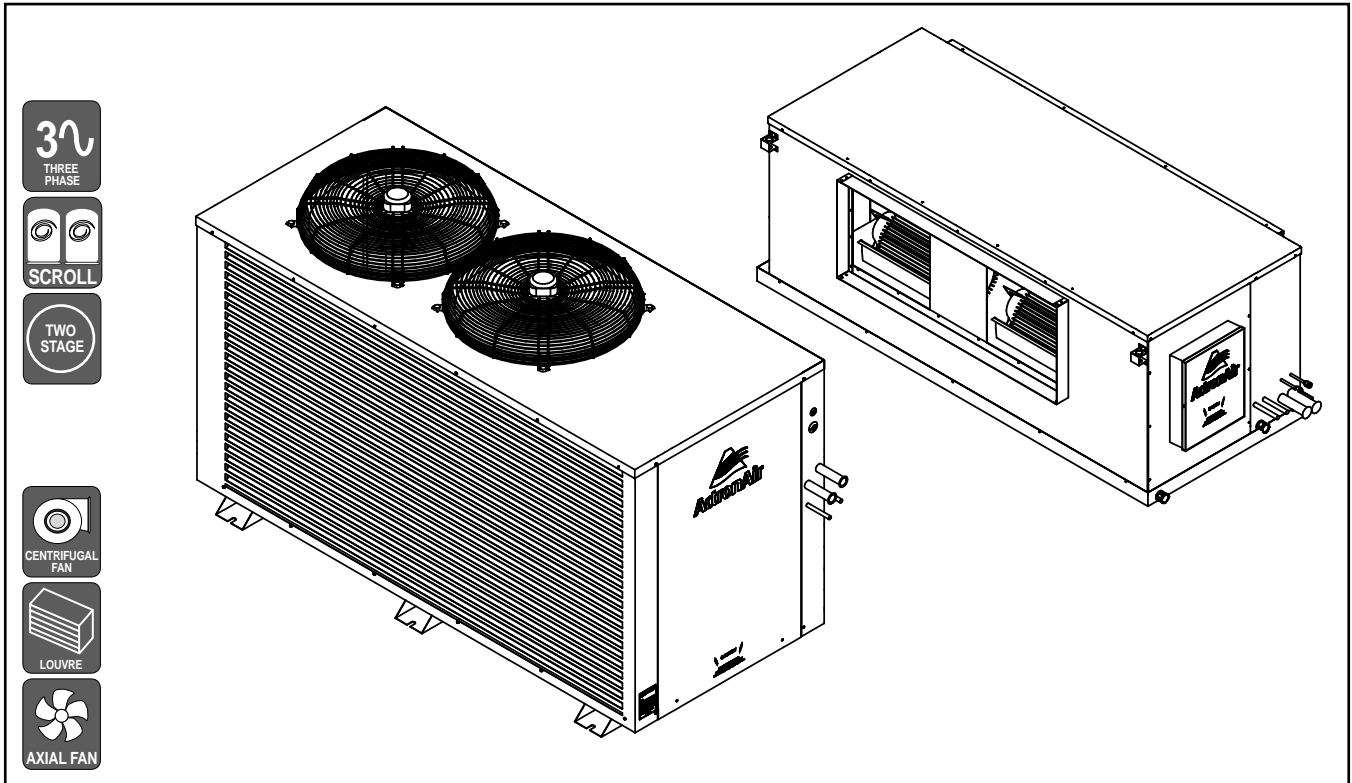


SPLIT DUCTED UNIT



UNIT FEATURES

- Scroll Compressor
- Multiple Speed Outdoor Fans
- Louvred Outdoor Coil Guard
- Pre-charged with R410A Refrigerant
- Integral Fan Coil Safety Tray
- Adaptive Demand Defrost

CONTROL OPTIONS

- C7-3 (7-Day Programmable Controller with 2 Events per Day and Temperature Set Back)
- Zone Kit for Control up to 4 Zones (See Control Section)
- Auto, Heat & Cool Modes
- Auto/Continuous Indoor Fan Operation
- 2 Speed Indoor Fan Setting
- Hot Start Feature
- 2nd Stage Cooling/Heating with 3 Stage Boost Heat
- Manual Control Inputs
- Remote Temperature Sensors
- 24-Hour ON/OFF Timer
- Home/Building Automation ON/OFF Capability

UNIT COMPLIANCE

- MEPS / QLD MP4.1 / SA MEPS
- Demand Response AS4755.3.1

SPECIFICATION SUMMARY

OUTDOOR UNIT MODEL	SCA300C	
INDOOR UNIT MODEL	SCA300E	
	TOTAL*	NETT**
COOLING CAPACITY (kW) ***	30.50	29.00
SENSIBLE CAPACITY (kW) ***	25.02	23.52
HEATING CAPACITY (kW) ^	29.10	30.60
COOLING INPUT POWER (kW) ^^	9.35	
HEATING INPUT POWER (kW) ^^	9.00	
EER	3.22	3.10
COP	3.23	3.40
INDOOR AIRFLOW (l/s) - MIN. / NOMINAL / MAX. ^^^	1275 / 1500 / 1650	
OUTDOOR SOUND PRESS. LEVEL @ 3M dB(A) - LOW / HIGH	55.9 / 59.9	
OUTDOOR SOUND POWER LEVEL dB(A) -- LOW / HIGH	72.9 / 76.9	
POWER SUPPLY - OUTDOOR	415V / 3Ph+N / 50Hz	
POWER SUPPLY - INDOOR	240V / 1 Ph / 50 Hz	
RATED LOAD AMPS -- OUTDOOR / INDOOR / TOTAL **	15.6 / 6.0 / 21.6	
FULL LOAD AMPS -- OUTDOOR / INDOOR / TOTAL ^^^	22.4 / 7.1 / 29.5	
CIRCUIT BREAKER AND CABLE AMPS *	32.0	
APPROXIMATE STARTING AMPS	51.5	
WEIGHT (kg) -- INDOOR / OUTDOOR	115.0 / 300.0	

