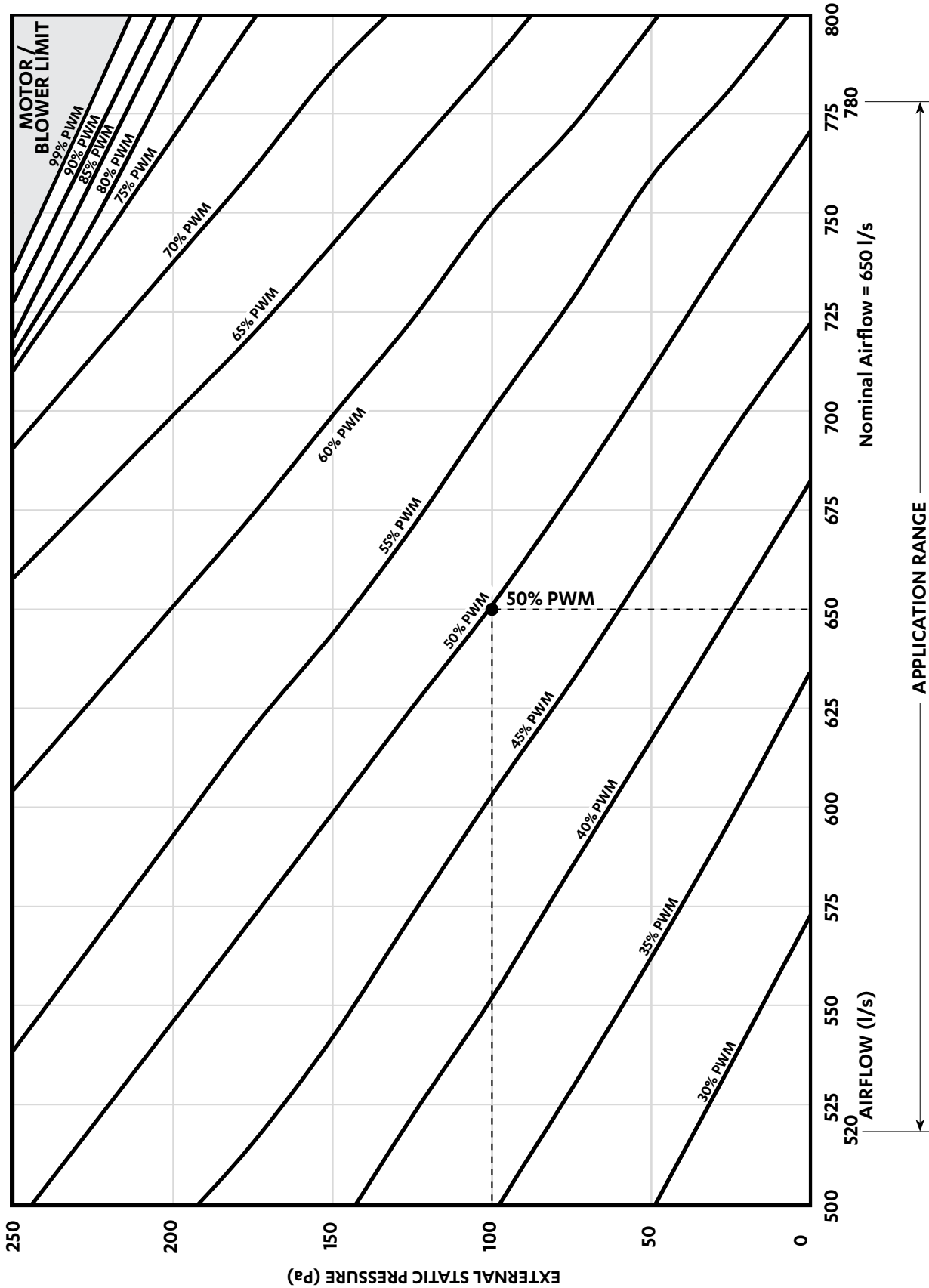


NOTE

Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduced with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s face velocity point will occur outside the application range.

THIRD PARTY FAN CURVE

EVA13AS

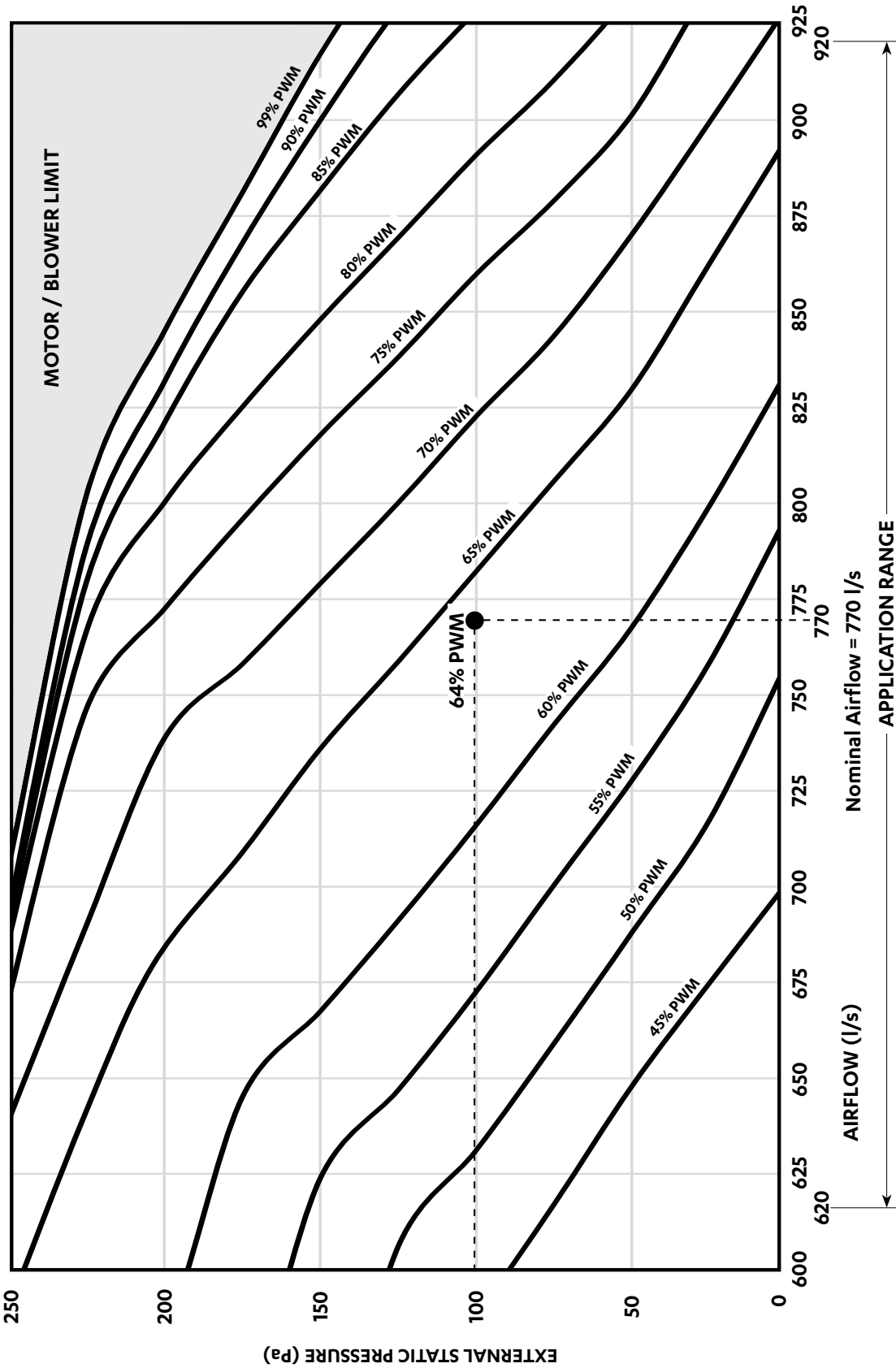


NOTE
 Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduced with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s face velocity point will occur outside the application range.



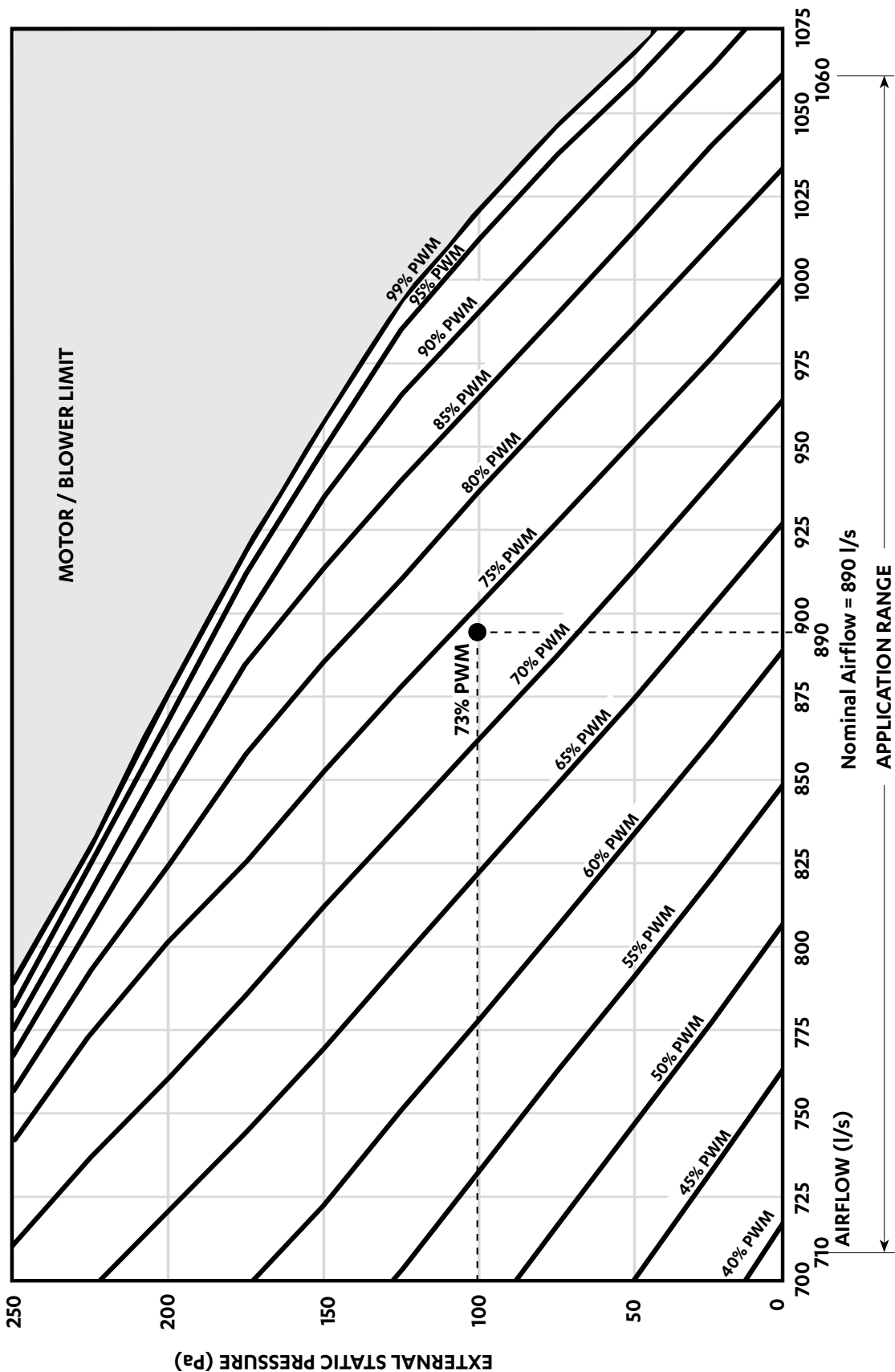
THIRD PARTY FAN CURVE

EVA15AS



NOTE
 Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduced with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s face velocity point will occur outside the application range.



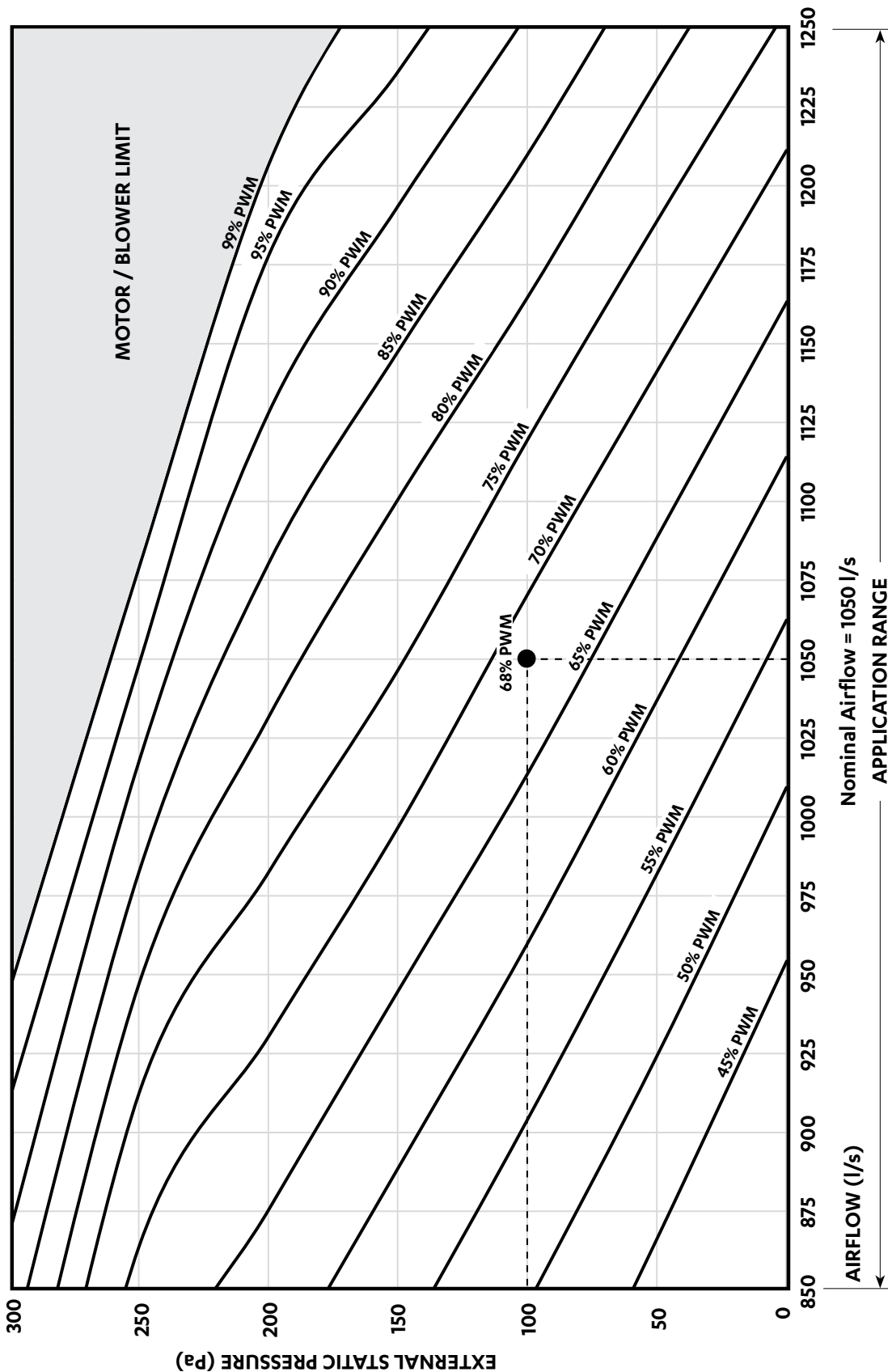


NOTE
 Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduced with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s face velocity point will occur outside the application range.



