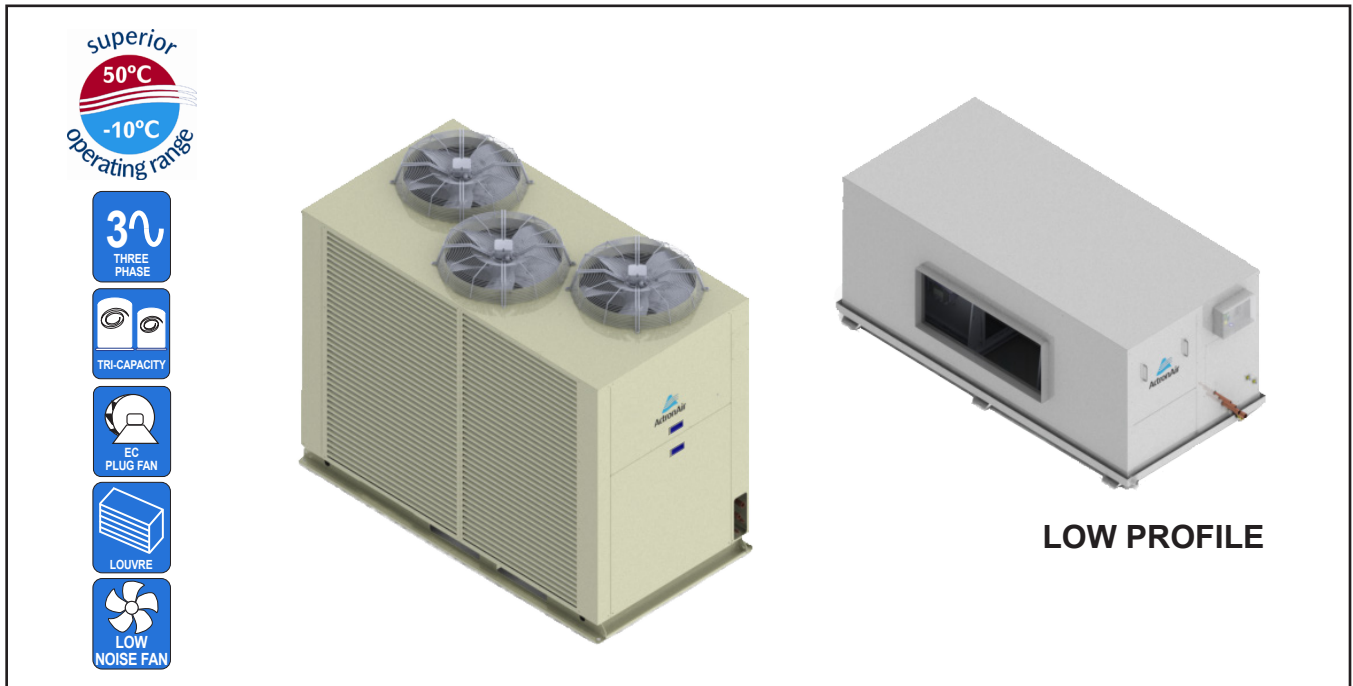


# TRI-CAPACITY SPLIT DUCTED UNIT



## UNIT FEATURES

- Compliant Scroll Compressors
- Tri-Capacity 33% 67% 100% Capacity Stages
- Quad Thermostatic Expansion Valves
- Pre-charged with R-410A Refrigerant
- Two Speed Outdoor Fans
- Blue Hydrophilic Coat Coil Fin Protection - Indoor and Outdoor Coils
- Louvred Outdoor Coil Guard
- External Stainless Steel Screws - Outdoor Unit
- Adaptive Demand Defrost
- EC Variable Speed Backward Curve Plug Fan
- Adjustable Indoor Airflow via Control Interface
- Foil Faced Polyethylene Insulation
- Integrated Condensate Safety Drain Tray

## UNIT OPTIONS

- Low Ambient / High Static Outdoor Fans
- <sup>(9)</sup>Economy Starter Kit
- Compressor Soft Starters
- Phase Protection
- Additional Full Coil Coat Protection

## CONTROL FEATURES

### ActronAir CP05 / CP10

- Auto / Cool / Heat / Fan Only Modes
- 7-Day Time Clock with 2 On/Off Events per Day
- 12 Programmable Special Days with 2 On/Off Events per Day
- Daylight Saving Time Function
- Indoor Coil Anti-Freeze Protection
- HP / LP Safety Protection
- Alarm Fault Data Logger
- LCD Screen Displays Operating Status, Mode and Menu Information
- Night Mode Function

## CONTROL OPTIONS

### ActronAir CL01-2 (BCA Compliant) - Purchased Separately

- Available in White or Grey
- 7-Day Time Clock with 2 On/Off Events per Day

### Optional BMS Control - Purchased Separately

- MODBUS 485 / BACNET 485 / BACNET TCP/IP

### Optional 3rd Party Control Inputs

## UNIT COMPLIANCE

- MEPS 2012
- Demand Response AS4755.3.1:2012
- EMC Compliant
- BCA Compliant with CL01-2 Control Interface

## SPECIFICATION SUMMARY

OUTDOOR UNIT MODEL	CAY500T	
INDOOR UNIT MODEL	ELY500T	
	<sup>(1)</sup> TOTAL	<sup>(2)</sup> NETT
<sup>(3)</sup> COOLING CAPACITY (kW)	50.10	48.60
<sup>(3)</sup> SENSIBLE CAPACITY (kW)	42.81	41.31
<sup>(4)</sup> HEATING CAPACITY (kW)	50.40	51.90
<sup>(5)</sup> COOLING INPUT POWER (kW)	15.23	
<sup>(5)</sup> HEATING INPUT POWER (kW)	15.36	
EER	3.29	3.19
COP	3.28	3.38
<sup>(6)</sup> INDOOR AIRFLOW (l/s) - MIN. / NOMINAL / MAX.	2000 / 2600 / 3100	
OUTDOOR SOUND PRESS. LEVEL @ 3M dB(A) - LOW / HIGH	58.0 / 63.0	
OUTDOOR SOUND POWER LEVEL dB(A) - LOW / HIGH	75.0 / 80.0	
POWER SUPPLY - OUTDOOR	400V / 3Ph+N / 50Hz	
POWER SUPPLY - INDOOR	400V / 3Ph+N / 50Hz	
<sup>(2)</sup> RATED LOAD AMPS - OUTDOOR / INDOOR / TOTAL	27.7 / 2.7 / 30.4	
<sup>(7)</sup> FULL LOAD AMPS - OUTDOOR / INDOOR / TOTAL	36.4 / 5.2 / 41.6	
<sup>(8)</sup> CIRCUIT BREAKER AND CABLE AMPS	50.0	
APPROXIMATE STARTING AMPS	118.0	
WEIGHT (kg) - INDOOR / OUTDOOR	239 / 542	

- <sup>(1)</sup> Based on unit rating excluding indoor fan kW.
- <sup>(2)</sup> Measured and tested in accordance with AS/NZS 3823.1.2.
- <sup>(3)</sup> At 27°C DB / 19°C WB entering air temperatures and 35°C ambient.
- <sup>(4)</sup> At 20°C DB entering air temperature and 7°C DB / 6°C WB ambient.
- <sup>(5)</sup> Input power includes indoor fan kW.
- <sup>(6)</sup> Max. - Min. airflow application range.
- <sup>(7)</sup> Full Load Amps are based on compressor and fan motors' maximum expected current.
- <sup>(8)</sup> See Specifications sheet for cable size and circuit breaker size details.
- <sup>(9)</sup> Room Air Sensor needs to be relocated by the installer specific to site requirements.

