



Refrigerated Type Compressed Air Dryers

DAVINA Series

Models: DAV127INA100, DAV170INA100, DAV212INA100, DAV255INA100,
DAV340INA400, DAV425INA400, DAV510INA400, DAV680INA400,
DAV850INA400, DAV340INA600, DAV425INA600, DAV510INA600,
DAV680INA600, DAV850INA600



Product Information

Instruction Manual



Save These Instructions



CONTENTS

GENERAL SAFETY INFORMATION.....	3	START-UP/OPERATION.....	7
Pressurized Devices	3	SHUTDOWN.....	7
Electrical.....	3	MAINTENANCE.....	8
Breathing Air	3	General	8
REFRIGERATED DRYER NOMENCLATURE.....	3	Daily Maintenance	8
RECEIVING, MOVING, AND UNPACKING	3	Monthly Maintenance	8
Receiving	3	Electronic Drain Valve Disassembly and Servicing.....	8
Unpacking	3	FIELD SERVICE GUIDE.....	9
Moving	3	ENGINEERING DATA	10
Storage	3	GENERAL ARRANGEMENT DRAWINGS.....	12
INSTALLATION	4	ELECTRICAL SCHEMATICS.....	15
Ambient Air Temperature.....	4	AIR AND REFRIGERANT FLOW SCHEMATIC.....	18
Location and Clearance.....	4	REPLACEMENT PARTS	19
System Arrangement.....	4	NOTICES AND DISCLAIMERS	22
Piping and Connections	4	WARRANTY	22
Removing Condensate	4		
Electrical Connections.....	4		
INSTRUMENTATION	5		
ON/OFF Switch.....	5		
Dew Point Indicator (75 through 150 scfm models)	5		
Dryer System Monitor (DSM) (200 through 500 scfm models)	5		
Automatic Drain Valve	6		
Electronic Drain Valve Adjustment	6		

**PORTLAND
COMPRESSOR**
Experience You Can Depend On
800-542-8300

GENERAL SAFETY INFORMATION

■ Pressurized Devices

This equipment is a pressure containing device.

- Do not exceed maximum operating pressure as shown on equipment serial number tag.
- Make sure equipment is depressurized before working on or disassembling it for service.



■ Breathing Air

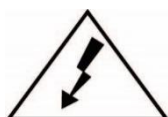
- Air treated by this equipment may not be suitable for breathing without further purification.
- Refer to applicable standards and specifications for the requirements for breathing quality air.



■ Electrical

This equipment requires electricity to operate.

- Install equipment in compliance with all applicable electrical codes.
- Standard equipment is supplied with electrical enclosures not intended for installation in hazardous environments.
- Disconnect power supply to equipment when performing any electrical service work.



REFRIGERATED DRYER NOMENCLATURE

PREFIX/SERIES	NOMINAL FLOW*		DESIGN	CONDENSER TYPE	POWER
	m ³ /hr	SCFM			
DAV	127	75	IN = NON-CYCLE Experience You Can Depend On 800-542-8300	A = AIR COOLED W = WATER COOLED	1=115/1/60 4 = 460/3/60 6 = 575/3/60
	170	100			
	212	125			
	255	150			
	340	200			
	425	250			
	510	300			
	680	400			
	850	500			

* Nominal Flows indicated are for 100°F inlet temperature, 100°F ambient temperature and 100 psig compressed air pressure.

RECEIVING, MOVING, AND UNPACKING

■ Receiving

This shipment has been thoroughly checked, packed and inspected before leaving our plant. It was received in good condition by the carrier and was so acknowledged.

Check for Visible Loss or Damage. If this shipment shows evidence of loss or damage at time of delivery to you, insist that a notation of this loss or damage be made on the delivery receipt by the carrier's agent.

■ Unpacking

Check for concealed loss or damage. When a shipment has been delivered to you in apparent good order, but concealed damage is found upon unpacking, notify the carrier immediately and insist on his agent inspecting the shipment. Concealed damage claims are not our responsibility as our terms are F.O.B. point of shipment.

■ Moving

In moving or transporting dryer, do not tip dryer onto its side.

■ Storage

IMPORTANT: Do not store dryer in temperatures above 130°F (54.4°C).

INSTALLATION

■ Ambient Air Temperature

Locate the dryer indoors where the ambient air temperature will be between 37°F and 110°F. Intermittent operation at ambient temperatures up to 110°F will not damage the dryer but may result in a higher dew point or dryer shutdown due to high refrigerant discharge pressure (see Field Service Guide).

Do not operate air-cooled dryers at ambient air temperatures below 37°F. Such operation may result in low suction pressure, causing freeze-up.

■ Location and Clearance

Mount the dryer on a level base. If the base vibrates, bolt the unit down using vibration dampeners. Allow at least 24 inches clearance on the sides and the front of the dryer for cooling airflow and for service access.

■ System Arrangement

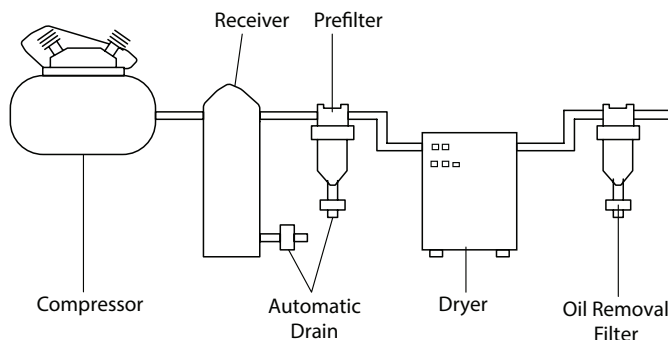
Liquid water in the inlet air will adversely affect the performance of the dryer. Install the dryer downstream of an aftercooler or separator so that the temperature of the dryer inlet air does not exceed 120°F and the inlet air does not contain any liquid water.

If the compressed airflow is relatively constant and does not exceed the dryer flow rating, it is recommended that the dryer be located downstream of the receiver tank. If the nature of the application is such that the air demand regularly exceeds the dryer flow rating, it is recommended that the dryer be located upstream of the receiver.