THIRD PARTY FAN CURVE

EVA20AS



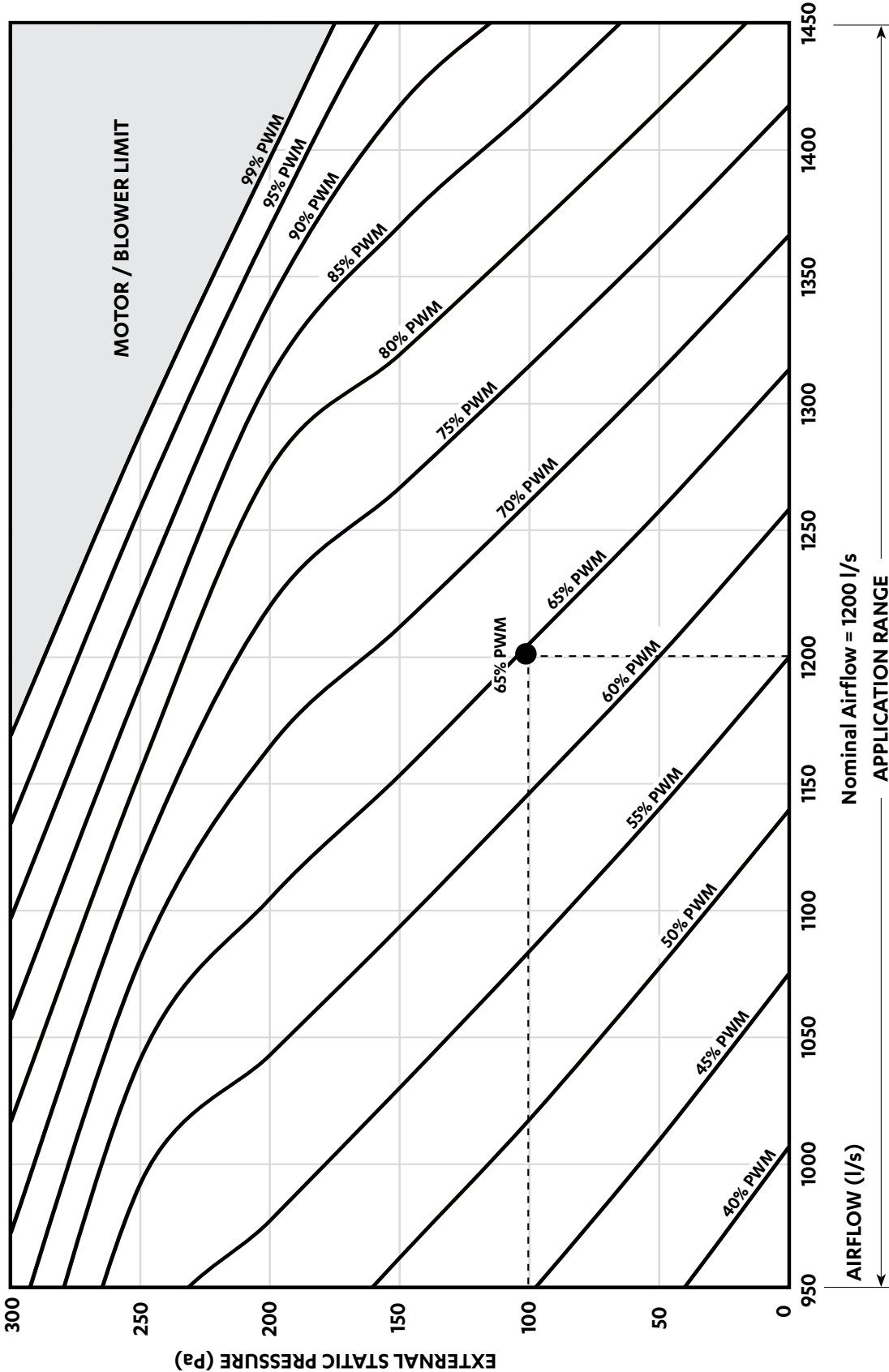
NOTE

Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduced with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s face velocity point will occur outside the application range.



THIRD PARTY FAN CURVE

EVA23AS



NOTE
 Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduce with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s face velocity point will occur outside the application range.



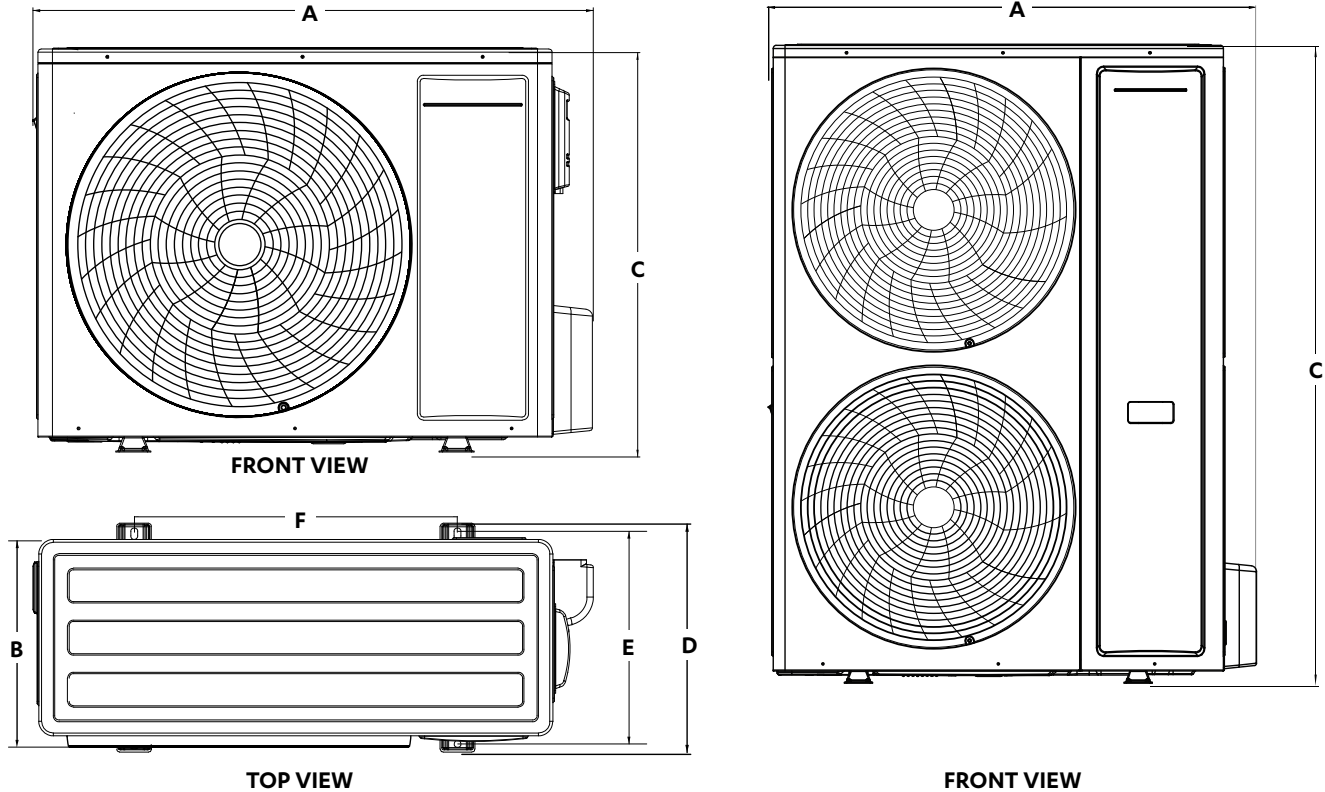
OUTDOOR UNIT DIMENSIONS

CRS10AS / CRS13AS / CRS15AS / CRS17AS

CRS13AT / CRS15AT / CRS17AT

NOTES:

All drawings are subject to change without notice.
 CRS10AS / CRS17AS models shown are for illustration purposes only.



Model Number	Unit Dimensions (mm)				MTG C-C DIST (mm)*	
	A	B	C	D	E	F
CRS10AS	990	370	790	426	394	610
CRS13AS / CRS13AT	1020	340	997	396	368	590
CRS15AS / CRS15AT			1350			
CRS17AS / CRS17AT						

Note: CRS10AS / CRS13AS / CRS13AT has a single fan configuration

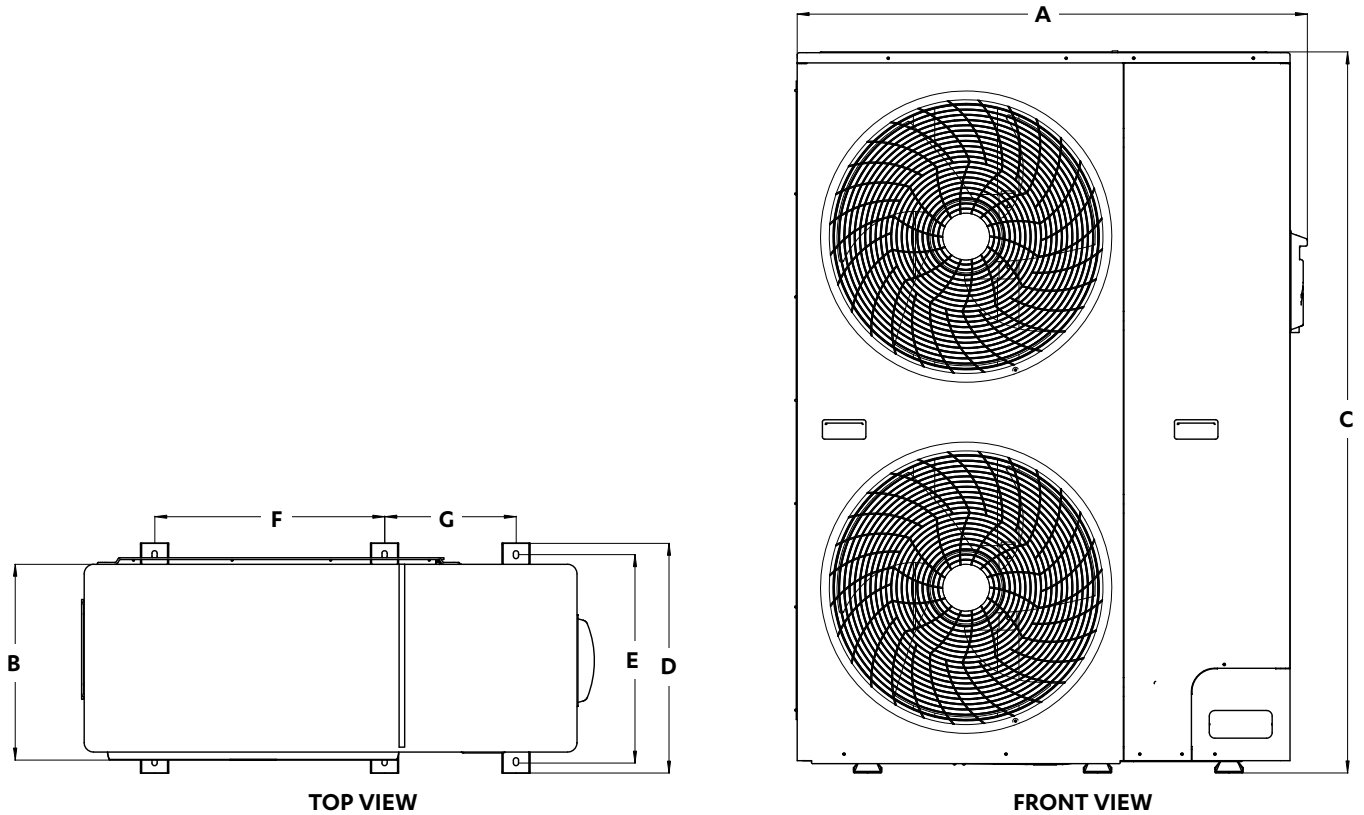
* MTG C-C DIST - Mounting Distance Base Foot (Centre to Centre)

OUTDOOR UNIT DIMENSIONS

CRS20AT / CRS23AT

NOTES:

Drawing is subject to change without notice.
 Model shown is for illustration purposes only.



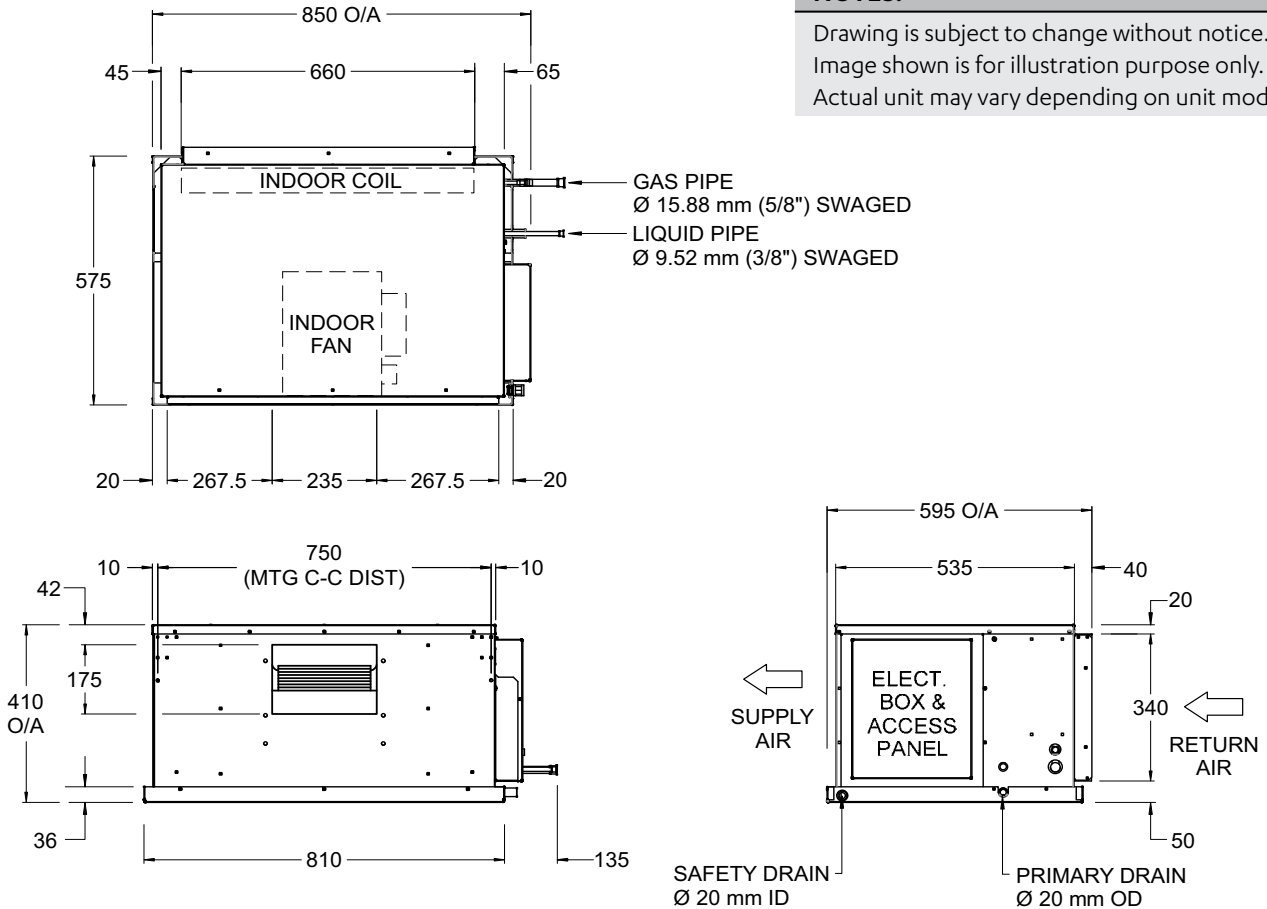
Model Number	Unit Dimensions (mm)				MTG C-C DIST (mm)*		
	A	B	C	D	E	F	G
CRS20AT	1087	417	1536	490	441	490	280
CRS23AT							

* MTG C-C DIST - Mounting Distance Base Foot (Centre to Centre)

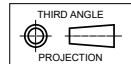
INDOOR UNIT DIMENSIONS

EVA10AS

NOTES:
 Drawing is subject to change without notice.
 Image shown is for illustration purpose only.
 Actual unit may vary depending on unit model.



