

Cooline[®]

AIR CONDITIONERS

from  **Zamil**



ASME
CERTIFIED THE QUALITY

Single Packaged Roof Top Air Conditioners

PT Series
PT036 - PT360
3 TR thru 30 TR
10 kW thru 105 kW



Higher quality of indoor living

Our product line ...



Window ACs & Mini-Splits Units



Free Standing Ceiling/Floor & Cassette units



Ducted Split Units



Condensing & Packaged Units



Chillers & Double Skin AHU's



Mobile AC



Controls for Building Automation, Security & Fire Alarms

Company Business

Zamil Air Conditioners was founded in 1974 as one of the first air conditioning companies to be established in Saudi Arabia and today is a leading international manufacturer of air conditioning systems and is Number One in the Middle East.

Zamil Air conditioners manufactures both consumer and central air conditioners and has sales operations in over 55 countries in the Middle East, Europe, Africa and Asia.

The company's operations are structured into four Strategic Business Units (SBUs) supporting five in-house product and service brands as well as a number of international brands under the OEM sales.

The five in-house brands are Classic, Cooline, CoolCare, Clima Tech and Geoclima.

The four SBUs are:

1. Consumer Business Unit supporting Classic, Cooline, GE and OEM brands for consumers.
2. Unitary & Applied Business Unit supporting Zamil, Cooline, GE and OEM brands for commercial and industrial customers.
3. Zamil CoolCare Business Unit providing industrial, electro mechanical contracting services, HVAC maintenance, retrofit & operation services and parts.
4. Geoclima srl is an independent business supporting other SBUs for their requirements of chillers & double skin AHU's.

The first three SBUs - Consumer Products, Unitary & Applied Products and CoolCare direct their business operations from the corporate headquarters in Dammam, Saudi Arabia.

Geoclima has its engineering & production operations located at Monfalcone, Italy and has a design center in Austria.

All the four SBUs, while operating independently, supplement each other's activities in a way that makes synergy work at its best and achieve the corporate goals of maximizing customer satisfaction.

Factories and Productions

Zamil Air Conditioners has two manufacturing plants in Dammam, Saudi Arabia and has one specialty production facility in Italy operated by Geoclima.

The company can produce up to 550,000 Room Air Conditioners, 300,000 Mini-Split systems and 50,000 Central Air Conditioning systems per year.

Quality & Product Certificates

The Quality systems and policies at Zamil Air Conditioners comply with the required ISO 9001:2008 certification.

Zamil Air Conditioners is the first company in Saudi Arabia to receive the SASO (Saudi Arabia's Standard Organization) Certificate for Room Air Conditioners. ZAC's products are also certified with:

1. CE (Council of European Community)
2. UL (Underwriters Laboratory)
3. Eurovent (Certified Performance)
4. ETL (Test Facilities)
5. SASO (Saudi Arabian Standards Organization)
6. ISO 9001:2008 (International Organization for Standardization)
7. ASME (American Quality of Mechanical Engineers)

Other awards include the prestigious Engineering Excellence Award of General Electric and the inaugural Prince Mohammed bin Fahd Al Saud Award for Factory Safety.

Our Products

In addition to the consumer products such as the Room Air Conditioners (RAC) and the Mini Splits, Zamil Air Conditioners manufactures a host of residential, commercial and industrial air conditioners. This broad range extends from the Concealed Units up to 5 TR, the Ducted Splits up to 30 TR, the Packaged Units up to 95 TR, the Single and Double Skin Air Handling Units up to 138,316 CFM and the Water Chillers up to 500 TR cooling capacity.

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*CONTINUING RESEARCH RESULTS IN STEADY IMPROVEMENTS.
THEREFORE, THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.*

MODEL DECODING

MODELS: PT036 - PT060 (DIRECT DRIVE MOTOR)

1 & 2 BASIC PACKAGED UNIT	3, 4 & 5 NOMINAL COOLING CAPACITY (MBH)	6 ELECTRICAL SUPPLY (V-Ph-Hz)	7 REFRIG- ERANT CIRCUIT	8 BLOWER MOTOR	9 DRIVE OPTIONS	10 HEATER OPTIONS (KW/STAGE)	11 EVAPORATOR COIL	12 CONDENSER COIL	13 PDS OPTION	14 ELECTRICAL OPTIONS	15 UNIT ACCESSORIES	16 FILTER OPTIONS	17 THERMOSTAT OPTION
PT UNIT	036 048 060	L : 380/415-3-50 (4 WIRE)	S : SINGLE	W : 0.75 HP ODP (DIRECT DRIVE) W : 0.75 HP ODP (DIRECT DRIVE) Y : 1 HP ODP (DIRECT DRIVE)	N : DIRECT DRIVE	N : NO HEATER A : 5/1 B : 6/1 C : 7.5/1 D : 10/2 E : 12/2	J : IGT + ALUMINUM FIN K : IGT + MHG FIN L : IGT + COPPER FIN M : ALUMINUM FINS WITH TG. N : COPPER FINS WITH TG.	J : IGT + ALUMINUM FIN K : IGT + MHG FIN L : IGT + COPPER FIN M : ALUMINUM FINS WITH TG. N : COPPER FINS WITH TG.	N : STD. UNIT P : PDS OPTION S : SIGHT GLASS G : P & S	N : STD. UNIT I : ANTI-ICE U : UVMI V : VOLT FREE CONTACTS K : ADJ. PRESSURE SWITCH A : I & U B : I & V C : U & V D : I, U & V E : I, U & K F : I, V & K G : U, V & K H : I, U, V & K J : I & K L : V & K M : U & K	N : STD. UNIT C : WITH FRESH AIR HOOD & MANUAL DAMPER	A : 1" THICK ALUMINUM B : 2" THICK ALUMINUM	S : UNIT WITH THERMO- STAT D : UNIT WITHOUT THERMO- STAT

NOTE: Volt free contact option is available as: A) Unit ON/TRIP indication, B) Compressor RUN/TRIP indication, C) Blower motor RUN/TRIP indication.

MODELS: PT075 - PT360 (BELT DRIVEN MOTOR)

1 & 2 BASIC PACKAGED UNIT	3, 4 & 5 NOMINAL COOLING CAPACITY (MBH)	6 ELECTRICAL SUPPLY (V-Ph-Hz)	7 REFRIG- ERANT CIRCUIT	8 BLOWER MOTOR	9 DRIVE OPTIONS	10 HEATER OPTIONS (KW/STAGE)	11 EVAPORATOR COIL	12 CONDENSER COIL	13 PDS OPTION	14 ELECTRICAL OPTIONS	15 UNIT ACCESSORIES	16 FILTER OPTIONS	17 THERMOSTAT OPTION
PT UNIT	075 090 100 120***	L : 380/415-3-50 (4 WIRE)	S : SINGLE D : DUAL	C : 1.5 HP ODP D : 2 HP ODP D : 2 HP ODP E : 3 HP ODP F : 3 HP TEFC G : 5 HP ODP H : 5 HP TEFC J : 7.5 HP ODP K : 7.5 HP TEFC J : 7.5 HP ODP K : 7.5 HP TEFC L : 10 HP ODP M : 10 HP TEFC L : 10 HP ODP M : 10 HP TEFC N : 15 HP ODP P : 15 HP TEFC	J : ALT. I K : ALT. II	N : NO HEATER A : 5/1* B : 6/1* C : 7.5/1 D : 10/2 E : 12/2 F : 15/2 G : 20/2 N : NO HEATER C : 7.5/1 D : 10/2 E : 12/2 F : 15/2 G : 20/2**	J : IGT + ALUMINUM FIN K : IGT + MHG FIN L : IGT + COPPER FIN M : ALUMINUM FINS WITH TG. N : COPPER FINS WITH TG.	J : IGT + ALUMINUM FIN K : IGT + MHG FIN L : IGT + COPPER FIN M : ALUMINUM FINS WITH TG. N : COPPER FINS WITH TG.	N : STD. UNIT P : PDS OPTION S : SIGHT GLASS G : P & S	N : STD. UNIT I : ANTI-ICE U : UVMI V : VOLT FREE CONTACTS K : ADJ. PRESSURE SWITCH A : I & U B : I & V C : U & V D : I, U & V E : I, U & K F : I, V & K G : U, V & K H : I, U, V & K J : I & K L : V & K M : U & K	N : STD. UNIT C : STD. UNIT WITH FRESH AIR HOOD & MANUAL DAMPER	A : 1" THICK ALUMINUM B : 2" THICK ALUMINUM	S : UNIT WITH THERMO- STAT D : UNIT WITHOUT THERMO- STAT

NOTE: 1. Volt free contact option is available as: A) Unit ON/TRIP indication, B) Compressor RUN/TRIP indication, C) Blower motor RUN/TRIP indication.

* - Applicable for PT075 models only.

** - Applicable for models PT180 & above only.

*** - 3 HP motor only available for models PT120.

BLOWER DRIVE OPTIONS

MODEL NUMBER	OPTION	MOTOR			BLOWER			APPROX. SPEED CHANGE PER PULLEY TURN (RPM)
		HP	RPM	PULLEY PITCH DIA. (INCH)	SPEED RANGE (RPM)		PULLEY PITCH DIA. (INCH)	
					MINIMUM	MAXIMUM		
PT075	ALT. I	1.5	1450	2.7 - 3.7	851	1166	4.6	53
	ALT. II	2	1450	2.7 - 3.7	955	1309	4.1	59
PT090	ALT. I	2/3	1450	2.7 - 3.7	642	880	6.1	40
	ALT. II		1450	2.7 - 3.7	851	1166	4.6	53
PT100	ALT. I	2/3	1450	2.7 - 3.7	642	880	6.1	40
	ALT. II		1450	2.7 - 3.7	851	1166	4.6	53
PT120	ALT. I	3	1450	3.1 - 4.1	737	975	6.1	40
	ALT. II		1450	3.1 - 4.1	881	1166	5.1	47
PT180	ALT. I	5	1450	3.7 - 4.7	766	974	7	35
	ALT. II	7.5	1450	4.3 - 5.5	891	1139	7	41
PT215	ALT. I	5	1450	4.3 - 5.5	663	848	9.4	31
	ALT. II	7.5	1450	4.3 - 5.5	779	997	8	36
PT240	ALT. I	7.5/10	1450	4.3 - 5.5	663	848	9.4	31
	ALT. II		1450	4.3 - 5.5	779	997	8	36
PT300	ALT. I	7.5/10	1450	4.8 - 6.0	740	926	9.4	31
	ALT. II		1450	4.8 - 6.0	870	1088	8	36
PT360	ALT. I	10	1450	4.8 - 6.0	740	926	9.4	31
	ALT. II	15	1450	5.5 - 6.9	886	1111	9	36

STANDARD SPECIFICATIONS

A. General

Packaged cooling or combination heating and cooling units suitable for mounting on the roof or ground. The packaged unit consists of hermetic compressors, cooling coil, condenser coil, control wiring and interconnecting piping - all factory assembled and mounted on heavy gauge G-90 galvanized steel sheet press formed base, ready for field connection to utilities and ducts. The packaged unit is of rigid construction with holes provided in the base rails for overhead rigging. The unit is provided with an integral weather resistant control panel.

These units are rated and tested in accordance with ARI standard 210/ ARI 360.

B. Unit Enclosure

Panels are of heavy gauge, G-90 galvanized steel sheet with removable access panels, completely weatherized for outdoor installation and properly reinforced and brazed. Panels and access doors are provided for inspection and access for all internal parts. Enclosures are provided with adequately reinforced points of support for setting the unit. Steel sheet panels are zinc-coated and galvanized by the hot dip process of lock forming quality conforming to ASTM A 653 commercial weight G-90, followed by baked on electrostatic polyester dry powder coat paint, on all external panels.

C. Compressor

Compressors are hermetic reciprocating for PT036 - PT060 & PT090 - PT100 and hermetic scroll for all other models as standard. They are provided with all the standard controls and accessories necessary for safe operation. These are equipped with internal motor protector, factory installed crank case heater and rubber vibration isolator for quiet and efficient operation.

D. Air Cooled Condensing Section

1. The air-cooled condensing section is enclosed within the unit housing and consists of condenser coil, fan(s), electric motor(s) and inherently protected compressor(s). Inner grooved copper tubes with wall thickness of 0.0175 inches (0.445 mm), mechanically bonded to enhanced louvered aluminum fins are standard for all condenser coils. Return bends have 0.022 inch thickness (0.56 mm). **As an option, corrugated copper fins or enhanced coated aluminum fins may be provided.** Tube support sheets are galvanized steel, formed to provide structural strength.
2. Fans are propeller type, direct driven, upward discharge and provided with fan grille mounted on the casing.
3. Motors are totally enclosed air-over type with class F insulation. Inherent thermal protection is automatic reset type.

E. Evaporator Coil Section

1. All cooling coils are of enhanced fins and inner grooved copper tubes with wall thickness of 0.0175 inches (0.445mm), mechanically bonded to aluminum fins. Return bend has 0.022 inch thickness (0.56 mm). **As option, enhanced coated aluminum fins or corrugated copper fins may be provided.** Tube support sheets are galvanized steel, formed to provide structural strength.
2. **Drain Pan:** An insulated drain Pan made of G-90 galvanized steel is provided.
3. **Insulation:** Insulation is supplied in adequate density and thickness for all units to prevent condensation from forming on the unit casing. Insulation meets the requirements of NFPA 90A and is protected against deterioration and erosion from air currents.

F. Evaporator Fan

PT036 - PT060: Evaporator fan is of a centrifugal forward-curved blade design and sized to meet system airflow/pressure using direct drive motors. These fans are statically / dynamically balanced in the fan housing during final assembly. Fan motors have ball bearings and conform to NEMA MG-1 & MG-2. Motor starters are magnetic contactor, across-the-line type.

PT075 - PT360: Evaporator fan is of centrifugal forward-curved blade design capable of handling total required CFM and static pressure in the low and the medium ranges. Casings are made of galvanized steel. Blower motors are of the open drip proof type (**totally enclosed types are optional**) and conform to NEMA MG-1 and MG-2. Fan drive is through adjustable pitch pulleys and belt driven. Blower motor is mounted on adjustable base and secured by locking device. Fan wheels shafts and bearing are selected to operate at 25% below first critical speed. Pillow block bearings are selected for at 200,000 hours average life at design operating conditions. Shaft is turned, ground and polished from solid steel. Fans and pulleys are keyed to shaft and designed for continuous operation at maximum motor horse power and fan speed. All rotating components and assemblies are statically and dynamically balanced and every unit is vibration tested before shipment from the factory.

G. Microprocessor Controller

These Packaged units are provided with Performex microprocessor control board incorporating the following features:

- **BALANCE LOADING OF COMPRESSORS:** The unit's electronic control automatically operates lead/lag sequence of compressors. This is to load the compressors evenly over long periods of operation. If required however, compressor-1 can also be set to always lead. In this case, compressor-1 always starts first and stops last. (Selectable through dip switch setting on control board).
- **PUMP DOWN FUNCTION:** In units equipped with pump down system, the controller provides the time delay between solenoid's opening and compressor starting to equalize the pressure in the system necessary for compressor to start-up. (Selectable through dip switch setting on control board).
- **COMPRESSOR ANTI-RECYCLING PROTECTION:** The controller has a built-in 3 minutes minimum off timer for compressor. This is for compressor protection in case of accidental manual re-set or immediate re-cycling of thermostat due to load demand.
- **COMPRESSOR LOCK-OUT FUNCTION:** If any of the unit's safety control trips due to abnormal conditions, the electronic controls locks out the compressor after a pre-determined timing preventing a re-start unless attended by a qualified service technician. The unit can be re-started through thermostat re-set after ensuring safe system conditions.
- **FAULT DIAGNOSTICS:** In case of system fault, LED's on the board emits a flashing signal indicating where the fault is. This is to guide the service technician in identifying the fault.
- **DIGITAL I/O's:** The unit's control board is compatible to operate with a DDC controller or any standard 24V a.c. thermostat commercially available.
- **SEQUENTIAL CONTROL:** With input signals from the thermostat, the motors in the equipment is started in sequential order: supply fan – condenser fan – compressor; at a pre-determined timings.

OPTIONS AND ACCESSORIES

A. Electric Heaters

Electric heaters are of the resistance open coil type and conform to the requirements of UL 573 or equivalent. Electrical characteristics, kW capacities and number of stages are as indicated. Airflow switches, fusible links and overheat limit thermostats are provided to shut-off power in case of airflow failure/overheat. Electric heater kit is installed as an externally mounted kit at the supply opening.

B. UV Flow™ Light Emitters:

The damp & dark environment inside the unit could contribute for the growth and development of hazardous bacteria and fungi. The UV flow™ concept uses emitter of Ultra Violet to simulate the effect of healthy sun radiation. This will inhibit the growth of these microorganism reducing in this manner mold related allergies and diseases. Breath safely with UV flow™.

To order UV flow™ use the kit number in tables below:

MODEL No.	PT036 - 060	PT075	PT090 - 120	PT180	PT215 - 240	PT300 - 360
KIT PART No.	700-393-00	700-393-01	700-393-02	700-393-03	700-393-04	700-393-05

C. Electronic Thermostat

General information: Electronic thermostat shall control one or two stage heating and cooling applications. The thermostat normally displays room temperature and mode of operation.

The temperature can be set by up/down buttons for both cooling and heating cycles. The thermostat also allows you to select continuous fan operation, or have the fan on intermittent operation with the equipment.

The thermostat is best located about 1500 mm (5 Ft.) above floor level, on a **partition wall** (not an outside wall), and should not be exposed to direct light from lamps, sun etc. It should be in return air stream, away from supply air registers/diffusers.

- Single/dual stage - Cooling & heating.
- Low voltage control - 24 VAC (nominal).
- Room temperature display - in °C or °F.
- Mode of operation - FAN/COOL/HEAT/AUTO.
- Fan mode - ON: Continuous fan operation; AUTO: Fan operates ON/OFF with compressor.
- Heating & cooling setpoint is permissible.
- Temperature set button - Up for increasing & down for decreasing temperature.
- Built-in compressor fault & clogged filter indication led lights.
- Remote sensing function as an option. Duct sensor is provided with the thermostat.