For safety and convenience, install inlet and outlet shutoff valves and depressurization valves. These valves allow the dryer to be isolated and depressurized for servicing. Bypass piping may be installed around the dryer for uninterrupted airflow when the dryer is serviced. If the compressed air operation cannot tolerate undried air for short periods, install a second dryer in the bypass line.

Compressed air systems commonly require filters to remove compressor oils, particulates, condensed liquids and other contaminants. When an oil-removal filter is used, it should be installed downstream of the refrigerated dryer. At this location, the life of the replaceable filter element is prolonged since some of the entrained oil is removed by the dryer and drained through the separator.

NOTE: A suitably sized prefilter must be installed before the dryer. Failure to install and maintain a proper prefilter will void the dryer warranty.



TYPICAL COMPRESSED AIR SYSTEM

■ Piping and Connections

Piping must be furnished by the user unless otherwise specified. Connections and fittings must be rated for the maximum operating pressure given on the dryer data plate and must be in accordance with applicable codes. Support all piping; do not allow the weight of any piping to stress the dryer or filter connections. Inlet and outlet shutoff valves and a valved bypass valve are recommended. Piping should be at least the size of the inlet and outlet connections to minimize pressure drop in the air system. See Engineering Data section for dryer inlet and outlet connections.

■ Removing Condensate

Condensate must be drained from the dryer to prevent re-entrainment. The dryers are equipped with automatic drain valves and internal drain hoses up to the drain connections on the dryer cabinets. The user must install a separate discharge line at the drain connection to carry off condensate to an environmentally approved condensate collection/disposal system. Piping or copper tubing 1/2 inch or larger is recommended for condensate discharge lines. Install the drain lines so that condensate can be seen as it drains.

■ Electrical Connections

The dryers are constructed according to NEMA Type 1 electrical standards. Field wiring must comply with local and national fire, safety and electrical codes. Installation must be in accordance with the National Electrical Code. Confirm that your line voltage is the same as the voltage listed on the dryer data plate. Refer to Figure 1 for electrical schematics.

CAUTION

Operation of dryers with improper line voltage constitutes abuse and could affect the dryer warranty.

INSTRUMENTATION

■ ON/OFF Switch

The dryer is equipped with an ON/OFF switch on the front panel. A light signals when the dryer is on.

■ Dew Point Indicator (75 through 150 scfm models)

All dryers are equipped with a dew point indicator which indicates dryer conditions as follows:

It is normal for the dew point indicator to be in the red zone when the dryer is first turned on and then move to the green zone when the dryer reaches its normal operating temperature. If this indicator is in the red zone during normal operation, turn the dryer off to avoid compressor damage. Refer to the Field Service Guide for additional information, or call your local distributor.



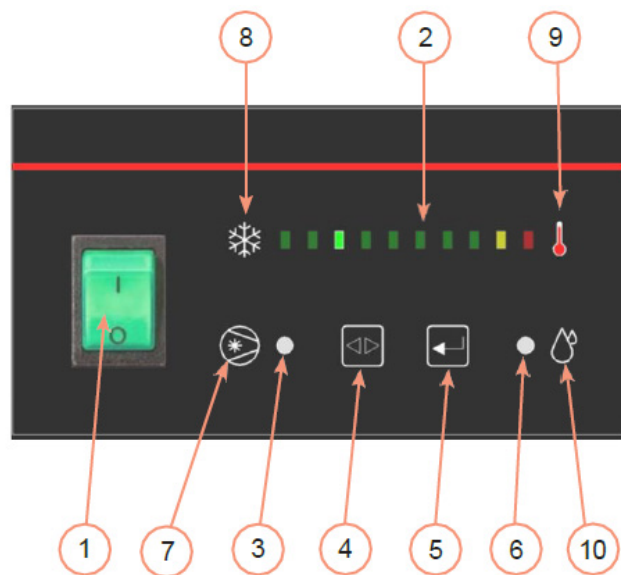
Dew Point Indicator

(Models DAV 127, 170, 212 and 255 INA)

■ Dryer System Monitor (DSM) (200 through 500 scfm models)

The Dryer System Monitor (DSM) has a LED type dew point temperature indicator and operating time control for the electronic drain valve. When the dryer is running normally, the green LED will illuminate. If the red LED is illuminated, there is a need for the dryer's operating condition to be checked. If all LEDs are illuminated, the sensor for the dew point temperature indicator has malfunctioned.

The automatic drain valve controls allow the period of drain opening to be set from 1 second to 9 seconds and drain valve closed time to be set from 0.5 minutes to 15 minutes. When the Drain Push-to-Test button (5) is pushed for one (1) second, the Drain LED (6) will illuminate and the drain port opens with a click.



Dryer System Monitor

(Models DAV 340, 425, 510, 680 and 850 INA)

1. On/Off Switch: Press the top of the switch (I) to turn the dryer on. Press the bottom of the switch (O) to turn the dryer off. When the dryer is on, the switch is illuminated.
2. Dew Point Temperature Indicator: Main portion of the graphic for the dew point temperature scale. Green indicates low, red indicates high.
3. Compressor On Light / On Time Setting Mode: Dual purpose LED indicating light. Illuminates as solid light when compressor is ON. Blinks On and Off during setup of the On Time Set Points for the Automatic Drain Valve.
4. Selection Button: During set up of the Automatic Drain Valve, When pressed, sequences from left to right.
5. Drain Push-to-Test Button / Enter Button:
 - Drain Push-to-Test button. When the button is pressed, the drain valve opens for the time corresponding to the setting established during Drain Valve setup.
 - Enter button. Stores the "On Time" and "Off Time" drain valve settings established during Drain Valve setup
6. Drain LED / Off Time Setting Mode: Dual purpose LED indicating light. Illuminates as solid light when Drain is closed. Blinks On and Off during setup of the Off Time Set Points for the Automatic Drain Valve.
7. This is a graphic symbol for the Air Dryer compressor. It simply indicates that the switch is used to turn the compressor (dryer) on and off.
8. Part of the graphic for the dew point temperature scale. The snowflake indicates the low (cold) end of the scale.
9. Part of the graphic for the dew point temperature scale. The thermometer indicates the high (hot) end of the scale.
10. This is a graphic symbol for the Drain Valve.