Note: Use input power to estimate running cost.

3 Phase  
Tri-Capacity

50.10 kW



# CAPACITY SELECTION DATA

# CAY500T / ELY500T

## COOLING PERFORMANCE

AIR ENTERING			TOTAL SENSIBLE CAPACITY - kW												
OUTDOOR DB - °C	INDOOR WB - °C	TOTAL CAPACITY kW	AT DB TEMPERATURE ONTO INDOOR COIL - °C												
			20	21	22	23	24	25	26	27	28	29	30		
25	16	51.13	34.52	37.43	39.90	42.67	45.33	48.00							
	17	52.20	31.52	34.44	37.33	40.04	42.59	45.31	47.90						
	18	53.46	28.44	31.42	34.34	37.22	40.09	42.46	45.17	47.83	50.50				
	19	55.03	25.34	28.34	31.30	34.23	37.09	39.96	42.35	45.11	47.74	50.43	52.99		
	20	56.49	22.23	25.24	28.19	31.15	34.06	36.95	39.80	42.48	45.00	47.67	50.33		
	21	58.00		22.07	25.05	28.07	31.02	33.94	36.83	39.64	42.47	44.85	47.55		
30	16	48.95	33.47	36.32	38.83	41.57	44.24	46.82							
	17	50.05	30.46	33.38	36.24	38.74	41.51	44.18	46.80						
	18	51.25	27.42	30.37	33.28	36.11	39.03	41.42	44.12	46.75	49.34				
	19	52.72	24.36	27.30	30.27	33.17	36.01	38.89	41.31	44.03	46.69	49.32			
	20	54.23	21.22	24.21	27.19	30.13	33.06	35.90	38.76	41.18	43.89	46.57	49.23		
	21	55.55		21.07	24.09	27.02	29.97	32.89	35.78	38.45	41.32	43.78	46.45		
35	16	46.87	32.24	35.11	37.61	40.32	42.96	45.51							
	17	47.63	29.29	32.16	35.05	37.52	40.26	42.96	45.49						
	18	48.71	26.23	29.21	32.13	34.93	37.45	40.21	42.87	45.48					
	19	50.10	23.18	26.16	29.09	32.02	34.86	37.73	40.09	42.81	45.43	48.03			
	20	51.51	20.07	23.05	26.03	28.98	31.90	34.73	37.57	39.98	42.72	45.38	47.97		
	21	52.79		19.92	22.94	25.92	28.85	31.76	34.62	37.42	39.85	42.60	45.29		
40	16	44.59	30.91	33.71	36.24	38.98	41.55								
	17	45.00	27.98	30.88	33.72	36.20	38.93	41.55							
	18	45.93	24.96	27.92	30.81	33.64	36.11	38.85	41.53	44.06					
	19	47.18	21.92	24.88	27.83	30.71	33.53	36.01	38.77	41.45	44.05				
	20	48.51	18.80	21.79	24.79	27.71	30.63	33.44	36.29	38.69	41.38	44.03	46.56		
	21	49.70		18.49	21.49	24.66	27.59	30.50	33.34	36.12	38.56	41.30	43.96		
45	16	42.04	29.47	31.96	34.89	37.44	39.95								
	17	42.05	26.58	29.42	32.15	34.72	37.40	40.00							
	18	42.86	23.57	26.47	29.35	32.21	34.63	37.37	40.00						
	19	44.01	20.53	23.49	26.42	29.27	32.12	34.56	37.29	39.95	42.49				
	20	45.17	17.46	20.43	23.40	26.32	29.20	32.00	34.47	37.21	39.89	42.51			
	21	46.32		17.34	20.35	23.31	26.22	29.11	31.91	34.59	37.11	39.81	42.45		
50	16	39.14	27.85	30.36	33.11	35.74									
	17	39.16	24.98	27.82	30.33	33.09	35.79								
	18	39.53	22.01	24.95	27.77	30.26	33.04	35.73							
	19	40.43	19.00	21.94	24.88	27.72	30.53	32.96	35.67	38.26					
	20	41.48	15.93	18.92	21.86	24.80	27.62	30.42	32.88	35.58	38.22				
	21	42.58		15.85	18.83	21.77	24.70	27.54	30.34	32.81	35.48	38.17	40.76		
22	43.70			15.74	18.69	21.64	24.60	27.42	30.23	32.69	35.38	38.08			

## HEATING PERFORMANCE

WB TEMP ON OD 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	33.14	31.15	32.93	30.95	32.73	30.77	32.52	30.57	32.32	30.38
-8	35.12	32.66	34.90	32.46	34.69	32.26	34.45	32.04	34.20	31.81
-6	37.17	34.20	36.94	33.98	36.70	33.76	36.45	33.53	36.26	33.35
-4	39.33	35.20	39.06	34.96	38.83	34.75	38.52	34.48	38.32	34.30
-2	41.60	36.20	41.31	35.94	41.01	35.68	40.74	35.44	40.33	35.09
0	43.95	37.80	43.62	37.52	43.30	37.24	43.04	37.02	42.63	36.66
2	46.19	41.11	45.86	40.82	45.50	40.50	45.22	40.25	44.77	39.85
4	48.64	46.21	48.29	45.88	47.87	45.48	47.56	45.18	47.08	44.73
6	51.21	51.21	50.80	50.80	<b>50.40</b>	<b>50.40</b>	49.99	49.99	49.48	49.48
8	53.97	53.97	53.50	53.50	53.10	53.10	52.53	52.53	52.06	52.06
10	56.85	56.85	56.28	56.28	55.81	55.81	55.23	55.23	54.77	54.77
12	59.68	59.68	59.23	59.23	58.62	58.62	58.09	58.09	57.49	57.49
14	62.79	62.79	62.21	62.21	61.62	61.62	60.98	60.98	60.45	60.45
16	65.97	65.97	65.32	65.32	64.66	64.66	64.12	64.12	63.43	63.43
18	69.23	69.23	68.66	68.66	67.98	67.98	67.31	67.31	66.58	66.58

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

## AIRFLOW CORRECTION MULTIPLIER

% VARIATION	-23.08%	-15%	-10%	-5%	NOMINAL	5%	10%	15%	19.23%
INDOOR AIRFLOW (l/s)	2000	2210	2340	2470	<b>2600</b>	2730	2860	2990	3100
TOTAL COOLING	0.960	0.972	0.983	0.992	<b>1.000</b>	1.007	1.016	1.023	1.031
SENSIBLE COOLING	0.888	0.920	0.948	0.974	<b>1.000</b>	1.025	1.051	1.075	1.104
HEATING FACTOR	0.986	0.991	0.994	0.998	<b>1.000</b>	1.003	1.005	1.006	1.008

### 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

	5 m	10 m	20 m	30 m	40 m	50 m	60 m	70 m	75 m
COOLING	<b>1.000</b>	0.998	0.981	0.978	0.969	0.960	0.950	0.940	0.934
HEATING	<b>1.000</b>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Correction multipliers are based on horizontal pipe runs.