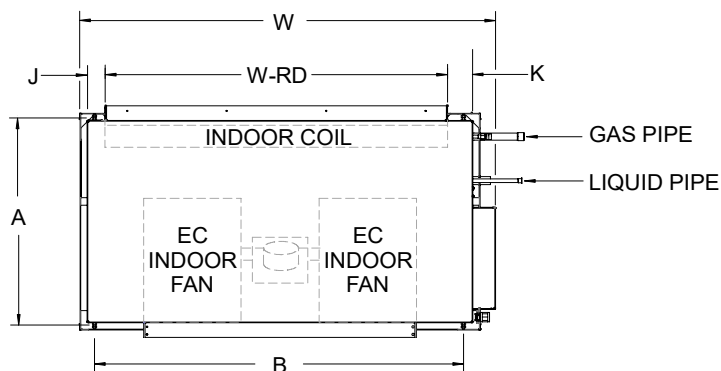
NOTES:



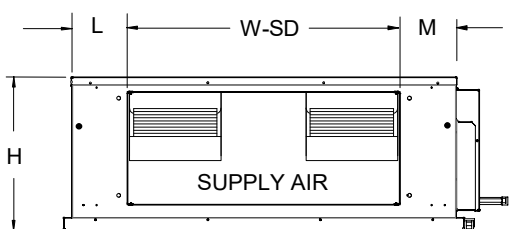
- Do not scale drawing. All dimensions are in mm unless specified. Refer to corresponding unit dimensional drawing for mounting hole details.
- Service Access Areas and Spaces for Airflow Clearances are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkaway passage of 1000 mm between the units or between the unit and the outside perimeter is available.
- 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.
 - Left Service Clearance can be 100mm minimum if Right Service Clearance is applicable.
 - Right Service Clearance can be 600mm minimum if Left Service Clearance is applicable.
 - Height Service Clearance can be 100mm minimum if Right Service Clearance is applicable.
- Installation of this unit should be in accordance with AS/NZS 60335.2.40.
- During installation ensure that the Minimum Floor Area of the smallest room is satisfied based on the Release height, or the maximum R-32 Charge amount is not exceeded.
- Where a minimum area is not satisfied, the installer must provide additional control measure/s such as but not limited to ventilation, shut-off valves, and safety alarm in place as per AS/NZS 60335.2.40 standard for the installation to be acceptable. These control measures are not provided by ActronAir and must be determined by the installer based on individual installation requirements.
- Refer to R-32 Safety Manual for further safety guides.

INDOOR UNIT DIMENSIONS

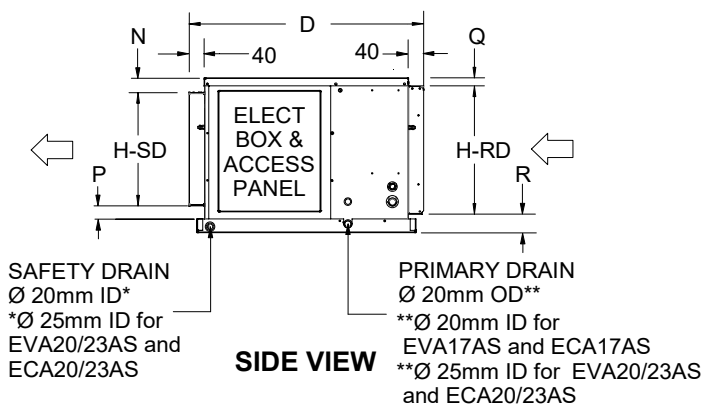
EVA13AS / EVA15AS / EVA17AS / EVA20AS / EVA23AS



TOP VIEW



FRONT VIEW



SIDE VIEW

NOTES:
 Drawing is subject to change without notice.
 Image shown is for illustration purpose only.
 Actual unit may vary depending on unit model.

Unit Model Number	Overall Nominal Dimension (OA)			Mounting Distance (Centre to Centre)		Supply Duct	Return Duct	Gas Pipe (Swaged)	Liquid Pipe (Swaged)
	H	W	D	A	B	H-SD x W-SD	H-RD x W-RD		
EVA10AS	410	850	595	535	750	175 X 235**	340 X 660	Ø 15.88mm (5/8")	Ø 9.52mm (3/8")
EVA13AS	412	1090	615	548	990	300 x 715	340 x 900	Ø 19.05mm (3/4") No swaged	
EVA15AS		1290			1190		340 x 1100		
EVA17AS	435	1420	680	603	1315		380 x 715		360 x 1140
EVA20AS	485	1470	695	645	1346	380 x 715	410 x 1190	Ø 22.22mm (7/8")	Ø 12.7mm (1/2") Cut to fit 92. mm (3/8") field pipe
EVA23AS		1570			1446		410 x 1290		

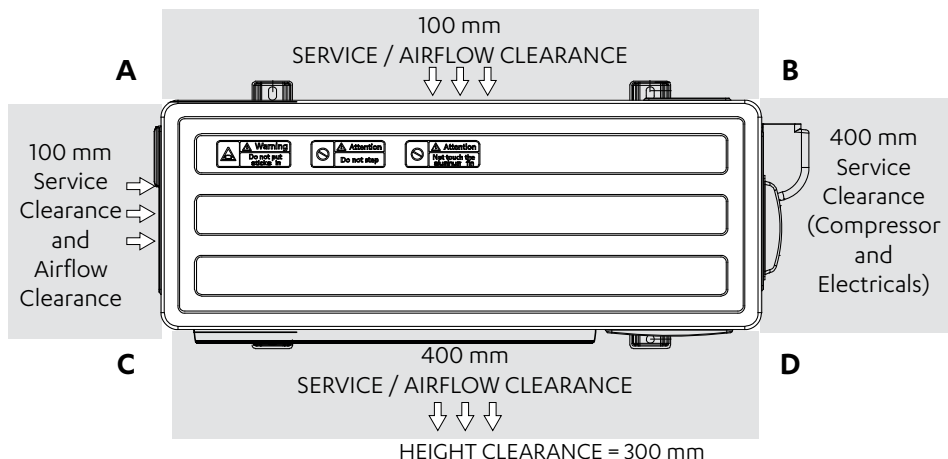
** NO FLANGE

Unit Model Number	Dimensions								
	J	K	L	M	N	P	Q	R	
EVA10AS	45	65	267.5	267.5	42	156	20	50	
EVA13AS	47		248.5	248.5	40	72	22		
EVA15AS			248.5	248.5	40	72	22		
EVA17AS	79	118	311	311	25	110	25	50	
EVA20AS	80	120	337.5	337.5	35	70			
EVA23AS			338	338					



SERVICE CLEARANCES, AIRFLOW ALLOWANCES AND WEIGHTS

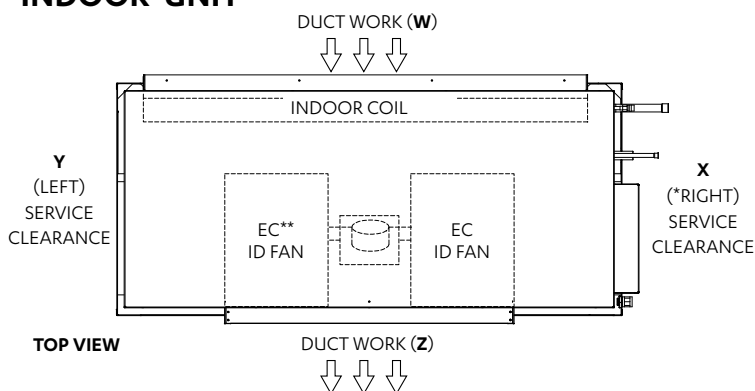
OUTDOOR UNIT



- The Service and Airflow clearances of the outdoor unit represent the minimum area recommended to ensure the designed operational performance range of the system and for safe or adequate serviceability of the system.
- The performance is influenced by the outdoor unit air intake temperatures therefore it's important to refer to the capacity selection data in this document to gain a full understanding of the effects that could lead to substandard performance if neglected.

Model Number	Net Weight	Gross Weight
CRS10AS	64	69
CRS13AS / CRS13AT	85	95
CRS15AS / CRS15AT	99	109
CRS17AS / CRS17AT	110	120
CRS20AT	142	159
CRS23AT	149	165

INDOOR UNIT

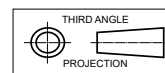


NOTES:

- *Electrical box and/or pipe connections are located on the Right side of the indoor unit.
- ** EVA10AS has only one EC FAN

Unit Model Number	Total Weight (Kg)	Service Clearance				Height Clearance
		X	Y	W	Z	
EVA10AS	36	800	800	Duct Work		340
EVA13AS	44					
EVA15AS	53					
EVA17AS	61					
EVA20AS	75					
EVA23AS	81					410

NOTES:



- Do not scale drawing.
All dimensions are in **mm** unless otherwise specified. Refer to corresponding unit dimensional drawing for mounting hole details.
- Service Access Areas and Spaces for Airflow Clearances are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkway passage of 1000 mm between the units or between the unit and the outside perimeter is available.
- 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.
 - Left Service Clearance can be 100mm minimum if Right Service Clearance is applicable.
 - Right Service Clearance can be 600mm minimum if Left Service Clearance is applicable.
 - Height Service Clearance can be 100mm minimum if Right Service Clearance is applicable.
- Under all circumstances, condenser air must not recirculate back onto condenser coil. Keep all clearance free of any obstruction.
- Refer Pipe Connection Details on Specifications Sheet.
- MTG C-C DIST = Mounting Centre to Centre Distance.
- Use M12 bolt for feet mounting.
- For installation with release height less than or equal to 0.6m, minimum area will be computed based on release height of 0.6m.
- Where A min (the minimum area required) is not satisfied, the installer must provide additional control measure/s in place as per AS/NZS 60335.2.40 standard for the installation to be acceptable.

The examples of controls measures are (but are not limited to): Ventilation, Shut Off Valves and Safety Alarm. These control measures are not provided by ActronAir and must be determined by the installer based on individual installation requirements.

SOUND DATA

OUTDOOR RADIATED

Sound Power Level (SWL)

Model Number		Sound Power Level dB(A)	Sound Pressure Level dB(A) @ 1m	Sound Pressure Level dB(A) @ 3m
CRS10AS	Max	69.9	58.8	53.8
	Rated Heating	68.1	57.1	52.1
	Rated Cooling	67.8	55.6	50.6
	Quiet	65.3	54.9	49.9
CRS13AS	Max	71.0	60.2	55.2
	Rated Heating	70.0	59.2	54.2
	Rated Cooling	69.2	57.9	52.9
	Quiet	64.2	52.0	47.0
CRS15AS	Max	72.0	60.1	55.1
	Rated Heating	71.6	59.9	54.9
	Rated Cooling	69.1	57.2	52.2
	Quiet	63.6	51.0	46.0
CRV17AS	Max	73.2	61.9	56.9
	Rated Heating	72.8	61.8	56.8
	Rated Cooling	71.7	60.0	55.0
	Quiet	67.3	55.1	50.1
CRS13AT	Max	71.1	59.9	54.9
	Rated Heating	70.3	59.0	54.0
	Rated Cooling	69.3	58.1	53.1
	Quiet	64.2	51.7	46.7
CRS15AT	Max	72.1	60.4	55.4
	Rated Heating	71.8	60.1	55.1
	Rated Cooling	71.1	58.6	53.6
	Quiet	63.4	50.8	45.8
CRS17AT	Max	73.1	62.0	57.0
	Rated Heating	72.8	61.9	56.9
	Rated Cooling	71.6	60.1	55.1
	Quiet	66.9	55.0	50.0
CRS20AT	Max	75.7	64.6	59.6
	Rated Heating	75.4	64.4	59.4
	Rated Cooling	73.8	62.8	57.8
	Quiet	66.2	53.8	48.8
CRS23AT	Max	76.9	65.7	60.7
	Rated Heating	76.2	65.3	60.3
	Rated Cooling	74.8	63.3	58.3
	Quiet	71.2	56.5	51.5

INDOOR OUTLET

Sound Power Level (SWL)

Model Number	Airflow Setting	Airflow l/s	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
				125	250	500	1k	2k	4k	8k
EVA10AS	Nominal	500	71.1	71.2	63.7	67.5	66.8	63.6	60.5	54.5
EVA13AS	Nominal	650	69.5	70.0	68.0	67.9	63.6	61.5	57.4	49.7
EVA15AS	Nominal	770	72.4	71.9	68.9	71.7	66.4	63.6	60.1	52.6
EVA17AS	Nominal	890	74.8	75.2	74.0	71.9	69.3	66.9	63.9	56.7
EVA20AS	Nominal	1050	73.1	73.0	68.9	71.3	67.3	65.3	62.3	56.1
EVA23AS	Nominal	1200	74.5	70.4	69.3	71.1	69.1	67.5	65.7	56.9

NOTE:

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



SPECIFICATIONS

SINGLE PHASE

MODEL NUMBERS	CRS10AS/EVA10AS	CRS13AS/EVA13AS	CRS15AS/EVA15AS	CRS17AS/EVA17AS
INSULATION (INDOOR UNIT)				
TYPE	Foil Faced Polyethylene Expanded Polystyrene			
OUTDOOR COIL				
TUBE TYPE	Copper			
FIN TYPE	Aluminium			
COIL COATING	Hydrophilic Blue Fin Coil Coat Protection			
OUTDOOR FAN				
FANS TYPE	Axial x1 / DC Motor		Axial x2 / DC Motor	
NUMBER OF FANS	1		2	
FAN SPEED CONTROL	Variable Speed			
The factory installed outdoor fans fitted to this unit will accept up to 10 Pa of external static resistance.				
INDOOR COIL				
TUBE TYPE	Copper - Rifle Bore			
FIN TYPE	Aluminium			
COIL COATING	Hydrophilic Blue Fin Coil Coat Protection			
INDOOR FAN				
FANS TYPE	Centrifugal / EC Motor			
NUMBER OF FANS	1 x Single Deck	1 x Twin Deck		
DIAMETER / WIDTH (mm)	240 x 180			
MOTOR TYPE / DRIVE TYPE	Variable Speed Drive EC Motor / Direct			
COMPRESSOR				
NUMBER PER UNIT x TYPE	1 x Twin Rotary			
STARTING METHOD	Variable Speed Drive			
REFRIGERATION SYSTEM				
REFRIGERANT TYPE	R-32			
EXPANSION CONTROL	Direct Expansion Orifice /EEV			
FACTORY CHARGE (grams)	2300	3400	3600	4100
PRE-CHARGE LENGTH (metres)	10	15		
Minimum room area (m ²) Factory charge @2.2m release height	4.541	7.318	8.204	10.641
ADDITIONAL REF. CHARGE (gram/metre)	40			
ADDITIONAL COMPRESSOR OIL	For installations over 40 m, additional 5ml of oil is required for every additional 5 meters.			
FILTER DRIER				
CONNECTION SIZE AND TYPE	9.52 mm (3/8") ODF Soldered Bi-Flow			
FACTORY SUPPLIED / FITTED	No			

SPECIFICATIONS

MODEL NUMBERS	CRS10AS/EVA10AS	CRS13AS/EVA13AS	CRS15AS/EVA15AS	CRS17AS/EVA17AS
INTERCONNECTING PIPE RUN				
MAX. EQUIVALENT PIPE LENGTH (metres)	60			
MAX. VERTICAL HEIGHT DIFFERENTIAL (metres)	20 (Included in Max. Pipe Length)			
MAXIMUM REFRIGERATION CHARGE @ MAXIMUM PIPE LENGTH (GM)	4300	5200	5400	5900
MINIMUM ROOM AREA @ 2.2m RELEASE HEIGHT (M ²)	/	/	/	/
	11.705	17.117	18.459	22.036
FIELD PIPE SIZES				
LIQUID PIPE	9.52 mm (3/8")			
GAS PIPE	15.88 mm (5/8")	19.05 mm (3/4")		
PIPE CONNECTIONS				
INDOOR	LIQUID PIPE	9.52 mm (3/8") swaged		
	GAS PIPE	15.88 mm (5/8")	19.05 mm (3/4")	
CONNECTION TYPE		Solder		
OUTDOOR	LIQUID PIPE	9.52 mm (3/8") swaged		
	GAS PIPE	15.88 mm (5/8")	19.05 mm (3/4")	
CONNECTION TYPE		Flare		
PROTECTION DEVICES				
HIGH 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			
ELECTRIC CONTROLS				
DEFROST METHOD	Reverse Cycle			
DEFROST TYPE	Adaptive Demand Defrost			
CONTROL FIELD WIRING	2 Core (1 Pair) Twisted Pair, 7/0.30 (0.5mm ²) Shielded Data Cable			
MASTER/SECONDARY CONTROLLER CABLE SPECS.	Cat5e UTP (AWG 24) Data Cable			
SENSOR CABLE/WIRING SPECS.	Cat5e UTP (AWG 24) 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.				
INDOOR AIR INTAKE TEMPERATURE				
COOLING MODE	MAX.	30°C DB / 22°C WB		
	MIN.	20°C DB / 16°C WB		
HEATING MODE	MAX.	24°C DB		
	MIN.	16°C DB		
OUTDOOR AIR INTAKE TEMPERATURE				
COOLING MODE	MAX.	50°C DB		
	MIN.	5°C DB		
HEATING MODE	MAX.	21°C DB / 16°C WB		
	MIN.	-10°C DB		

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.



SPECIFICATIONS

THREE PHASE

MODEL NUMBERS	CRS13AT/ EVA13AS	CRS15AT/ EVA15AS	CRS17AT/ EVA17AS	CRS20AT/ EVA20AS	CRS23AT/ EVA23AS
INSULATION (INDOOR UNIT)					
TYPE	Foil Faced Polyethylene				
	Expanded Polystyrene				
OUTDOOR COIL					
TUBE TYPE	Copper				
FIN TYPE	Aluminium				
COIL COATING	Hydrophilic Blue Fin Coil Coat Protection				
OUTDOOR FAN					
FANS TYPE	Axial / DC Motor				
NUMBER OF FANS	1				2
FAN SPEED CONTROL	Variable Speed				
The factory installed outdoor fans fitted to this unit will accept up to 10 Pa of external static resistance.					
INDOOR COIL					
TUBE TYPE	Copper - Rifle Bore				
FIN TYPE	Aluminium				
COIL COATING	Hydrophilic Blue Fin Coil Coat Protection				
INDOOR FAN					
FANS TYPE	Centrifugal / EC Motor				
NUMBER OF FANS	1 x Twin Deck				
DIAMETER / WIDTH (mm)	240 x 180				
MOTOR TYPE / DRIVE TYPE	Variable Speed Drive EC Motor / Direct				
COMPRESSOR					
NUMBER PER UNIT x TYPE	1 x Twin Rotary				
STARTING METHOD	Variable Speed Drive				
REFRIGERATION SYSTEM					
REFRIGERANT TYPE	R-32				
EXPANSION CONTROL	Direct Expansion Orifice /EEV				
FACTORY CHARGE (grams)	3300	3600	4100	5000	5400
PRE-CHARGE LENGTH (metres)	15				
Minimum room area (m ²) Factory charge @2.2m release height	6.894	8.204	10.641	15.826	18.459
ADDITIONAL REF. CHARGE (gram/metre)	40				
ADDITIONAL COMPRESSOR OIL	For installations over 40 m, additional 5ml of oil is required for every additional 5 meters.				
FILTER DRIER					
CONNECTION SIZE AND TYPE	9.52 mm (3/8") ODF Soldered Bi-Flow			12.7 mm (1/2") ODF Soldered Bi-Flow	
FACTORY SUPPLIED / FITTED	No				

SPECIFICATIONS

MODEL NUMBERS	CRS13AT/ EVA13AS	CRS15AT/ EVA15AS	CRS17AT/ EVA17AS	CRS20AT/ EVA20AS	CRS23AT/ EVA23AS
INTERCONNECTING PIPE RUN					
MAX. EQUIVALENT PIPE LENGTH (metres)	60				
MAX. VERTICAL HEIGHT DIFFERENTIAL (metres)	20 (Included in Max. Pipe Length)				
MAXIMUM REFRIGERATION CHARGE @ MAXIMUM PIPE LENGTH (GM)	5100	5400	5900	6800	7200
MINIMUM ROOM AREA @ 2.2m RELEASE HEIGHT (M ²)	16.465	18.459	22.036	29.272	32.817
FIELD PIPE SIZES					
LIQUID PIPE	9.52 mm (3/8")				
GAS PIPE	19.05 mm (3/4")			22.22 mm (7/8")*	22.22 mm (7/8")
PIPE CONNECTIONS					
INDOOR	LIQUID PIPE	9.52 mm (3/8") swaged		12.7 mm (1/2") swaged Cut to fit 9.52mm (3/8") field pipe	
	GAS PIPE	19.05 mm (3/4")		22.22 mm (7/8") swaged	
CONNECTION TYPE		Solder			
OUTDOOR	LIQUID PIPE	9.52 mm (3/8") swaged		9.52 mm (3/8")	
	GAS PIPE	19.05 mm (3/4")		22.22 mm (7/8")	
CONNECTION TYPE		Flare		Solder	
PROTECTION DEVICES					
HIGH PRESSURE CUTOFF 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			
ELECTRIC CONTROLS					
DEFROST METHOD		Reverse Cycle			
DEFROST TYPE		Adaptive Demand Defrost			
CONTROL FIELD WIRING		2 Core (1 Pair) Twisted Pair, 7/0.30 (0.5mm ²) Shielded Data Cable			
MASTER/SECONDARY CONTROLLER CABLE SPECS.		Cat5e UTP (AWG 24) Data Cable			
SENSOR CABLE/WIRING SPECS.		Cat5e UTP (AWG 24) 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.					
INDOOR AIR INTAKE TEMPERATURE					
COOLING MODE	MAX.	30°C DB / 22°C WB			
	MIN.	20°C DB / 16°C WB			
HEATING MODE	MAX.	24°C DB			
	MIN.	16°C DB			
OUTDOOR AIR INTAKE TEMPERATURE					
COOLING MODE	MAX.	50°C DB			
	MIN.	5°C DB			
HEATING MODE	MAX.	21°C DB / 16°C WB			
	MIN.	-10°C DB			

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.

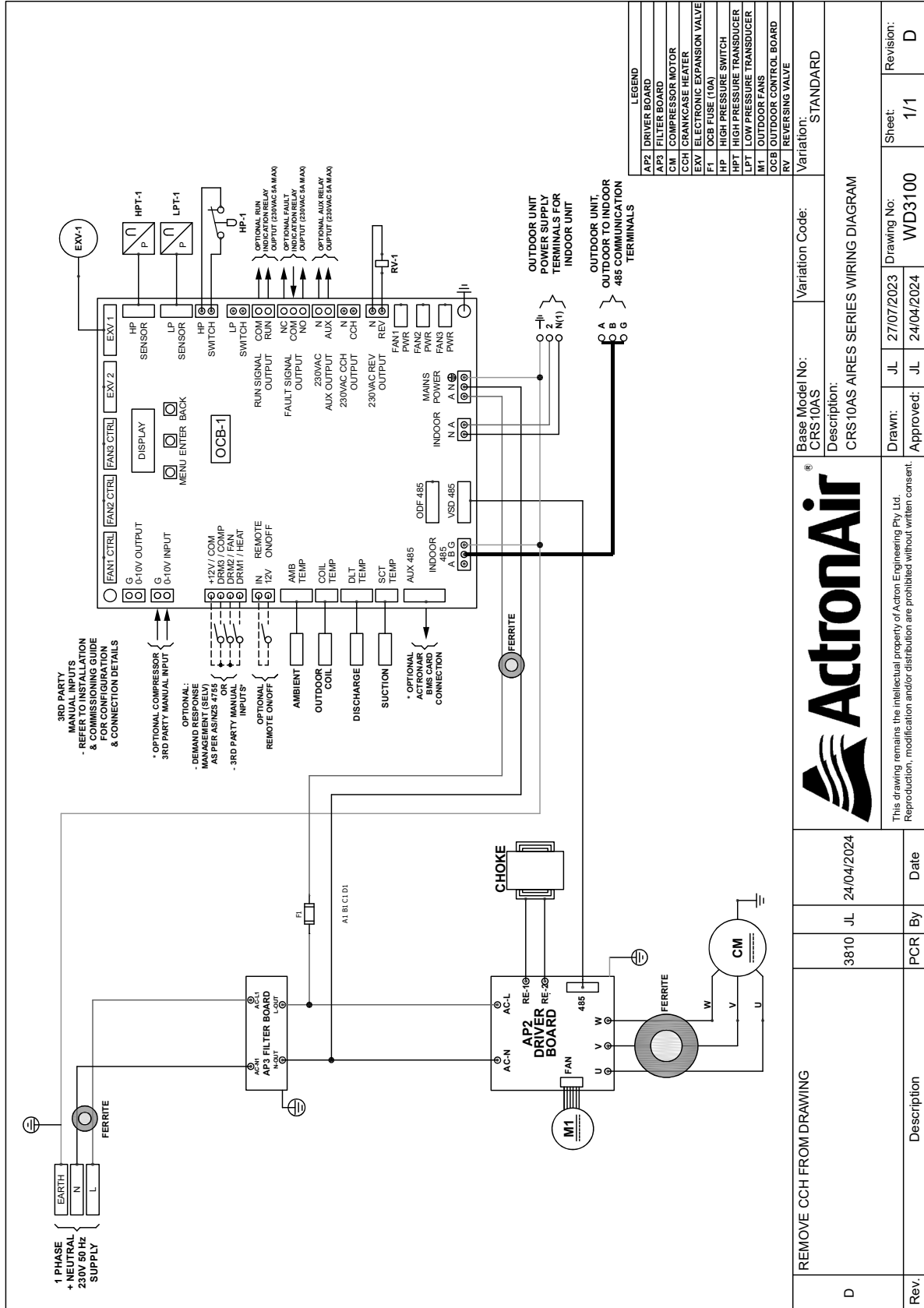
* 19.05 mm (3/4") Gas Field Pipe may be used in place of the recommended 22.22 mm (7/8"). Please see Pipe Length Correction Multiplier table below for the drop in refrigeration capacity as a consequence of change in Gas Field Pipe diameter.

PIPE LENGTH CORRECTION MULTIPLIER							
	5m	10m	20m	30m	40m	50m	60m
COOLING	0.985	0.96	0.938	0.914	0.889	0.861	0.831
HEATING	1.000	1.000	1.000	1.000	1.000	1.000	1.000

NOTE: Correction multipliers are based on horizontal pipe runs.