■ Automatic Drain Valve

All models are equipped with an electronic drain valve that automatically discharges condensate from the dryer. Drain valve operation is controlled by a drain valve timer. The drain opening can be set from 0.5 seconds to 9 seconds. The drain cycle can be set from 0.5 minutes to 15 minutes.

Models DAV127INA through DAV255INA have the timer mounted directly on the drain valve.

For models DAV340INA through DAV850INA, drain valve adjustments are made on the Dryer System Monitor:

1. Press the Selection (4) and Enter (5) buttons at the same time for 3 seconds, the On Time Setting Mode LED (3) will start to blink, and the illuminated LED on the Dew Point Temperature Indicator LED (2) will identify the factory setting for "On Time". (See table)
2. Press and release the Selection button (4) to sequence from left to right until reaching your selection. The red LED is not used.
3. To store the "On Time", press the Enter button (5) and set the "Off Time" using step 2.
4. To store the "Off Time", press the Enter button (5) again.
5. Exiting the Program will cause the Timer Drain to discharge and begin a new cycle.

NOTE: Failure to perform step 3 within 10 seconds of completing step 2 will cause the unit to revert back to the previous setting.

LED (2) Position	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
On Time (sec)	1	2	3	4	5	6	7	8	Continuous (Drain Trap Option)
Off Time (min)	0.5	1	2	3	5	7	9	10	15

■ Electronic Drain Valve Adjustment

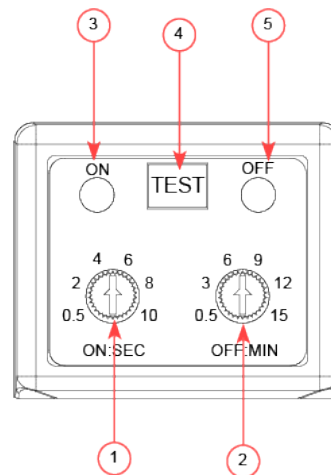
The automatic drain valve has been pre-programmed at the factory for your specific DAV Series dryer. Programming is based upon a minimum of 100 psi saturated inlet air pressure and maximum energy efficiency. Generally no adjustment to the timer is necessary.

⚠ CAUTION

If water is present downstream of the dryer, always verify that and condensate drains installed upstream of the dryer are draining properly before attempting to adjust the timer settings.

1. For minimum inlet air pressures that fall between column values the setting for the lower pressure is recommended. (i.e. select the 100 psi column values for 124 psi inlet pressure.)

2. Where the dryer is consistently operating at less than maximum capacity, it may be possible to alter the timer set points to minimize air loss. Discretionary adjustments to the dryer should only be made on a hot, humid day when the maximum expected air load is flowing through the dryer. Failure to do so may prevent the condensate from draining completely when operating under peak load conditions.



Drain Timer

(Models DAV 127 170, 212 and 255 INA)

1. Adjustment knob for the drain valve open time. The values on the dial correspond to the time in seconds that the valve is open in each drain cycle.
2. Adjustment knob for the drain valve closed time. The values on the dial correspond to the time in minutes that the valve is closed in each drain cycle.
3. LED to indicate when the drain valve is open.
4. Drain test button. When the button is pressed, the drain valve opens for the time corresponding to the setting on item 1.
5. LED to indicate when the drain valve is closed.

Dryer Model	Inlet Pressure (psig)											
	75		100*		125		150		200		225	
	On (sec)	Off (min)	On (sec)	Off (min)	On (sec)	Off (min)	On (sec)	Off (min)	On (sec)	Off (min)	On (sec)	Off (min)
DAV127~DAV255	4	1	3	1	2	1	2	2	2	3	2	4
DAV340~DAV850	3	1	2	1	2	2	2	3	2	4	2	6

* Recommended and pre-programmed factory settings for each DAV-IN Series model dryer.

Assumes dryer operates at ISO 7183 (Option A2) conditions: 100°F inlet air temperature, 100 psig operating pressure, 100°F ambient air temperature and 10°F air-cooled after-cooler approach temperature.

START-UP/OPERATION

Follow the procedure below to start your dryer. Failure to follow the prescribed start-up procedure will invalidate the warranty. If problems arise during start-up, call your distributor.

WARNING

Refer to Serial Number Tag for dryer operating capacity. Do not exceed recommended capacity.

Drain connections must be made before the dryer can be operated. The dryers are fully automatic and require no auxiliary controls.

1. Turn the dryer ON/OFF switch to OFF.
2. Check that the main electrical supply voltage matches the voltage specified on the dryer data plate.
3. Check proper connection and support of compressed air lines to the dryer; check bypass valve system, if installed.
4. SLOWLY pressurize the dryer. The outlet valves of the dryer should be closed to prevent flow through the dryer.
5. Turn on the main electrical power to the dryer.
6. Ensure adequate ventilation for air-cooled dryers.

To start dryer:

1. Turn the power switch to ON. The refrigerant compressor will turn on.
2. Allow the dryer to run 15 minutes. Confirm that the temperature indicators are in the green zone.
3. SLOWLY open the dryer outlet valves permitting flow through the dryer.
4. Confirm that condensate is discharging from the drain valve by pressing the "Push-to Test" button.
5. Check drain valve timing. See Automatic Drain Valve section for drain valve adjustment procedure.
6. Confirm that the inlet air temperature, pressure and airflow to the dryer meet the specified requirements (see Engineering Data section).
7. Confirm that the condensate lines from the drain valve discharge into a collection tank or an environmentally approved disposal system.

The dryer is designed to run continuously. Let the dryer run even when the demand for compressed air is interrupted; the dryer will not freeze up.

SHUTDOWN

When the dryer must be shutdown for maintenance or other reasons, use the following procedure.

If electrical repairs must be made:

1. Turn off the power switch.
2. Disconnect the main power supply.
3. Lock out and tag the power supply in accordance with OSHA requirements.

If mechanical repairs are to be made or service is performed, vent the internal pressure of the dryer to atmospheric pressure. Restart the dryer according to the start-up instructions.