* Based on unit rating excluding indoor fan kW.
 ** Measured and tested in accordance with AS/NZS 3823.1.2.
 *** At 27°C DB / 19°C WB entering air temperatures and 35°C ambient.
 ^ At 20°C DB entering air temperature and 7°C DB / 6°C WB ambient.
 ^^ input power includes indoor fan kW.
 ^^^ Max. - Min. airflow application range.
 ^^^ Full Load Amps are based on compressor and fan motors' maximum expected current.
 • See Specifications sheet for cable size and circuit breaker size details.

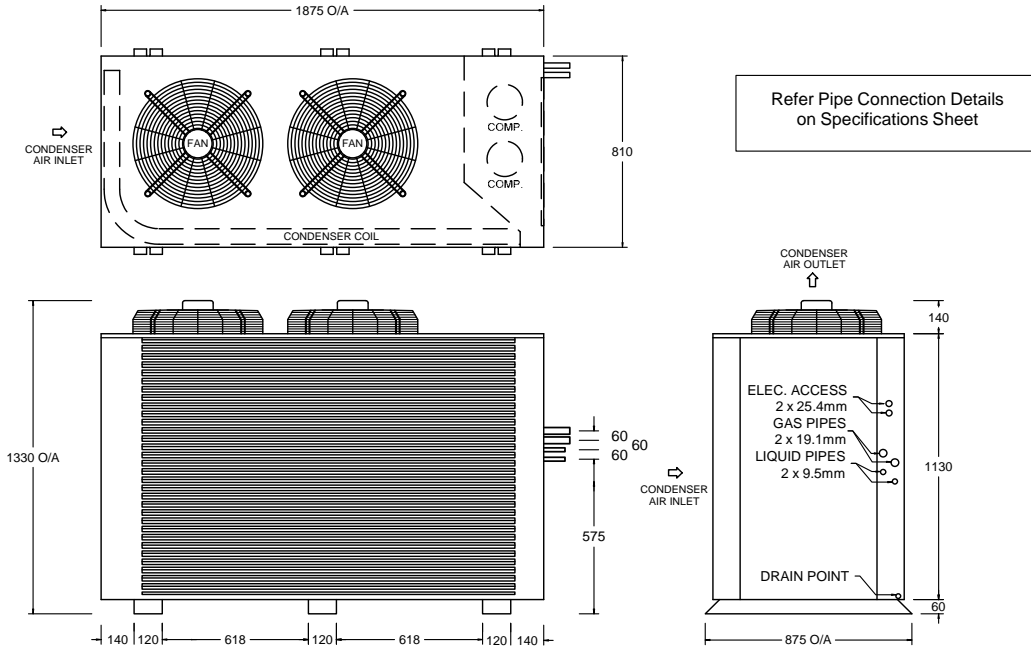
Note: Use input power to estimate running cost.