TYPICAL THERMOSTAT

Part No.	Heating Stages	Cooling Stages	Selector Switch Positions	
			Mode Switch	Fan Switch
800-652-62	1 & 2	1 & 2	OFF-HEAT/COOL	ON - AUTO

STANDARD FEATURES/OPTIONS/ACCESSORIES

DESCRIPTION	STANDARD FEATURES	OPTION (FACTORY INSTALLED)	ACCESSORY (FIELD INSTALLED)
Horizontal discharge	■		
Compressor crankcase heaters	■		
Evaporator fan–belt driven ⁽¹⁾	■		
Evaporator fan motor – ODP type (TEFC type optional) ⁽²⁾	■	■	
Condenser fan – direct drive, propeller type	■		
Condenser fan motor – totally enclosed air-over type	■		
Electric heaters		■	■
Filter drier	■		
Return air filter	■		
Compressor overload protection	■		
Low pressure switch	■		
High pressure switch	■		
Cooling & heating thermostat		■	
Condenser fan guard	■		
Condenser coil guard	■		
Manual outside air damper		■	■

NOTES:

(1) Direct drive motors for PT036 to PT060.

(2) TEFC motors are available for PT090 to PT360.

PHYSICAL DATA (DIRECT DRIVE MOTOR)

MODEL NUMBER		PT036	PT048	PT060
NOMINAL CAPACITY, TONS (kW)		3 (10.5)	4 (14)	5 (17.5)
COMPRESSOR	Quantity	1	1	1
	Oil (oz)	40	70	70
	Refrigerant	R-22		
	Operating Charge (oz)	81	95	134
CONDENSER FAN	Type/Drive	Propeller/Direct		
	Quantity – Diameter (inch)	1 – 24	1 – 24	1 – 24
	Nominal CFM (L/S)	3500 (1652)	3500 (1652)	3500 (1652)
	Motor HP – RPM	1/3 – 1075	1/3 – 1075	1/3 – 1075
CONDENSER COIL	Type	Inner Grooved Tubes and Enhanced Fins		
	Tube dia. - Rows - Fins per inch	3/8-1-14	3/8-2-14	3/8-2-16
	Total face area, Sq. ft. (Sq. m.)	10.4 (0.97)	8.33 (0.774)	10.4 (0.97)
EVAPORATOR BLOWER	Type	Centrifugal		
	Size (inch)	10 x 10	10 x 10	10 x 10
	Drive type	Direct Drive		
	Nominal CFM (L/S)	1200 (566)	1600 (755)	1800 (850)
	Motor HP (Standard)	0.75	0.75	0.75
EVAPORATOR COIL	Type	Inner Grooved Tubes and Enhanced Fins		
	Tube dia. - Rows - Fins per inch	3/8-2-16	3/8-2-16	3/8-3-14
	Total face area, Sq. ft. (Sq. m.)	3.82 (0.35)	3.82 (0.35)	4.86 (0.45)
LOW PRESSURE SWITCH	Open	25 ± 5 PSIG		
	Close	50 ± 5 PSIG		
HIGH PRESSURE SWITCH	Open	450 ± 10 PSIG		
	Close	360 ± 15 PSIG		
RETURN AIR FILTERS (1" THICK)	Quantity	2	2	2
	Size (inch)	20 x 12.75	20 x 12.75	20 x 12.75
SHIPPING WEIGHT	Kgs.	182	190	198

PHYSICAL DATA

MODEL NUMBER		PT075	PT090	PT100	PT120	PT180	PT215	PT240	PT300	PT360
NOMINAL CAPACITY, TONS (kW)		6 (21)	7.5 (26)	8.5 (30)	10 (35)	15 (53)	18 (63)	20 (71)	25 (88)	30 (105)
COMPRESSOR	Quantity	1	2	2	2	2	2	2	2	2
	Oil (oz)	60	45 x 2	70 x 2	60 x 2	81 & 110	110 x 2	110 x 2	140 x 2	140 x 2
	Refrigerant	R-22								
	Operating Charge per system (oz)	159	99 x 2	126 x 2	134 x 2	195 & 210	278 x 2	282 x 2	388 x 2	425 x 2
CONDENSER FAN	Type/Drive	Propeller/Direct								
	Qty. – Diameter (inch)	1 – 24	1 – 26	1 – 26	1 – 26	2 – 24	2 – 26	2 – 26	4 – 24	4 – 24
	Nominal CFM (L/S)	5100(2410)	6600(3115)	6600(3115)	6600(3115)	11500(5430)	13400(6330)	13400(6330)	22300(10535)	22300(10535)
	Motor HP – RPM	3/4 – 950								
CONDENSER COIL	Type	Inner Grooved Tubes and Enhanced Fins								
	Tube dia. - Rows - Fins per inch	3/8-2-16	3/8-1-16	3/8-2-14	3/8-2-14	3/8-2-14	3/8-2-16	3/8-2-16	3/8-2-14	3/8-2-14
	Total face area, Sq. ft. (Sq. m.)	11.66 (1.08)	22.5 (2.1)	22.5 (2.1)	22.5 (2.1)	36 (3.36)	48 (4.5)	48 (4.5)	72 (6.71)	72 (6.71)
EVAPORATOR BLOWER	Type	Centrifugal								
	Size (inch)	12 x 12	15 x 15	15 x 15	15 x 15	15 x 15	18 x 18	18 x 18	18 x 18	18 x 18
	Drive type	Belt								
	Nominal CFM (L/S)	2400(1135)	3000(1415)	3400(1605)	4000(1890)	6000(2835)	7000(3305)	7500(3540)	9600(4535)	11250(5315)
	Motor HP - Std. / Alt	1.5/2	2/3	2/3	3	5/7.5	5/7.5	7.5/10	7.5/10	10/15
	Motor Frame (NEMA) Std. / Alt.	56 / 56	56 / 56	56 / 56	56	184T/213T	184T/213T	213T/215T	213T/215T	213T/254T
	Fan RPM range	750-1200	700-1200	700-1200	700-1200	700-1150	700-1150	700-1150	700-1250	700-1250
	Factory setting full turns open	3	3	3	3	3	3	3	3	3
	Fan pulley pitch dia.	4.6	6.1	6.1	6.1	7.0	9.4	9.4	9.4	9.4
EVAPORATOR COIL	Type	Inner Grooved Tubes and Enhanced Fins								
	Tube dia. - Rows - Fins per inch	3/8-3-14	3/8-2-16	3/8-3-14	3/8-3-14	3/8-3-14	3/8-3-14	3/8-3-14	3/8-3-14	3/8-4-14
	Total face area, Sq. ft. (Sq. m.)	5.47 (0.51)	8.94 (0.83)	8.94 (0.83)	8.94 (0.83)	13.33 (1.24)	16 (1.48)	17.67 (1.64)	20.67 (1.92)	20.67 (1.92)
LOW PRESSURE SWITCH	Open	25 ± 5 PSIG								
	Close	50 ± 5 PSIG								
HIGH PRESSURE SWITCH	Open	450 ± 10 PSIG								
	Close	360 ± 15 PSIG								
RETURN AIR FILTERS (1" THICK)	Qty.	2	2	2	2	2	4	4	4	4
	Size (inch)	22.5x12.8	27.5x17	27.5x17	27.5x17	26.5x38.6	24.75x 23	24.75x 23	27x 26.6	27x 26.6
SHIPPING WEIGHT	Kgs.	246	367	383	384	695	742	760	1060	1176

SELECTION PROCEDURE

1. Determine cooling and heating capacity requirements at design conditions

Data:

Condenser entering air temperature	: 115°F
Evaporator entering air temperature	: 80°F DB / 67°F WB
Evaporator airflow	: 7500 CFM
Required cooling capacity	: 196,000 BTUH
Sensible heat capacity	: 145,000 BTUH
Required heating capacity	: 20 kW
External static pressure	: 0.8 INCH WG.
Power supply (V-Ph-Hz)	: 380/415-3-50

2. Unit selection based on required cooling capacity

Enter cooling capacity performance data at condenser entering air temp. at 115°F and evaporator entering air temp. 80°F DB, 67°F WB, 7500 CFM airflow. The PT240 unit will give 212,660 BTUH cooling capacity (gross) and 160,310 BTUH sensible heat capacity (gross).

3. Electric heater selection

Heating capacity required = 20 kW.
 Enter electric heating table for PT240 at 380/415-3-50 power supply.
 20 kW heater at 380/415 volts satisfies the required heating.

4. Determine fan speed and power requirements at design conditions

Before entering the fan performance tables, calculate the summation of external static pressure for the required components as follows.

External static pressure	: 0.8 INCH WG.
Electric heater	: 0.14 INCH WG.
	0.94 INCH WG.

Enter fan performance table for PT240 model. For 7500 CFM and external static pressure of 0.94 INCH WG, it requires 830 RPM and 4.58 brake horse power (BHP) wherein the standard motor will meet job requirements.

5. Determine input power to motor

Use fan motor efficiency table.

$$\text{Blower motor watts} = \frac{\text{BHP} \times 746 \text{ watts}}{\text{Motor efficiency}} = \frac{4.58 \times 746}{0.81} = 4218 \text{ watts.}$$

6. Determine net capacities

Above capacities are gross and do not include blower motor heat gain.
 Determine net capacities as follows:

Net cooling capacity	= Gross cooling capacity – blower motor heat = 212,660 – (4218 WATTS x 3.413 BTUH/WATTS) = 198,264 BTUH
Net sensible capacity	= 160,310 – (4218 WATTS x 3.413 BTUH/WATTS) = 145,914 BTUH

7. Altitude correction factors for cooling capacity

ALTITUDE, FT.		2000	4000	6000	8000	10000
FACTOR	Total capacity	0.98	0.96	0.93	0.90	0.88
	Sensible capacity	0.93	0.86	0.80	0.75	0.70

COOLING CAPACITIES

Model No.: PT036

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		1135/0.235			1250/0.248			1370/0.260		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	32.34	35.63	39.16	32.97	36.31	39.87	33.47	36.89	40.57
	SC	30.66	25.47	20.21	32.12	26.55	20.9	33.11	27.56	21.59
	kW	3.44	3.61	3.78	3.53	3.7	3.87	3.6	3.77	3.94
95	TC	31.29	34.52	37.96	31.87	35.15	38.67	32.39	35.76	39.3
	SC	30.25	25.09	19.83	31.57	26.15	20.53	32.09	27.2	21.2
	kW	3.49	3.67	3.85	3.58	3.76	3.93	3.65	3.83	4.01
105	TC	30.09	33.22	36.56	30.6	33.84	37.24	31.07	34.38	37.87
	SC	29.76	24.61	19.37	30.32	25.67	20.07	30.78	26.69	20.74
	kW	3.67	3.87	4.06	3.76	3.96	4.15	3.85	4.04	4.24
115	TC	27.94	30.89	34.06	28.48	31.47	34.68	28.9	31.99	35.28
	SC	27.58	23.53	18.39	28.12	24.59	19.07	28.53	25.6	19.75
	kW	3.88	4.09	4.31	3.96	4.19	4.39	4.06	4.26	4.49
125	TC	25.86	28.62	31.59	26.3	29.14	32.13	26.7	29.62	32.68
	SC	25.79	22.93	17.76	26.24	23.98	18.43	26.63	25.01	19.09
	kW	4.07	4.3	4.54	4.17	4.4	4.64	4.26	4.49	4.73

Model No.: PT048

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		1275/0.250			1450/0.268			1650/0.280		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	41.69	45.76	50.05	45.49	49.94	54.62	46.19	50.72	55.52
	SC	37.75	32.22	26.53	45.04	37.67	30.12	45.26	38.69	30.81
	kW	5.11	5.44	5.74	5.41	5.67	5.93	5.74	6.02	6.29
95	TC	40.6	44.58	48.82	44.24	48.62	53.22	44.97	49.42	54.14
	SC	37.18	31.65	26	43.35	37.08	29.57	44.07	38.13	30.29
	kW	5.16	5.49	5.8	5.6	5.88	6.15	5.66	5.93	6.21
105	TC	38.62	42.46	46.53	42.04	46.2	50.66	42.7	46.99	51.55
	SC	36.45	30.92	25.24	41.2	36.32	28.82	41.85	37.41	29.55
	kW	5.26	5.6	5.93	5.69	5.98	6.27	5.74	6.04	6.32
115	TC	36.45	40.05	43.93	39.61	43.62	47.87	40.26	44.31	48.71
	SC	35.73	30.12	24.43	38.82	35.62	28.06	39.46	36.67	28.8
	kW	5.46	5.81	6.15	5.87	6.18	6.5	5.93	6.24	6.56
125	TC	34.32	37.79	41.49	37.33	41.12	45.23	37.91	41.79	45.95
	SC	33.64	29.04	23.38	36.59	34.5	27.03	37.15	35.56	27.72
	kW	5.54	5.91	6.28	5.96	6.28	6.61	6.02	6.34	6.67

Model No.: PT060

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		1600/0.120			1800/0.135			2000/0.150		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	55.49	60.71	66.41	56.01	61.37	67.06	57.01	62.51	68.38
	SC	48.13	41.44	32.7	48.58	42.67	33.46	49.45	45.03	35.01
	kW	6.22	6.5	6.74	6.4	6.66	6.91	6.46	6.72	6.96
95	TC	52.34	57.44	62.86	52.88	58.03	63.52	53.87	59.04	64.69
	SC	45.81	40.62	31.86	46.27	41.83	32.64	47.14	44.15	34.15
	kW	6.68	7.0	7.28	6.88	7.18	7.46	6.93	7.23	7.52
105	TC	49.61	54.47	59.74	50.15	55.05	60.39	51.05	56.13	61.49
	SC	43.41	39.8	31.05	43.89	41.03	31.85	44.67	43.46	33.38
	kW	6.97	7.3	7.62	7.15	7.48	7.8	7.2	7.53	7.86
115	TC	44.36	48.82	53.51	44.81	49.3	54.11	45.63	50.18	55.09
	SC	38.13	36.13	27.96	38.52	37.24	28.72	39.23	39.45	30.13
	kW	7.19	7.56	7.91	7.38	7.74	8.1	7.44	7.79	8.15
125	TC	41.29	45.42	49.93	41.67	45.88	50.43	42.46	46.7	51.41
	SC	35.85	35.2	27.1	36.16	36.34	27.81	36.85	38.55	29.27
	kW	7.45	7.84	8.22	7.65	8.02	8.41	7.7	8.08	8.48

TC - Total Capacity (1000 Btu/h) Gross kW - Total unit power input DBE - Dry Bulb Temp. (°F) of Air Entering Coil DBL - Dry Bulb Temp. (°F) of Air Leaving Coil
 SC - Sensible Heat Capacity (1000 Btu/h) Gross DR - Wet Bulb depression ratio WBE - Wet Bulb Temp. (°F) of Air Entering Coil WBL - Wet Bulb Temp. (°F) of Air Leaving Coil

NOTES: 1. Direct interpolation is permissible - Do not extrapolate.
 2. Capacities above are based on DBE = 80°F. For higher or lower DBE, add following Correction Factor to Sensible Capacity = 1.08 x CFM (1 - DR) (DBE - 80).
 3. To calculate leaving conditions, follow this procedure: DBL = DBE - (Sensible Capacity (Btu/h) / 1.08 x CFM); WBL = DBL - (DR (DBE - WBE)).
 4. Total unit power input at 0.15 ESP for PT036 & 0.2 ESP for PT048/PT060.

COOLING CAPACITIES

Model No.: PT075

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		1900/0.13			2400/0.16			2900/0.18		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	66.53	72.72	79.47	69.83	76.44	83.56	72.16	79.05	86.56
	SC	57.17	47.83	38.42	65.32	53.91	42.38	68.25	59.46	45.99
	kW	7.17	7.34	7.51	7.55	7.7	7.89	8.06	8.21	8.41
95	TC	65.28	71.49	78.2	65.87	72.22	79.17	67.99	74.71	81.92
	SC	56.4	47.04	37.56	63.53	53.15	41.61	65.58	58.78	45.22
	kW	7.56	7.73	7.9	7.91	8.08	8.25	8.4	8.55	8.76
105	TC	58.9	64.58	70.79	61.8	67.81	74.41	63.78	70.11	77.06
	SC	52.68	43.88	35.0	58.6	49.65	38.77	60.48	54.95	42.22
	kW	7.72	7.87	8.04	8.04	8.19	8.37	8.5	8.66	8.86
115	TC	55.98	61.43	67.34	58.62	64.44	70.86	60.55	66.66	73.26
	SC	51.84	43.0	34.06	55.98	48.76	37.9	57.82	54.13	41.3
	kW	8.68	8.86	9.03	9.02	9.2	9.4	9.5	9.67	9.91
125	TC	53.47	58.77	64.52	56.06	61.69	67.83	57.83	63.7	70.19
	SC	51.04	42.21	33.28	53.81	48.04	37.09	55.51	53.35	40.56
	kW	9.3	9.48	9.7	9.63	9.82	10.06	10.12	10.3	10.56

Model No.: PT090

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		2400/0.20			3000/0.23			3600/0.26		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	80.31	88.23	96.52	83.79	92.08	100.73	86.27	94.73	103.66
	SC	70.32	59.41	48.19	77.74	64.93	51.81	83.8	69.35	54.67
	kW	8.37	8.79	9.2	8.93	9.34	9.72	9.61	10.02	10.4
95	TC	77.8	85.53	93.62	81.05	89.22	97.63	83.45	91.77	100.55
	SC	69.86	58.87	47.59	77.27	64.44	51.2	83.41	68.9	54.15
	kW	8.97	9.44	9.88	9.55	10.02	10.46	10.27	10.72	11.17
105	TC	73.31	80.64	88.34	76.34	84.02	92.07	78.59	86.46	94.81
	SC	67.87	56.9	45.66	75.29	62.41	49.26	77.02	66.92	52.21
	kW	9.44	9.97	10.46	10.04	10.56	11.04	10.77	11.28	11.77
115	TC	69.75	76.79	84.21	72.55	79.86	87.67	74.67	82.25	90.31
	SC	66.94	55.88	44.59	71.1	61.35	48.19	73.17	65.96	51.18
	kW	9.98	10.56	11.11	10.58	11.16	11.71	11.32	11.89	12.44
125	TC	65.05	71.69	78.72	67.71	74.65	81.98	69.65	76.79	84.41
	SC	64.9	53.89	42.66	66.36	59.45	46.28	68.25	63.99	49.25
	kW	10.65	11.29	11.9	11.28	11.9	12.52	12.01	12.64	13.27

Model No.: PT100

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		2700/0.115			3400/0.135			4100/0.165		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	94.47	103.36	112.89	98.96	108.49	118.56	102.19	112.16	122.65
	SC	85.68	71.97	58.05	97.23	80.64	63.73	100.14	88.55	68.84
	kW	9.43	9.93	10.39	9.86	10.34	10.79	10.48	10.95	11.38
95	TC	90.24	98.99	108.25	94.57	103.86	113.67	97.58	107.32	117.57
	SC	84.18	70.83	57.17	95.63	79.37	62.76	99.62	87.14	67.79
	kW	9.85	10.38	10.89	10.29	10.81	11.32	10.91	11.43	11.94
105	TC	86.35	94.81	103.81	90.37	99.35	108.89	93.25	102.56	112.57
	SC	82.19	68.64	54.83	88.56	77.24	60.46	91.39	85.07	65.56
	kW	10.14	10.72	11.27	10.6	11.16	11.72	11.23	11.8	12.35
115	TC	82.24	90.36	99.04	86.07	94.63	103.91	88.79	97.76	107.27
	SC	80.2	66.71	52.98	84.35	75.25	58.61	87.01	83.13	63.62
	kW	10.61	11.25	11.85	11.09	11.71	12.31	11.74	12.37	12.99
125	TC	76.94	84.75	92.99	80.59	88.73	97.46	83.07	91.72	100.73
	SC	75.4	64.71	51.0	78.98	73.28	56.59	81.41	81.24	61.68
	kW	10.84	11.51	12.15	11.32	11.98	12.62	11.98	12.63	13.3

TC - Total Capacity (1000 Btuh) Gross kW - Total unit power input DBE - Dry Bulb Temp. (°F) of Air Entering Coil DBL - Dry Bulb Temp. (°F) of Air Leaving Coil
 SC - Sensible Heat Capacity (1000 Btuh) Gross DR - Wet Bulb depression ratio WBE - Wet Bulb Temp. (°F) of Air Entering Coil WBL - Wet Bulb Temp. (°F) of Air Leaving Coil

- NOTES:** 1. Direct interpolation is permissible - Do not extrapolate.
 2. Capacities above are based on DBE = 80°F. For higher or lower DBE, add following Correction Factor to Sensible Capacity = 1.08 x CFM (1 - DR) (DBE - 80).
 3. To calculate leaving conditions, follow this procedure: DBL = DBE - (Sensible Capacity (Btuh) / 1.08 x CFM); WBL = DBL - [DR (DBE - WBE)].
 4. Total unit power input based on nominal CFM & 0.25 ESP.