WARNING

Disconnect power supply and depressurize dryer before servicing. Dismantling or working on any component of the compressed air system under pressure may cause equipment failure and serious personal injury.

MAINTENANCE

The dryers require little maintenance for satisfactory operation. Good dryer performance can be expected if the following routine maintenance steps are taken.

WARNING

Dismantling or working on any component of the compressed air system under pressure may cause equipment failure and serious personal injury. Before dismantling any part of the dryer or compressed air system, completely vent the internal pressure to the atmosphere.

■ General

For continued good performance of your refrigerated dryer, all refrigeration system maintenance should be performed by a competent refrigeration mechanic.

NOTE: Before corrective maintenance is done during the warranty period, call your local distributor and proceed according to instructions. Refer to the warranty for limits of your coverage.

■ Daily Maintenance

Check the operation of the automatic drain valve at least once daily. See the Field Service Guide for remedies to drain valve malfunctions. See the Automatic Drain Valve section for drain valve adjustment.

■ Monthly Maintenance

It is recommended to inspect the condenser coils monthly. If necessary, remove dirt or other particles with compressed air from an OSHA-approved air nozzle that limits its discharge pressure to 30 psig (2.1 kgf/cm²).

■ Electronic Drain Valve Disassembly and Servicing

The valve body is attached to the valve strainer which is attached to the heat exchanger vessel.

CAUTION

Do not disassemble drain valve timer or attempt to repair electrical parts. Replace timer if defective.

The drain valve discharges condensate through a full-port drain opening. The valve body may need to be cleaned under conditions of gross particulate contamination.

To disassemble the drain valve body for cleaning and other maintenance:

1. Turn power switch off.
2. Disconnect main power supply to dryer.
3. Depressurize unit.
4. Lock out and tag power supply in accordance with OSHA requirements.

WARNING

If power supply is not connected and unit is not depressurized before disassembly, serious personal injury and valve damage may result.

5. Remove hoses that connect the drain valve to the drain discharge fitting and remove the valve from the drain valve strainer.
6. Remove screw and washer from front of the drain valve.
7. Remove the power supply connector and gasket (with the timer assembly if attached) from the solenoid coil housing. Do not damage or lose the gasket.
8. Remove coil fixing nut from top of solenoid coil housing.
9. Lift solenoid coil housing off solenoid core in valve body.
10. Unscrew solenoid core from valve body.

Once the drain valve is disassembled, the following maintenance can be performed.

1. Inspect internal parts of valve body; clean or replace as required.

NOTE: Replace solenoid valve if component damage is observed.

2. Remove debris from valve body.
3. Wipe solenoid core components with a clean cloth or blow out debris with compressed air from an OSHA-approved air nozzle that limits its discharge pressure to 30 psig.
4. Check that the plunger assembly is clean and moves freely in housing.
5. If timer is attached to valve body, check electrical continuity across timer assembly.

To reassemble the drain valve, reverse the sequence of the preceding steps. After the drain valve is reassembled, connect the main power supply to the dryer.

When the dryer is returned to service, check the drain valve for air or condensate leaks; tighten connections as required to correct leaks. Check the drain cycle; adjust the timer according to the procedure in the drain valve adjustment section.

FIELD SERVICE GUIDE

Problems most frequently encountered with refrigerated dryers are water downstream of the dryer and excessive pressure drop. Most causes can be identified and remedied by following this guide.

WARNING

Closed refrigeration systems are potentially dangerous. Work on the refrigeration system must be done only by a competent licensed refrigeration mechanic. Do not release fluorocarbon refrigerants to the atmosphere. Do not discharge liquid refrigerants into floor drains. Refrigerant vapors may accumulate in low places. Inhalation of high concentrations may be fatal. All refrigerants must be recovered per EPA requirements.

Do not smoke when a refrigeration leak is suspected. Burning materials may decompose refrigerants, forming a toxic gas or acids that may cause serious injury and property damage.

Before dismantling any part of the dryer or compressed air system, completely vent the internal pressure to the atmosphere.

PROBLEM	SYMPTOM	POSSIBLE CAUSE	REMEDY
Water Downstream of Dryer	Refrigerant compressor not running.	Loss of power to dryer	Check power supply, fuses and/or breakers. Check for loose connections.
		Dryer turned off.	Check On/Off switch position.
		Dryer overloaded.	Confirm that inlet flow, inlet temperature and inlet pressure are within acceptable range of dryer.
		Condenser clogged with debris.	Check/clean condenser.
		Fan motor inoperative	Check fan motor operation. Replace if necessary.
		Ambient temperature too high.	Verify ambient temperature throughout day.
		High pressure switch activated (models 200 to 500 only)	Press manual reset button to switch to reset button.
		Compressor overheated.	Turn dryer off. Contact local distributor.
		Compressor defective.	Turn dryer off. Contact local distributor.
	No condensate discharging from dryer.	Drain strainer clogged.	Clean drain strainer.
		Drain valve inoperative.	Check/rebuild drain valve.
		Drain timer or DSM inoperative.	Confirm there is power to the timer or DSM. Replace timer or DSM, if necessary.
		Drain solenoid inoperative.	Confirm there is power to the coil. Replace coil, if necessary.
	Condensate discharging from dryer.	Incorrect drain timer setting.	Adjust drain timer - increase open time and/or decrease closed time.
	Liquid water entering dryer.	Aftercooler drain valve malfunction.	Check, repair aftercooler drain valve.
Excessive Pressure Drop Across Dryer	Frozen condensate in evaporator.	Incorrect constant pressure valve setting.	Contact local distributor.
	Inlet air pressure low.	Upstream restriction in air system.	Check all upstream air system components (valves, regulators, etc.)
	Dryer undersized.	Excessive compressed air flow.	Resize dryer.
Dew Point Indicator Out of Green Zone	Dew Point Indicator Out of Green Zone	Dryer overloaded.	Confirm that inlet flow, inlet temperature and inlet pressure are within acceptable range of dryer.
		Condenser clogged with debris.	Check/clean condenser.
		Loose sensor connection.	Confirm gauge or DSM sensor is tightly connected to dryer tubing.
		Defective gauge, DSM or DSM sensor.	Replace gauge, DSM or DSM sensor.