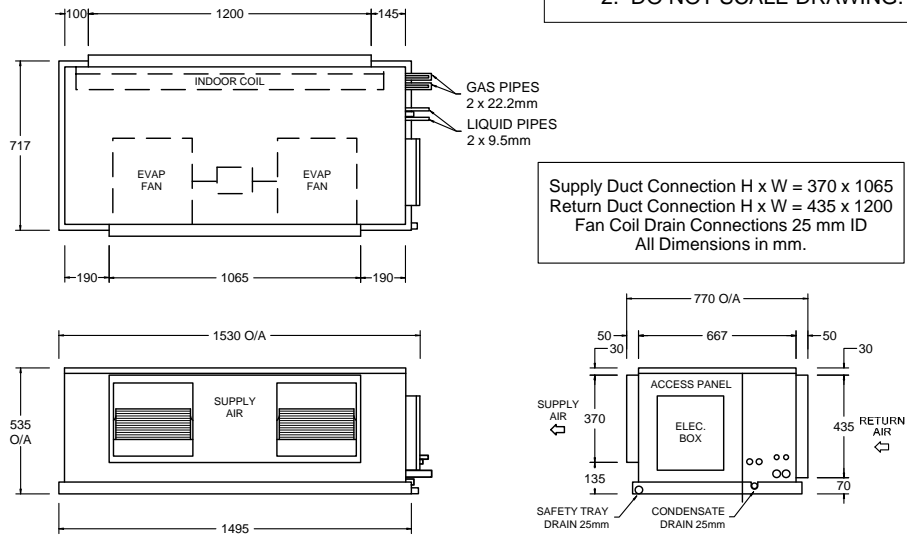
DIMENSIONS AND FAN CURVE

SCA300C / SCA300E

OUTDOOR UNIT SCA300C



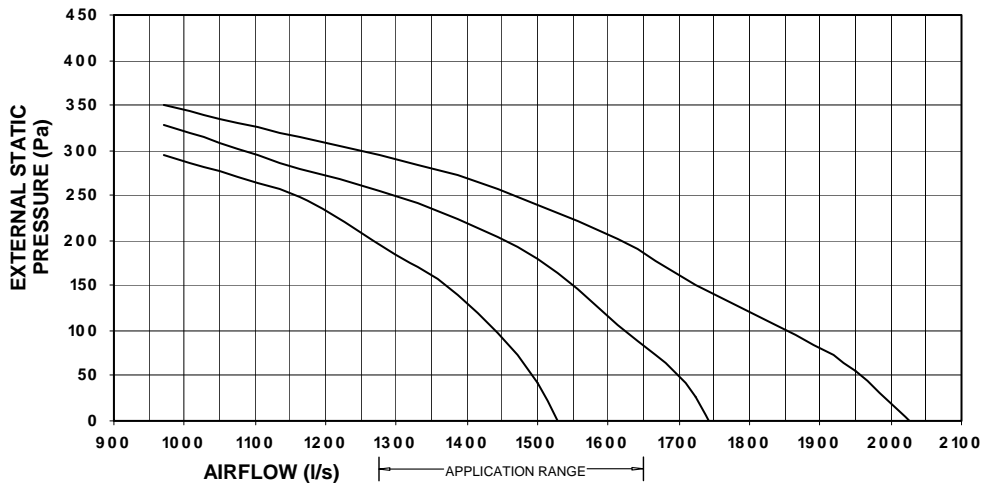
INDOOR UNIT SCA300E



- NOTES:**
1. OPTIONAL ANTI-CORROSIVE ACRYLIC COATED COIL AVAILABLE ON ALL UNITS.
 2. DO NOT SCALE DRAWING.

Supply Duct Connection H x W = 370 x 1065
 Return Duct Connection H x W = 435 x 1200
 Fan Coil Drain Connections 25 mm ID
 All Dimensions in mm.

INDOOR UNIT FAN CURVE



3 Phase
 2 Stage
 30.50 kW



Outdoor Radiated

Sound Power Level (SWL)

Fan Speed	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
		125	250	500	1k	2k	4k	8k
Low	72.9	74.1	73.3	70.2	67.7	64.5	58.9	53.0
High	76.9	78.4	78.1	74.9	71.4	66.8	63.7	57.5

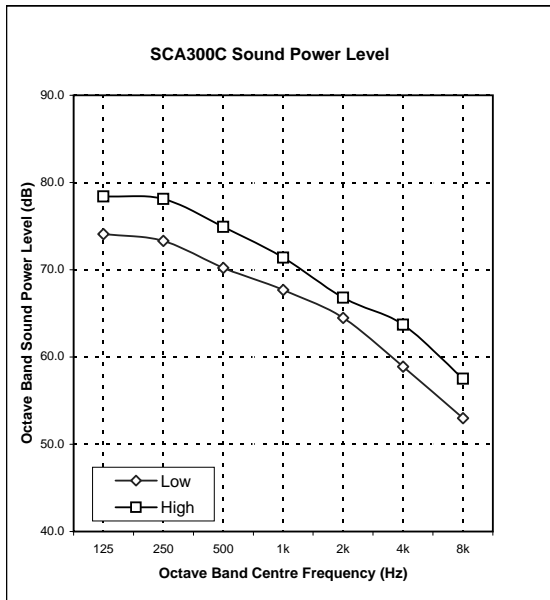
Indoor Outlet

Sound Power Level (SWL)

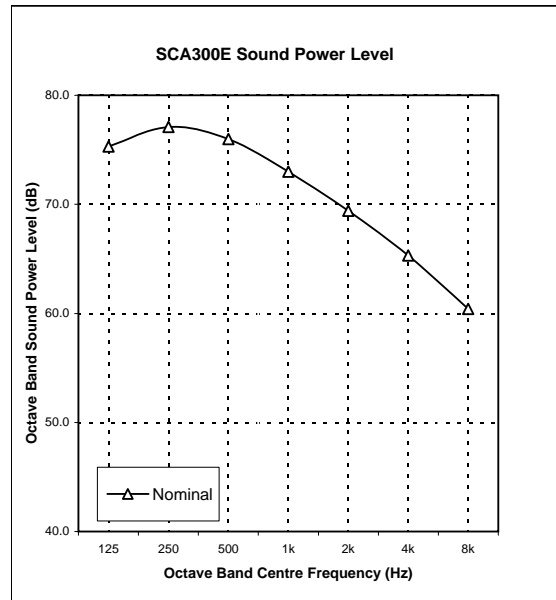
Airflow Setting	Airflow Li/s	Sound Power Level dB(A)	Octave Band Centre Frequency (Hz), dB						
			125	250	500	1k	2k	4k	8k
Nominal	1500	78.0	75.3	77.1	76.0	73.0	69.4	65.3	60.4

30.50 kW
3 Phase
2 Stage

OUTDOOR RADIATED



INDOOR OUTLET



NOTES:

1. Radiated sound power levels are based on ISO 3743-2.
2. Outlet sound power levels are based on ISO 13347-2.

SPECIFICATIONS

SCA300C / SCA300E

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

INSULATION (Indoor Unit)	
TYPE	10 mm Foil Faced Polyethylene 15 mm Expanded Polystyrene

ELECTRICAL	
OUTDOOR UNIT	
Power Supply - 50 Hz	415 Volts x 3 Phase + N
Voltage Range (min - max)	400 V - 440 V
Full Load Amps*	22.4
Rated Load Amps**	15.6
Approximate Starting Amps	51.5
IP Rating	IP44

INDOOR UNIT	
Power Supply - 50 Hz	240 Volts x 1 Phase
Voltage Range (min - max)	220 V - 260 V
Full Load Amps*	7.1
IP Rating	IP20