# INDOOR FAN DATA / FAN CURVE

# CAY500T/ ELY500T

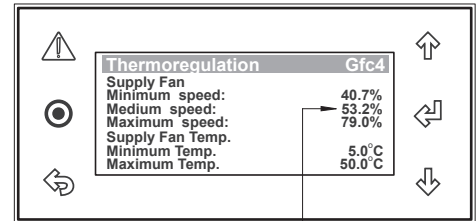
## FAN PERFORMANCE DATA

AIR FLOW (l/s)	EXTERNAL STATIC PRESSURE (Pa)																			
	50		100		150		200		250		300		350		400		450		500	
	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W	% Spd.	W
2000	40.7	585.6	44.2	748.3	47.4	918.7	50.2	1082.2	52.8	1253.5	55.2	1411.5	57.6	1593.2	59.7	1758.0	61.7	1912.2	63.7	2032.5
2100	42.3	644.0	45.7	814.0	48.7	1005.3	51.6	1180.5	54.1	1337.5	56.5	1511.0	58.8	1687.8	60.9	1851.4	62.8	2004.3	64.6	2137.3
2200	43.9	711.2	47.2	888.3	50.1	1068.0	52.9	1251.3	55.4	1412.9	57.8	1612.3	60.0	1784.8	62.0	1969.3	63.9	2141.5	65.8	2242.0
2300	45.5	775.0	48.7	971.6	51.6	1156.3	54.3	1330.6	56.7	1520.7	59.0	1717.9	61.2	1902.2	63.1	2078.1	65.0	2246.6	67.0	2247.5
2400	47.1	845.5	50.2	1037.1	53.0	1228.7	55.6	1415.7	58.0	1614.3	60.3	1806.8	62.3	1999.2	64.3	2182.5	66.3	2368.1	68.3	2366.0
2500	48.7	913.2	51.7	1125.9	54.4	1311.9	57.0	1513.8	59.3	1712.0	61.5	1912.6	63.5	2104.3	65.5	2295.2	67.5	2491.5	69.5	2489.5
<b>2600</b>	50.4	1008.4	<b>53.2</b>	<b>1208.0</b>	55.9	1402.1	58.3	1611.5	60.6	1813.7	62.7	2020.6	64.7	2215.1	66.8	2432.5	68.8	2644.4	70.9	2766.3
2700	52.0	1027.4	54.7	1293.7	57.3	1504.8	59.7	1708.5	61.9	1919.9	64.0	2127.5	66.1	2349.1	68.1	2567.8	70.1	2782.5	72.4	2780.1
2800	53.6	1180.0	56.2	1379.2	58.8	1603.1	61.0	1813.1	63.1	2027.0	65.2	2241.2	67.4	2481.7	69.5	2702.0	71.7	2940.5	73.9	2938.2
2900	55.2	1256.5	57.7	1480.9	60.2	1704.5	62.3	1924.2	64.4	2135.9	66.6	2376.8	68.8	2617.4	70.9	2847.9	73.2	3089.0	75.5	3280.0
3000	56.8	1361.2	59.2	1584.2	61.6	1819.6	63.6	2036.8	65.7	2261.8	68.0	2511.6	70.2	2754.6	72.5	2999.4	74.7	3236.3	77.7	3347.5
3100	58.3	1467.4	60.7	1692.9	63.0	1933.0	65.0	2147.6	67.3	2403.0	69.4	2646.9	71.7	2901.8	74.1	3156.9	76.1	3418.0	79.0	3415.0

### NOTES:

- % Speed = Indoor Fan Speed Control Setting, in percent (Value is set on the Control Interface via Service Menu \*).
- W = Indoor Fan Power, Watts
- Data in the box indicates Factory Default Setting.

\*Service → Service Settings → Thermoregulation → Thermoregulation Gfc4

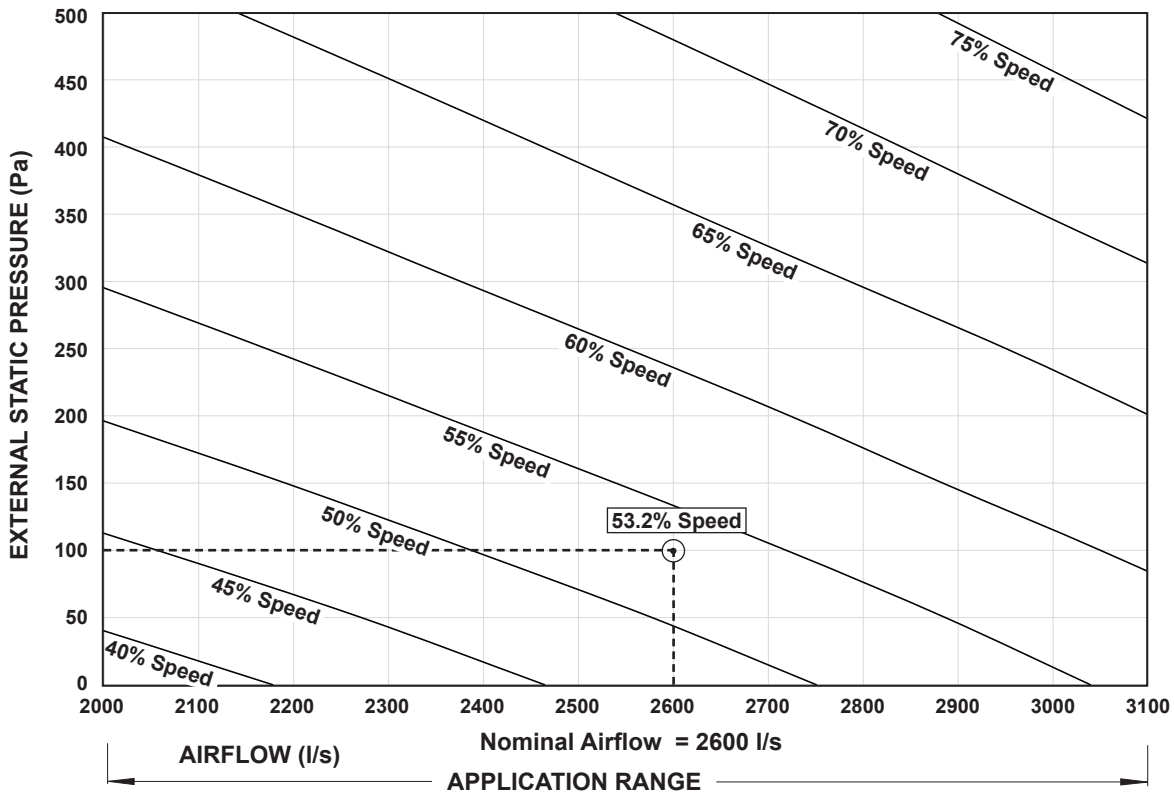


Set Fan Speed →

3 Phase  
Tri-Capacity

50.10 kW

## INDOOR UNIT FAN CURVE



### NOTE:

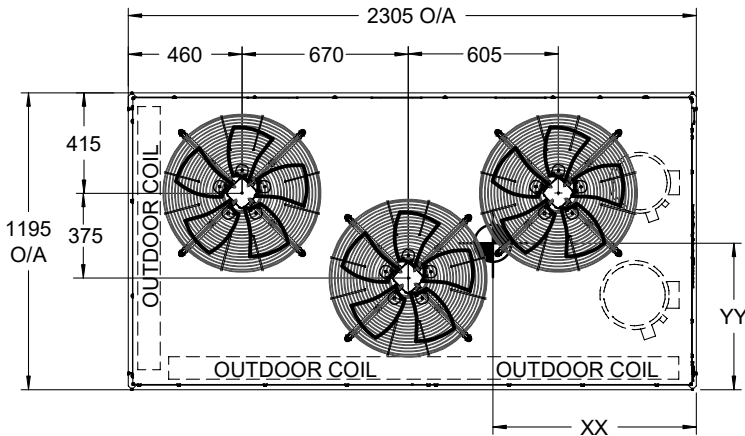
Fan Performance Data and Fan Curve shown is at dry coil and with no air filters installed. Consider external static pressure drop specific to your design requirements. Airflow should be reduce with respect to the moisture content in the air. Please review filter manufacturer for application. 2.5 m/s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