ENGINEERING DATA

MODEL	DAV127 INA100	DAV170 INA100	DAV212 INA100	DAV255 INA100	DAV340 INA400	DAV425 INA400	DAV510 INA400	DAV680 INA400	DAV850 INA400
SPECIFICATIONS									
Rated Capacity ¹ - (scfm)	75	100	125	150	200	250	300	400	500
Inlet /Outlet Connections - (inches, NPT)	1	1	1	1	2	2	2	2	2
Dimensions									
Height - (inches)	23.67	23.67	26.03	26.03	29.97	29.97	31.94	31.94	31.94
Width - (inches)	14.28	14.28	14.28	14.28	19.40	19.40	19.40	19.40	21.36
Length - (inches)	32.33	32.33	32.33	34.69	36.66	36.66	43.75	43.75	47.69
Net Weight - (lbs)	106	111	116	132	174	181	228	254	302
Shipping Weight - (lbs)	123	129	135	152	196	204	252	279	328
Refrigerant Compressor Capacity ² - (BTU/hr)	4,245	4,982	4,982	9,724	17,224	17,224	21,425	28,052	28,040
Refrigerant Type	R-134a	R-134a	R-134a	R-407c	R-407c	R-407c	R-407c	R-407c	R-407c
Charge ³ - (oz)	12.7	15.5	19.4	21.5	28.2	31.7	35.3	38.8	42.3

MODEL	DAV127 INA100	DAV170 INA100	DAV212 INA100	DAV255 INA100	DAV340 INA400	DAV425 INA400	DAV510 INA400	DAV680 INA400	DAV850 INA400
ELECTRICAL DATA									
Power Supply - (V/Ph/Hz)	115/1/60					460/3/60			
Input Power - (kW)	0.57	0.70	0.74	0.96	1.80	1.82	2.32	2.99	3.05

MODEL	DAV127 INA100	DAV170 INA100	DAV212 INA100	DAV255 INA100	DAV340 INA600	DAV425 INA600	DAV510 INA600	DAV680 INA600	DAV850 INA600
ELECTRICAL DATA									
Power Supply - (V/Ph/Hz)	-	-	-	-	575/3/60				
Input Power - (kW)	-	-	-	-	3.41	3.52	4.13	4.13	5.05

- Rated Flow Capacity - Conditions for rating dryers are in accordance with ISO 7183 (Option A2). Compressed air at dryer inlet: 100 psig (7.0 barg) and 100°F (38°C); ambient air temperature: 100°F (38°C), operating on 60 Hz power supply.
- Compressor capacity @ ASHRAE-T standard: 45°F evaporating temperature, 130°F condensing temperature, 95°F return temperature, 115°F liquid temperature, and 95°F ambient temperature.
- Refer to dryer data plate for refrigerant charge.

MINIMUM - MAXIMUM OPERATING CONDITIONS	ALL MODELS
Min.-Max. Inlet Air Pressure (compressed air at inlet to dryer)	43.5 - 232 psig (3 - 16 barg)
Min.-Max. Inlet Air Temperature (compressed air at inlet to dryer)	45°F - 120°F (7°C - 49°C)
Min.-Max. Ambient Temperature	37°F - 110°F (3°C - 43°C)

NOTE: Continuous operation in the above maximum and minimum operation conditions is not allowable.

SUCTION PRESSURE

Refrigerant	Without Airflow
R-134a	31 psig
R-407c	60 psig

REFRIGERANT PRESSURE SWITCH SETTINGS

Fan Cycle Control			
Fan Pressure Switch Setting			
Model	Refrigerant	Cut-In (psig)	Cut-Out (psig)
DAV127INA100- DAV212INA100	R-134a	199 psig	142 psig
DAV255INA100- DAV850INA400	R-407c	299 psig	213 psig

Refrigerant Compressor Control			
High Pressure Switch Setting			
Sensor Location	Refrigerant	Cut-In	Cut-Out (psig)
Compressor Discharge	R-407c	Manual Reset	398 psig

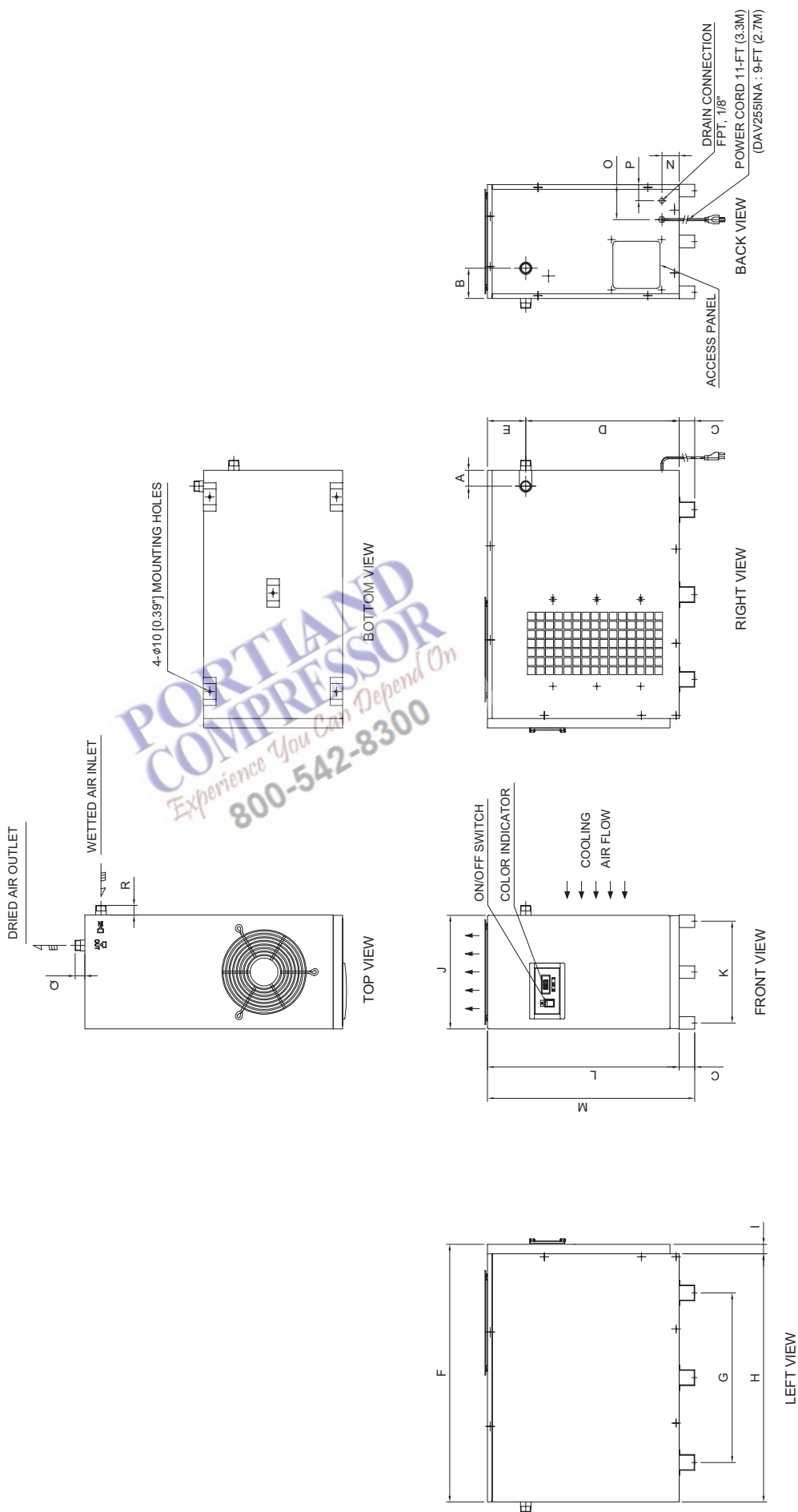
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GENERAL ARRANGEMENT DRAWINGS