OUTDOOR & INDOOR UNIT (TOTAL)	
Full Load Amps* - Phase 1	29.5
Full Load Amps* - Phase 2 & 3	19.5 & 20.5
Rated Load Amps**	21.6

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 & CIRCUIT BREAKER SIZE	
Suggested minimum cable size should be used as a guide only, refer to AS/NZS 3000 "Australian/New Zealand Wiring Rules" for more details.	
Cable Size (main line)	6.0 mm ² (SUGGESTED MINIMUM)
Cable Size (indoor to outdoor wire)	1.0 mm ² (SUGGESTED MINIMUM)
Circuit Breaker Size	32.0 Amps

OUTDOOR COIL	
TUBE TYPE	Copper - Rifle Bore
FIN TYPE	Aluminium - Wave
FACE AREA (m sq)	2.44
FIN SPACING (per m)	630
ROWS	---

OUTDOOR FAN	
NUMBER OF FANS x TYPE	2 x Axial
NUMBER OF BLADES PER FAN	4
DIAMETER (mm)	560
OUTPUT kW	0.37
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 only accept 5Pa of external static resistance.	

INDOOR COIL	
TUBE TYPE	Copper - Rifle Bore
FIN TYPE	Aluminium - Louvre
FACE ARE (m sq)	0.66
FIN SPACING (per m)	472
ROWS	---

INDOOR FAN	
NUMBER OF FANS x TYPE	1 x Twin Deck Centrifugal
DIAMETER / WIDTH (mm)	240 x 240
OUTPUT kW / INPUT kW	1.10 / 1.50
MOTOR TYPE / DRIVE TYPE	3 Speed 4 Pole / Direct

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.	

COMPRESSOR	
NUMBER PER UNIT x TYPE	2 x Scroll (Hermetic)
FULL LOAD AMPS	20.0
LOCKED ROTOR AMPS	51.5
STARTING METHOD	D.O.L. (optional soft starter)

REFRIGERATION SYSTEM	
REFRIGERANT TYPE	R-410A
EXPANSION CONTROL	Direct Expansion Orifice
FACTORY CHARGE (grams)	5,400 per stage (per compressor)
PRE-CHARGE LENGTH (metres)	5.0
ADDITIONAL REF. CHARGE (gm/m)	50.0 per stage

FILTER DRIER	
CONNECTION SIZE & TYPE	9.52 mm (3/8") ODF Soldered Bi-Flow
FACTORY SUPPLIED / FITTED	Yes
See Installation Section for complete Filter Drier specifications.	

INTERCONNECTING PIPE RUN	
MAX PIPE LENGTH (metres)	60.0
MAX. VERTICAL LENGTH (metres)	20.0 (Included in Max. Pipe Length)
FIELD PIPE SIZES	
Liquid Pipe	9.52 mm (3/8")
Gas Pipe	19.1 mm (3/4")

PIPE CONNECTIONS		
Indoor	Liquid Pipe	9.52 mm (3/8") Swaged to fit 9.52 mm (3/8") field pipe
	Gas Pipe	22.2 mm (7/8") Swage to be cut-off to fit 19.1 mm (3/4") field pipe
Outdoor	Liquid Pipe	9.52 mm (3/8") Swaged to fit 9.52 mm (3/8") field pipe
	Gas Pipe	19.1 mm (3/4") Swaged to fit 19.1 mm (3/4") field pipe
CONNECTION TYPE		Solder
Insulate both gas and liquid pipes separately.		

PROTECTION DEVICES	
HIGH PRESSURE CUTOUT SWITCH	Nonadjustable (Automatic Reset)
LOW PRESSURE CUTOUT SWITCH	Nonadjustable (Automatic Reset)
COMPRESSOR MOTOR TEMP.	Internal Thermal Cut-Out
INDOOR FAN OVERLOAD	Internal Thermal Cut-Out
OUTDOOR FAN OVERLOAD	Internal Thermal Cut-Out
SUMP HEATER WATTS	2 x 30 W during Comp. Off Cycle

ELECTRIC CONTROLS	
DEFROST METHOD	Reverse Cycle
DEFROST TYPE	Adaptive Demand Defrost
CONTROL CIRCUIT BREAKER	16.0 Amps
CONTROL FIELD WIRING	2 Core 14 / 0.20 Screened Cable

OPERATING RANGE					
It is essential that the unit is correctly sized for the application and operates within its recommended range of operating conditions as shown below.					
MODE	RANGE	INDOOR AIR INTAKE TEMPERATURE	OUTDOOR AIR INTAKE TEMPERATURE		
Cooling	Max.	29°C DB / 19°C WB	50°C DB		
	Min.	20°C DB / 15°C WB	15°C DB		
Heating	Max.	24°C DB	21°C DB / 16°C WB		
	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	