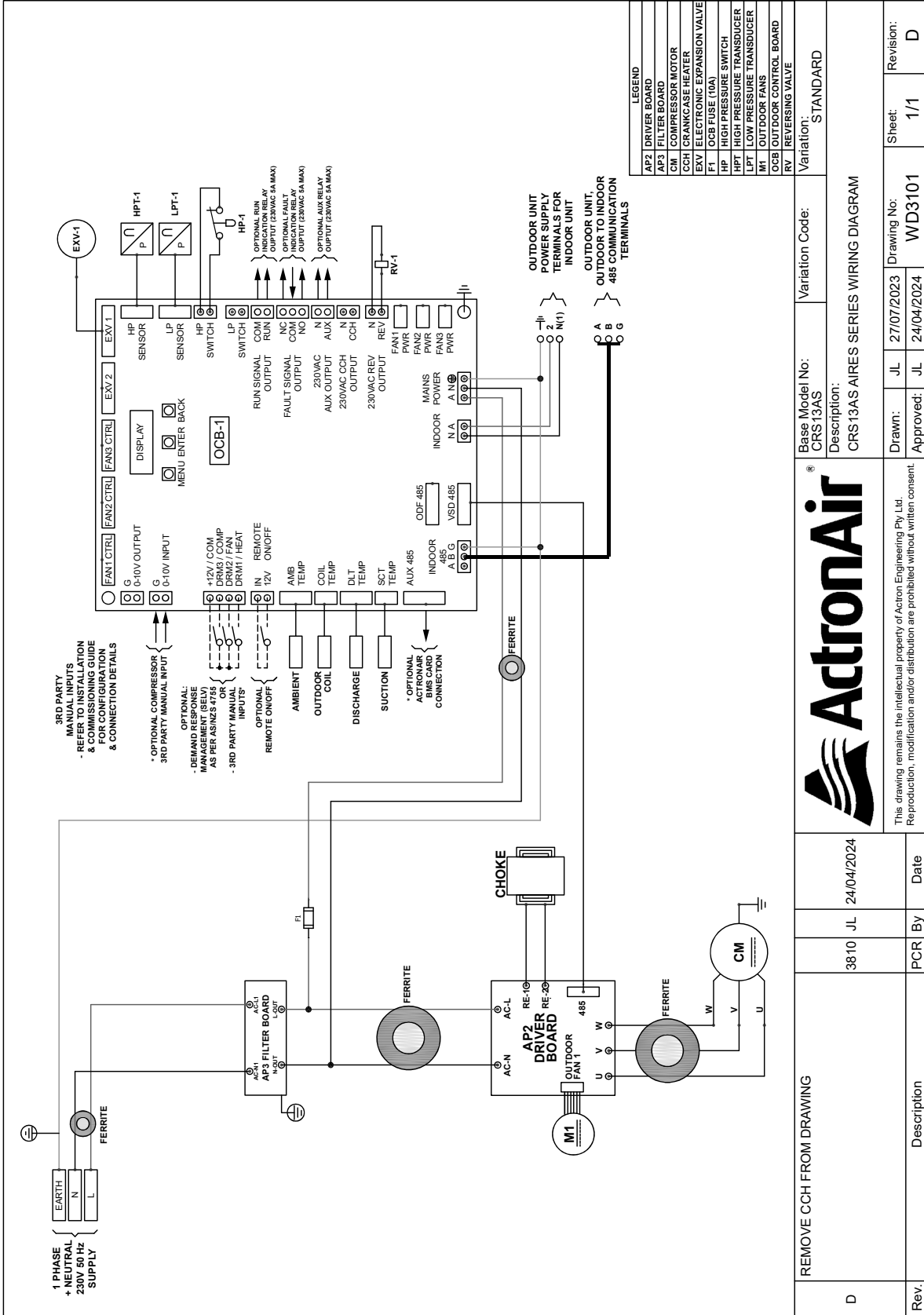
WIRING DIAGRAM - CRS10AS



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Rev.	Description	PCR	By	Date
D	REMOVE CCH FROM DRAWING			3810 JL 24/04/2024

WIRING DIAGRAM - CRS13AS

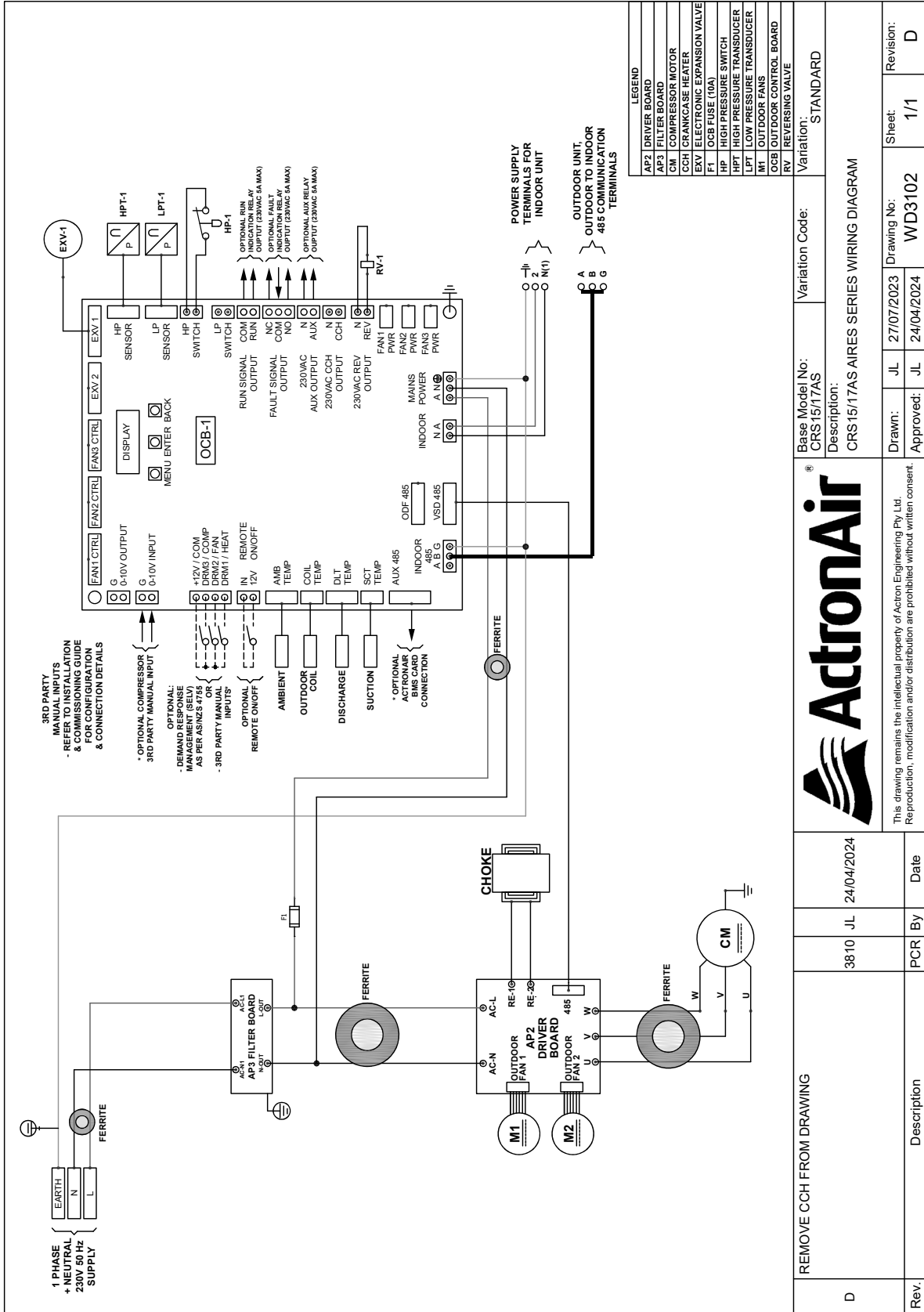


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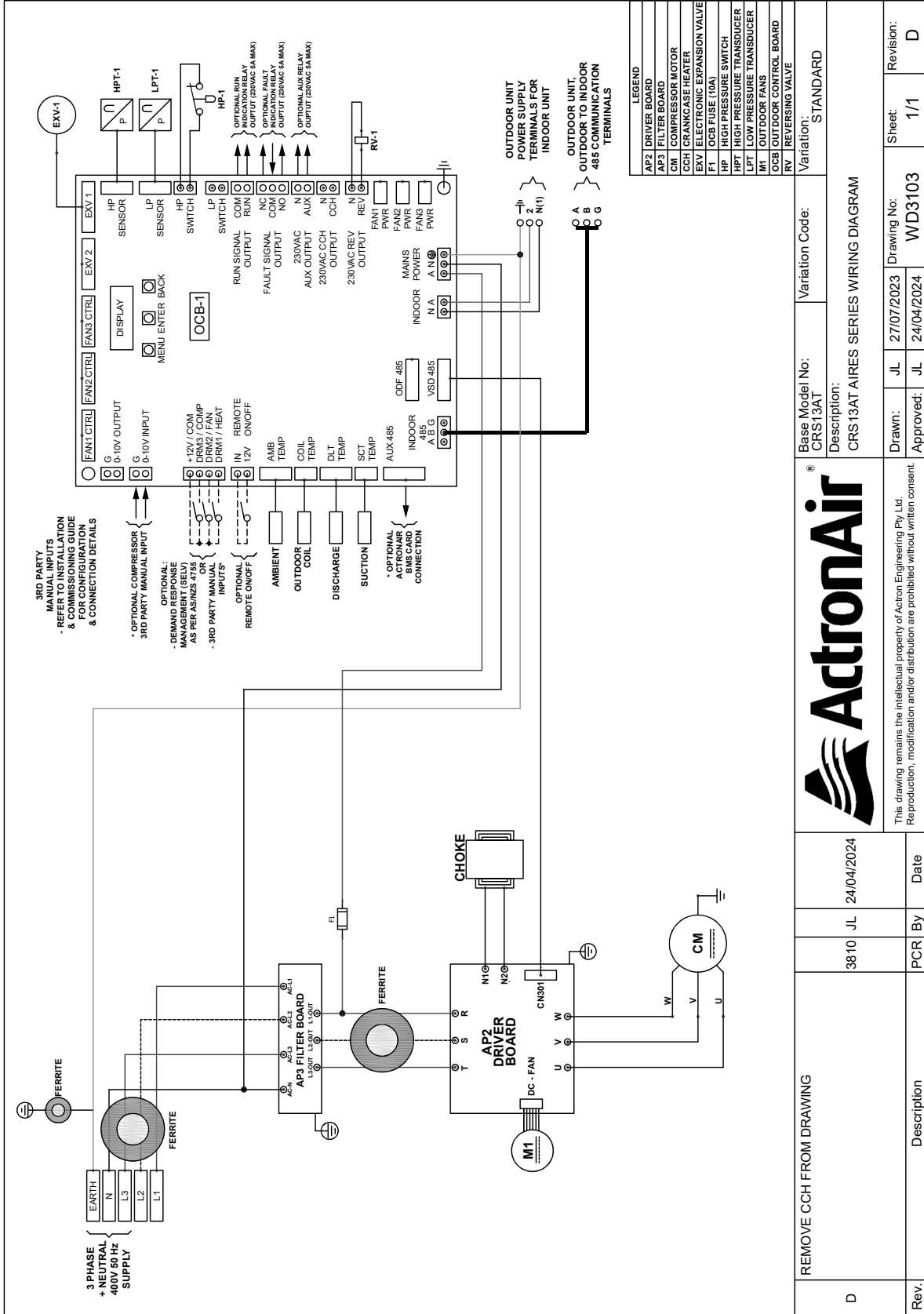
Rev.	Description	By	Date
D	REMOVE CCH FROM DRAWING	PCR	24/04/2024