Models DAV127INA100 through DAV255INA100

MODEL	DIMENSIONS																		CONNECTIONS <NPT, MALE>	INLET AIR FLOW <scfm>	WEIGHT <kg>
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R			
DAV127INA	2.02 (51.2)	3.79 (96.2)	1.96 (50)	19.26 (489.2)	2.44 (62)	32.33 (821.2)	21.26 (540)	31.15 (791.2)	1.18 (30)	14.28 (362.6)	12.76 (324)	21.70 (551.2)	23.67 (601.2)	2.16 (55)	4.38 (111.2)	2.02 (51.2)	1.18 (30)	1.18 (30)	1	75	48
DAV170INA	2.02 (51.2)	3.79 (96.2)	1.96 (50)	19.26 (489.2)	2.44 (62)	32.33 (821.2)	21.26 (540)	31.15 (791.2)	1.18 (30)	14.28 (362.6)	12.76 (324)	21.70 (551.2)	23.67 (601.2)	2.16 (55)	4.38 (111.2)	2.02 (51.2)	1.18 (30)	1.18 (30)	1	100	50
DAV212INA	2.02 (51.2)	3.79 (96.2)	1.96 (50)	19.26 (489.2)	4.80 (122)	32.33 (821.2)	21.26 (540)	31.15 (791.2)	1.18 (30)	14.28 (362.6)	12.76 (324)	24.06 (611.2)	26.03 (661.2)	2.16 (55)	4.38 (111.2)	2.02 (51.2)	1.18 (30)	1.18 (30)	1	125	53
DAV255INA	2.02 (51.2)	3.79 (96.2)	1.96 (50)	19.26 (489.2)	4.80 (122)	34.69 (881.2)	23.62 (600)	33.51 (851.2)	1.18 (30)	14.28 (362.6)	12.76 (324)	24.06 (611.2)	26.03 (661.2)	2.16 (55)	4.38 (111.2)	2.02 (51.2)	1.18 (30)	1.18 (30)	1	150	60

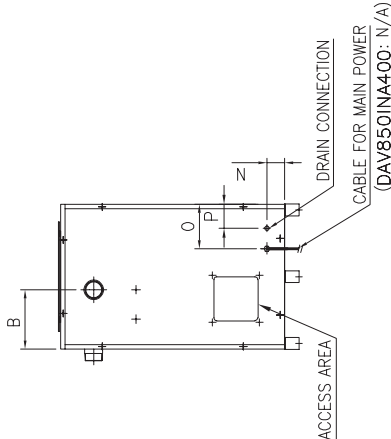
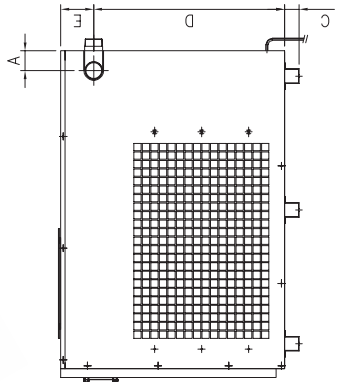
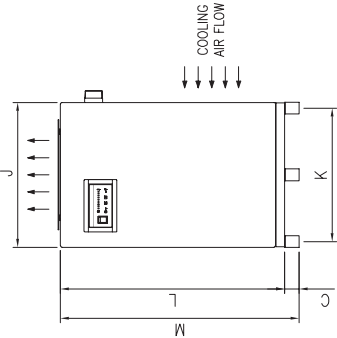
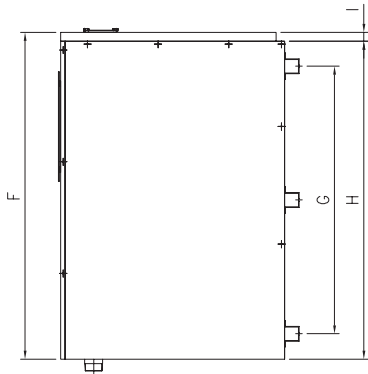
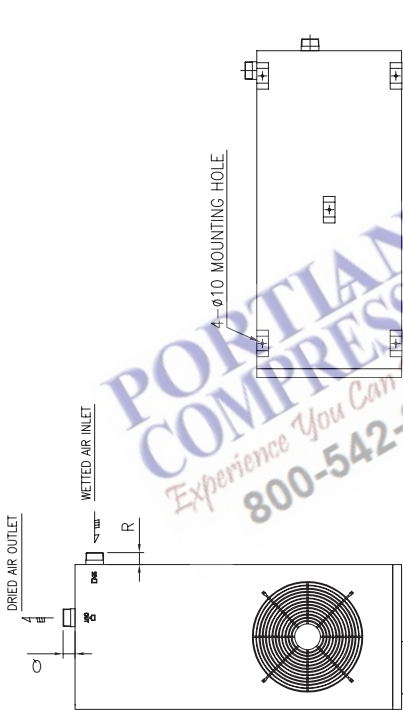
NOTE : PRIMARY DIMENSIONS ARE INCHES AND DIMENSIONS IN BRACES ARE METRIC