3 Phase
2 Stage

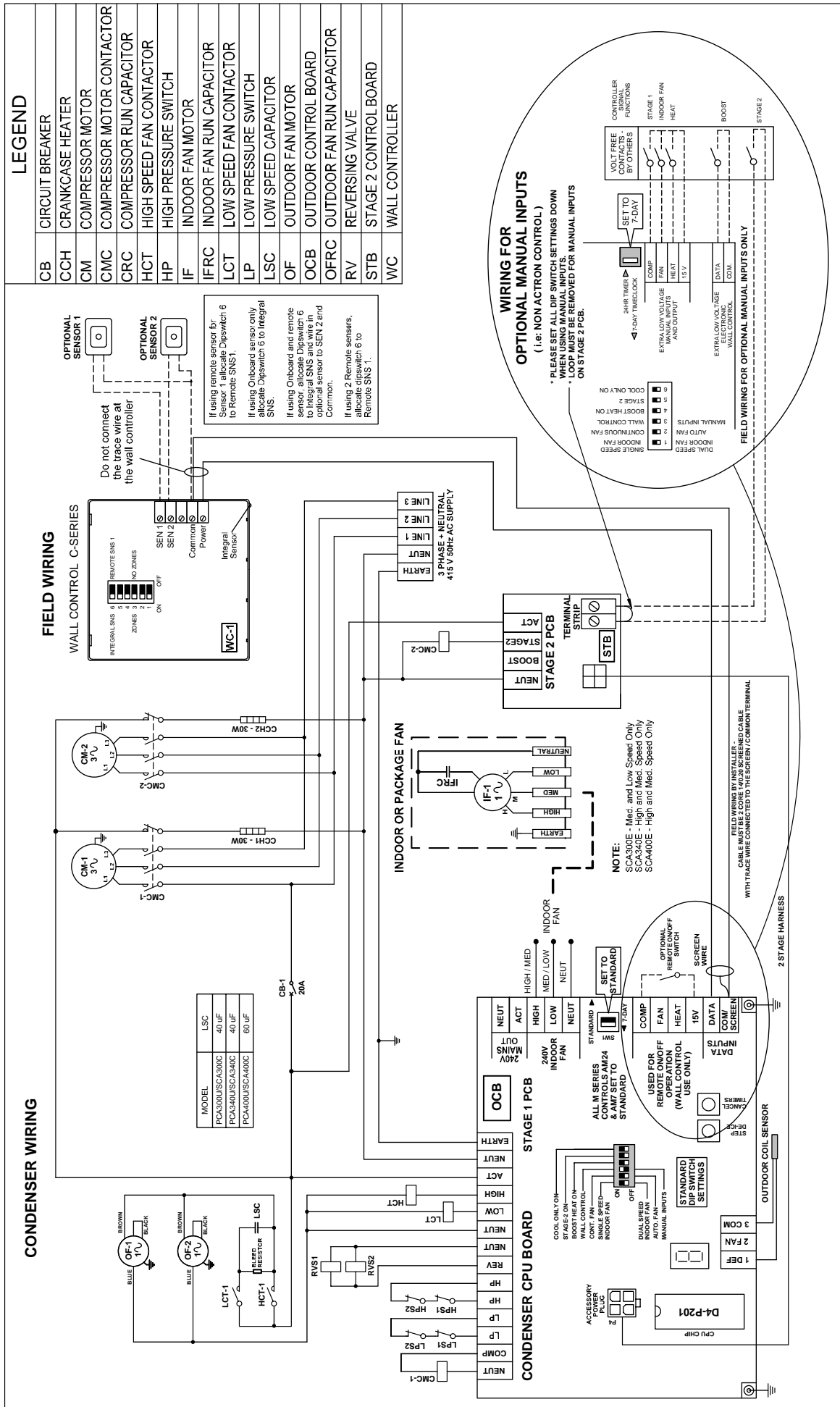
30.50 kW



WIRING DIAGRAM

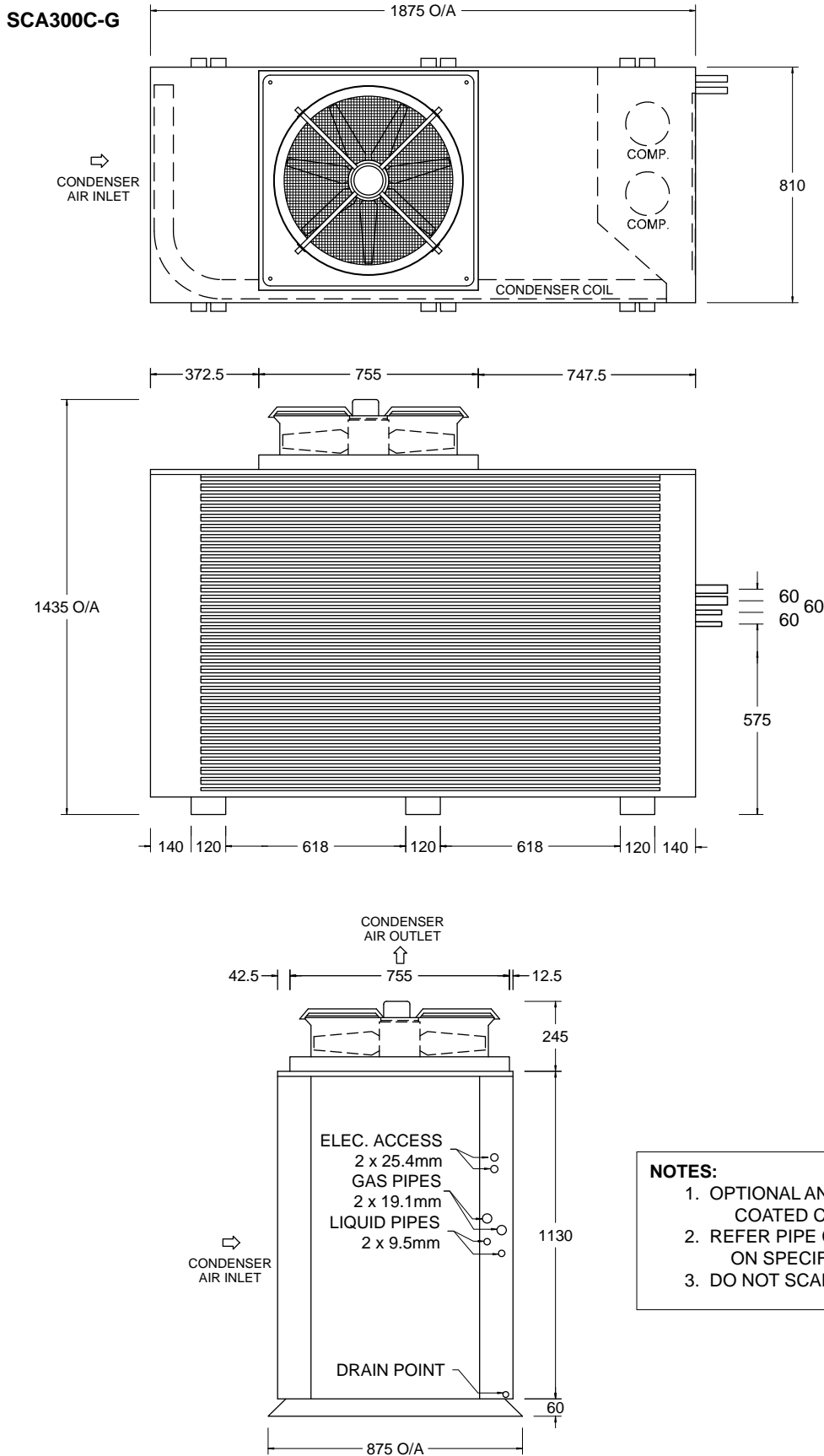
SCA300C / SCA300E

30.50 kW
3 Phase 2 Stage



		Base Model No: PCA300/340/400U Variation Code: SCA300/340/400C STANDARD
Description: ACT-D4 CONTROL SYSTEM WIRING DIAGRAM WITH C SERIES WALL CONTROL		Date: 25-06-2010 Revision: B Size: A4