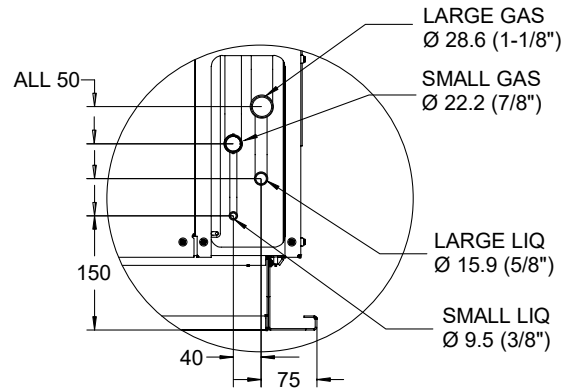
# OUTDOOR UNIT DIMENSIONS

# CAY500T

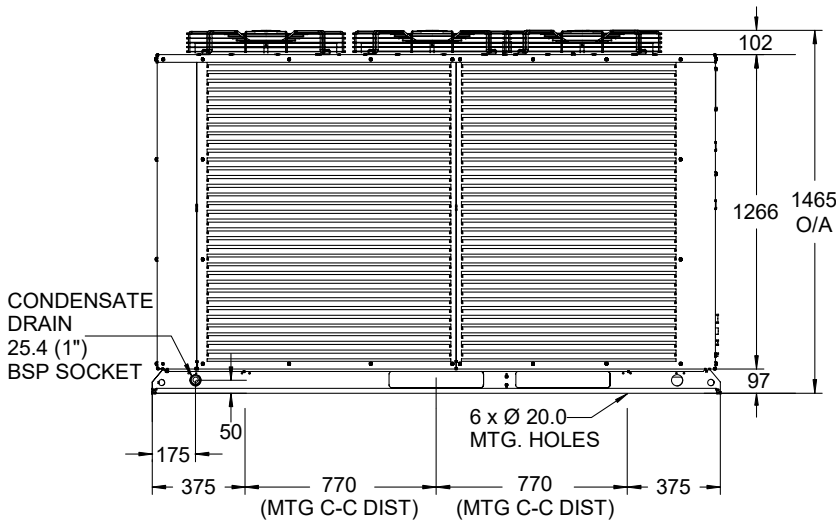
OVERALL NOMINAL DIMENSION (H x W x D)  
= 1465 x 2305 x 1195



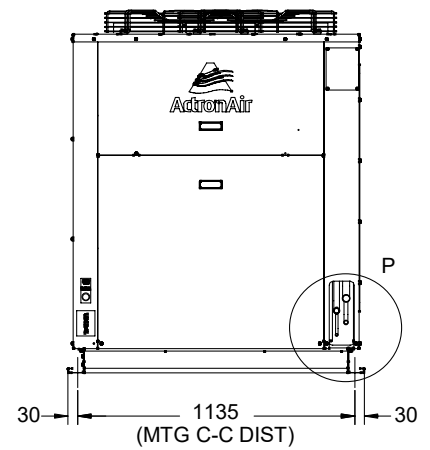
TOP VIEW



DETAIL P



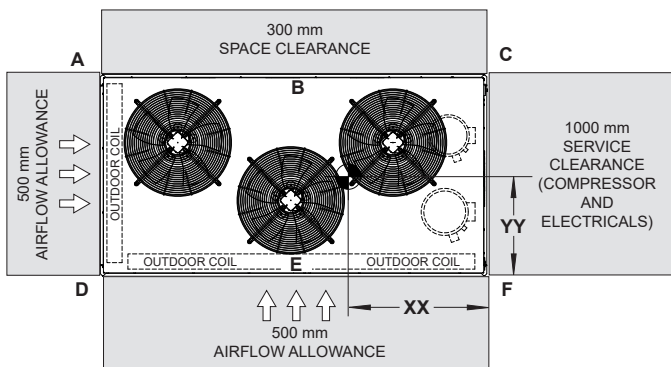
SIDE VIEW



FRONT VIEW

UNIT MODEL NUMBER	UNIT WEIGHT	CORNER WEIGHTS (kg)						CENTRE OF GRAVITY POSITION	
		A	B	C	D	E	F	XX	YY
CAY500T	542	64	61	113	88	88	128	931	569

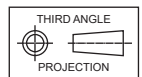
## SERVICE ACCESS AREAS AND AIRFLOW ALLOWANCES



TOP VIEW

HEIGHT CLEARANCE = 1500

### NOTES:



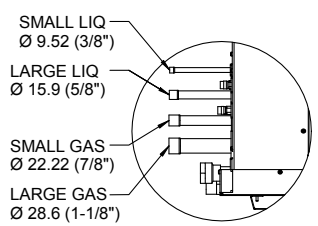
- Do not scale drawing. All dimensions are in mm unless otherwise specified. Refer to corresponding unit dimensional drawing for mounting hole details.
- Service Access Areas and Spaces for Airflow Clearances are suggested minimum based on the condition that the spaces around the units are free from 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.
- STACKING OF UNITS: Ensure that minimum airflow and clearances are met.
- Refer to Pipe Connection Details on Specifications Sheet.
- MTG C-C DIST = Mounting Centre to Centre Distance.
- Use M12 bolt for feet mounting.