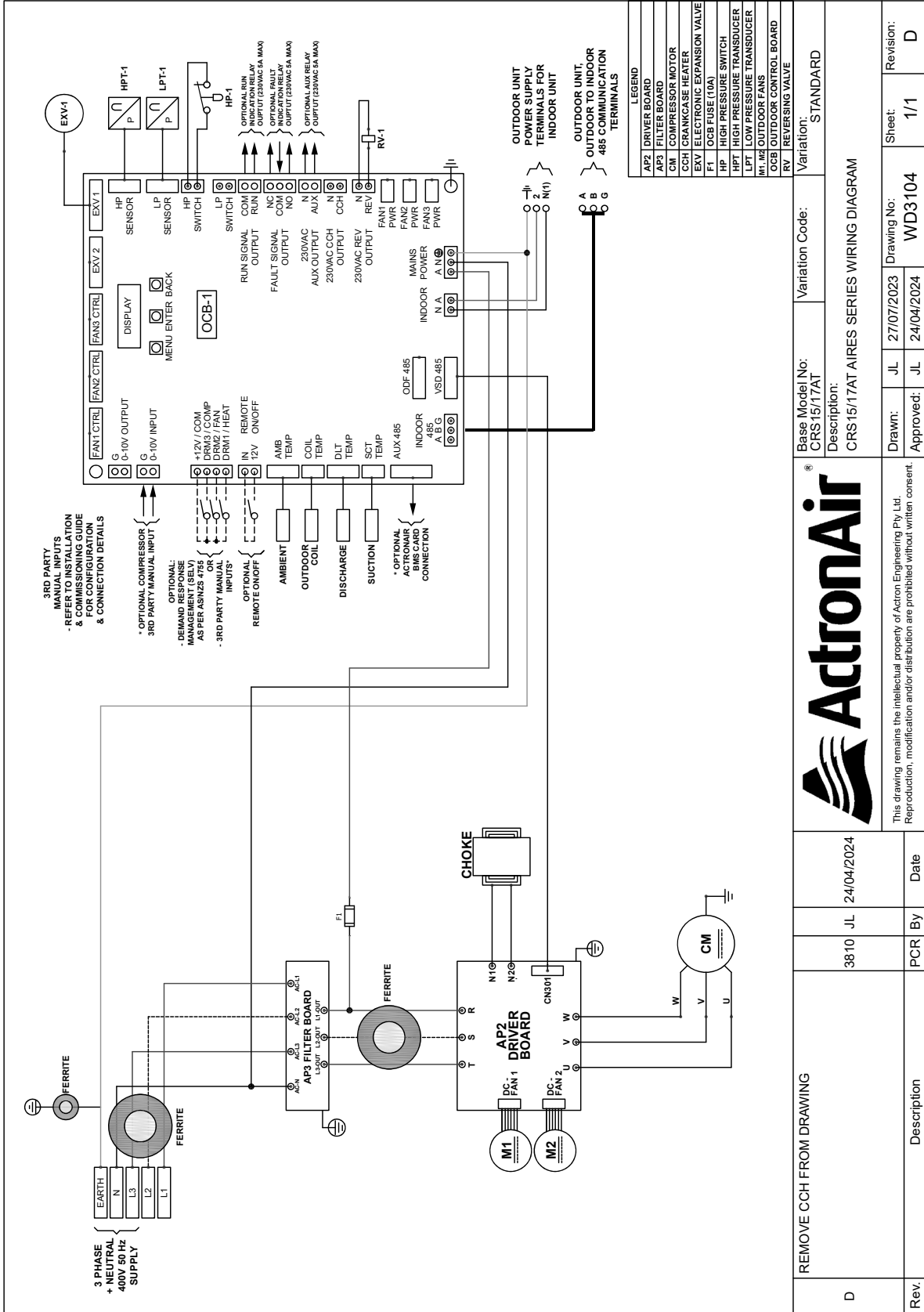
WIRING DIAGRAM - CRS15 - 17AS



WIRING DIAGRAM - CRS13AT



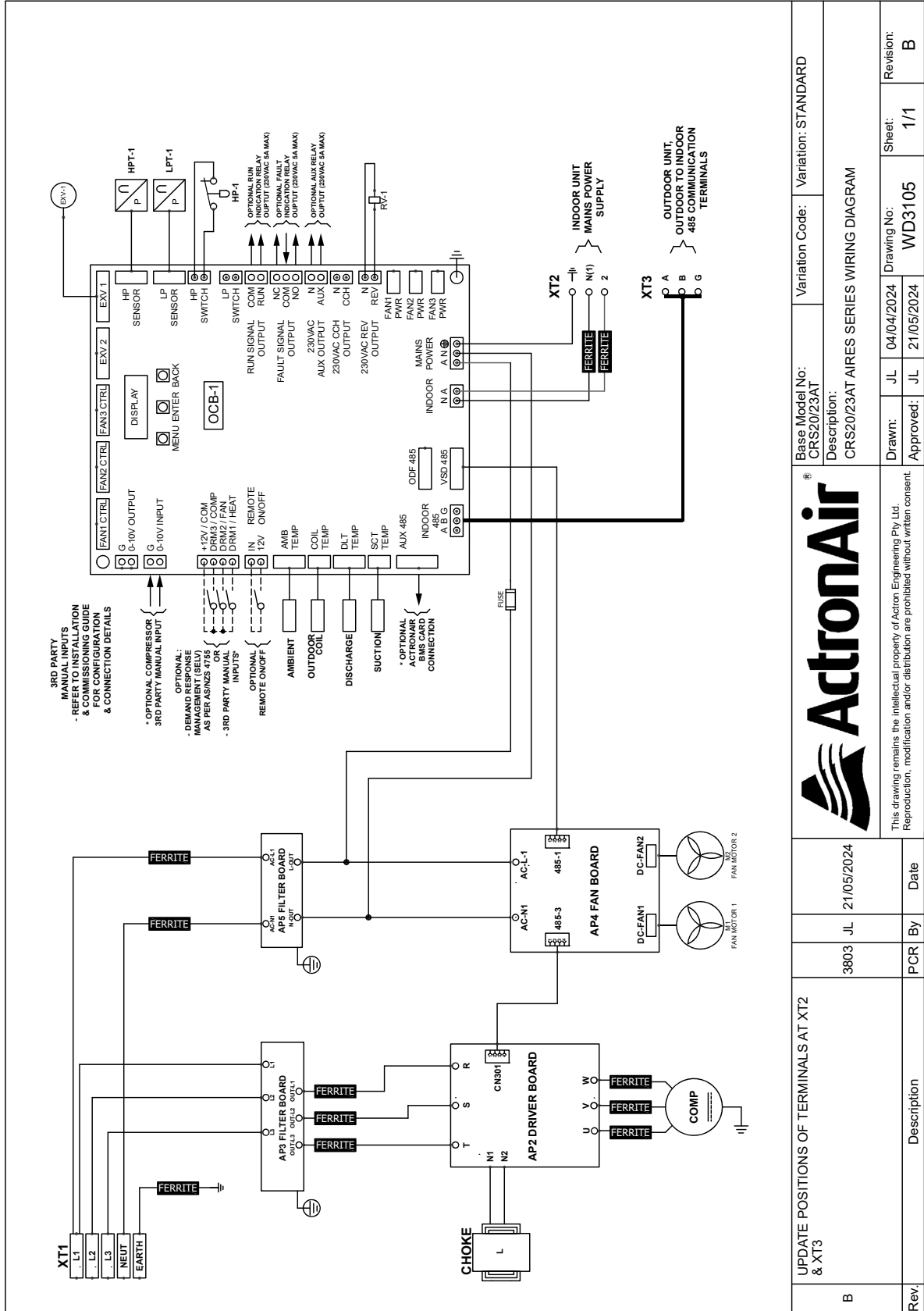
WIRING DIAGRAM - CRS15 - 17AT



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Rev.	D	REMOVE CCH FROM DRAWING	3810	JL	24/04/2024	PCR	By	Date
		Description						

WIRING DIAGRAM - CRS20AT - CRS23AT



Rev: B	UPDATE POSITIONS OF TERMINALS AT XT2 & XT3	3803	JL	21/05/2024	Description	
			PCR	By	Date	
			JL	04/04/2024	Drawing No:	WD3105
			JL	21/05/2024	Approved:	
					Sheet:	1 / 1
					Revision:	B
Base Model No: CRS20/23AT			Variation Code:			STANDARD
Description: CRS20/23AT AIRES SERIES WIRING DIAGRAM						



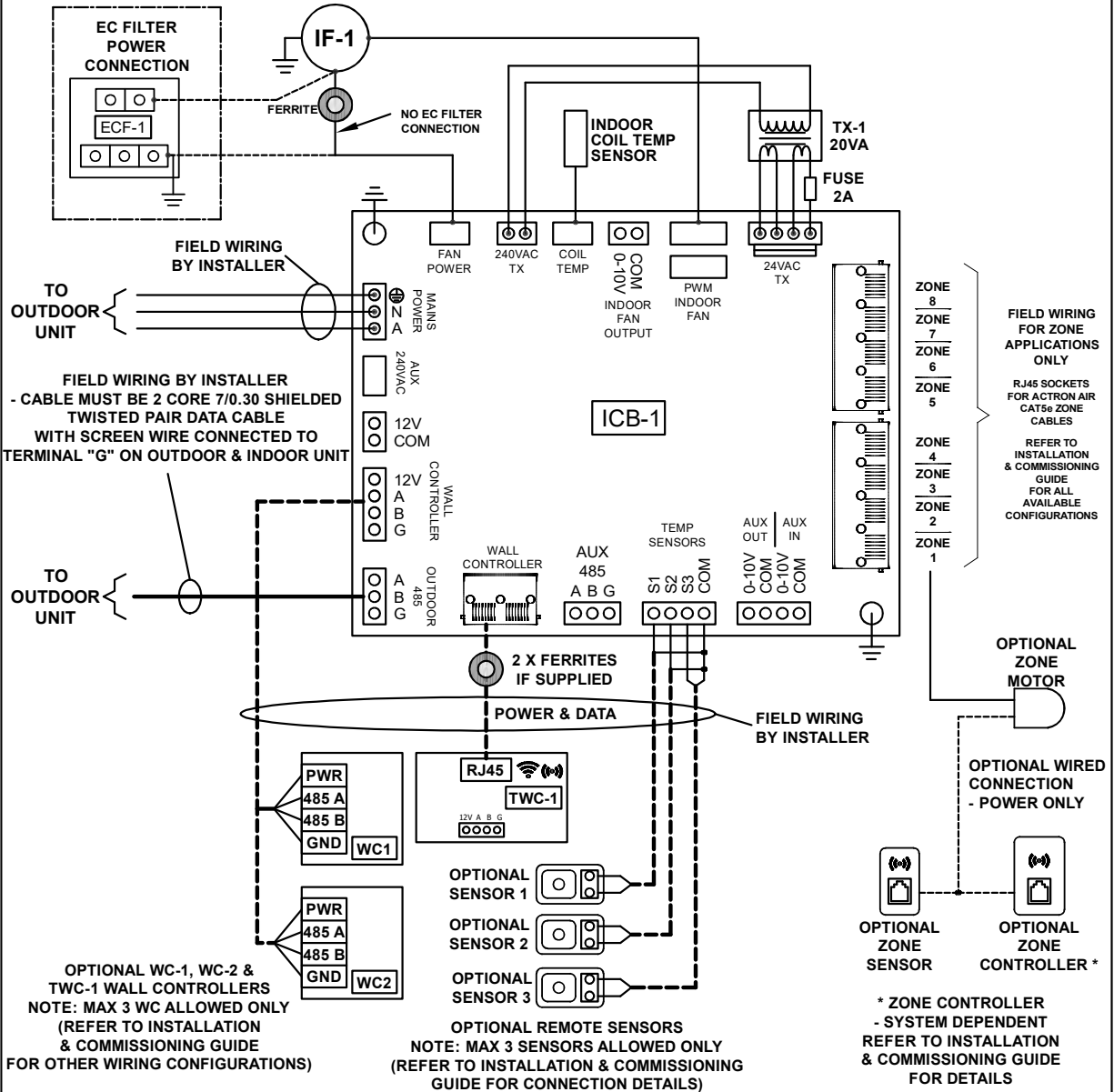
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WIRING DIAGRAM - EVA10AS



Base Model No.: EVA10AS	Variation Code:	Variation: STANDARD
Description: WIRING DIAGRAM INDOOR BOARD + 8 ZONES WITH 3 WALL CONTROLLERS		
Drawn: JL	13/05/2024	Drawing No: 0515-1102
Approved: JL	15/05/2024	Sheet: 1/1
		Revision: A

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WALL CONTROLLER WIRING

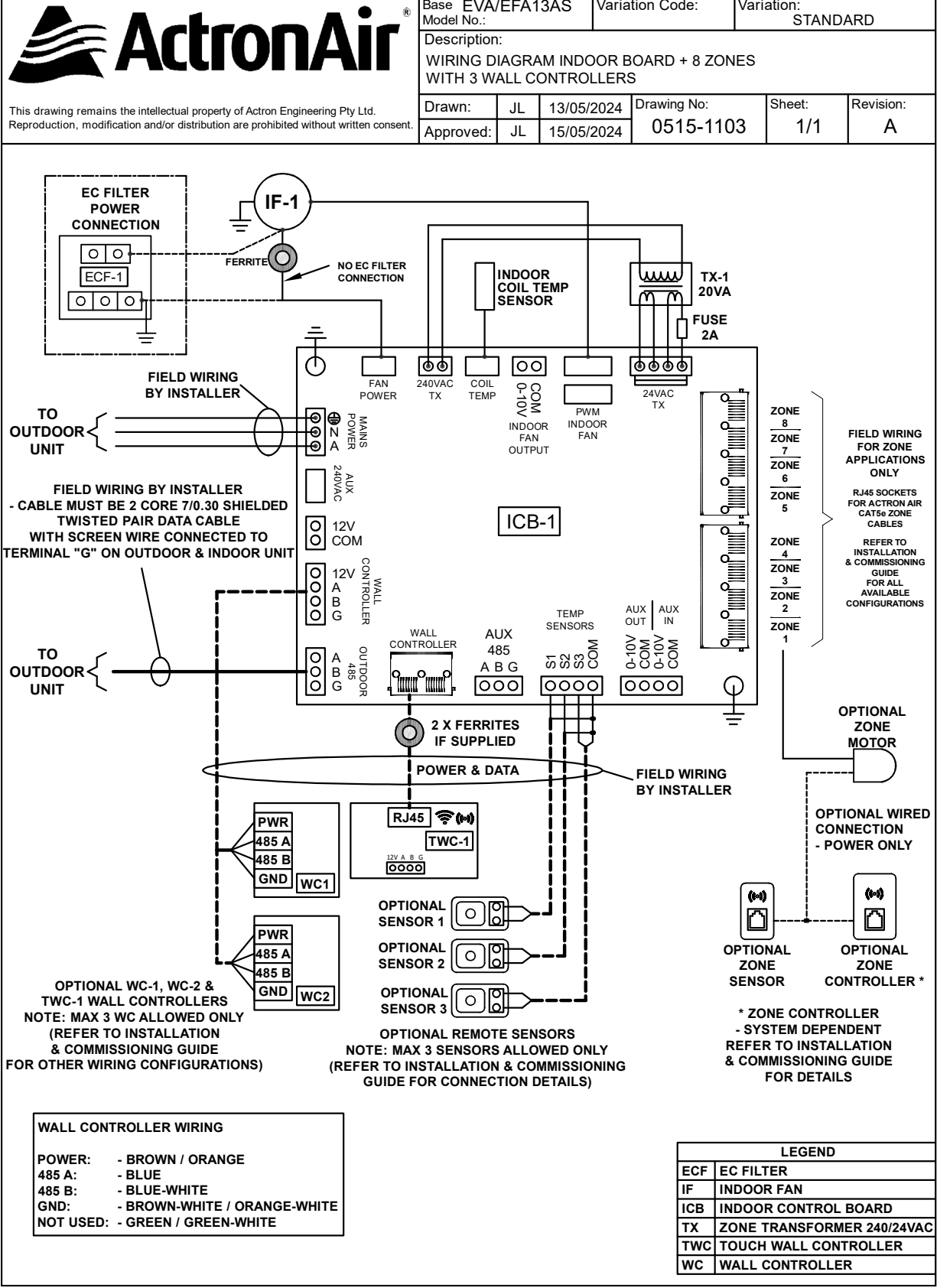
POWER:	- BROWN / ORANGE
485 A:	- BLUE
485 B:	- BLUE-WHITE
GND:	- BROWN-WHITE / ORANGE-WHITE
NOT USED:	- GREEN / GREEN-WHITE

LEGEND

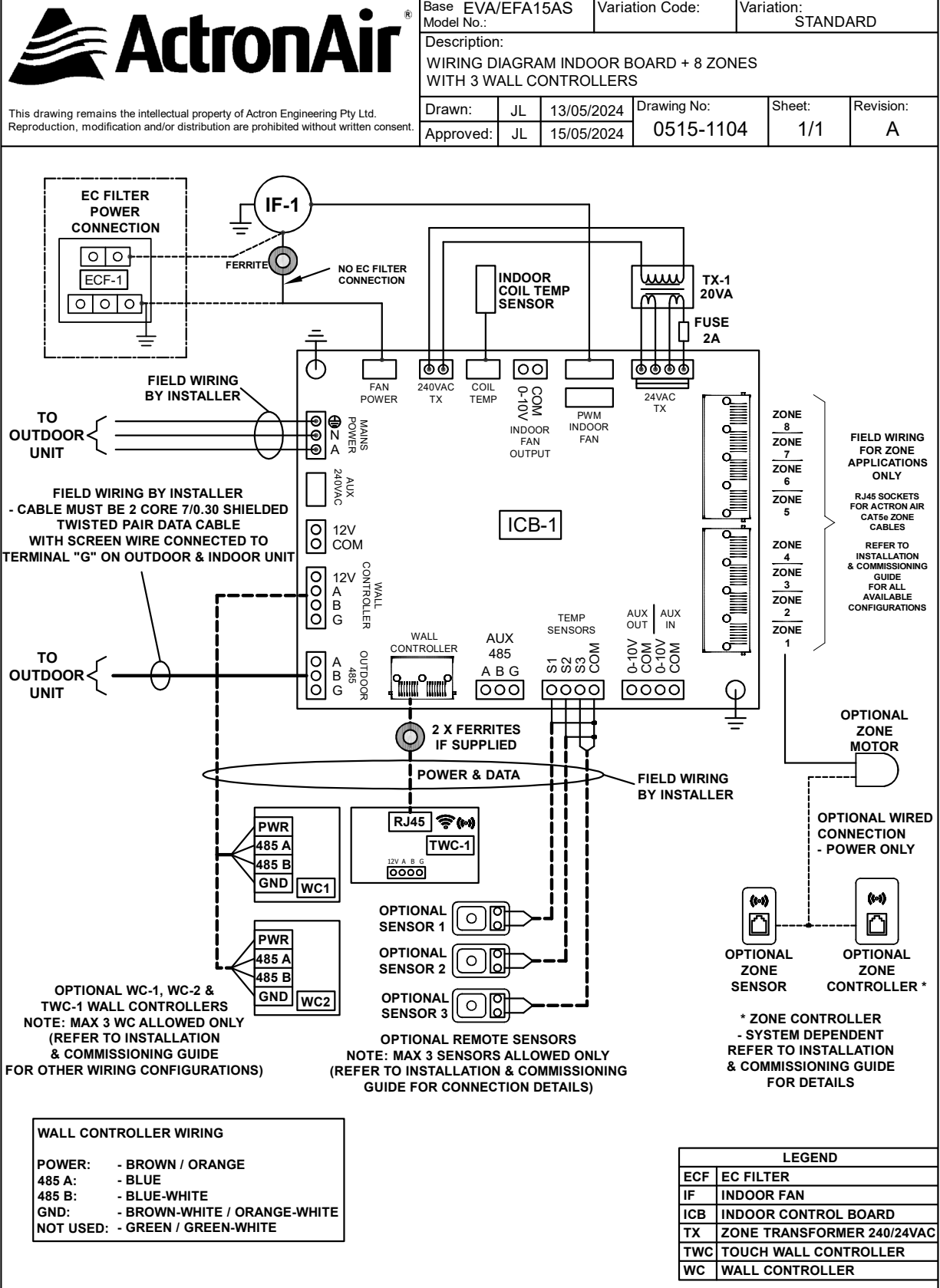
ECF	EC FILTER
IF	INDOOR FAN
ICB	INDOOR CONTROL BOARD
TX	ZONE TRANSFORMER 240/24VAC
TWC	TOUCH WALL CONTROLLER
WC	WALL CONTROLLER