47816579-A
(Ref. Drawing)

Models DAV340INA400 through DAV850INA400

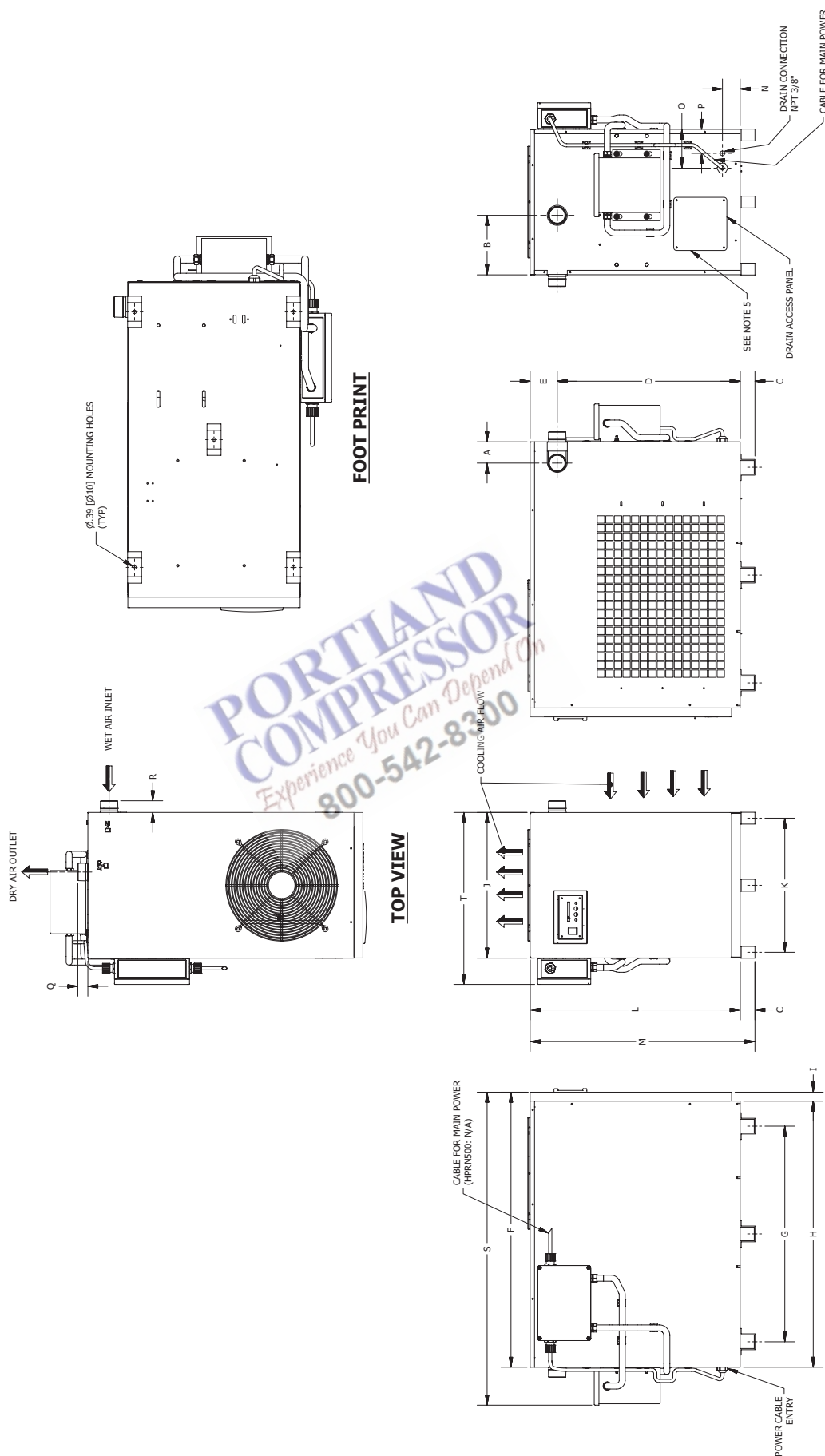
MODEL	DIMENSIONS																	CONNECTIONS <NPT, MALE>	INLET AIR FLOW <scfm>	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q			R
DAV340INA400	2.65	7.92	1.96	24.38	3.62	36.66	28.74	35.48	1.18	19.39	17.87	28.00	29.97	2.36	5.17	3.20	1.58	1.58	2	200
	{67.2}	{201.2}	{50}	{619.2}	{92}	{931.2}	{730}	{901.2}	{30}	{492.6}	{454}	{711.2}	{761.2}	{60}	{131.2}	{81.2}	{40}	{40}		
DAV425INA400	2.65	7.92	1.96	24.38	3.62	36.66	28.74	35.48	1.18	19.39	17.87	28.00	29.97	2.36	5.17	3.20	1.58	1.58	2	250
	{67.2}	{201.2}	{50}	{619.2}	{92}	{931.2}	{730}	{901.2}	{30}	{492.6}	{454}	{711.2}	{761.2}	{60}	{131.2}	{81.2}	{40}	{40}		
DAV510INA400	2.65	7.92	1.96	25.56	4.41	43.75	35.83	42.57	1.18	19.39	17.87	29.97	31.94	2.36	5.95	3.20	1.58	1.58	2	300
	{67.2}	{201.2}	{50}	{649.2}	{112}	{1111.2}	{910}	{1081.2}	{30}	{492.6}	{454}	{761.2}	{811.2}	{60}	{151.2}	{81.2}	{40}	{40}		
DAV680INA400	2.65	7.92	1.96	25.56	4.41	43.75	35.83	42.57	1.18	19.39	17.87	29.97	31.94	2.36	5.95	3.20	1.58	1.58	2	400
	{67.2}	{201.2}	{50}	{649.2}	{112}	{1111.2}	{910}	{1081.2}	{30}	{492.6}	{454}	{761.2}	{811.2}	{60}	{151.2}	{81.2}	{40}	{40}		
DAV850INA400	2.65	7.92	1.96	26.74	3.23	47.69	38.19	46.50	1.18	21.36	19.84	29.97	31.94	2.36	5.95	3.20	1.58	1.58	2	500
	{67.2}	{201.2}	{50}	{679.2}	{82}	{1211.2}	{970}	{1181.2}	{30}	{542.6}	{504}	{761.2}	{811.2}	{60}	{151.2}	{81.2}	{40}	{40}		