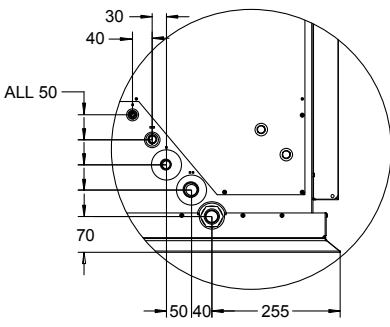
# INDOOR UNIT DIMENSIONS

# ELY500T

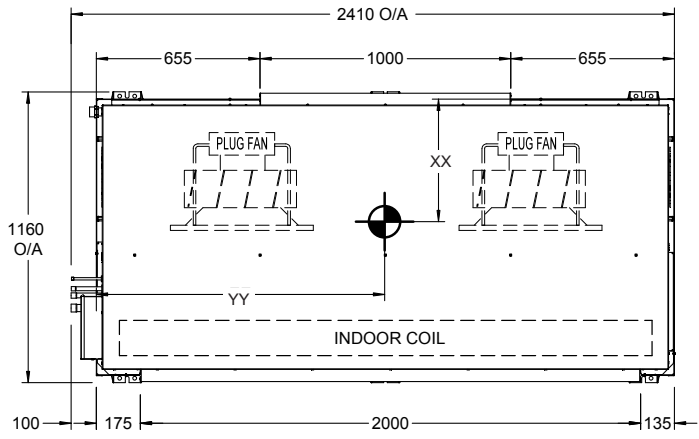
DIMENSION (H x W x D) = 770 x 2410 x 1160  
 SUPPLY DUCT (H x W) = 380 x 1000  
 RETURN DUCT = 620 x 2000  
 USE M12 BOLT FOR FEET MOUNTING



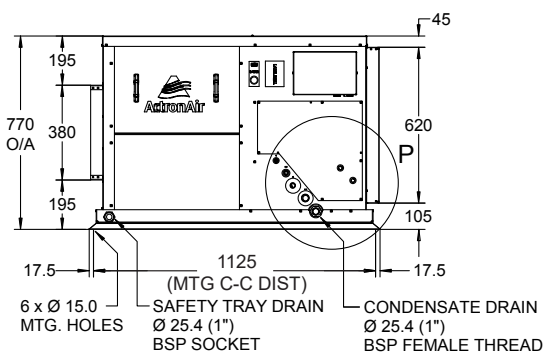
DETAIL T



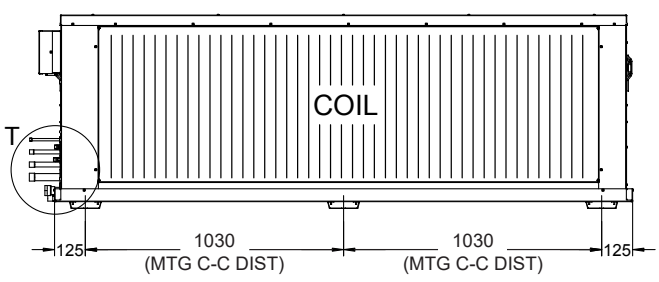
DETAIL P



TOP VIEW



SIDE VIEW

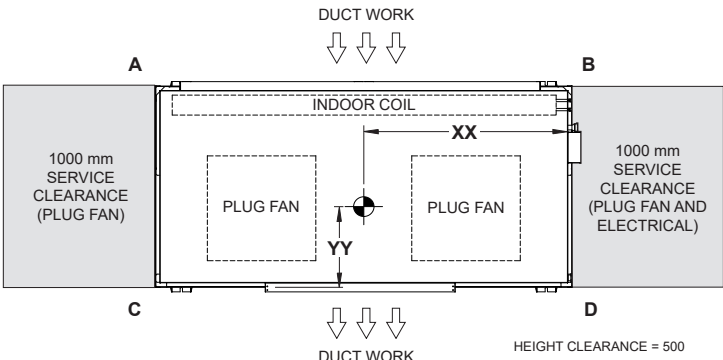


REAR VIEW

3 Phase  
 Tri-Capacity  
 50.10 kW

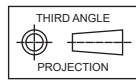
UNIT MODEL NUMBER	UNIT WEIGHT	CORNER WEIGHTS (kg)				CENTRE OF GRAVITY POSITION	
		A	B	C	D	XX	YY
ELY500T	239	68	71	49	51	1130	462

## SERVICE ACCESS AREAS AND AIRFLOW ALLOWANCES



TOP VIEW

**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.



## 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	75.0	82.9	74.4	70.9	68.6	64.9	59.3	54.3
High	80.0	87.9	78.3	75.4	74.2	69.5	63.0	58.0

## Indoor Outlet

### Sound Power Level (SWL)

Airflow Setting	Airflow l/s	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
			125	250	500	1k	2k	4k	8k
Minimum	2000	81.7	80.8	82.7	79.6	75.3	73.5	68.8	66.1
Nominal	2600	85.5	84.3	86.4	83.0	79.2	76.7	74.8	70.8
Maximum	3100	85.9	85.3	86.3	83.4	79.8	77.3	75.2	71

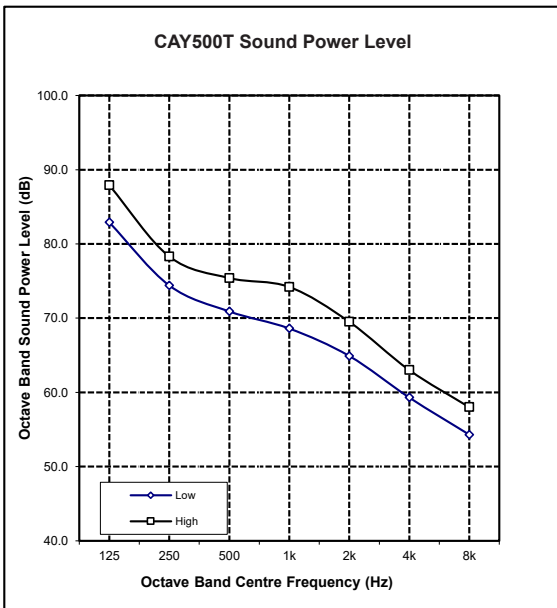
## Indoor Inlet + Radiated

### Sound Power Level (SWL)

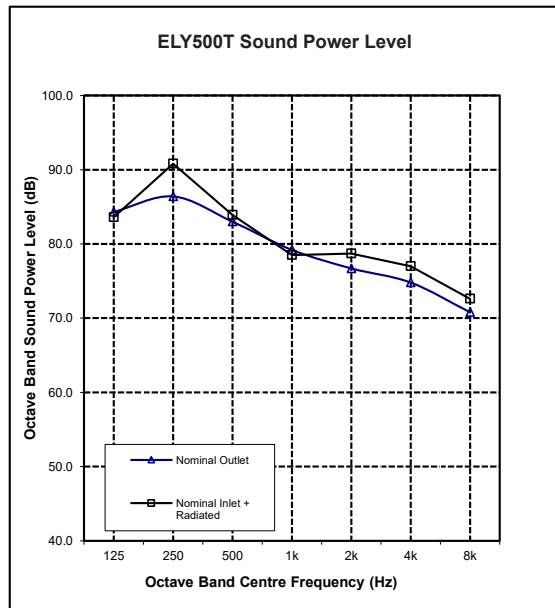
Airflow Setting	Airflow l/s	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
			125	250	500	1k	2k	4k	8k
Minimum	2000	82.7	78.0	83.0	82.1	74.1	74.4	70.7	67.9
Nominal	2600	87.3	83.6	90.8	83.9	78.5	78.7	77.0	72.6
Maximum	3100	87.4	84.1	90.7	84.5	78.8	79.0	76.4	72.5

50.10 kW  
3 Phase  
Tri-Capacity

### OUTDOOR RADIATED



### INDOOR NOMINAL OUTLET / INLET + RADIATED



### NOTES:

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

# SPECIFICATIONS

# CAY500T/ ELY500T

CONSTRUCTION		
CABINET (INDOOR UNIT)	Base	1.1 - 1.6 mm Galvanised Steel
	Top and Side	1.1 mm Galvanised Steel
CABINET (OUTDOOR UNIT)	Base	1.1 - 2.4 mm Galvanised Steel
	Top and Side	0.9 - 1.1 mm Galvanised Steel
SURFACE FINISH (Outdoor Unit)		65 µ Baked Polyester Powder Coat