COOLING CAPACITIES

Model No.: PT120

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		3200/0.128			4000/0.160			4800/0.180		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	112.23	122.24	133	116.99	127.55	138.77	120.3	131.43	143.17
	SC	96.8	81.3	65.3	108.8	90.2	71.3	118.5	98.3	76.6
	kW	11.99	12.3	12.55	12.6	12.85	13.09	13.38	13.63	13.85
95	TC	106.3	115.99	126.17	110.74	120.94	131.62	114.01	124.54	135.66
	SC	94.65	79.39	63.77	106.48	88.17	69.44	113.1	96.15	74.59
	kW	12.78	13.1	13.36	13.38	13.65	13.91	14.16	14.43	14.67
105	TC	100.76	109.94	119.61	104.82	114.55	124.76	107.93	117.88	128.64
	SC	90.91	75.87	60.52	102.49	84.5	66.13	106.42	92.32	71.24
	kW	13.75	14.09	14.37	14.35	14.64	14.91	15.12	15.41	15.66
115	TC	96.17	104.96	114.26	100.08	109.34	119.24	102.86	112.43	122.82
	SC	89.2	74.15	58.82	99.0	82.81	64.49	101.75	90.6	69.56
	kW	14.17	14.52	14.81	14.75	15.06	15.35	15.52	15.8	16.09
125	TC	91.43	99.85	108.91	95.19	103.95	113.39	97.79	106.98	116.8
	SC	89.27	74.9	59.36	94.24	82.75	64.03	96.81	90.83	69.24
	kW	14.72	15.12	15.46	15.3	15.7	16.05	16.18	16.48	16.76

Model No.: PT180

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		4800/0.130			6000/0.160			7200/0.180		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	164.27	178.45	193.87	170.42	185.28	201.49	174.92	190.57	207.25
	SC	146.19	121.58	96.83	164.71	135.21	105.61	169.67	147.91	113.66
	kW	18.02	18.39	18.75	19.4	19.75	20.14	21.16	21.52	21.91
95	TC	158.28	172.27	187.29	164.33	178.94	194.63	168.6	183.96	200.01
	SC	141.45	117.42	93.13	157.04	130.94	101.79	161.13	143.38	109.62
	kW	19.19	19.57	19.94	20.56	20.93	21.32	22.32	22.69	23.12
105	TC	149.87	163.45	177.64	155.47	169.56	184.76	159.62	174.03	189.81
	SC	136.78	113.19	89.1	147.32	126.46	97.78	151.27	138.59	105.54
	kW	20.22	20.61	20.99	21.57	21.94	22.37	23.32	23.7	24.14
115	TC	142.32	155.29	169.09	147.71	161.3	175.72	151.64	165.43	180.6
	SC	132.02	108.74	85.16	138.21	122.01	93.67	141.89	133.91	101.38
	kW	22.11	22.53	22.93	23.45	23.85	24.31	25.19	25.58	26.09
125	TC	133.51	145.96	159.02	138.63	151.57	165.37	142.3	155.68	169.77
	SC	124.6	104.65	81.42	129.41	117.74	89.89	132.84	129.69	97.4
	kW	23.41	23.85	24.29	24.75	25.16	25.66	26.5	26.91	27.45

Model No.: PT215

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		5800/0.140			7000/0.160			8200/0.180		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	198.66	215.61	232.9	206.4	223.64	241.38	211.97	229.69	248.02
	SC	174.67	147.05	118.6	192.5	160.05	126.91	208.69	171.99	134.61
	kW	20.41	21.17	21.76	21.82	22.5	23.05	23.22	23.85	24.37
95	TC	190.22	206.28	222.94	197.36	213.8	231.02	202.7	219.47	237.22
	SC	167.28	140.16	112.46	184.59	152.84	120.63	200.53	164.5	128.11
	kW	21.74	22.5	23.07	23.11	23.8	24.33	24.49	25.12	25.63
105	TC	177.47	192.5	208.39	183.96	199.46	215.76	188.92	204.94	221.61
	SC	158.3	131.98	105.25	175.06	144.32	113.17	186.86	155.86	120.53
	kW	22.98	23.73	24.31	24.33	25.0	25.54	25.68	26.3	26.82
115	TC	165.64	179.82	194.62	171.64	186.36	201.64	176.13	191.23	207.01
	SC	156.27	129.56	102.4	168.84	142.26	110.58	173.26	153.86	118.05
	kW	23.91	24.65	25.21	25.21	25.89	26.41	26.52	27.14	27.65
125	TC	154.37	167.76	181.57	159.97	173.78	188.14	164.34	178.37	193.08
	SC	152.46	125.88	98.72	155.65	138.56	106.94	159.9	150.25	114.41
	kW	26.04	26.81	27.39	27.32	28.01	28.55	28.62	29.24	29.78

TC - Total Capacity (1000 Btuh) Gross kW - Total unit power input DBE - Dry Bulb Temp. (°F) of Air Entering Coil DBL - Dry Bulb Temp. (°F) of Air Leaving Coil
 SC - Sensible Heat Capacity (1000 Btuh) Gross DR - Wet Bulb depression ratio WBE - Wet Bulb Temp. (°F) of Air Entering Coil WBL - Wet Bulb Temp. (°F) of Air Leaving Coil

- NOTES:** 1. Direct interpolation is permissible - Do not extrapolate.
 2. Capacities above are based on DBE = 80°F. For higher or lower DBE, add following Correction Factor to Sensible Capacity = 1.08 x CFM (1 - DR) (DBE - 80).
 3. To calculate leaving conditions, follow this procedure: DBL = DBE - (Sensible Capacity (Btuh) / 1.08 x CFM); WBL = DBL - [DR (DBE - WBE)].
 4. Total unit power input based on nominal CFM & 0.35 ESP.

COOLING CAPACITIES

Model No.: PT240

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		6000/0.125			7500/0.150			9000/0.175		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	221.76	240.16	259.52	231.18	250.39	270.57	237.89	257.55	278.41
	SC	190.52	159.58	128.19	214.06	177.02	139.41	234.05	192.74	149.47
	kW	23.85	24.62	25.2	25.03	25.71	26.28	26.56	27.18	27.77
95	TC	212.58	230.52	249.37	221.49	240.28	259.66	227.82	247.09	267.53
	SC	181.68	152.31	122.44	204.14	168.94	132.99	222.76	183.95	142.78
	kW	25.48	26.24	26.83	26.65	27.32	27.89	28.15	28.77	29.38
105	TC	196.86	213.7	231.2	205.12	222.54	240.88	210.8	228.85	247.67
	SC	175.75	146.56	116.79	198.33	163.14	127.5	208.24	178.22	137.06
	kW	27.34	28.12	28.73	28.49	29.17	29.78	29.99	30.62	31.26
115	TC	187.98	204.15	221.28	195.7	212.66	230.23	201.39	218.9	237.19
	SC	172.73	143.67	114.16	195.2	160.31	124.73	200.17	175.59	134.56
	kW	29.25	30.04	30.67	30.37	31.09	31.72	31.86	32.52	33.18
125	TC	174.73	189.99	205.96	181.95	197.75	214.49	187.15	203.23	220.89
	SC	170.96	140.59	110.66	179.62	157.45	121.55	184.75	172.78	131.54
	kW	30.32	31.1	31.74	31.42	32.14	32.78	32.9	33.57	34.26

Model No.: PT300

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		8000/0.140			9600/0.160			11200/0.180		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	271.43	293.99	317.52	279.62	302.64	327.32	285.5	309.56	334.64
	SC	244.87	204.24	162.83	268.1	221.12	173.8	271.65	236.69	183.57
	kW	28.43	29.17	29.72	30.17	30.82	31.35	32.33	32.93	33.46
95	TC	262.81	285.06	307.93	270.57	293.21	317.09	276.46	299.56	324.2
	SC	242.0	201.55	160.09	257.44	218.43	170.98	263.04	233.87	180.87
	kW	31.4	32.15	32.71	33.12	33.78	34.32	35.25	35.87	36.41
105	TC	247.49	268.44	290.34	254.75	276.35	298.76	260.11	282.1	305.59
	SC	239.16	198.59	157.29	249.65	215.75	168.13	254.91	231.1	178.14
	kW	33.37	34.16	34.76	35.08	35.78	36.37	37.22	37.87	38.45
115	TC	234.6	254.57	275.52	241.36	261.78	283.86	246.45	267.54	290.14
	SC	232.24	192.0	151.11	234.16	208.9	162.14	239.1	224.46	172.01
	kW	35.9	36.73	37.37	37.6	38.35	38.98	39.71	40.43	41.07
125	TC	215.56	234.18	254.12	221.77	241.05	261.56	226.69	246.01	267.3
	SC	213.4	186.16	145.68	219.55	203.34	156.62	224.42	218.67	166.51
	kW	37.71	38.6	39.28	39.41	40.21	40.87	41.53	42.28	42.96

Model No.: PT360

CONDENSER ENTERING AIR TEMP. (°F)		EVAPORATOR AIRFLOW, CFM/DR								
		9600/0.090			11250/0.10			12500/0.110		
		EVAPORATOR ENTERING AIR, WBE (°F)								
		62	67	72	62	67	72	62	67	72
85	TC	301.59	327.51	355.45	309	336.07	365.1	313.6	341.6	371.26
	SC	284.01	233.45	182.42	285.18	254.19	195.66	289.43	269.61	205.43
	kW	31.6	32.05	32.62	33.04	33.49	34.17	34.24	34.71	35.45
95	TC	295.14	320.65	348.21	302.44	329.03	357.62	306.87	334.34	363.5
	SC	266.77	226.14	176.28	278.95	246.51	189.26	277.37	261.56	198.77
	kW	33.4	33.88	34.52	34.86	35.35	36.09	36.06	36.58	37.38
105	TC	286.72	312.02	339.34	294	320.37	348.7	298.33	325.01	353.92
	SC	275.48	235.86	183.69	282.47	257.48	197.48	286.63	272.92	207.22
	kW	35.0	35.51	36.2	36.46	36.98	37.78	37.68	38.23	39.09
115	TC	279.27	304.33	331.0	286.16	312.3	339.9	290.46	316.9	345.55
	SC	262.84	227.13	176.49	274.83	247.99	189.76	273.38	263.05	199.54
	kW	37.14	37.7	38.44	38.65	39.22	40.08	39.89	40.5	41.42
125	TC	271.48	295.91	321.93	278.43	303.36	330.71	282.14	307.8	336.21
	SC	252.75	220.42	170.89	264.51	240.64	183.97	262.67	255.38	193.56
	kW	38.8	39.39	40.19	40.32	40.93	41.83	41.58	42.22	43.21

TC - Total Capacity (1000 Btuh) Gross kW - Total unit power input DBE - Dry Bulb Temp. (°F) of Air Entering Coil DBL - Dry Bulb Temp. (°F) of Air Leaving Coil
 SC - Sensible Heat Capacity (1000 Btuh) Gross DR - Wet Bulb depression ratio WBE - Wet Bulb Temp. (°F) of Air Entering Coil WBL - Wet Bulb Temp. (°F) of Air Leaving Coil

- NOTES:** 1. Direct interpolation is permissible - Do not extrapolate.
 2. Capacities above are based on DBE = 80°F. For higher or lower DBE, add following Correction Factor to Sensible Capacity = 1.08 x CFM (1 - DR) (DBE - 80).
 3. To calculate leaving conditions, follow this procedure: DBL = DBE - (Sensible Capacity (Btuh) / 1.08 x CFM); WBL = DBL - [DR (DBE - WBE)].
 4. Total unit power input based on nominal CFM & 0.35 ESP.

ELECTRICAL DATA

MODELS: PT036 - PT060

MODEL NUMBER	POWER SUPPLY (V-Ph-Hz)	VOLTAGE RANGE		FM	COMPRESSOR			BLOWER MOTOR		ELECTRIC HEATER		MCA	MOCP
		MIN.	MAX.	FLA	RLA	LRA	HP	FLA	kW	FLA			
PT036	380/415-3-50 (4 WIRE)	342	457	2.3	5.9	42	0.75	5.5	-	-	15.2	20	
									5/6	7.6/9.1	16.4/18.3	20/20	
									7.5/10*	11.4/15.2	21.1/25.9	25/30	
PT048	380/415-3-50 (4 WIRE)	342	457	2.3	10.4	55	0.75	5.5	-	-	20.8	30	
									5/6	7.6/9.1	20.8/20.8	30/30	
									7.5/10*	11.4/15.2	21.1/25.9	35/30	
PT060	380/415-3-50 (4 WIRE)	342	457	2.3	9.6	65	1	7.8	-	-	22.1	30	
									5/6	7.6/9.1	22.1/22.1	30/30	
									7.5/10*	11.4/15.2	24/28.8	30/30	
									12*	18.2	32.5	35	

LEGEND:

- FLA** - Full Load Amps
- HP** - Horse Power
- BM** - Blower Motor
- LRA** - Locked Rotor Amps
- RLA** - Rated Load Amps
- MCA** - Minimum Circuit Amps
- MOCP** - Maximum Over Current Protection
- FM** - Fan Motor (Condenser)
- *Combination of heater modules

MODELS: PT075 & PT090

DESCRIPTION				MODEL NUMBER															
				PT075								PT090							
POWER SUPPLY (V-Ph-Hz)	VOLTAGE RANGE		FM	COMPRESSOR		BM		ELECTRIC HEATER		MCA	MOCP	COMPRESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP
	Min.	Max.	FLA	RLA	LRA	HP	FLA	Nom. kW	FLA			RLA	LRA	HP	FLA	Nom. kW	FLA		
380/415-3-50 (4 WIRE)	342	457	2.3 (1.9 FOR PT090)	12	101	1.5	3.4	-	-	20.7	30	2	3.6	-	-	24	30	8.2	50
								5/6	7.6/9.1	20.7/20.7	30/30			5/6	7.6/9.1	24/24	30/30		
								7.5/10*	11.4/15.2	20.7/23.3	30/30			7.5/10*	11.4/15.2	24/24	30/30		
								12*/15*	18.2/22.8	27/32.8	30/35			12*/15*	18.2/22.8	27.3/33	30/35		
								12*/15*	18.2/22.8	27/32.8	30/35			20*	30.4	42.5	45		
								20*	30.4	42.5	45			20*	30.4	42.5	45		
	342	457	2.3 (1.9 FOR PT090)	12	101	2	3.6	-	-	20.9	30	3	4.7	-	-	25.1	30	10	74
								5/6	7.6/9.1	20.9/20.9	30/30			5/6	7.6/9.1	25.1/25.1	30/30		
								7.5/10*	11.4/15.2	20.9/23.5	30/30			7.5/10*	11.4/15.2	25.1/25.1	30/30		
								12*/15*	18.2/22.8	27.3/33	30/35			12*/15*	18.2/22.8	28.6/34.4	30/35		
								12*/15*	18.2/22.8	27.3/33	30/35			20*	30.4	43.9	45		
								20*	30.4	43.9	45			20*	30.4	43.9	45		

MODELS: PT100 & PT120

DESCRIPTION				MODEL NUMBER															
				PT100								PT120							
POWER SUPPLY (V-Ph-Hz)	VOLTAGE RANGE		FM	COMPRESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP	COMPRESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP
	Min.	Max.	FLA	RLA	LRA	HP	FLA	Nom. kW	FLA			RLA	LRA	HP	FLA	Nom. kW	FLA		
380/415-3-50 (4 WIRE)	342	457	1.9	10.4	55	2	3.6	-	-	28.9	35	10	74	-	-	29.1	35	3	4.7
								7.5/10	11.4/15.2	28.9/28.9	35/35			7.5/10	11.4/15.2	29.1/29.1	35/35		
								10*/12*	15.2/18.2	28.9/28.9	35/35			10*/12*	15.2/18.2	29.1/29.1	35/35		
								15*/20*	22.8/30.4	33/42.5	35/45			15*/20*	22.8/30.4	34.4/43.9	35/45		
								15*/20*	22.8/30.4	33/42.5	35/45			25*	38	53.4	60		
								25*	38	53.4	60			25*	38	53.4	60		
	342	457	1.9	10.4	55	3	4.7	-	-	30	40	5	9.2	-	-	33.6	40	10	74
								7.5/10	11.4/15.2	30/30	40/40			7.5/10	11.4/15.2	33.6/33.6	40/40		
								10*/12*	15.2/18.2	30/30	40/40			10*/12*	15.2/18.2	33.6/34.3	40/40		
								15*/20*	22.8/30.4	34.4/43.9	40/50			15*/20*	22.8/30.4	40/49.5	40/50		
								15*/20*	22.8/30.4	34.4/43.9	40/50			25*	38	59	60		
								25*	38	59	60			25*	38	59	60		