Rev. B Description: CONDENSER FAN RELAYS ADDED & REDRAWN	By: PCR Date: 25-06-2010	Drawn: KJP Date: 25-06-2010 Drawing No.: WD0279

G OUTDOOR UNIT - HI STATIC TOP DISCHARGE FANS



3 Phase
2 Stage
30.50 kW

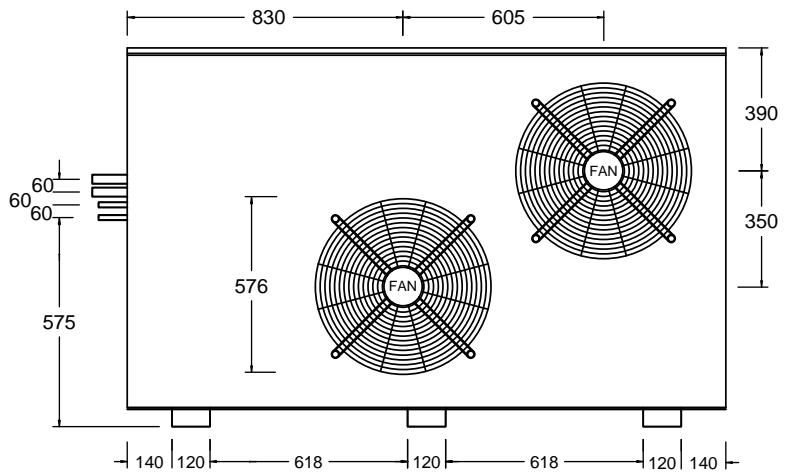
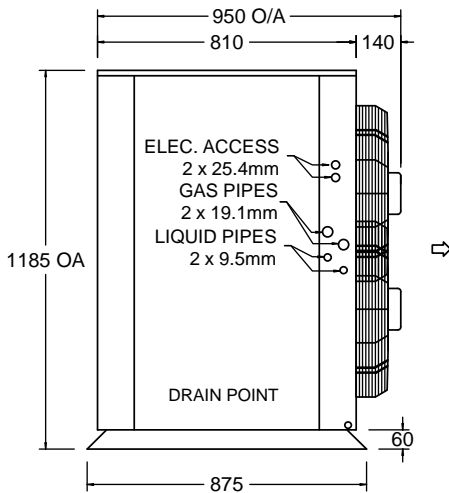
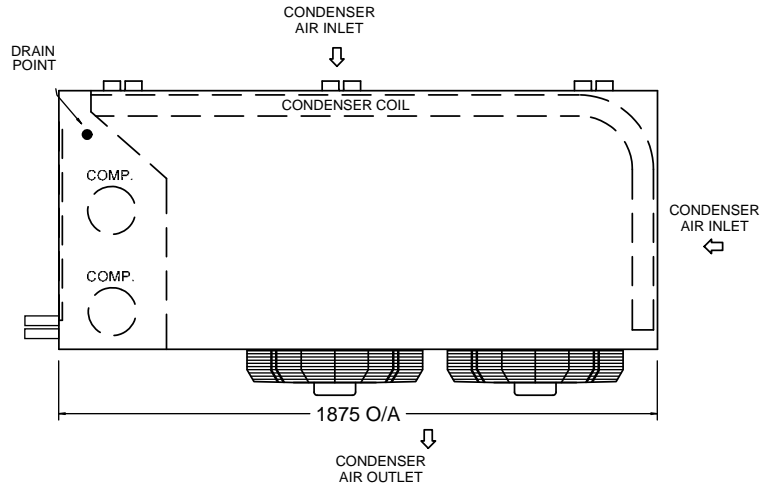
NOTES:

1. OPTIONAL ANTI-CORROSIVE ACRYLIC COATED COIL AVAILABLE ON ALL UNITS.
2. REFER PIPE CONNECTION DETAILS ON SPECIFICATIONS SHEET.
3. DO NOT SCALE DRAWING.