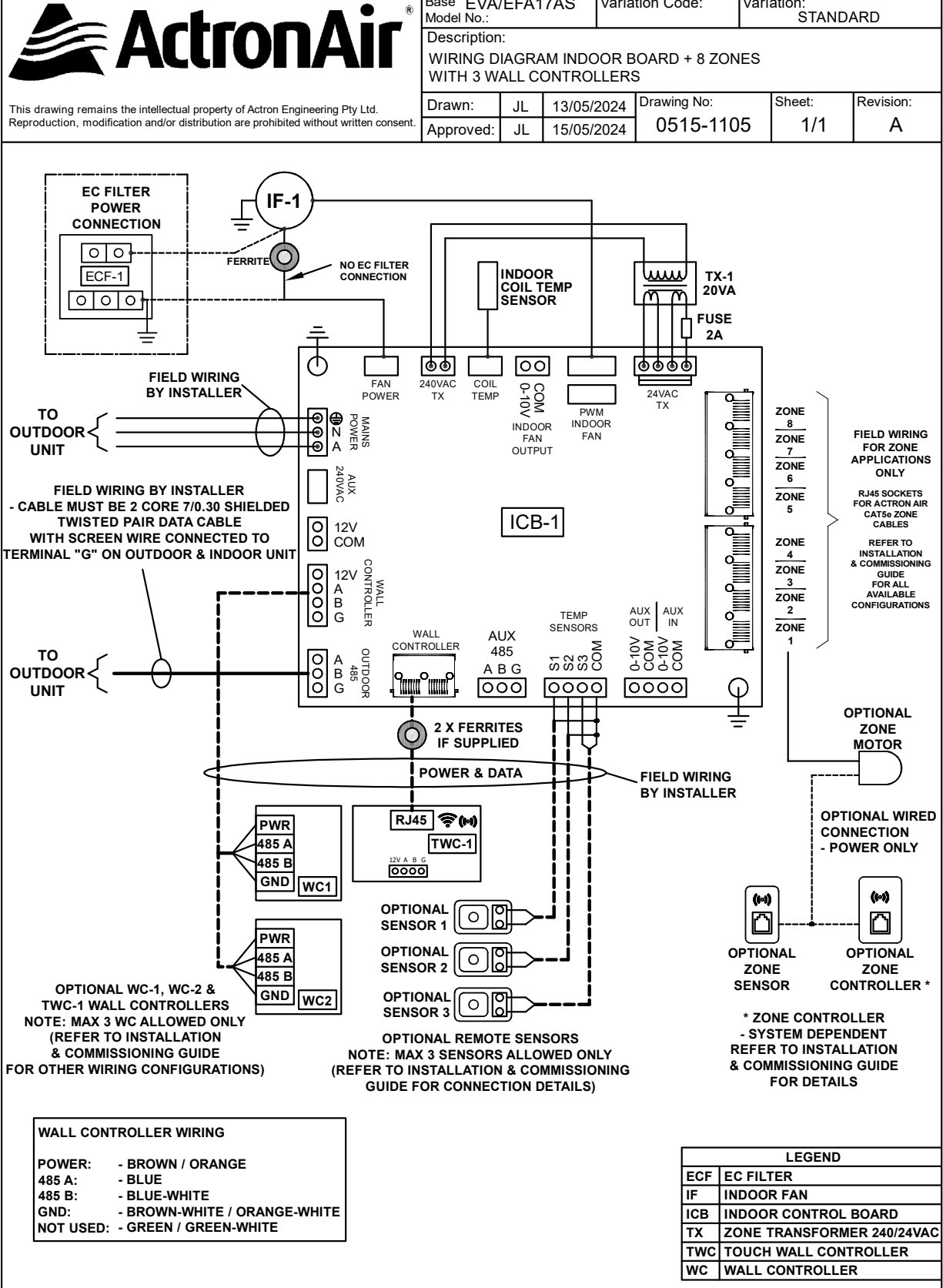
WIRING DIAGRAM - EVA/EFA13AS



WIRING DIAGRAM - EVA/EFA15AS



WIRING DIAGRAM - EVA/EFA17AS

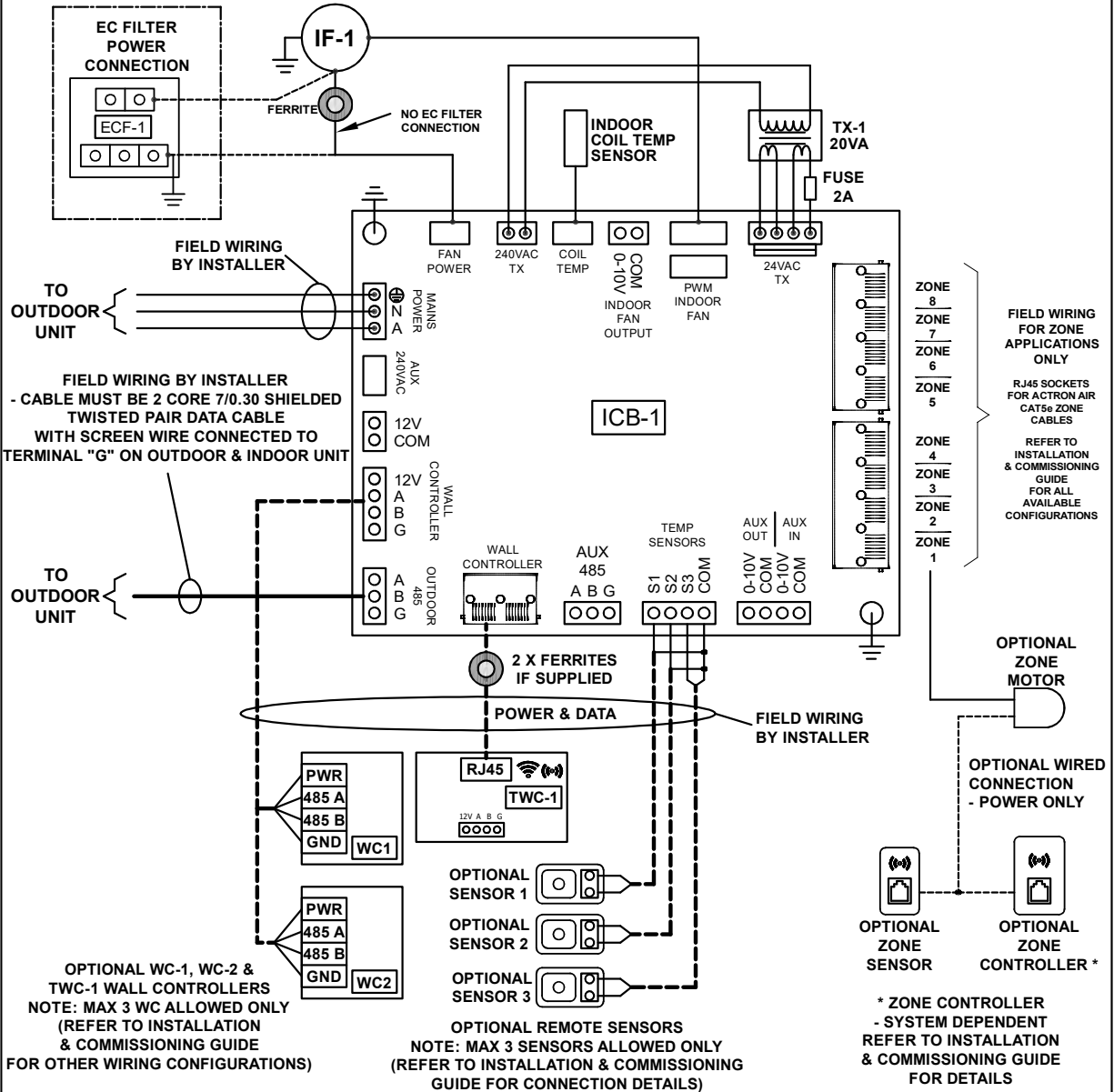


WIRING DIAGRAM - EVA/EFA20AS



Base EVA/EFA20AS		Variation Code:		Variation: STANDARD	
Model No.:					
Description: WIRING DIAGRAM INDOOR BOARD + 8 ZONES WITH 3 WALL CONTROLLERS					
Drawn:	JL	01/05/2024	Drawing No:	Sheet:	Revision:
Approved:	JL	15/05/2024	0515-1101	1/1	A

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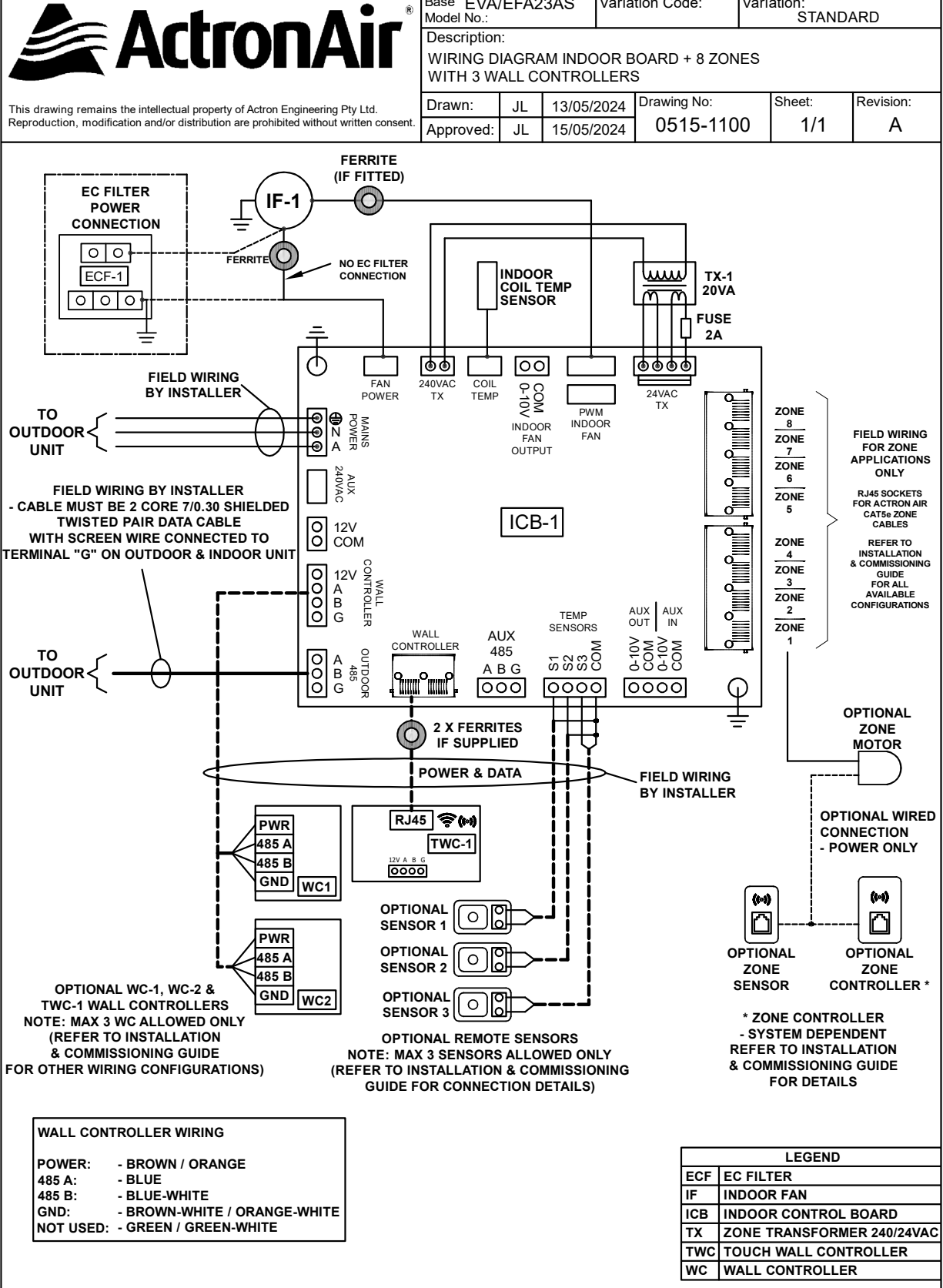


WALL CONTROLLER WIRING	
POWER:	- BROWN / ORANGE
485 A:	- BLUE
485 B:	- BLUE-WHITE
GND:	- BROWN-WHITE / ORANGE-WHITE
NOT USED:	- GREEN / GREEN-WHITE

LEGEND	
ECF	EC FILTER
IF	INDOOR FAN
ICB	INDOOR CONTROL BOARD
TX	ZONE TRANSFORMER 240/24VAC
TWC	TOUCH WALL CONTROLLER
WC	WALL CONTROLLER