ELECTRICAL DATA

MODELS: PT180 & PT215

DESCRIPTION				MODEL NUMBER															
				PT180								PT215							
POWER SUPPLY (V-Ph-Hz)	VOLTAGE RANGE		FM (each)	COMPR-ESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP	COMPR-ESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP
	Min.	Max.	FLA	RLA	LRA	HP	FLA	Nom. kW	FLA			RLA	LRA	HP	FLA	Nom. kW	FLA		
380/415-3-50 (4 WIRE)	342	457	1.9	17.3 & 16.4	111 & 95	5	9.2	-	-	51	60	19.2	125	-	-	56.2	70		
								7.5/10	11.4/15.2	51/51	60/60			7.5/10	11.4/15.2	56.2/56.2	70/70		
								10*/12*	15.2/18.2	51/51	60/60			10*/12*	15.2/18.2	56.2/56.2	70/70		
								15*/20*	22.8/30.4	51/51	60/60			15*/20*	22.8/30.4	56.2/56.2	70/70		
								25*/30*	38/45.6	59/68.5	60/70			25*/30*	38/45.6	59/68.5	70/70		
				7.5	13	-	-	54.8	70	-	-	60	70						
						7.5/10	11.4/15.2	54.8/54.8	70/70	7.5/10	11.4/15.2	60/60	70/70						
						10*/12*	15.2/18.2	54.8/54.8	70/70	10*/12*	15.2/18.2	60/60	70/70						
						15*/20*	22.8/30.4	54.8/54.8	70/70	15*/20*	22.8/30.4	60/60	70/70						
						25*/30*	38/45.6	63.8/73.3	70/80	25*/30*	38/45.6	63.8/73.3	70/80						

MODELS: PT240 & PT300

DESCRIPTION				MODEL NUMBER															
				PT240								PT300							
POWER SUPPLY (V-Ph-Hz)	VOLTAGE RANGE		FM (each)	COMPR-ESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP	COMPR-ESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP
	Min.	Max.	FLA	RLA	LRA	HP	FLA	Nom. kW	FLA			RLA	LRA	HP	FLA	Nom. kW	FLA		
380/415-3-50 (4 WIRE)	342	457	1.9	19.6	118	7.5	13	-	-	60.9	80	25.6	167	-	-	78.2	100		
								7.5/10	11.4/15.2	60.9/60.9	80/80			10*/12*	15.2/18.2	78.2/78.2	100/100		
								10*/12*	15.2/18.2	60.9/60.9	80/80			15*/20*	22.8/30.4	78.2/78.2	100/100		
								15*/20*	22.8/30.4	60.9/60.9	80/80			25*/30*	38/45.6	78.2/78.2	100/100		
								25*/30*	38/45.6	63.8/73.3	80/80			35*/40*	53.2/60.8	82.8/92.3	100/100		
				10	15.1	-	-	63	80	-	-	80.3	100						
						7.5/10	11.4/15.2	63/63	80/80	10*/12*	15.2/18.2	80.3/80.3	100/100						
						10*/12*	15.2/18.2	63/63	80/80	15*/20*	22.8/30.4	80.3/80.3	100/100						
						15*/20*	22.8/30.4	63/63	80/80	25*/30*	38/45.6	80.3/80.3	100/100						
						25*/30*	38/45.6	66.4/75.9	80/80	35*/40*	53.2/60.8	85.4/94.9	100/100						

MODEL: PT360

DESCRIPTION				MODEL NUMBER													
				PT360													
POWER SUPPLY (V-Ph-Hz)	VOLTAGE RANGE		FM (each)	COMPR-ESSOR (each)		BM		ELECTRIC HEATER		MCA	MOCP	COMPR-ESSOR (each)		BM		ELECTRIC HEATER	
	Min.	Max.	FLA	RLA	LRA	HP	FLA	Nom. kW	FLA			RLA	LRA	HP	FLA	Nom. kW	FLA
380/415-3-50 (4 WIRE)	342	457	1.9	27.8	198	10	15.1	-	-	85.3	110	27.8	198	-	-	85.3	110
								10*/12*	15.2/18.2	85.3/85.3	110/110			10*/12*	15.2/18.2	85.3/85.3	110/110
								15*/20*	22.8/30.4	85.3/85.3	110/110			15*/20*	22.8/30.4	85.3/85.3	110/110
								25*/30*	38/45.6	85.3/85.3	110/110			25*/30*	38/45.6	85.3/85.3	110/110
								35*/40*	53.2/60.8	85.4/94.9	110/110			35*/40*	53.2/60.8	85.4/94.9	110/110
				15	22.6	-	-	92.8	110	-	-	92.8	110				
						10*/12*	15.2/18.2	92.8/92.8	110/110	10*/12*	15.2/18.2	92.8/92.8	110/110				
						15*/20*	22.8/30.4	92.8/92.8	110/110	15*/20*	22.8/30.4	92.8/92.8	110/110				
						25*/30*	38/45.6	92.8/92.8	110/110	25*/30*	38/45.6	92.8/92.8	110/110				
						35*/40*	53.2/60.8	94.8/104.3	110/110	35*/40*	53.2/60.8	94.8/104.3	110/110				

LEGEND:

- FLA** - Full Load Amps
- HP** - Horse Power
- BM** - Blower Motor
- LRA** - Locked Rotor Amps
- RLA** - Rated Load Amps
- MCA** - Minimum Circuit Amps
- MOCP** - Maximum Over Current Protection
- FM** - Fan Motor (Condenser)
- *Combination of heater modules

FAN PERFORMANCE DATA

(DIRECT DRIVE MOTOR)

Model No.: PT036

BLOWER MOTOR SPEED	EXTERNAL STATIC PRESSURE (inch wg.)						
		0.1	0.2	0.3	0.4	0.5	0.6
HIGH	CFM	1400	1340	1300	1280	1265	1250
	BHP	0.78	0.75	0.73	0.7	0.69	0.67
MEDIUM	CFM	1280	1220	1200	1180	1160	1150
	BHP	0.7	0.69	0.69	0.67	0.65	0.64
LOW	CFM	1150	1120	1100	1080	1040	1000
	BHP	0.65	0.6	0.6	0.58	0.57	0.56

Model No.: PT048

BLOWER MOTOR SPEED	EXTERNAL STATIC PRESSURE (inch wg.)										
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
HIGH	CFM	1680	1620	1550	1500	1480	1440	1410	1380	1340	1300
	BHP	1.0	0.96	0.95	0.9	0.87	0.86	0.84	0.82	0.81	0.78
MEDIUM	CFM	1500	1405	1385	1360	1300	1280	1240	1190	1160	1140
	BHP	0.82	0.81	0.8	0.79	0.77	0.75	0.74	0.72	0.7	0.68
LOW	CFM	1300	1250	1220	1180	1160	1140	1100	1040	1000	950
	BHP	0.71	0.7	0.68	0.66	0.64	0.61	0.58	0.56	0.54	0.53

Model No.: PT060

BLOWER MOTOR SPEED	EXTERNAL STATIC PRESSURE (inch wg.)										
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
HIGH	CFM	2055	2000	1980	1950	1940	1910	1880	1850	1800	1770
	BHP	1.52	1.48	1.4	1.36	1.32	1.28	1.28	1.25	1.25	1.21
MEDIUM	CFM	1850	1800	1750	1730	1710	1690	1680	1650	1640	1610
	BHP	1.48	1.45	1.41	1.39	1.35	1.31	1.26	1.2	1.18	1.15
LOW	CFM	1650	1600	1558	1550	1542	1534	1526	1517	1495	1475
	BHP	1.29	1.24	1.22	1.20	1.17	1.14	1.11	1.10	1.09	1.04

NOTE: 1. Values include losses for dry coil, filter & unit casing.
 2. Direct drive motors have single speed connection only. Thermostats are also single speed type only. Refer to the unit wiring diagram for connecting to other motor speeds.

FAN PERFORMANCE DATA

Model No.: PT075

Airflow, CFM (L/S)	External Static Pressure (inch wg.)															
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800 (849)	761*	0.42*	865	0.51	940	0.64	1016	0.76	1084	0.91	1148	1.02	1236	1.06	1264	1.18
2000 (944)	808*	0.51*	886	0.64	965	0.77	1044	0.88	1106	1.04	1169	1.17	1242	1.31	1296	1.39
2200 (1038)	849*	0.65*	916	0.76	990	0.89	1066	1.08	1134	1.18	1191	1.32	1254	1.51	1312*	1.52*
2400 (1133)	864	0.74	942	0.89	1020	1.02	1084	1.18	1151	1.32	1212	1.49	1266	1.62	1324*	1.68*
2600 (1227)	894	0.92	968	1.10	1041	1.21	1120	1.35	1174	1.52	1228	1.72	1275	1.76	1332*	1.79*
2800 (1321)	925	1.08	995	1.25	1072	1.40	1138	1.48	1188	1.65	1254	1.82	1282	1.86		
3000 (1416)	958	1.21	1039	1.40	1096	1.59	1164	1.69	1192	1.76						
3200 (1510)	991	1.40	1075	1.71	1121	1.76	1173	1.82								II

- Notes:**
1. Values include losses for filters, unit casing and wet coils.
 2. Standard 1.5 HP motor to be used for the unshaded portion.
 3. Alt. 2 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
- * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

Model No.: PT090

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400 (1133)	620*	0.65*	680	0.71	752	0.85	815	0.96	865	1.10	930	1.38	990	1.45	1054	1.68	1090	1.78	1150	1.92
2600 (1227)	660	0.71	720	0.82	785	0.98	835	1.15	884	1.38	945	1.51	1005	1.61	1065	1.76	1100	1.91	1161	2.05
2800 (1321)	672	0.76	741	0.91	801	1.14	849	1.38	895	1.54	960	1.62	1012	1.73	1072	1.88	1109	2.00	1168*	2.21*
3000 (1416)	700	0.84	765	1.10	821	1.32	875	1.51	915	1.63	976	1.76	1022	1.84	1084	1.99	1115	2.15	1179*	2.42*
3200 (1510)	705	0.96	771	1.25	834	1.44	890	1.62	928	1.79	985	1.87	1029	2.01	1090	2.18	1124	2.33	1184*	2.62*
3400 (1605)	719	1.10	795	1.41	842	1.57	899	1.84	945	1.94	1000	1.98	1037	2.18	1095	2.31	1133	2.54	1190*	2.83*
3600 (1699)	735	1.29	804	1.49	854	1.71	910	1.98	957	2.08	1010	2.21	1045	2.31	1101	2.48	1137	2.67		
3800 (1793)	755	1.45	810	1.61	875	1.82	915	2.05	970	2.21	1021	2.35	1052	2.55	1105	2.62				II

- Notes:**
1. Values include losses for filters, unit casing and wet coils.
 2. Standard 2 HP motor to be used for the unshaded portion.
 3. Alt. 3 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
- * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

Model No.: PT100

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2700 (1274)	610*	0.73*	690	0.75	750	0.87	805	1.09	864	1.41	925	1.65	975	1.71	1022	1.79	1080	1.91	1120	2.10
2800 (1321)	633*	0.79*	700	0.85	762	0.95	810	1.17	875	1.47	934	1.72	987	1.84	1.31	1.88	1095	2.02	1135	2.18
3000 (1416)	650	0.85	708	0.97	781	1.10	832	1.32	890	1.59	951	1.82	998	1.93	1045	1.99	1100	2.11	1145	2.49
3200 (1510)	665	0.92	725	1.12	796	1.28	841	1.43	900	1.67	959	1.91	1008	2.06	1056	2.10	1105	2.25	1152	2.61
3400 (1605)	685	1.01	750	1.35	805	1.44	855	1.52	911	1.75	978	1.98	1016	2.17	1065	2.22	1109	2.54	1161	2.71
3600 (1699)	700	1.10	765	1.48	816	1.56	871	1.65	921	1.84	986	2.08	1024	2.29	1074	2.46	1115	2.61		
3800 (1793)	720	1.25	787	1.65	835	1.70	895	1.82	938	1.98	995	2.21	1035	2.41	1081	2.61	1122	2.74		II
4000 (1888)	745	1.40	805	1.78	859	1.92	907	1.97	951	2.18	1005	2.38	1048	2.55	1089	2.72				
4100(1935)	765	1.51	815	1.91	881	2.01	921	2.16	967	2.35	1020	2.49	1056	2.66						

- Notes:**
1. Values include losses for filters, unit casing and wet coils.
 2. Standard 2 HP motor to be used for the unshaded portion.
 3. Alt. 3 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
- * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

FAN PERFORMANCE DATA

Model No.: PT120

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3200 (1510)	685*	0.80*	750	1.03	795	1.09	850	1.24	890	1.44	950	1.56	1008	1.71	1049	1.99	1074	2.15	1105	2.36
3400 (1605)	715*	1.02*	760	1.16	825	1.26	880	1.39	910	1.54	970	1.79	1024	2.01	1062	2.11	1098	2.34	1128	2.47
3600 (1699)	735*	1.16*	790	1.22	835	1.36	895	1.56	930	1.71	985	1.92	1036	2.12	1085	2.26	1115	2.46	1143	2.62
3800 (1793)	745	1.24	805	1.37	850	1.51	905	1.69	945	1.87	995	2.12	1044	2.26	1105	2.39	1128	2.64	1165	2.81
4000 (1888)	765	1.32	820	1.52	865	1.66	925	1.84	955	2.12	1010	2.32	1061	2.40	1114	2.69	1141	2.85		
4200 (1982)	780	1.44	835	1.64	890	1.84	935	2.06	975	2.24	1025	2.46	1079	2.61	1121	2.79				
4400 (2076)	800	1.56	845	1.77	905	1.99	955	2.31	995	2.39	1035	2.62	1091	2.82	1134	2.93				
4600 (2170)	825	1.85	870	1.98	915	2.14	970	2.49	1005	2.54	1050	2.79	1105	2.92						
4800 (2265)	835	2.07	885	2.13	930	2.28	985	2.62	1020	2.79	1070	2.98								

- Notes: 1. Values include losses for filters, unit casing and wet coils.
 2. Standard 3 HP motor to be used.
 3. Bordered regions indicate alternative drives I & II.

Model No.: PT180

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4800 (2265)	698*	1.45*	755*	1.72*	790	1.91	845	2.17	880	2.19	930	2.50	971	2.60	1020	2.91	1060	3.20	1095	3.55
5000 (2360)	714*	1.58*	768	1.79	805	2.05	871	2.20	895	2.40	940	2.74	985	2.80	1031	3.05	1070	3.40	1110	3.74
5200 (2454)	718*	1.85*	781	2.03	818	2.30	880	2.39	914	2.65	955	2.98	995	3.12	1039	3.28	1081	3.65	1121	4.01
5400 (2548)	742*	2.01*	802	2.20	845	2.50	895	2.49	921	2.84	981	3.22	1011	3.20	1055	3.50	1096	3.91	1135	4.19
5600 (2643)	758*	2.18*	809	2.35	865	2.70	905	2.74	938	3.00	995	3.35	1030	3.50	1068	3.75	1110	4.09	1144*	4.39*
5800 (2737)	795	2.40	831	2.64	890	2.80	928	2.91	961	3.21	1012	3.60	1050	3.70	1080	4.00	1121	4.40	1155*	4.68*
6000 (2832)	802	2.60	845	2.83	910	2.91	941	3.20	975	3.45	1025	3.81	1061	3.92	1096	4.19	1135	4.60	1169*	4.91*
6200 (2926)	822	2.75	864	3.01	915	3.14	956	3.40	994	3.60	1032	3.90	1075	4.20	1112	4.48	1142*	4.90*	1181*	5.22*
6400 (3020)	840	3.10	879	3.25	921	3.50	968	3.60	1011	3.80	1048	4.12	1092	4.50	1119	4.79	1157*	5.21*	1190*	5.55*
6600 (3115)	861	3.20	891	3.61	935	3.62	980	3.95	1025	4.10	1060	4.35	1100	4.81	1127	4.98	1169*	5.50*	1199*	5.79*
6800 (3209)	874	3.35	904	3.65	948	3.91	998	4.22	1041	4.34	1071	4.85	1110	5.40	1145*	5.60*	1178*	6.10*	1208*	6.35*
7000 (3303)	890	3.60	930	3.98	956	4.21	1011	4.61	1052	4.68	1085	5.24	1120	5.65	1158*	6.10*	1198*	6.32*	1219*	6.60*
7200 (3398)	905	4.10	942	4.25	985	4.55	1025	4.88	1065	5.28	1098	5.58	1135	5.95	1170*	6.21*	1210*	6.66*	1228*	7.05*

- Notes: 1. Values include losses for filters, unit casing and wet coils.
 2. Standard 5 HP motor to be used for the unshaded portion.
 3. Alt. 7.5 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
 * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

Model No.: PT215

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5800 (2737)	601	1.98	649	2.26	678	2.69	728	2.89	772	3.10	816	3.42	853	3.62	886	3.92	928	4.23	964	4.72
6000 (2832)	617	2.08	661	2.45	692	2.76	741	2.98	784	3.21	834	3.52	866	3.75	898	4.12	939	4.38	978	4.81
6200 (2926)	630	2.20	674	2.55	710	2.84	754	3.07	802	3.34	846	3.60	880	4.10	910	4.21	950	4.51	990	4.90
6400 (3020)	647	2.45	691	2.66	721	2.96	762	3.21	816	3.46	854	3.84	891	4.21	921	4.38	962	4.62	997	5.14
6600 (3115)	662	2.86	703	2.91	734	3.07	778	3.44	832	3.68	868	3.98	904	4.34	930	4.55	975	4.73	1008*	5.32*
6800 (3209)	689	3.02	711	3.12	741	3.24	790	3.61	844	3.81	881	4.22	912	4.52	939	4.74	984	4.89	1017*	5.48*
7000 (3303)	705	3.24	722	3.34	768	3.41	808	3.78	852	3.92	894	4.41	920	4.71	950	4.96	993*	5.20*	1024*	5.62*
7200 (3398)	720	3.65	735	3.78	782	3.84	821	3.90	865	4.10	902	4.62	929	4.95	959	5.20	1004*	5.48*	1032*	5.94*
7400 (3492)	734	3.84	746	3.91	795	3.98	839	4.08	875	4.24	912	4.78	938	5.14	968	5.36	1015*	5.67*	1040*	6.32*
7600 (3587)	755	4.02	762	4.14	812	4.21	855	4.34	884	4.46	921	5.00	946	5.34	979	5.72	1023*	5.98*	1048*	6.71*
7800 (3681)	786	4.31	792	4.44	831	4.54	869	4.65	892	4.84	928	5.40	954	5.50	991	5.96	1034*	6.38*	1055*	7.20*
8000 (3775)	798	4.64	806	4.61	855	4.72	892	4.82	906	5.09	936	5.61	963	5.64	999	6.10	1042*	6.60*	1062*	7.50*
8200 (3870)	808	4.84	822	4.98	876	5.09	904	5.21	914	5.44	948	5.82	970	5.85	1012	6.22	1051*	6.82*		