H OUTDOOR UNIT - HORIZONTAL DISCHARGE FANS 5 Pa

SCA300C-H

30.50 kW
3 Phase 2 Stage



NOTES:

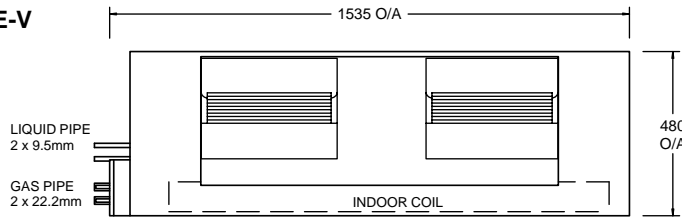
1. OPTIONAL ANTI-CORROSIVE ACRYLIC COATED COIL AVAILABLE ON ALL UNITS.
2. REFER PIPE CONNECTION DETAILS ON SPECIFICATIONS SHEET.
3. DO NOT SCALE DRAWING.

VARIATION

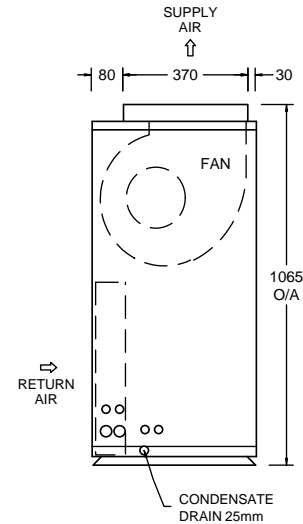
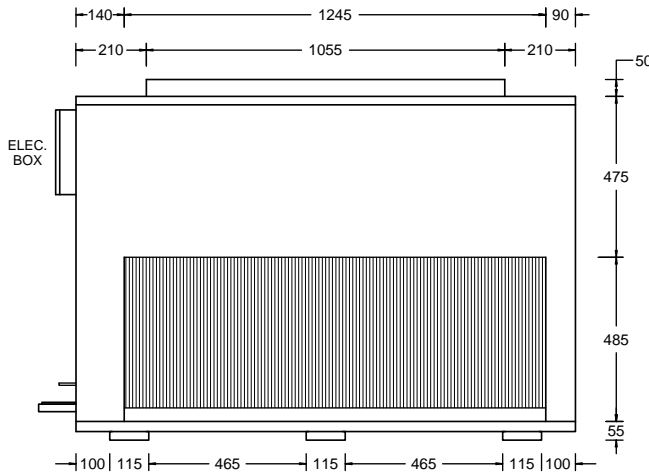
SCA300E

V UPRIGHT FAN COIL VERTICAL DISCHARGE

SCA300E-V



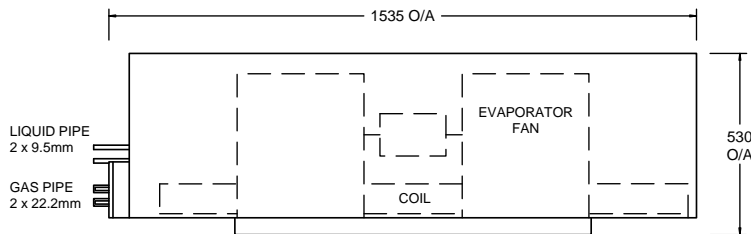
Supply Duct Connection = 370 x 1055
Return Duct Opening Size = 485 x 1245
Drain Connection = 25mm ID
All Dimensions in mm.



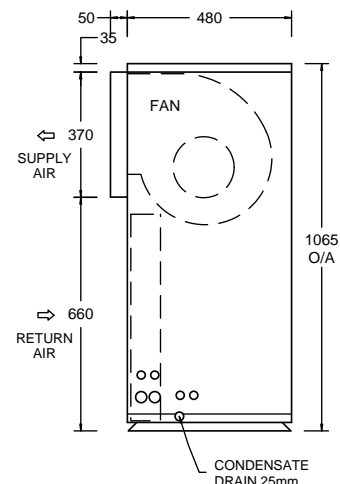
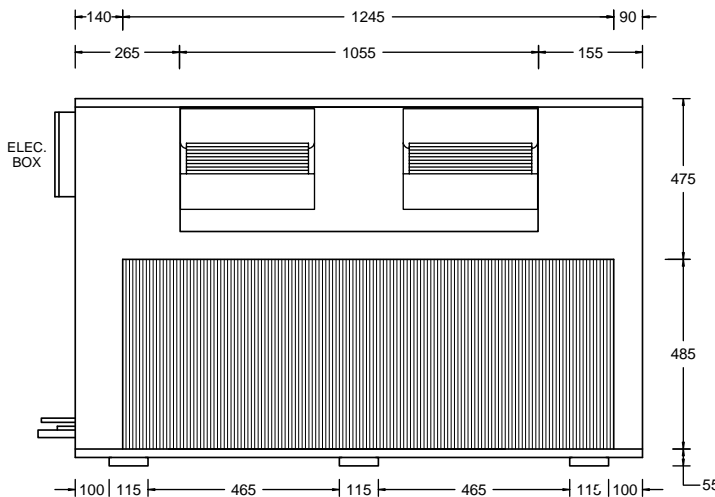
3 Phase
2 Stage
30.50 kW

H UPRIGHT FAN COIL HORIZONTAL DISCHARGE

SCA300E-H



Supply Duct Connection = 370 x 1055
Return Duct Opening Size = 485 x 1245
Drain Connection = 25mm ID
All Dimensions in mm.