INSULATION	
INDOOR UNIT	Foil Faced Polyethylene
OUTDOOR UNIT	Foil Faced Polyethylene

ELECTRICAL	
OUTDOOR UNIT	
Power Supply - 50 Hz	400 Volts x 3 Phase + Neutral
Voltage Range (min - max)	376 V - 440 V
Full Load Amps*	36.4
Rated Load Amps**	27.7
Approximate Starting Amps	118.0
IP Rating	IP44
INDOOR UNIT	
Power Supply - 50 Hz	400 Volts x 3 Phase + Neutral
Voltage Range (min - max)	376 V - 440 V
Full Load Amps*	5.2
IP Rating	IP20
OUTDOOR AND INDOOR UNIT (TOTAL)	
Full Load Amps* - Phase 1	41.6
Full Load Amps* - Phase 2 and 3	41.6 and 41.6
Rated Load Amps**	30.0

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	
Suggested minimum cable size should be used as a guide only, refer to the accordance with the latest edition of the AS/NZS 3000 "Australian/New Zealand Wiring Rules" for more details.	
Cable Size (main line)	10.0 mm <sup>2</sup> (SUGGESTED MINIMUM)
Cable Size (indoor to outdoor wire)	1.5 mm <sup>2</sup> (SUGGESTED MINIMUM)
Circuit Breaker Size - Amps	50.0

OUTDOOR COIL	
TUBE TYPE	Copper - Rifle Bore
FIN TYPE	Aluminium - Wave
FACE AREA (m sq) - Coil 1 and 2	1.25 and 2.36
FIN SPACING (per m)	472 and 472
COIL COATING	Blue Epoxy Coat Coil Fin Protection

OUTDOOR FAN	
NUMBER OF FANS x TYPE	3 x Axial Low Noise
NUMBER OF BLADES PER FAN	5
INPUT kW / FULL LOAD AMPS	0.34 / 1.95 each fan
MOTOR TYPE / DRIVE TYPE	6 Pole External Rotor / Direct
FAN SPEED CONTROL	2 Speed via Capacitor
The standard type outdoor fans fitted to this unit will accept up to 20 Pa of external static resistance.	

INDOOR COIL	
TUBE TYPE	Copper - Rifle Bore
FIN TYPE	Aluminium - Louvre
FACE AREA (m sq)	1.41 (interlaced)
FIN SPACING (per m)	472
COIL COATING	Blue Epoxy Coat Coil Fin Protection

INDOOR FAN	
NUMBER OF FANS x TYPE	2 x Backward Curve Plug Fan
INPUT kW / FULL LOAD AMPS	0.75 each / 5.2 total
MOTOR TYPE / DRIVE TYPE	Variable Speed EC Motor / Direct Drive

COMPRESSOR	
NUMBER PER UNIT x TYPE	2 x Scroll (Hermetic)
FULL LOAD AMPS - (Comp. 1 and 2)	10.1 and 20.5
LOCKED ROTOR AMPS - (Comp. 1 and 2)	64.0 and 118.0
STARTING METHOD	D.O.L. (optional soft starter)

REFRIGERATION SYSTEM	
REFRIGERANT TYPE	R-410A
EXPANSION CONTROL	TXV (Thermostatic Valve) x 4
FACTORY CHARGE - Circuit 1 and 2	8,250 grams and 14,010 grams
PRE-CHARGE LENGTH (metres)	5.0
ADDITIONAL REF. CHARGE (Crt. 1 and 2)	50.0 g/m and 165.0 g/m

INTERCONNECTING PIPE RUN		
MAX PIPE LENGTH (metres)	75.0	
MAX. VERTICAL LENGTH (metres)	20 (Included in Max. Pipe Length)	
FIELD PIPE SIZES		
Liquid Pipe - (Crt. 1 and 2)	9.5 mm (3/8") and 15.9 mm (5/8")	
Gas Pipe - (Crt. 1 and 2)	22.2 mm (7/8") and 28.6 mm (1-1/8")	
PIPE CONNECTIONS (Factory Swaged)		
Indoor - (Crt. 1 and 2)	Liquid Pipe	9.5 mm (3/8") and 15.9 mm (5/8")
	Gas Pipe	22.2 mm (7/8") and 28.6 mm (1-1/8")
Outdoor	Liquid Pipe	9.5 mm (3/8") and 15.9 mm (5/8")
	Gas Pipe	22.2 mm (7/8") and 28.6 mm (1-1/8")
CONNECTION TYPE	Solder	

FILTER DRIER	
CONNECTION SIZE AND TYPE (Drier 1)	9.5 mm (3/8") ODF - Soldered
CONNECTION SIZE AND TYPE (Drier 2)	15.9 mm (5/8") ODF - Soldered
FACTORY SUPPLIED / FITTED	Yes
See Installation Section for complete Filter Drier specifications.	

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	Full Electronic Monitoring
OUTDOOR FAN OVERLOAD	Internal Thermal Cut-Out
SUMP HEATER WATTS - (Comp. 1 and 2)	30W and 50W

ELECTRIC CONTROLS	
DEFROST METHOD	Reverse Cycle
DEFROST TYPE	Adaptive Demand Defrost
CONTROL CIRCUIT BREAKER	16.0 Amps
OPTIONAL THIRD PARTY BMS / CONTROLLER INPUTS	MODBUS 485 BACNET 485 BACNET TCP/IP 0-10VDC / 24VAC Third Party Input

**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
		Max.	29°C DB / 19°C WB
Cooling	Min.	20°C DB / 15°C WB	15°C DB
	Max.	24°C DB	21°C DB / 16°C WB
Heating	Min.	16°C DB	-10°C DB

IMPORTANT - For low ambient cooling use option S. Lower ambient available on request. Contact your nearest ActronAir office for more details.

Low Ambient Cooling	Option S	Max.	29°C DB / 19°C WB	50°C DB
		Min.	20°C DB / 15°C WB	5°C DB
	On Request	Max.	29°C DB / 19°C WB	50°C DB
		Min.	20°C DB / 15°C WB	-5°C DB

**AIR FILTERS**  
All return air including fresh air must have adequate filters supplied and fitted by the installing contractor. Filters must be installed in accessible location between the return air grille and the unit.

ActronAir does not supply or make any provisions for return air filter.