- Notes: 1. Values include losses for filters, unit casing and wet coils.
 2. Standard 5 HP motor to be used for the unshaded portion.
 3. Alt. 7.5 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
 * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

FAN PERFORMANCE DATA

Model No.: PT240

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000 (2832)	600*	2.15*	640*	2.40*	700	2.82	730	2.95	780	3.20	815	3.65	850	3.91	900	4.50	920	4.98	970	5.30
6200 (2926)	615*	2.30*	665*	2.65*	710	2.95	745	3.15	790	3.40	825	3.81	859	4.30	912	4.91	918	5.28	979	5.52
6400 (3020)	625*	2.51*	684	2.95	718	3.15	760	3.30	800	3.57	833	4.04	862	4.69	919	5.25	928	5.46	994	5.86
6600 (3115)	650*	2.82*	698	3.10	735	3.40	778	3.52	808	3.79	840	4.25	874	4.95	926	5.48	935	5.81	1008*	6.24*
6800 (3209)	665	2.98	709	3.28	745	3.58	792	3.84	815	3.92	851	4.48	891	5.32	933	5.82	948	6.21	1019*	6.56*
7000 (3303)	678	3.22	717	3.45	758	3.69	800	4.05	820	4.15	865	4.72	908	5.51	940	6.10	958	6.42	1028*	6.84*
7200 (3398)	689	3.45	730	3.62	767	4.01	810	4.21	835	4.48	880	5.01	916	5.80	947	6.38	969	6.67	1040*	7.10*
7400 (3492)	700	3.64	748	3.89	778	4.35	822	4.44	854	4.89	892	5.34	925	6.12	958	6.52	978	6.94	1052*	7.40*
7600 (3587)	712	3.84	762	4.21	792	4.61	839	4.72	868	5.25	905	5.56	934	6.28	970	6.68	988	7.18	1059*	7.73*
7800 (3681)	732	4.10	783	4.62	805	4.85	852	5.10	884	5.52	915	5.84	948	6.41	981	6.74	999*	7.37*	1066*	8.10*
8000 (3775)	748	4.45	791	4.89	818	5.10	861	5.46	895	5.91	922	6.10	960	6.50	990	6.94	1010*	7.51*	1074*	8.31*
8200 (3870)	767	4.80	805	5.01	835	5.51	874	5.73	905	6.22	934	6.40	971	6.82	997	7.31	1017*	7.85*	1079*	8.52*
8400 (3964)	778	5.10	810	5.35	850	5.72	891	6.02	915	6.48	946	6.70	984	7.10	1010*	7.52*	1023*	8.11*		
8600 (4058)	799	5.40	825	5.64	865	5.95	900	6.31	927	6.90	960	7.10	996	7.40	1018*	7.89*	1029*	8.38*		
8800 (4152)	812	5.59	840	6.12	882	6.21	909	6.64	940	7.20	974	7.30	1008	7.64	1024*	8.20*				
9000 (4247)	828	5.82	865	6.35	895	6.48	924	6.97	970	7.40	990	7.70	1118	7.92						

- Notes:**
1. Values include losses for filters, unit casing and wet coils.
 2. Standard 7.5 HP motor to be used for the unshaded portion.
 3. Alt. 10 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
- * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

Model No.: PT300

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000 (3775)	641*	3.24*	695*	3.63*	735*	3.84*	764	4.18	795	4.48	839	4.85	865	5.10	905	5.55	942	5.91	992	6.30
8200 (3870)	650*	3.40*	710*	3.85*	748	4.10	781	4.36	814	4.70	862	5.21	895	5.42	939	5.69	965	6.18	1015	6.55
8400 (3964)	664*	3.51*	726*	4.13*	765	4.32	804	4.48	831	4.81	874	5.36	921	5.63	955	5.87	977	6.32	1026	6.78
8600 (4058)	679*	3.65*	735*	4.28*	777	4.47	821	4.62	848	4.95	888	5.49	928	5.89	967	5.99	989	6.52	1034	6.92
8800 (4152)	696*	3.78*	744	4.44	784	4.64	832	4.85	862	5.12	900	5.78	937	6.24	975	6.41	1000	6.79	1046	7.14
9000 (4247)	714*	4.10*	756	4.59	790	4.91	841	5.13	875	5.48	911	5.94	948	6.63	984	6.73	1010	7.05	1055	7.34
9200 (4341)	729*	4.32*	764	4.72	801	5.20	852	5.28	888	5.75	919	6.21	958	6.85	991	7.10	1016	7.29	1065	7.55
9400 (4436)	746	4.56	779	4.88	821	5.49	865	5.51	897	5.95	928	6.39	966	7.12	998	7.24	1024	7.62	1076	7.71
9600 (4530)	765	4.78	789	5.10	834	5.72	878	5.84	906	6.32	936	6.61	978	7.20	1008	7.44	1031	7.88	1084	7.96
9800 (4624)	779	4.97	799	5.33	848	5.97	887	5.95	913	6.62	944	6.88	989	7.38	1015	7.66	1036	8.18	1096*	8.28*
10000 (4719)	791	5.20	812	5.51	860	6.22	895	6.31	921	6.95	952	7.14	996	7.76	1022	7.92	1044	8.39	1105*	8.52*
10200 (4813)	802	5.47	824	5.74	871	6.41	904	6.54	928	7.24	959	7.39	1004	7.91	1029	8.18	1051	8.79	1112*	9.10*
10400 (4907)	812	5.83	839	5.95	882	6.66	912	6.78	934	7.39	966	7.62	1009	8.13	1038	8.41	1056	9.10		
10600 (5002)	821	5.95	851	6.32	895	6.95	918	6.96	941	7.64	972	7.88	1014	8.38	1045	8.72				
10800 (5096)	833	6.10	867	6.64	902	7.29	925	7.34	949	7.95	978	8.03	1021	8.76	1051	9.10				
11000 (5191)	841	6.30	880	6.95	910	7.52	934	7.69	951	8.21	984	8.36	1028	9.05						
11200 (5286)	849	6.49	891	7.29	917	7.89	941	7.98	955	8.61	991	8.68								

- Notes:**
1. Values include losses for filters, unit casing and wet coils.
 2. Standard 7.5 HP motor to be used for the unshaded portion.
 3. Alt. 10 HP motor to be used for the shaded portion.
 4. Bordered regions indicate alternative drives I & II.
- * For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

FAN PERFORMANCE DATA

Model No.: PT360

Airflow, CFM (L/S)	External Static Pressure (inch wg.)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9600 (4530)	745	5.61	765	5.95	792	6.32	819	6.87	852	7.35	879	7.72	911	8.19	952	8.61	981	8.92	1010	9.30
9800 (4624)	757	5.72	777	6.11	806	6.51	836	6.99	867	7.52	894	7.94	936	8.34	976	8.82	998	9.18	1028	9.42
10000 (4719)	770	5.84	794	6.20	820	6.70	855	7.10	895	7.70	915	8.10	955	8.52	995	9.00	1018	9.30	1046	9.80
10200 (4813)	778	6.10	814	6.36	834	6.95	866	7.34	908	7.86	927	8.41	976	8.79	1015	9.24	1027	9.45	1064	10.34
10400 (4907)	785	6.29	835	6.58	846	7.30	878	7.61	921	8.11	939	8.78	994	9.12	1029	9.56	1039	9.68	1073	10.76
10600 (5002)	793	6.64	849	6.79	861	7.62	891	7.98	942	8.42	951	9.10	1000	9.45	1040	9.77	1048	9.96	1084	11.10
10800 (5096)	802	6.92	864	7.10	875	8.10	904	8.42	955	8.78	966	9.54	1008	9.72	1049	10.10	1061	10.38	1091*	11.84*
11000 (5191)	810	7.30	878	7.46	890	8.41	918	8.88	965	9.14	985	9.92	1015	10.10	1058	10.68	1070	10.84	1100*	12.32*
11200 (5286)	829	7.51	888	7.77	902	8.78	931	9.21	974	9.48	998	10.22	1023	10.41	1067	10.99	1081	11.25	1111*	12.67*
11400 (5380)	851	7.77	897	8.08	918	9.10	946	9.64	983	9.82	1011	10.51	1041	10.73	1076	11.40	1092*	11.64*	1121*	12.98*
11600 (5474)	868	7.99	905	8.42	929	9.38	957	9.94	992	10.18	1021	10.94	1057	11.18	1084	11.92	1102*	12.25*		
11800 (5569)	885	8.22	914	8.74	938	9.65	968	10.32	1004	10.62	1032	11.21	1061	11.62	1092*	12.34*	II			
12000 (5663)	900	8.54	925	9.20	951	9.98	977	10.76	1015	10.98	1042	11.58	1080	12.16						
12200 (5757)	911	8.92	938	9.65	962	10.40	988	11.10	1024	11.44	1051	11.84								
12400 (5852)	919	9.42	949	10.10	977	10.72	1000	11.61	1032	11.87	1059	12.45								
12500 (5899)	930	9.86	960	10.70	985	11.30	1010	12.20	1040	12.60										

Notes: 1. Values include losses for filters, unit casing and wet coils.

2. Standard 10 HP motor to be used for the unshaded portion.

3. Alt. 15 HP motor to be used for the shaded portion.

4. Bordered regions indicate alternative drives I & II.

* For bold figures, consult your nearest COOLINE representative for proper selection of drives. Drives shall be field supplied & installed.

SOUND LEVEL DATA

To obtain Sound Pressure Level measured 5 ft. (1.6 m) directly opposite the center of blower inlet:

1. From performance table at operating conditions, find BHP, RPM & Static Efficiency (SE).
 $SE = (CFM \times TSP) / 6362 \times BHP$ (see step 4 & table below).
2. Read dBA level from respective graph at operating BHP & SE(%).
3. Knowing RPM, select proper row from sound power factor table and add dBA level to each values in the row to obtain Sound Power Level (dB re 10^{-12} watts).
4. Calculate TSP (Total Static Pressure) as follows:

$$TSP = ISP + ESP$$

ESP (External Static Pressure) from Job Specification.

ISP (Internal Static Pressure) Calculate from table below.

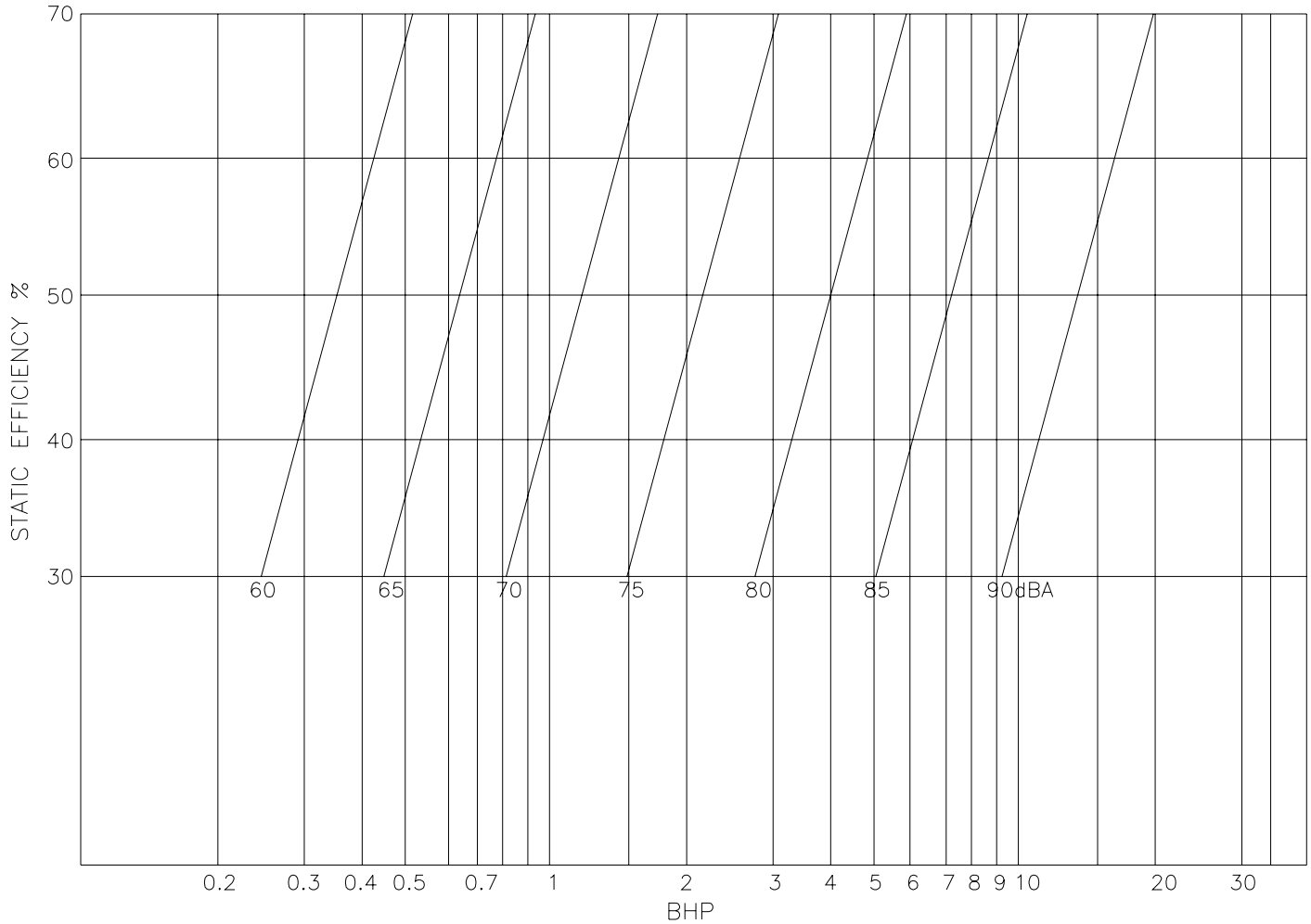
FACE VELOCITY (FPM)	INTERNAL STATIC PRESSURE (inch wg.)		
	2 ROW	3 ROW	4 ROW
200	0.42	0.44	0.47
300	0.67	0.73	0.78
400	0.88	0.95	1.05
450	1.02	1.13	1.23
500	1.16	1.29	1.49

NOTE:

Pressure drop across filter, coil and casing are included in ISP.

SOUND LEVEL DATA

MODELS: PT036 - PT060



SOUND POWER FACTOR TABLE

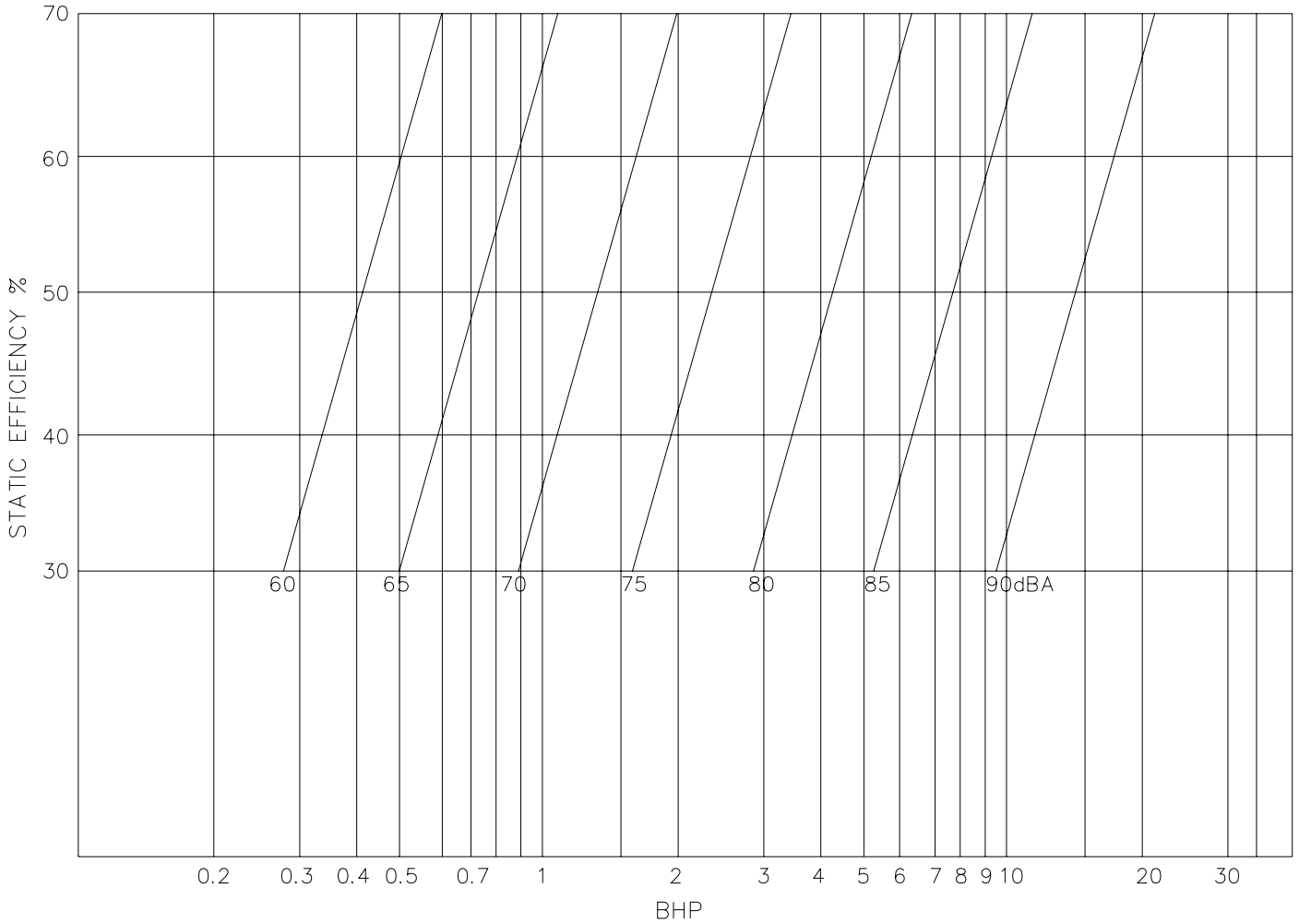
VALUES GIVE TO SOUND POWER								
Octave Band Center Frequency – Hz	63	125	250	500	1000	2000	4000	8000
493-887 RPM	- 7.5	+ 0.5	+ 7.5	+ 10.5	+ 5.5	+ 2	- 1	- 6.5
887-1750 RPM	- 8	+ 0.5	+ 7	+ 7	+ 8	+ 1.5	- 1.5	- 6.5
1750-2500 RPM	- 8	+ 0.5	+ 7	+ 7	+ 5	+ 4.5	- 1.5	- 6.5

To obtain Sound Pressure Level measured 5 ft. (1.6 m) directly opposite the center of blower inlet:

1. From performance table at operating conditions, find BHP, RPM & Static Efficiency (SE).
 $SE = (CFM \times TSP) / 6362 \times BHP$
2. Read dBA level from above graph at operating BHP & SE(%).
3. Knowing RPM, select proper row from above table and add dBA level to each values in the row to obtain Sound Power Level (dB re 10^{-12} watts).