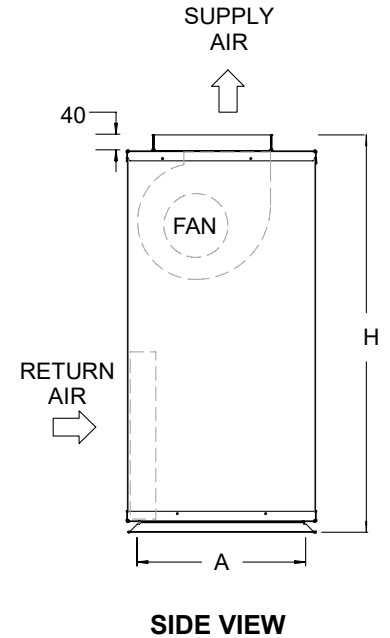
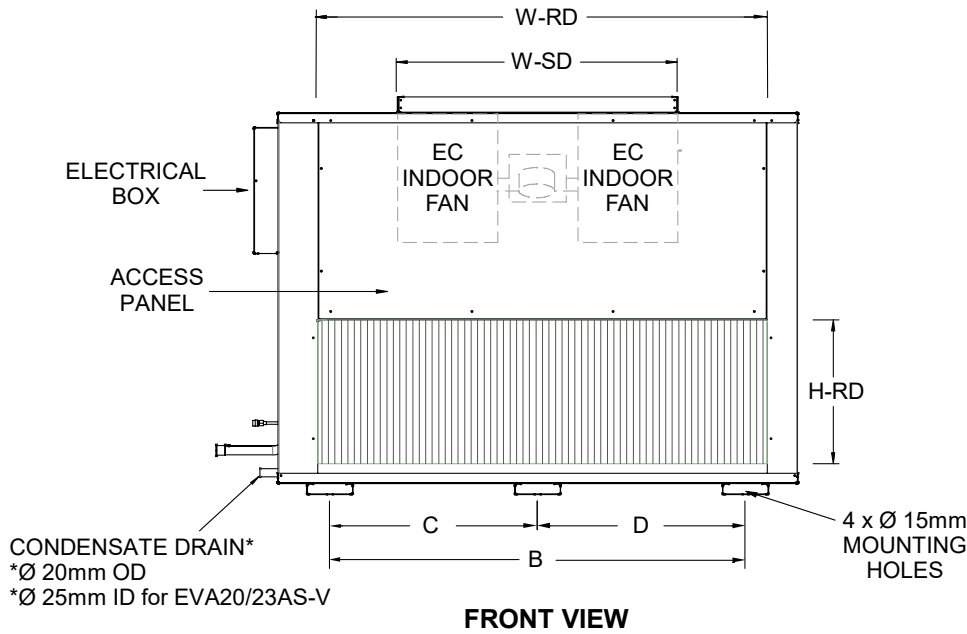
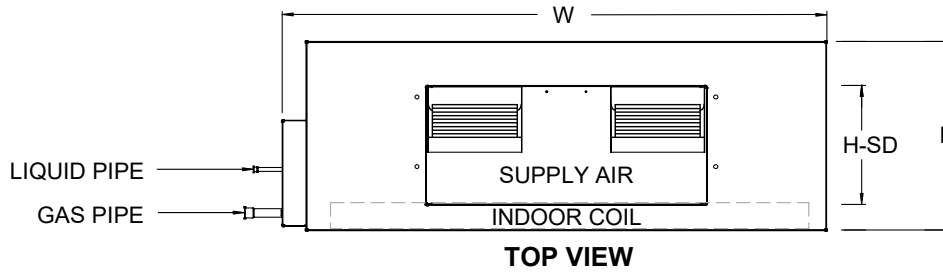


WIRING DIAGRAM - EVA/EFA23AS



INDOOR UNIT VARIATION - DIMENSION

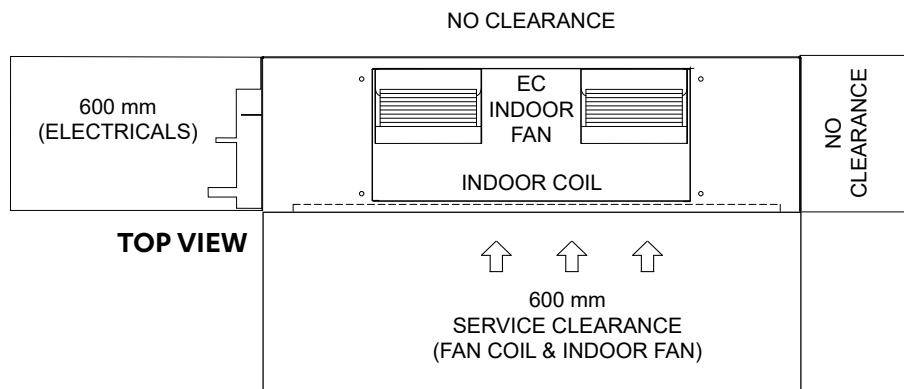
INDOOR UNIT - UPRIGHT FAN COIL WITH VERTICAL DISCHARGE



Unit Model Number	Overall Nominal Dimension (OA)			Mounting Distance Base Foot (Centre to Centre)				Supply Duct	Return Duct	Gas Pipe (Swaged)	Liquid Pipe (Swaged)
	H	W	L	A	B	C	D	H-SD x W-SD	H-RD x W-RD		
EVA10AS-V	870	830	405	350	545	-	-	300 x 500	365 x 650	Ø 15.88mm (5/8")	Ø 9.52mm (3/8")
EVA13AS-V	875	1075	405	350	790	-	-	300 x 715	365 x 895		
EVA15AS-V		1275			990	-	-		365 x 1095		
EVA17AS-V	1015	1390	480	430	-	530	530	405 x 1198			
EVA20AS-V	1066	1434	483		1056	528	528	380 x 717	405 x 1298		
EVA23AS-V		1534			1156	578	578				

SERVICE CLEARANCES, AIRFLOW ALLOWANCES AND WEIGHTS

INDOOR VERTICAL VARIATION

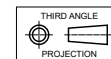


Unit Model Number	Total Weight Kg)
EVA10AS-V	36
EVA13AS-V	44
EVA15AS-V	53
EVA17AS-V	61
EVA20AS-V	72
EVA23AS-V	81

HEIGHT CLEARANCE = DUCT WORK

NOTES:

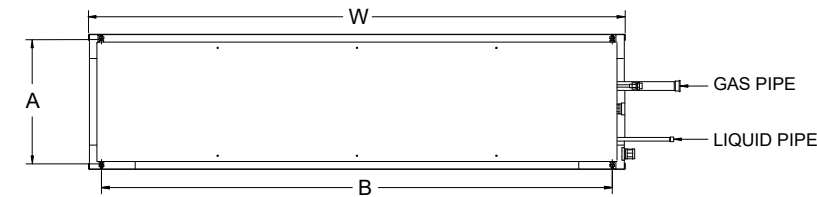
- Do not scale drawing. All dimensions are in **mm** unless otherwise specified. Refer to corresponding unit dimensional drawing for mounting hole details.
- Service Access Areas and Spaces for Airflow Clearances are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkway passage of 1000 mm between the units or between the unit and the outside perimeter is available.
- 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.
- Under all circumstances, condenser air must not recirculate back onto condenser coil. Keep all clearance free of any obstruction.
- Refer Pipe Connection Details on Specifications Sheet.
- MTG C-C DIST = Mounting Centre to Centre Distance.
- Use M12 bolt for feet mounting.
- For installation with release height less than or equal to 0.6m, minimum area will be computed based on release height of 0.6m.
- Where A_{min} (the minimum area required) is not satisfied, the installer must provide additional control measure/s in place as per AS/NZS 60335.2.40 standard for the installation to be acceptable.



The examples of controls measures are (but are not limited to): Ventilation, Shut Off Valves and Safety Alarm. These control measures are not provided by ActronAir and must be determined by the installer based on individual installation requirements.

TWO-PIECE FAN COIL

Coil Section - ECA13AS / ECA15AS / ECA17AS / ECA20AS / ECA23AS



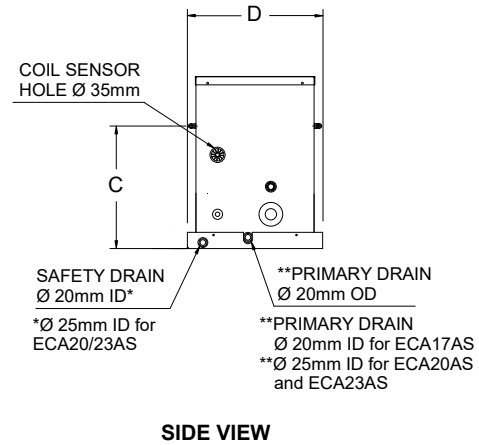
TOP VIEW



FRONT VIEW - SUPPLY AIR



REAR VIEW - RETURN AIR



SIDE VIEW

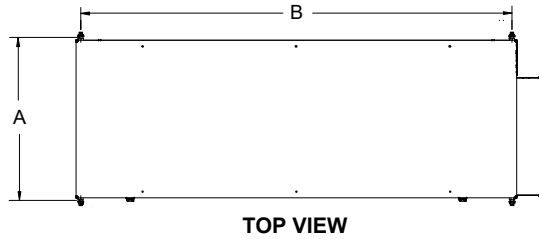
NOTES:

Drawing is subject to change without notice.
 ECA17AS model is shown for illustration purpose only.
 Actual unit may vary depending on unit model.

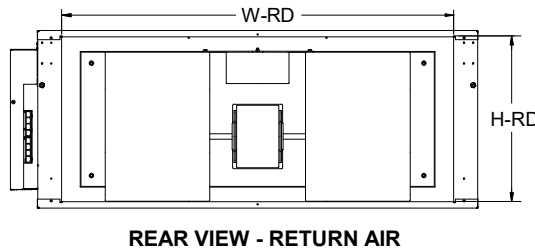
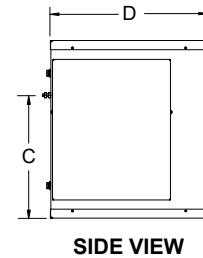
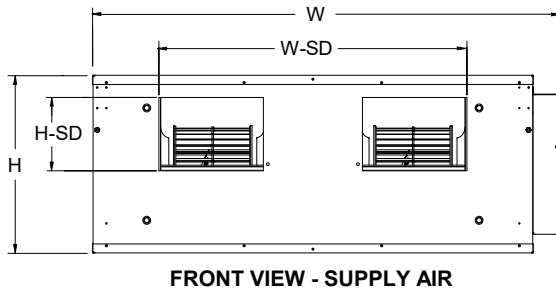
Unit Model Number	Overall Nominal Dimension (OA)			Mounting Distance (Centre to Centre)			Supply Duct	Return Duct	Gas Pipe	Liquid Pipe
	H	W	D	A	B	C	H-SD x W-SD	H-RD x W-RD		
ECA13AS	410	1054	342	310	990	284	345 x 900	345 x 900	Ø 19.05mm (3/4") Swaged	Ø 9.52mm (3/8") Swaged
ECA15AS		1252			1190	283				
ECA17AS	435	1360			1294	310	362 x 1094	362 x 1094		
ECA20AS	487	1410	1345		361	411 x 1094	411 x 1094			
ECA23AS		1510	1445			411 x 1194	411 x 1194			

TWO-PIECE FAN COIL

Fan Section - EFA13AS / EFA15AS / EFA17AS / EFA20AS / EFA23AS

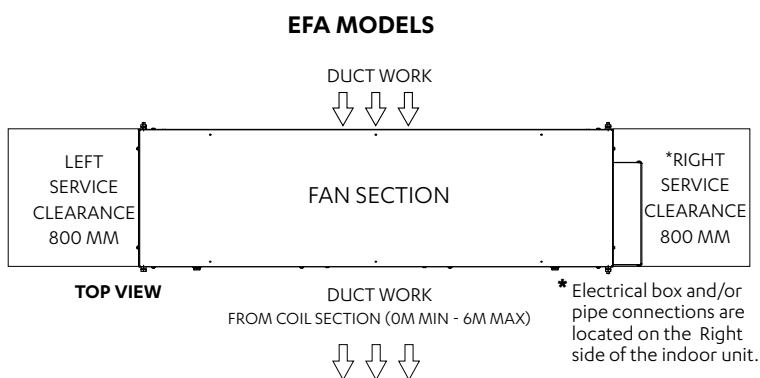
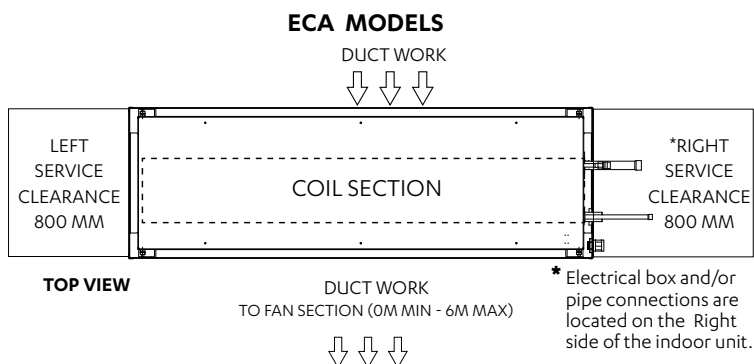


NOTES:
 Drawing is subject to change without notice.
 Image shown is for illustration purpose only.
 Actual unit may vary depending on unit model.

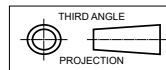


Unit Model Number	Overall Nominal Dimension (OA)			Mounting Distance (Centre to Centre / Base Foot)			Supply Duct	Return Duct
	H	W	D	A	B	C	H-SD x W-SD	H-RD x W-RD
EFA13AS	408	1072	362	370	990	282	186 x 708	378 x 900
EFA15AS								
EFA17AS								
EFA20AS	483	1269	412	422	1185	358	305 x 734	453 x 1195
EFA23AS		1369			1285			

SERVICE CLEARANCES, AIRFLOW ALLOWANCES AND WEIGHTS



NOTES:



- Do not scale drawing.
- All dimensions are in **mm** unless otherwise specified. Refer to corresponding unit dimensional drawing for mounting hole details.
- Service Access Areas and Spaces for Airflow Clearances are suggested minimum based on the condition that the spaces around the units are free from any obstructions and a walkway passage of 1000 mm between the units or between the unit and the outside perimeter is available.
- 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.
 - Left Service Clearance can be 100mm minimum if Right Service Clearance is applicable.
 - Right Service Clearance can be 600mm minimum if Left Service Clearance is applicable.
 - Height Service Clearance can be 100mm minimum if Right Service Clearance is applicable.
- For installation with release height less than or equal to 0.6m, minimum area will be computed based on release height of 0.6m.
- Where A min (the minimum area required) is not satisfied, the installer must provide additional control measure/s in place as per AS/NZS 60335.2.40 standard for the installation to be acceptable.

The examples of controls measures are (but are not limited to): Ventilation, Shut Off Valves and Safety Alarm. These control measures are not provided by ActronAir and must be determined by the installer based on individual installation requirements.

Model Number	Weight (kg)	Height Clearance
ECA13AS	28.5	340
ECA15AS	37.5	
ECA17AS	45.5	410
ECA20AS	TBD	
ECA23AS	TBD	
EFA13AS	35	340
EFA15AS	44	
EFA17AS	50.5	
EFA20AS	TBD	410
EFA23AS	TBD	

AIRES Split Ducted Unit

Index

- Technical Selection Data (Unit and Control Features)
- Specification Summary
- Capacity Selection Data
- Three Speed Fan Curves
- Third Party Control Fan Curves
- Outdoor Unit Dimensions
- Indoor Unit Dimensions
- Indoor and Outdoor Service Clearances and Weights
- Sound Data
- Specifications
- Wiring Diagram - Single Phase
- Wiring Diagram - Three Phase
- Wiring Diagram - Indoor Units
- Indoor Unit Variation Dimensions
- Indoor Unit Variations Service Clearances and Weights
- Coil Section Unit Dimensions
- Fan Section Unit Dimensions
- Two-Piece Fan Coil Service Clearances and Weights