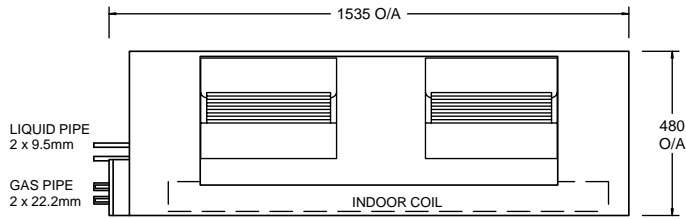
NOTES:

1. OPTIONAL ANTI-CORROSIVE ACRYLIC COATED COIL AVAILABLE ON ALL UNITS.
2. REFER PIPE CONNECTION DETAILS ON SPECIFICATIONS SHEET.
3. DO NOT SCALE DRAWING.

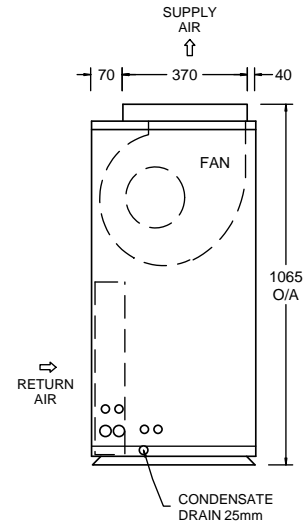
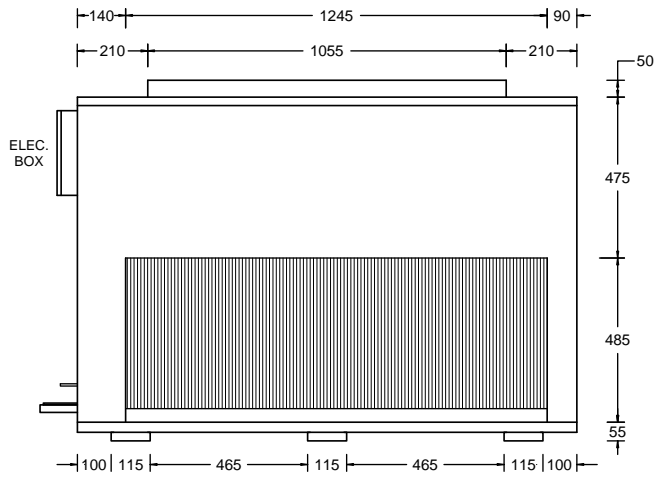


C003 UPRIGHT FAN COIL VERTICAL DISCHARGE AND HIGH STATIC FAN

SCA300E-C003



Supply Duct Connection = 370 x 1055
 Return Duct Opening Size = 485 x 1245
 Drain Connection = 25mm ID
 All Dimensions in mm.



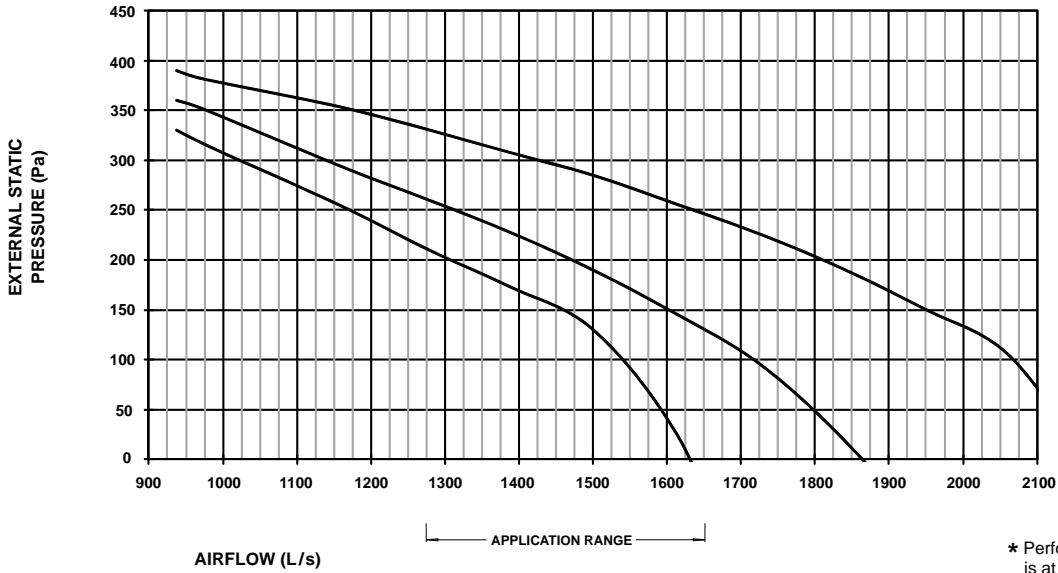
30.50 kW
3 Phase 2 Stage

NOTES:

1. OPTIONAL ANTI-CORROSIVE ACRYLIC COATED COIL AVAILABLE ON ALL UNITS.
2. REFER PIPE CONNECTION DETAILS ON SPECIFICATIONS SHEET.
3. DO NOT SCALE DRAWING.

F INDOOR UNIT - HIGH STATIC FANS 200 Pa

INDOOR UNIT FAN CURVE *



* Performance Fan Curve shown is at Dry Coil Condition for 10 x 10 - 1500kW fan

3 Phase
2 Stage
30.50 kW