SOUND LEVEL DATA

MODEL: PT075



SOUND POWER FACTOR TABLE

VALUES GIVE TO SOUND POWER								
Octave Band Center Frequency – Hz	63	125	250	500	1000	2000	4000	8000
251-495 RPM	- 6	+ 2	+ 11.5	+ 8	+ 5.5	+ 2	- 1	- 6.5
495-990 RPM	- 6.5	+ 1.5	+ 8	+ 10.5	+ 5	+ 1.5	- 1.5	- 7
990-1953 RPM	- 7	+ 1.5	+ 8	+ 7	+ 8	+ 1.5	- 2	- 7.5
1953-2050 RPM	- 7	+ 1.5	+ 8	+ 7	+ 5	+ 4.5	- 2	- 7.5

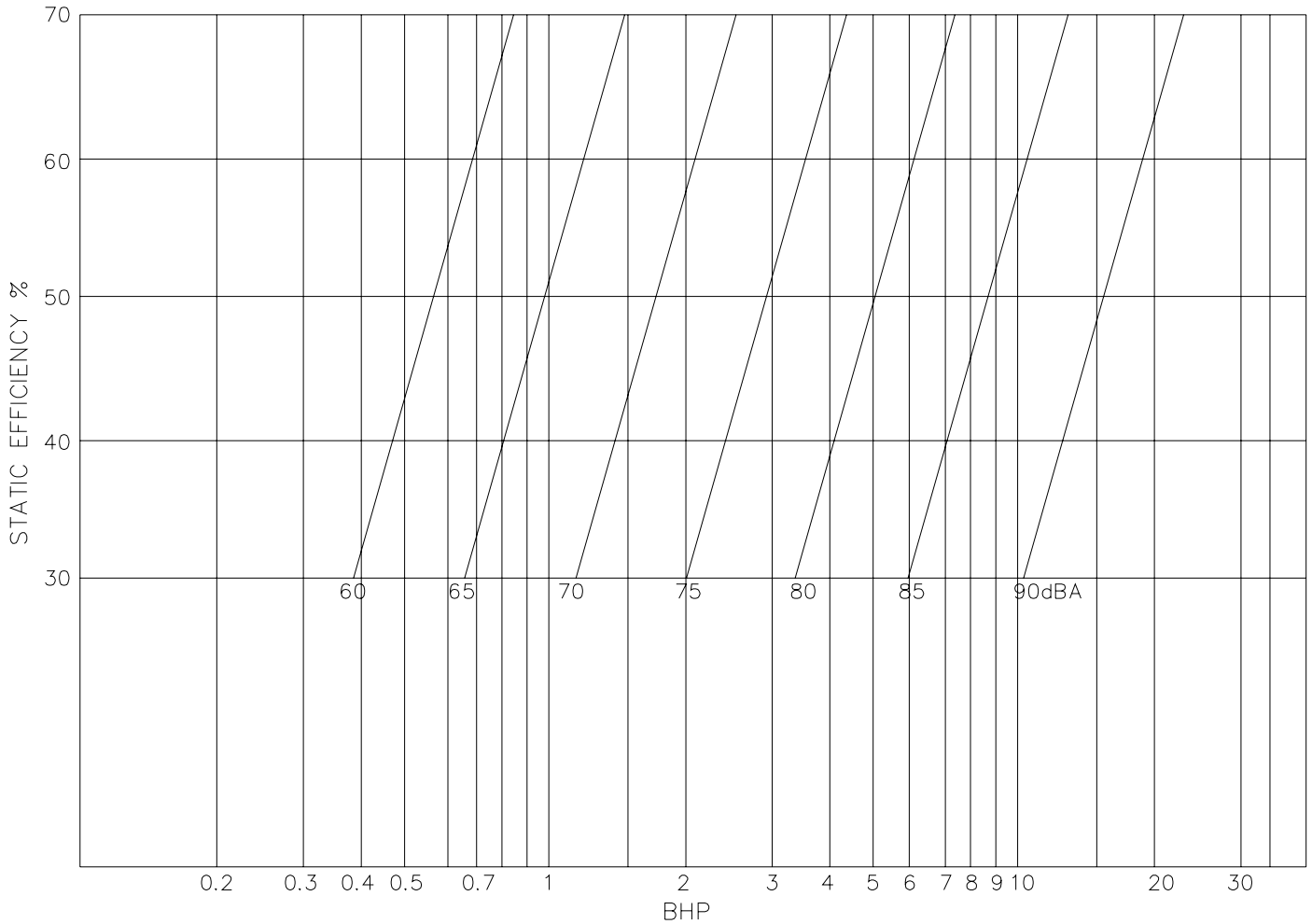
To obtain Sound Pressure Level measured 5 ft. (1.6 m) directly opposite the center of blower inlet:

1. From performance table at operating conditions, find BHP, RPM & Static Efficiency (SE).

$$SE = \frac{CFM \times TSP}{6362 \times BHP}$$
2. Read dBA level from above graph at operating BHP & SE(%).
3. Knowing RPM, select proper row from above table and add dBA level to each values in the row to obtain Sound Power Level (dB re 10^{-12} watts).

SOUND LEVEL DATA

MODELS: PT090 - PT180



SOUND POWER FACTOR TABLE

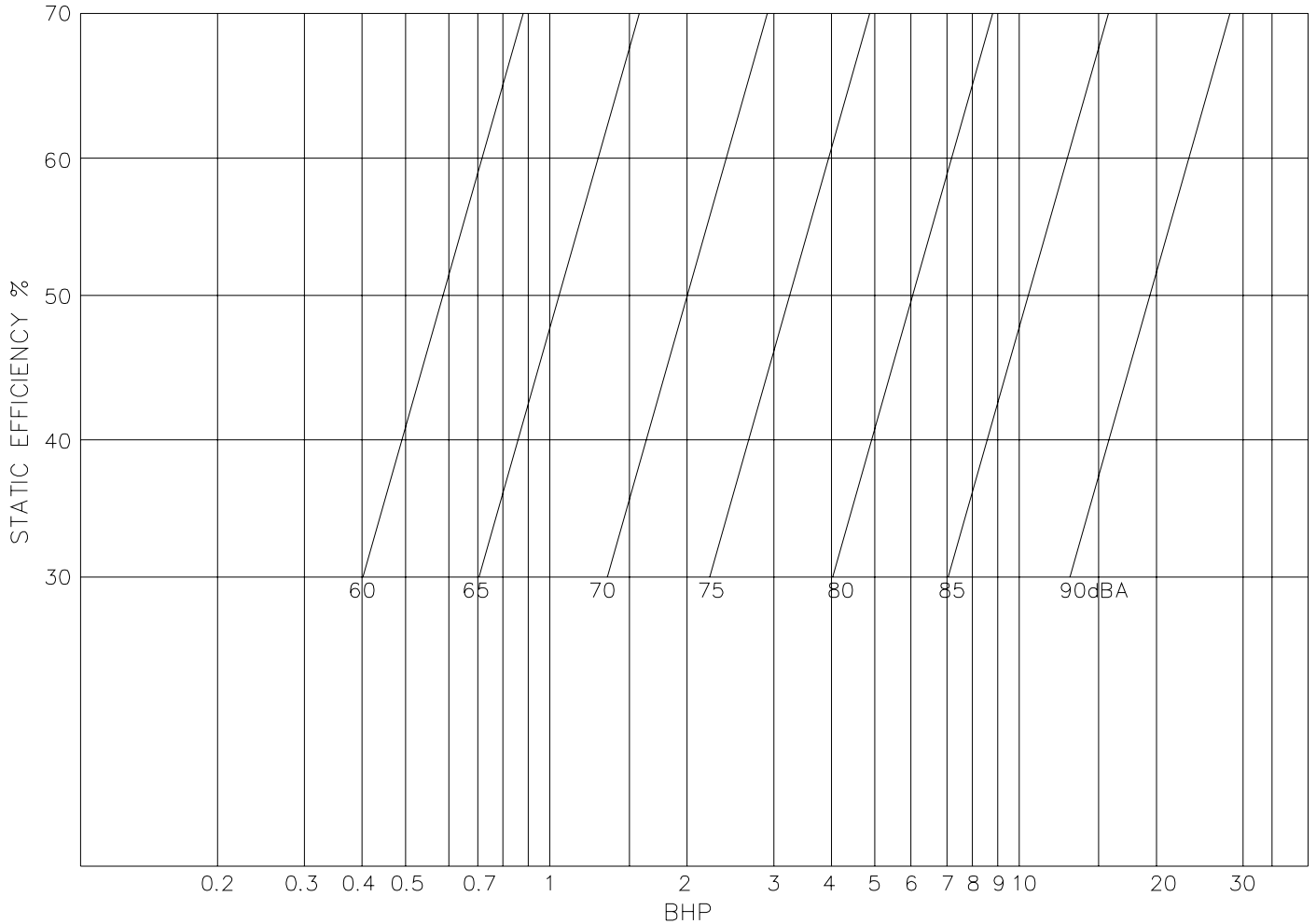
VALUES GIVE TO SOUND POWER								
Octave Band Center Frequency – Hz	63	125	250	500	1000	2000	4000	8000
211-417 RPM	- 4.5	+ 3	+ 12	+ 8	+ 5	+ 2	- 1.5	- 7
417-835 RPM	- 5.5	+ 2.5	+ 8.5	+ 10.5	+ 4.5	+ 1.5	- 2	- 7.5
835-1647 RPM	- 5.5	+ 2.5	+ 8	+ 7	+ 7	+ 1	- 2.5	- 7.5

To obtain Sound Pressure Level measured 5 ft. (1.6 m) directly opposite the center of blower inlet:

1. From performance table at operating conditions, find BHP, RPM & Static Efficiency (SE).
 $SE = (CFM \times TSP) / 6362 \times BHP$
2. Read dBA level from above graph at operating BHP & SE(%).
3. Knowing RPM, select proper row from above table and add dBA level to each values in the row to obtain Sound Power Level (dB re 10^{-12} watts).

SOUND LEVEL DATA

MODELS: PT215 - PT360



SOUND POWER FACTOR TABLE

VALUES GIVE TO SOUND POWER								
Octave Band Center Frequency – Hz	63	125	250	500	1000	2000	4000	8000
255-443 RPM	- 3.5	+ 4	+ 12.5	+ 8	+ 4.5	+ 1.5	- 2	- 7.5
443-887 RPM	- 4	+ 3.5	+ 9	+ 10	+ 4	+ 1	- 2.5	- 8
887-1750 RPM	- 4	+ 3.5	+ 8.5	+ 7	+ 7	+ 0.5	- 3	- 8

To obtain Sound Pressure Level measured 5 ft. (1.6 m) directly opposite the center of blower inlet:

1. From performance table at operating conditions, find BHP, RPM & Static Efficiency (SE).

$$SE = \frac{CFM \times TSP}{6362 \times BHP}$$

2. Read dBA level from above graph at operating BHP & SE(%).

3. Knowing RPM, select proper row from above table and add dBA level to each values in the row to obtain Sound Power Level (dB re 10^{-12} watts).

STATIC PRESSURE DROP (inch wg.)

MODELS: PT036 - PT060

COMPONENT	CFM					
	900	1200	1400	1600	1800	2000
1 HEATER MODULE	0.12	0.12	0.12	0.13	0.14	0.15
2 HEATER MODULE	0.19	0.19	0.19	0.20	0.21	0.21

MODELS: PT075

COMPONENT	CFM										
	1600	1800	2000	2200	2400	2600	3000	3200	3400	3600	3800
1 HEATER MODULE	0.11	0.12	0.13	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
2 HEATER MODULE	0.18	0.19	0.19	0.19	0.20	0.21	0.21	0.21	0.22	0.23	0.23

MODELS: PT090 - PT120

COMPONENT	CFM										
	2400	2600	2800	3000	3200	3400	3600	3800	4000	4400	4800
1 HEATER MODULE	0.04	0.04	0.04	0.05	0.07	0.08	0.09	0.10	0.11	0.13	0.14
2 HEATER MODULE	0.05	0.06	0.06	0.07	0.09	0.10	0.11	0.12	0.14	0.16	0.18

MODELS: PT180 - PT240

COMPONENT	CFM										
	4800	5200	5600	6200	6600	7000	7400	7800	8200	8600	9000
1 HEATER MODULE	0.08	0.08	0.08	0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.13
2 HEATER MODULE	0.14	0.14	0.14	0.14	0.15	0.16	0.16	0.17	0.17	0.18	0.18

MODELS: PT300 - PT360

COMPONENT	CFM											
	8000	8400	8800	9200	9600	10000	10400	10800	11200	11600	12000	12500
1 HEATER MODULE	0.09	0.09	0.10	0.10	0.11	0.12	0.12	0.13	0.13	0.14	0.15	0.16
2 HEATER MODULE	0.16	0.16	0.17	0.18	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24

BLOWER MOTOR EFFICIENCY

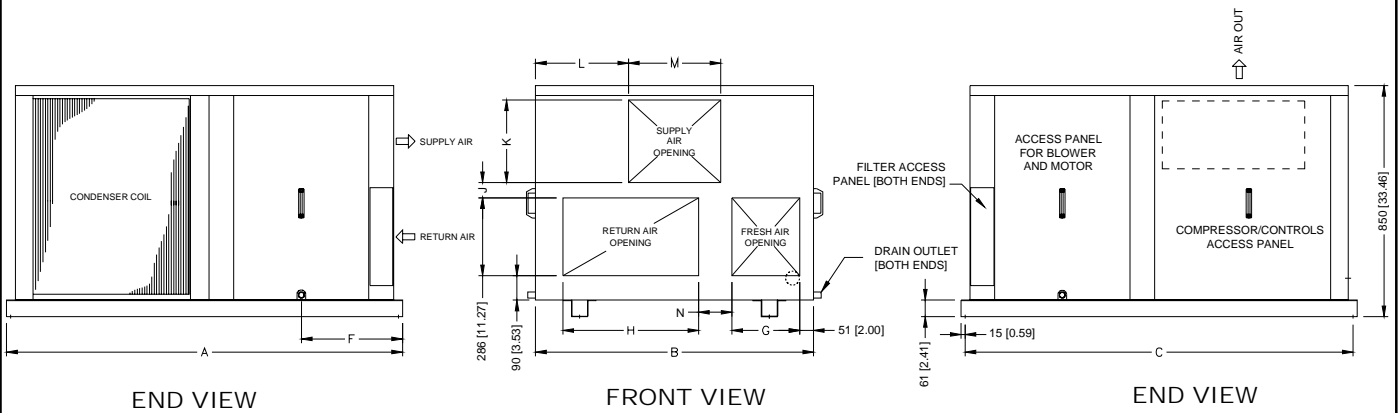
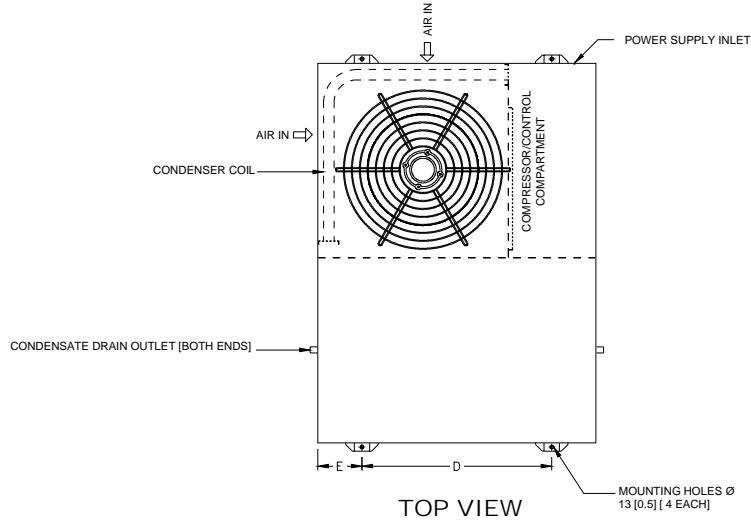
MOTOR HP	0.75	1.0	1.5	2.0	3.0	5.0	7.5	10.0
EFFICIENCY (%)	0.81	0.81	0.80	0.81	0.81	0.80	0.81	0.80

NOTE: Convert BHP to watts using following formula

$$\text{Watts} = \frac{746 \times \text{BHP}}{\text{Motor Efficiency}}$$

UNIT DIMENSIONS

PT036 - PT075



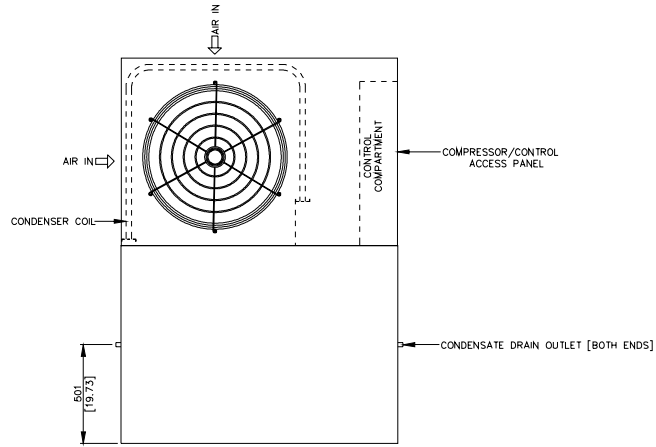
MODEL	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
PT036 - PT060	1460(57.48)	1025(40.35)	1430(56.3)	700(27.56)	163(6.42)	373(14.68)	250(9.84)	500(19.69)	57(2.24)	304(11.96)	343(13.49)	340(13.39)	123(4.84)
PT075	1775(69.88)	1150(45.28)	1745(68.7)	800(31.5)	175(6.89)	480(18.9)	325(12.8)	670(26.38)	80(3.15)	280(11.02)	275(10.83)	600(23.62)	51(2)

NOTES:

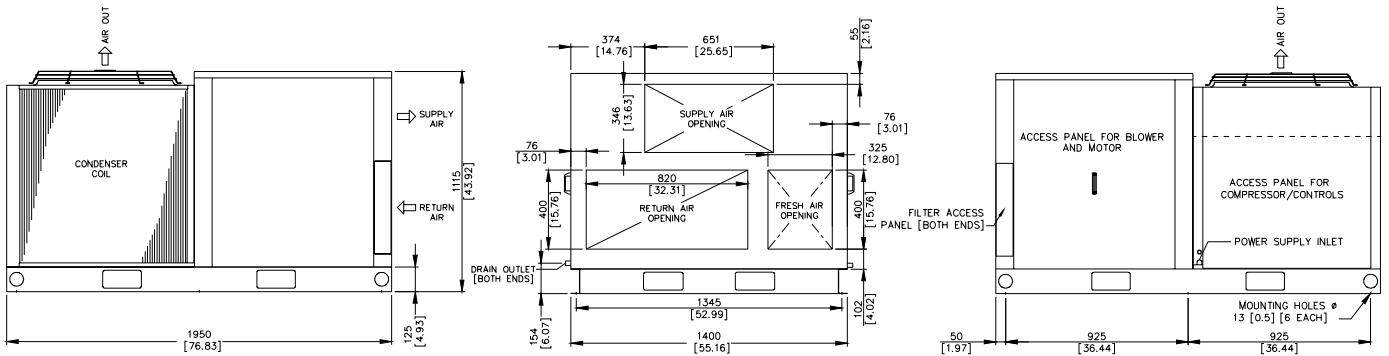
1. All dimensions are in mm (dimensions in brackets are in inches).
2. Service clearance should be 1200mm (4 feet) on all sides.