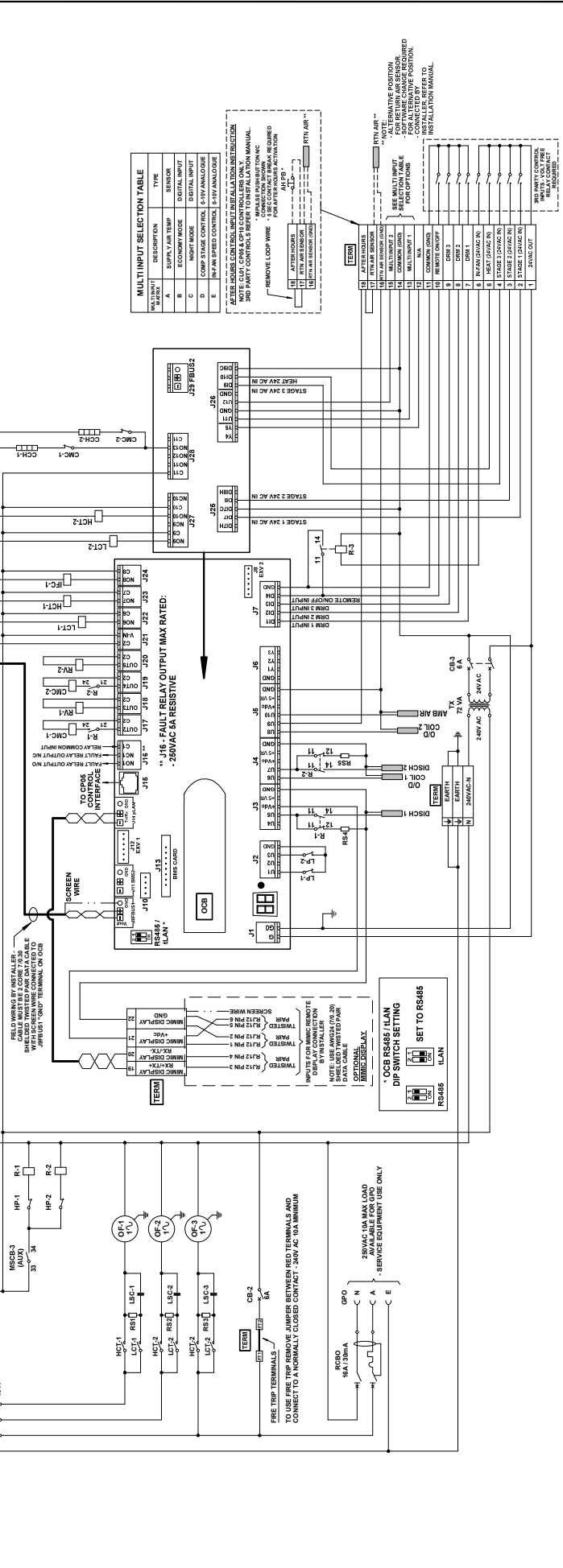
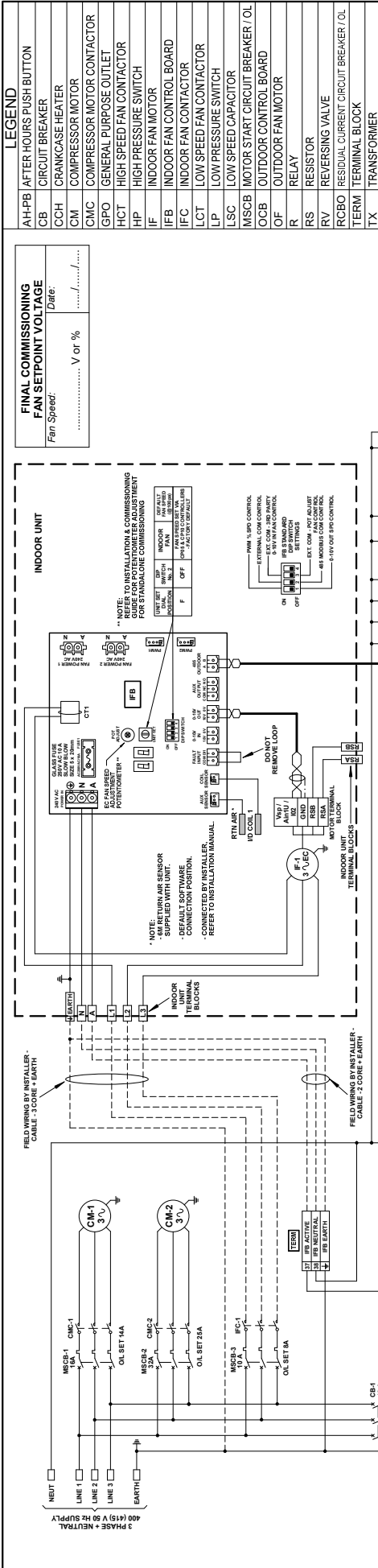
# WIRING DIAGRAM

# CAY500T

50.10 kW

3 Phase

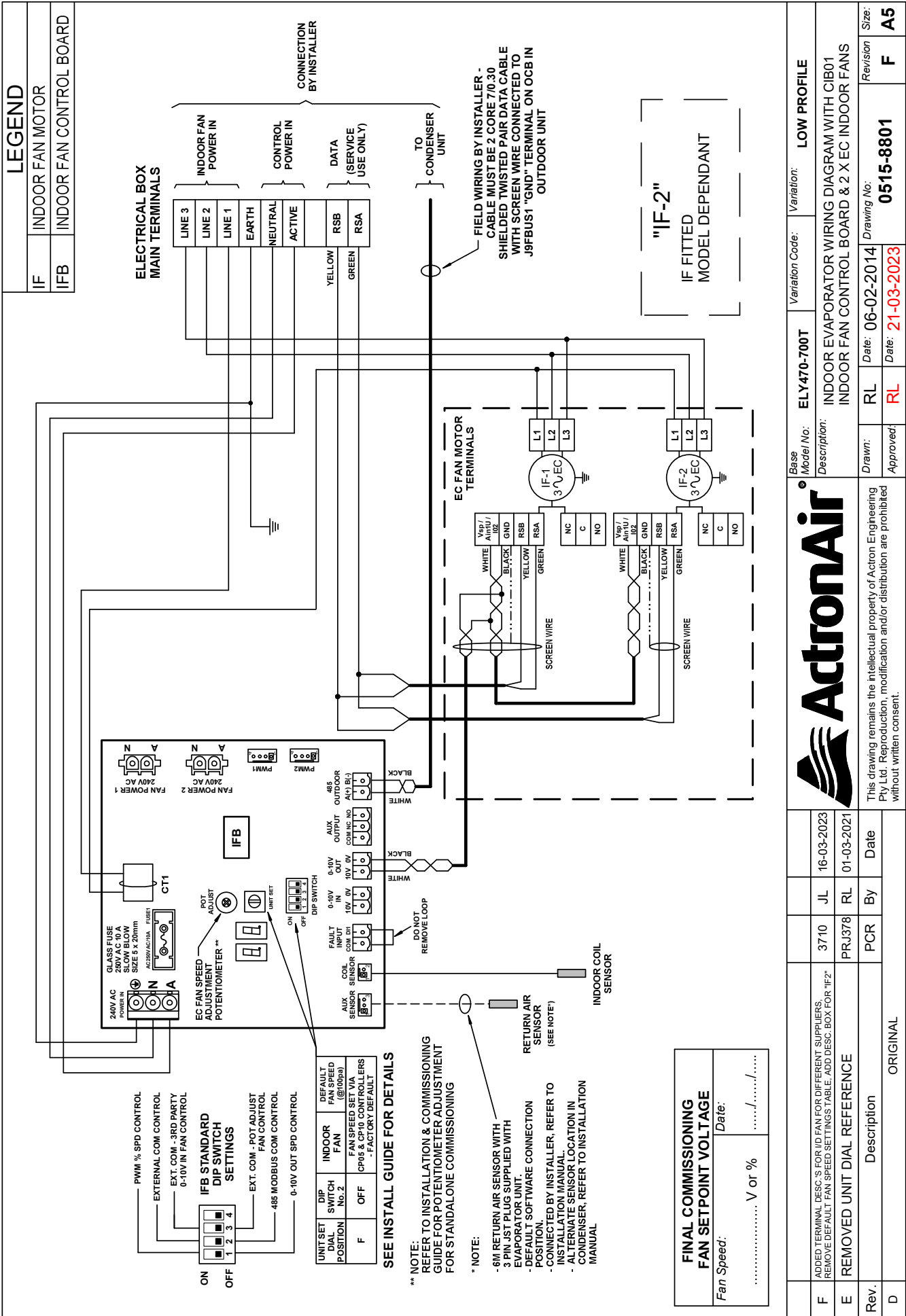
Tri-Capacity



Base Model No:	CAY500T	Variation Code:	STANDARD
Description:	CM100 TRI-CAPACITY CONTROL SYSTEM WITH CIB01 INDOOR FAN CONTROL BOARD WIRING DIAGRAM	Drawn:	JL
Date:	15-03-2023	Approved:	RL
Revision:	B	Drawing No:	0515-8006
Size:	A3	Date:	15-03-2023