UNIT DIMENSIONS

PT090 - PT120



TOP VIEW



END VIEW

FRONT VIEW

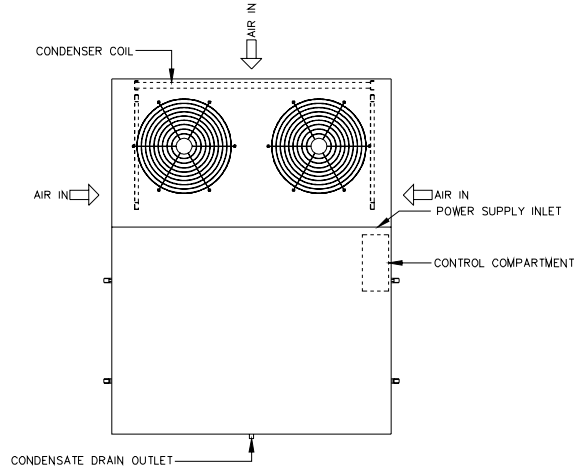
END VIEW

NOTES:

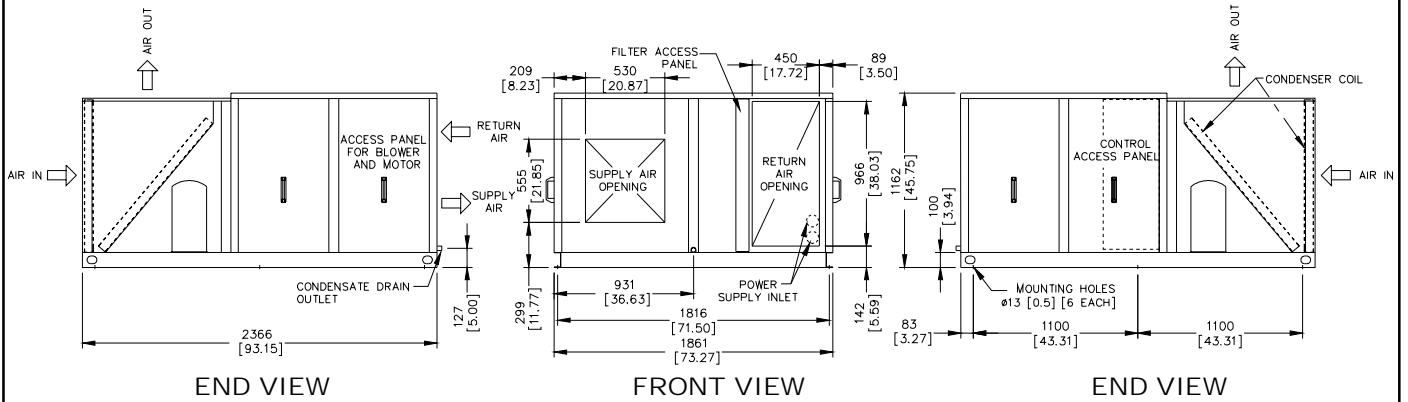
1. All dimensions are in mm (dimensions in brackets are in inches).
2. Service clearance should be 1200mm (4 feet) on all sides.

UNIT DIMENSIONS

PT180



TOP VIEW

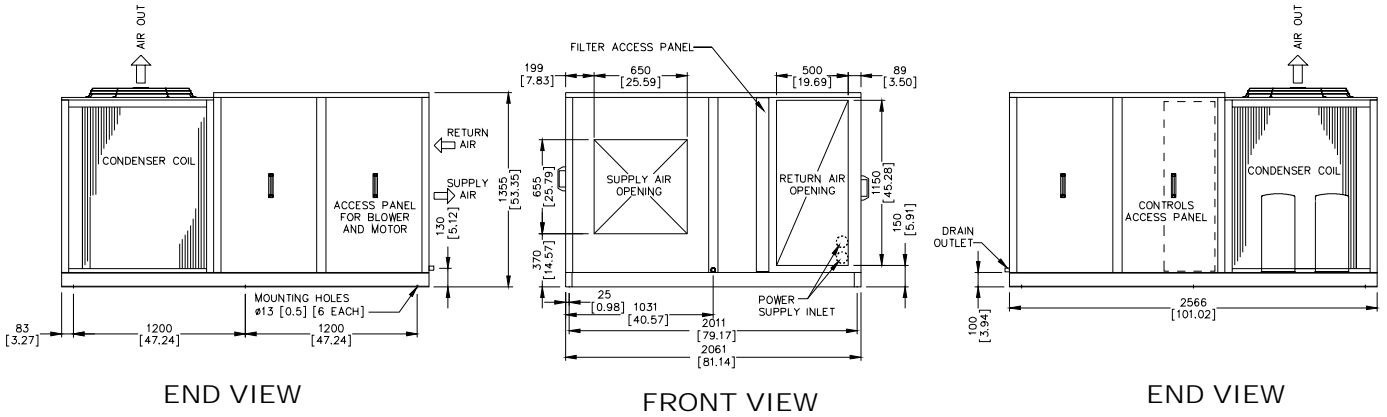
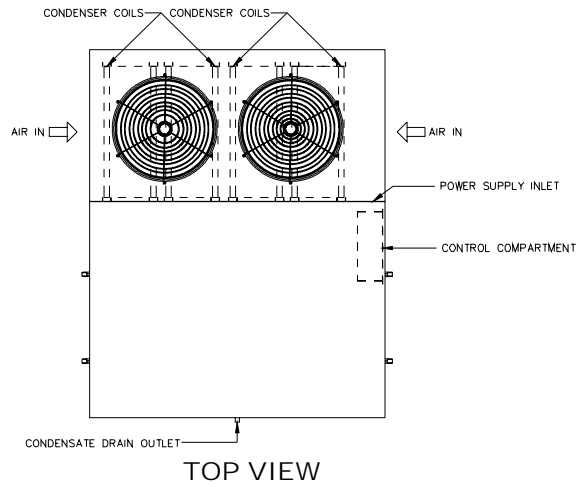


NOTES:

1. All dimensions are in mm (dimensions in brackets are in inches).
2. Service clearance should be 1200mm (4 feet) on all sides.

UNIT DIMENSIONS

PT215 - PT240

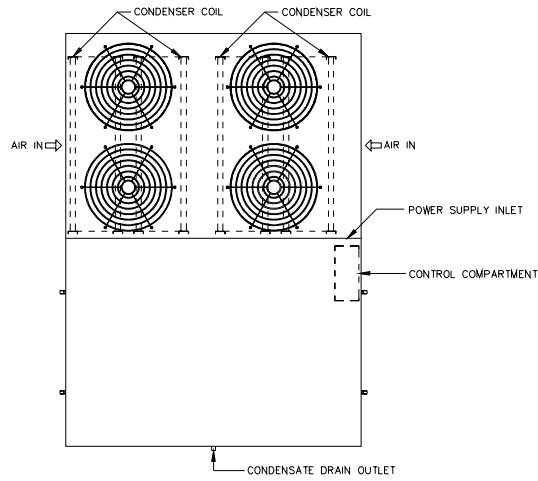


NOTES:

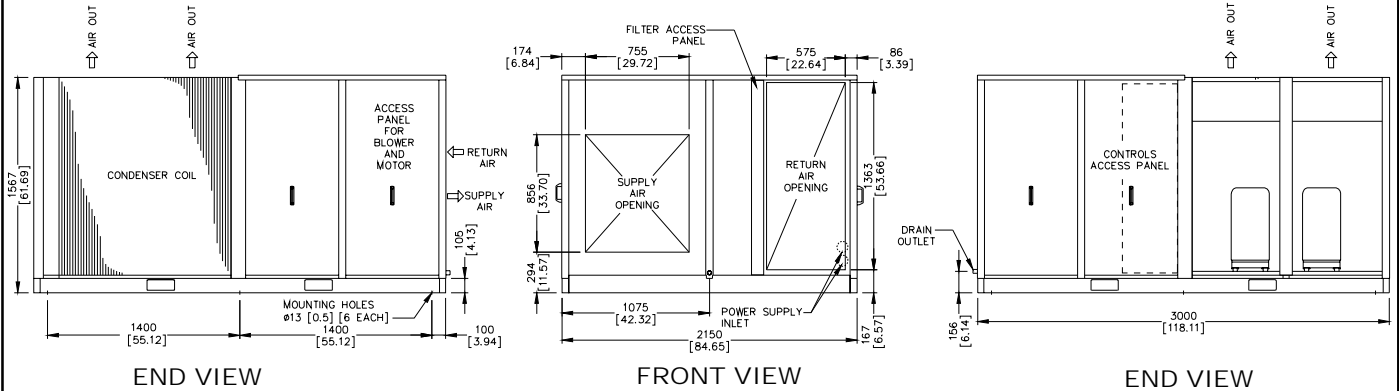
1. All dimensions are in mm (dimensions in brackets are in inches).
2. Service clearance should be 1200mm (4 feet) on all sides.

UNIT DIMENSIONS

PT300 - PT360



TOP VIEW



END VIEW

FRONT VIEW

END VIEW

NOTES:

1. All dimensions are in mm (dimensions in brackets are in inches).
2. Service clearance should be 1200mm (4 feet) on all sides.

CONTROLS & SEQUENCE OF OPERATION

Scroll compressors are designed to operate in single direction only. Hence, care has to be taken to ensure correct rotation when the system is operated. Verification of correct rotation is by observing that the suction pressure drops and discharge pressure rises when compressor run. Reverse rotation results in abnormal sound, as well as, substantially low current draw and by interchanging power supply wire L1 & L3 will correct this problem.

The operation of the air conditioning unit is controlled by a 24VAC electronic control board.

GENERAL

The thermostat normally displays room temperature and mode of operation. The five buttons on the front of the unit allow complete control of the thermostat. The thermostat also allows to select continuous fan operation (useful when using an air cleaner) or have the fan come on with the compressor.

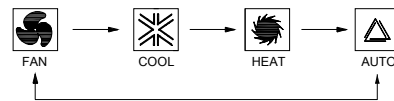
SWITCH FUNCTION

- On/Off Key : Switch the system On or Off.
- Up Key : To increases the set temperature.
- Down Key : To decreases the set temperature.
- Mode Key : Changes the mode to Fan, Cool, Heat or Auto.
- Fan Key : Changes the Fan Operation to Auto or Continuous.
- °C/°F selection : By pressing Mode & UP key together, toggles between °C to °F or vice versa.

USER CONTROLS

Mode:

Select the desired mode of operation by pressing of the mode button:



Fan: In this mode of operation, the compressor will be in inactive state. Display shows room temperature. Fan will be running.

Cool: In this mode of operation, the compressor will be ON after a delay depending on the differential of room temperature & Set temperature.

Heat: In this mode of operation, Fan is ON.

Auto: In auto mode, thermostat provide automatic changeover from heating to cooling mode & vice versa. Thermostat automatically switches to maintain the desired temperature.

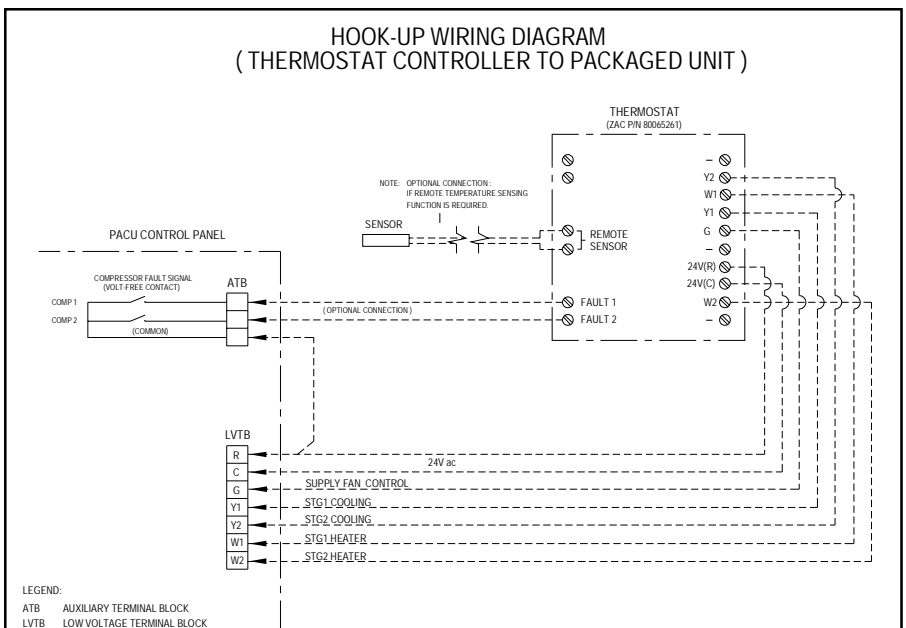
DIP SWITCH OPTIONS AND FUNCTIONS

There are 4 small DIP (Dual in line package) switches on the back of the circuit board which must be configured by the installer.