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Rev.	Description	By	Date
F	ADDED TERMINAL DESC'S FOR I/O FAN FOR DIFFERENT SUPPLIERS. REMOVE DEFAULT FAN SPEED SETTINGS TABLE, ADD DESC. BOX FOR "IF2"	JL	16-03-2023
E	REMOVED UNIT DIAL REFERENCE	RL	01-03-2021
D	ORIGINAL	PCR	

Drawn: **RL** Date: **06-02-2014**  
 Approved: **RL** Date: **21-03-2023**

Base Model No: **ELY470-700T** Variation Code: **LOW PROFILE**

Description: **INDOOR EVAPORATOR WIRING DIAGRAM WITH CIB01**  
**INDOOR FAN CONTROL BOARD & 2 X EC INDOOR FANS**

Drawing No: **0515-8801** Revision: **F** Size: **A5**

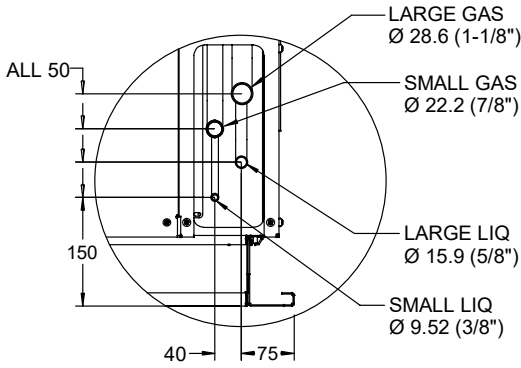
**3 Phase**  
**Tri-Capacity**  
**50.10 kW**

# OUTDOOR UNIT VARIATION

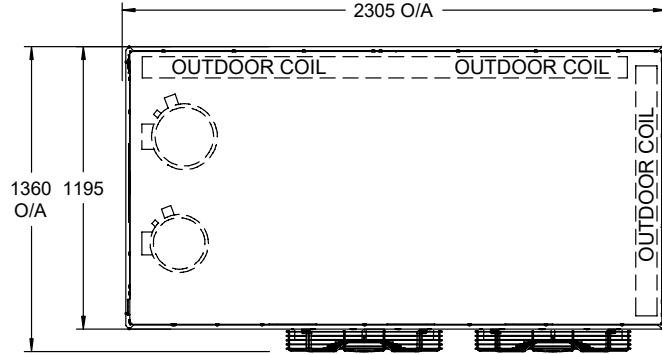
# CAY500T-SV

## SV SIDE DISCHARGE ELECTRONICALLY COMMUTATED FAN

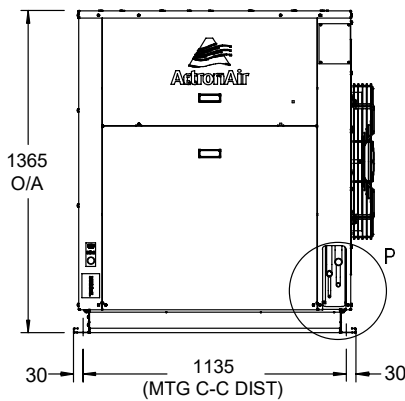
OVERALL NOMINAL DIMENSION (H x W x D)  
= 1365 x 2305 x 1360



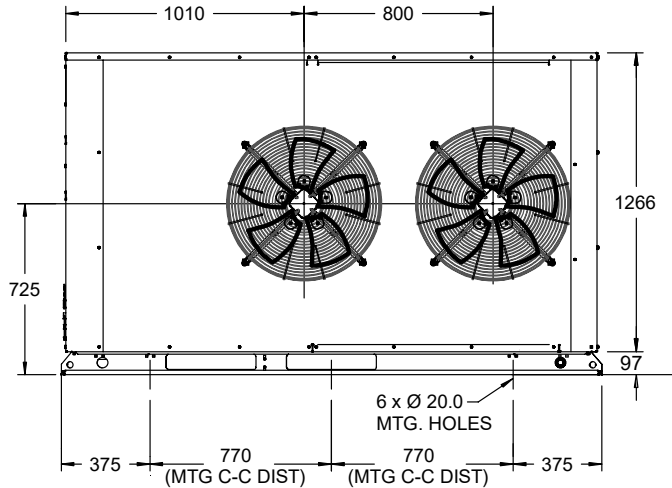
DETAIL P



TOP VIEW



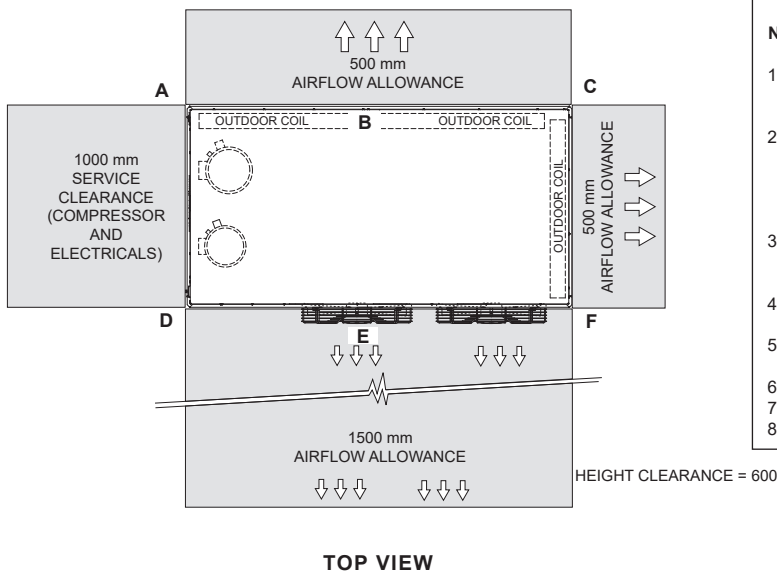
FRONT VIEW



SIDE VIEW

50.10 kW  
3 Phase  
Tri-Capacity

### SERVICE ACCESS AREAS AND AIRFLOW ALLOWANCES



TOP VIEW

THIRD ANGLE  
PROJECTION

**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.
- STACKING OF UNITS: Ensure that minimum airflow and clearances are met.
- Refer to Pipe Connection Details on Specifications Sheet.
- MTG C-C DIST = Mounting Centre to Centre Distance.
- Use M12 bolt for feet mounting.