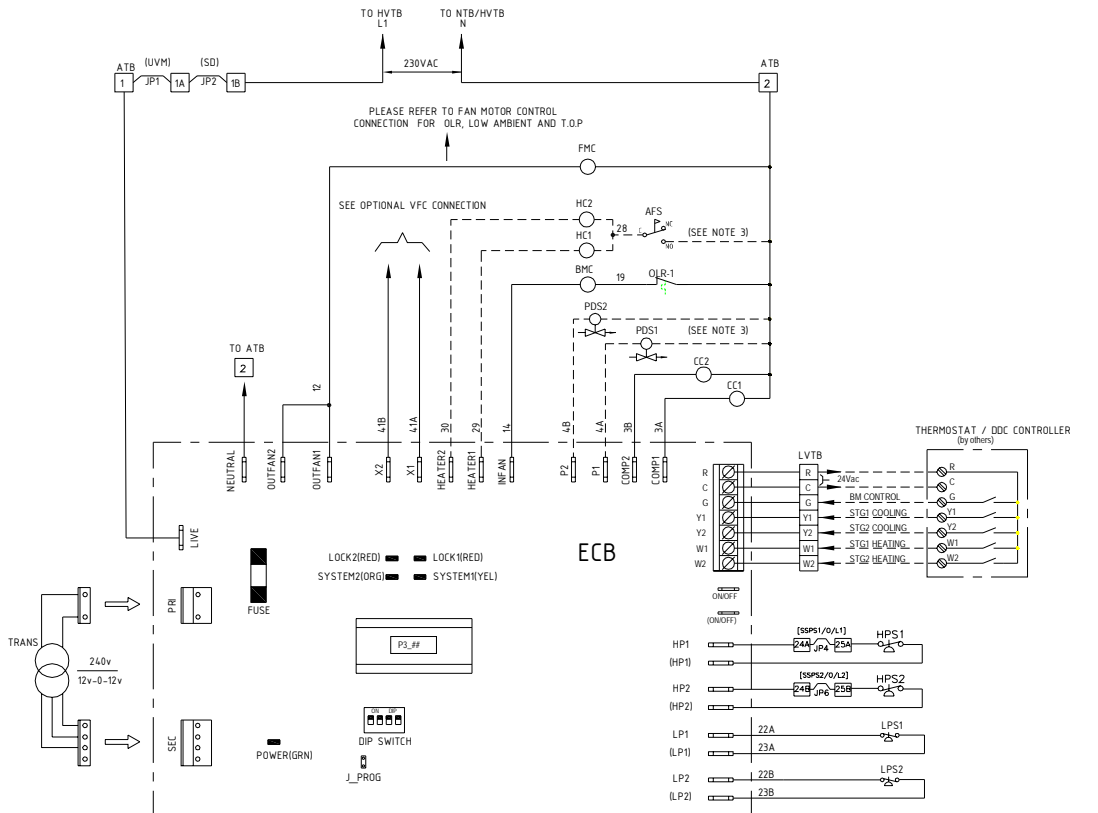
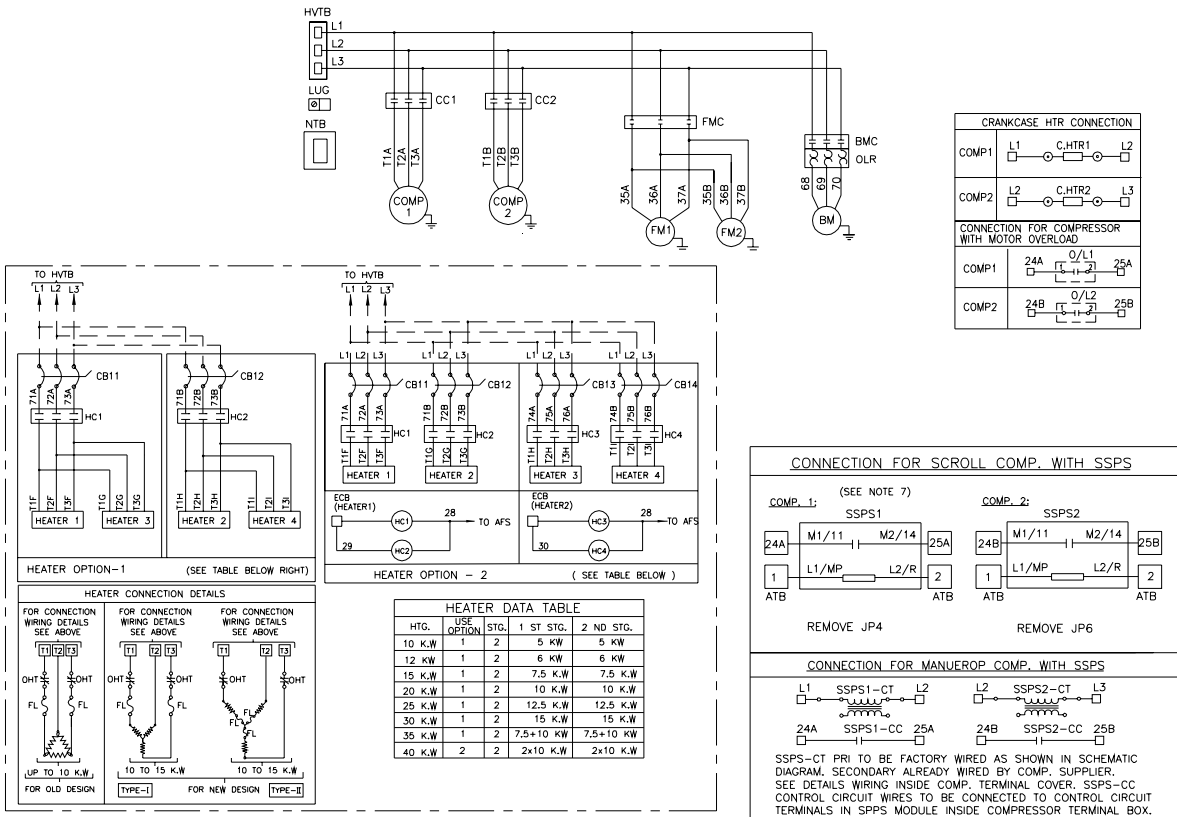
DIP SWITCH SELECTION		
SWITCH	ON	OFF
1	N. A.	-
2	N. A.	-
3	N. A.	-
4	INDOOR SENSOR	REMOTE SENSOR

Note:

Keep DIP SWITCH 1, 2 & 3 in OFF position only.

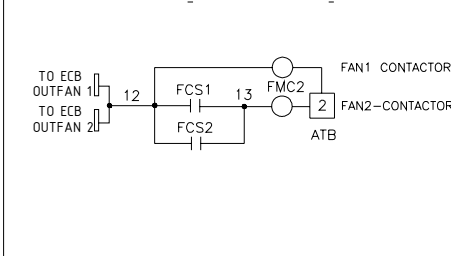
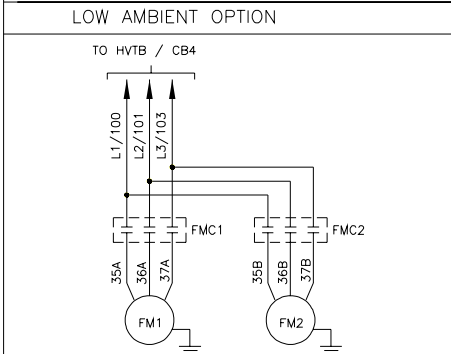
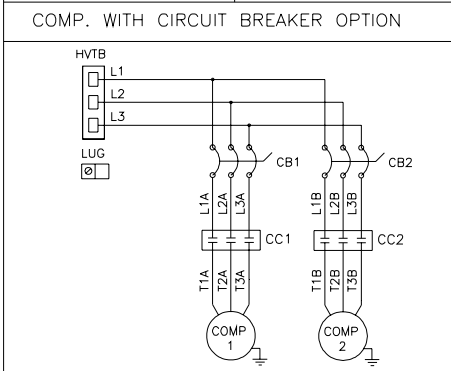
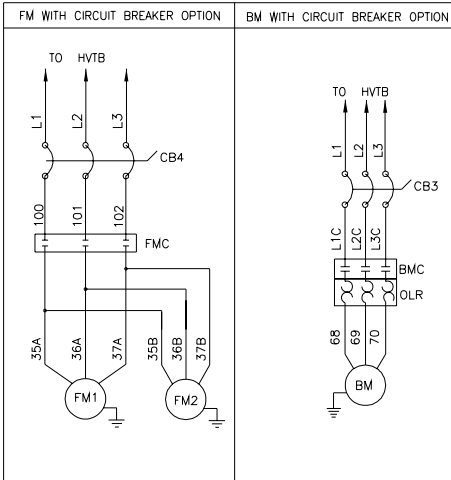


TYPICAL SCHEMATIC WIRING DIAGRAM



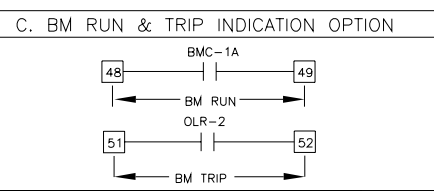
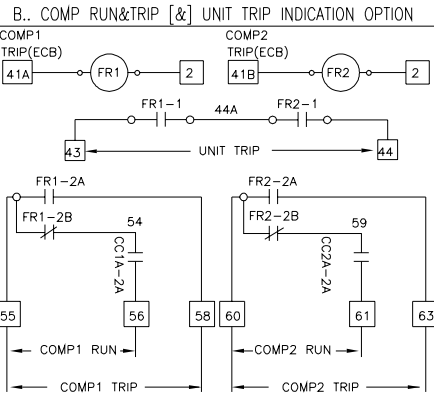
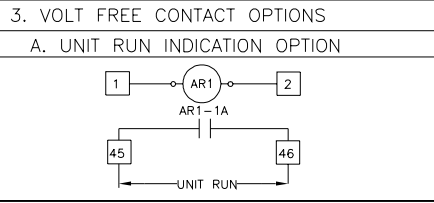
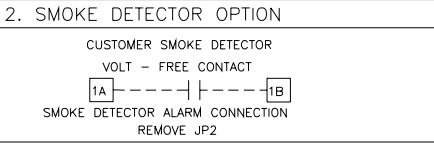
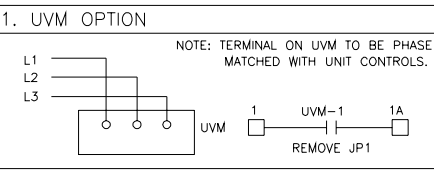
NOTE: 1. Refer to next page for legend, notes & wiring diagram for optional items.
 2. Refer to unit control box (inside panel) for exact wiring diagram.

TYPICAL SCHEMATIC WIRING DIAGRAM

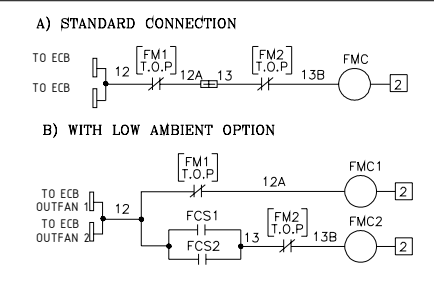


PRESSURE SWITCH SETTINGS		
NAME	OPEN (PSIG)	CLOSE (PSIG)
LPS1 & 2	25 ± 5	50 ± 5
HPS1 & 2	450 ± 10	360 ± 15
FCS1 & 2	190 ± 15	290 ± 10

STANDARD OPTIONS



FAN MOTOR CONTROL CONNECTION (APPLICABLE FOR FM WITH T.O.P)



LEGEND	
AR	AUXILIARY RELAY
AFS	AIRFLOW SWITCH
ATB	AUXILIARY TERMINAL BLOCK
BM	BLOWER MOTOR
BMC	BLOWER MOTOR CONTACTOR
CC	COMPRESSOR CONTACTOR
CCA	AUXILIARY CONTACT
CB	CIRCUIT BREAKER
C. HTR	CRANKCASE HEATER
COMP	COMPRESSOR
ECB	ELECTRONIC CONTROL BOARD
FCS	FAN CYCLING SWITCH
F	FUSE
FL	FUSE LINK
FM	FAN MOTOR (CONDENSER)
FMC	FAN MOTOR CONTACTOR
FR	FAULT RELAY
HC	HEATER CONTACTOR
HPS	HIGH PRESSURE SWITCH
HVTB	HIGH VOLTAGE TERMINAL BLOCK
HTR	HEATER
JP	JUMPER
L1	LINE 1
L2	LINE 2
L3	LINE 3
LPS	LOW PRESSURE SWITCH
LUG	LUG GROUND
NTB	NEUTRAL TERMINAL BLOCK
O/L	OVER LOAD
OHT	OVER HEAT THERMOSTAT
PDS	PUMP DOWN SOLENOID
SSPS	SOLID STATE PROTECTIVE SYSTEM
SD	SMOKE DETECTOR
TRANS	TRANSFORMER
TSTAT	THERMOSTAT
UVM	UNDER VOLTAGE MONITOR
---	FIELD WIRING
+	DISCONNECT TAB - 1/4"
⊙	SPLICE-CLOSED END
□	TERMINAL BLOCK OR TERMINATION POINT

NOTES

- POWER SUPPLY, 380/415V-3PH-50Hz.
- ANY WIRE REPLACEMENT SHOULD BE OF 90°C OR ITS EQUIVALENT. USE COPPER CONDUCTOR WIRES ONLY.
- IF PDS & HEATERS ARE FACTORY INSTALLED, PLEASE READ BROKEN LINES AS CONTINUOUS LINES.
- POWER MUST BE SUPPLIED TO CRANKCASE HEATER FOR MINIMUM OF 12 HOURS PRIOR TO SYSTEM START UP. IF POWER IS OFF 6 HOURS OR MORE, CRANKCASE HEATER MUST BE ON FOR 12 HOURS BEFORE OPERATING THE SYSTEM.

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN COMPRESSOR DAMAGE.
- FUSED DISCONNECT SWITCH OR CIRCUIT BREAKER TO BE PROVIDED BY CONSUMER WITH RATING AS RECOMMENDED BY COOLINE.
- COMPRESSORS ARE PROVIDED WITH INTERNAL OVERLOAD.
- IF COMPRESSOR IS SUPPLIED WITH SSPS, CONNECT AS SHOWN. PLEASE ALLOW 2-3 MINUTES FOR SSPS SWITCH TO CLOSE, BEFORE STARTING THE UNIT.
- IF ANY CHANGE IN DIP SWITCH SETTING IS REQUIRED, TURN OFF POWER FIRST & SET REQUIRED SETTING.

PARTS LIST

MODEL NUMBER	PT036L	PT048L	PT060L	PT075L	PT090	PT100L	PT120L	PT180L	PT215L
COMPRESSOR	800-684-08	800-672-52	800-643-01	800-674-78	800-684-09	800-672-52	800-674-25	800-674-67/81	800-674-38
FAN MOTOR	800-555-26	800-555-26	800-555-26	800-555-26	800-545-68	800-545-68	800-545-68	800-545-68	800-545-68
FAN MOTOR CAPACITOR	800-353-15	800-353-15	800-353-15	800-353-15	N.A.	N.A.	N.A.	N.A.	N.A.
BIOWER MOTOR (STANDARD)	800-546-94	800-546-94	800-546-95	800-544-13	800-544-16	800-544-16	800-544-17	800-544-72	800-544-72
BLOWER WHEEL	800-707-10	800-707-10	800-707-10	800-707-46	800-707-02	800-707-02	800-707-02	800-707-02	800-707-23
CONDENSER FAN PROPELLER	800-225-02	800-225-02	800-225-02	800-225-02	800-224-23	800-224-23	800-224-23	800-225-03	800-225-04
COMPRESSOR CONTACTOR	800-095-01	800-095-01	800-095-01	800-095-01	800-095-01	800-095-01	800-095-01	800-095-01	800-736-22
BLOWER MOTOR CONTACTOR	800-736-27	800-736-27	800-736-27	800-095-01	800-095-01	800-095-01	800-095-01	800-098-55	800-098-55
AIRFLOW SWITCH	800-005-02	800-005-02	800-005-02	800-005-02	800-005-02	800-005-02	800-005-02	800-005-02	800-005-02
EXPANSION VALVE*	800-195-33	800-195-25	800-195-22	800-181-00	800-183-01	800-181-00	800-181-00	800-182-00	800-182-00
DISTRIBUTOR	800-194-13	800-194-13	800-194-17	800-191-01	800-191-00	800-191-00	800-191-00	800-196-00	800-194-01
LOW PRESSURE SWITCH	800-557-00	800-557-00	800-557-00	800-557-00	800-557-00	800-557-00	800-557-00	800-557-00	800-557-00
HIGH PRESSURE SWITCH	800-558-00	800-558-00	800-558-00	800-558-00	800-558-00	800-558-00	800-558-00	800-558-00	800-558-00
FAN GRILLE	800-625-46	800-625-46	800-625-46	800-625-46	800-625-29	800-625-29	800-625-29	800-625-74	800-625-77
FILTER DRIER	800-531-08	800-531-08	800-531-08	800-531-08	800-531-08	800-531-08	800-531-08	800-531-05	800-531-05
SIGHT GLASS (OPTION)	800-201-00	800-201-00	800-201-00	800-201-00	800-201-00	800-201-00	800-200-00	800-200-00	800-200-00
CONTROLLER	800-652-52	800-652-52	800-652-52	800-652-52	800-652-63	800-652-63	800-652-63	800-652-63	800-652-63
TRANSFORMER	800-652-53	800-652-53	800-652-53	800-652-53	800-652-53	800-652-53	800-652-53	800-652-53	800-652-53

* Flo-rater piston will be used as expansion device for models PT036 - PT060.

MODEL NUMBER	PT240L	PT300L	PT360L
COMPRESSOR	800-674-19	800-614-82	800-614-85
FAN MOTOR	800-545-68	800-545-68	800-545-68
BIOWER MOTOR (STANDARD)	800-544-73	800-544-73	800-544-74
BLOWER WHEEL	800-707-23	800-707-23	800-707-23
CONDENSER FAN PROPELLER	800-225-04	800-225-03	800-225-03
COMPRESSOR CONTACTOR	800-736-22	800-736-22	800-736-22
BLOWER MOTOR CONTACTOR	800-098-55	800-098-55	800-098-57
AIRFLOW SWITCH	800-005-02	800-005-02	800-005-02
EXPANSION VALVE	800-185-00	800-186-00	800-186-00
DISTRIBUTOR	800-194-01	800-196-10	800-191-34
LOW PRESSURE SWITCH	800-557-00	800-557-00	800-557-00
HIGH PRESSURE SWITCH	800-558-00	800-558-00	800-558-00
FAN GRILLE	800-625-77	800-625-46	800-625-46
FILTER DRIER	800-531-05	800-531-05	800-531-01
SIGHT GLASS (OPTION)	800-200-00	800-200-00	800-200-01
CONTROLLER	800-652-63	800-652-63	800-652-63
TRANSFORMER	800-652-53	800-652-53	800-652-53

OPTIONAL ITEMS:

ANTI ICE THERMOSTAT : 800-644-22 (COMMON TO ALL MODELS)

RETURN AIR FILTERS

Aluminum filter (1" Thick) : 800-254-10 (2 Each) for PT036 - PT060, 800-254-11 (2 Each) for PT075, 800-254-12 (2 Each) for PT090 - PT120, 800-254-13 (2 Each) for PT180, 800-254-14 (4 Each) for PT215 - PT240 & 800-254-15 (4 Each) for PT300 - PT360.

Aluminum filter (2" Thick) : 800-254-16 (2 Each) for PT036 - PT060, 800-254-17 (2 Each) for PT075, 800-254-18 (2 Each) for PT090 - PT120, 800-254-19 (2 Each) for PT180, 800-254-20 (4 Each) for PT215 - PT240 & 800-254-21 (4 Each) for PT300 - PT360.



from  Zamil

In 1989, Zamil Air Conditioners (ZAC), one of the sector business of Zamil Industrial and the Number One Middle East manufacturer of air conditioning systems, introduced its international brand – Cooline, to the growing world market. Today, Cooline supplies air conditioners to more than 55 countries worldwide with major markets in GCC, Middle East, North Africa, Europe and Asia. In addition to the Head Office in Saudi Arabia, five regional offices handles Cooline's overall operations including more than 25 international distributors.

All ZAC Products are available under the Cooline brand. Cooline Products include an array of central air conditioners for residential, commercial and industrial use, including concealed units up to 5 TR, ducted splits up to 30 TR, packaged units up to 90 TR, single and double skin air handling units up to 138,316 CFM and water chillers up to 440 TR cooling capacity. New products include High Efficiency Ratio (EER) units which comply with the more demanding international codes and heat pump units with increased overall Coefficient of Performance (COP).

Cooline is the first brand from the Middle East to receive Eurovent for its air movement systems - a capacity/performance certification that has been made mandatory in Europe and is fast becoming a requirement in all regions. With the addition of the state-of-the-art testing facility, Ikhtebar, a 3rd party air conditioners testing facility built by Intertek Testing Services (ITS) and certified by Electrical Testing Labs (ETL) and accredited by the Saudi Accreditation Committee (SASO) for compliances with the international testing standards, Cooline is the only brand in the Middle East capable of guaranteeing product performance in compliance with local and international standards. It's no surprise that in 2003, Cooline received the Best GCC Brand of the Decade Award.

For more information, please visit our website www.cooline.com



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