47816578-A
(Ref. Drawing)

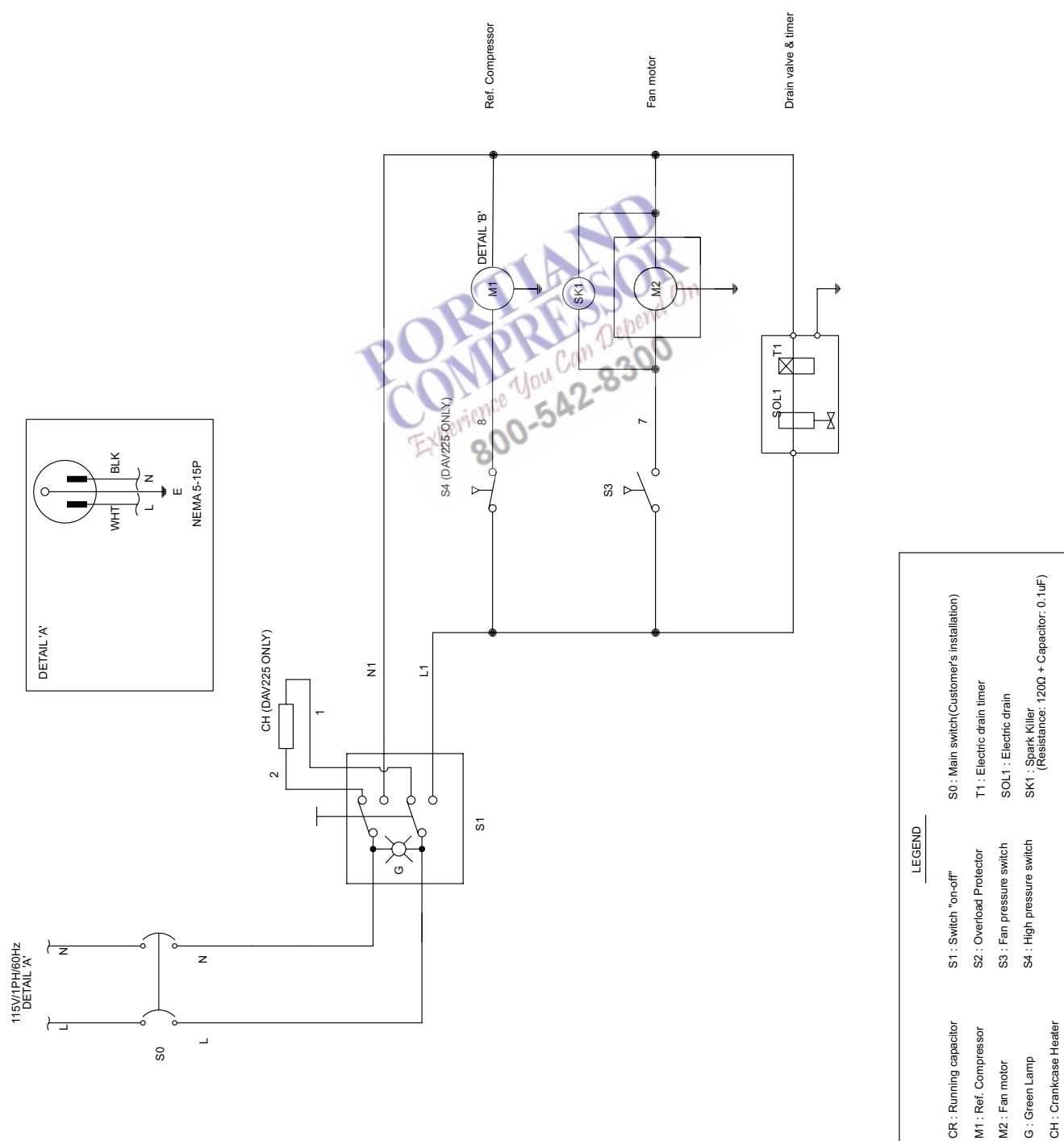
Models DAV340INA600 through DAV850INA600 (575V Option)

MATH	MODEL	DIMENSIONS - INCHES (MM)																CONNECTIONS (NPT, MALE)	INLET AIR FLOW (SCFM)	WEIGHT LBS (KG)	POWER SUPPLY	REFRIGERANT			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P						Q	R	S
DAV340NA600	7838730001	2.65 (67.2)	7.92 (201.2)	1.96 (50)	24.38 (619.2)	3.62 (92)	36.66 (931.2)	28.74 (730)	35.48 (901.2)	1.18 (30)	19.39 (492.6)	17.87 (454)	28.00 (711.2)	29.97 (761.2)	2.36 (60)	5.17 (131.2)	3.20 (81.2)	1.58 (40)	1.58 (40)	42.1 (1069.34)	22.93 (582.4)	2	200 (90)	575V/3PH/60HZ	R407C
DAV425NA600	7838731001	2.65 (67.2)	7.92 (201.2)	1.96 (50)	24.38 (619.2)	3.62 (92)	36.66 (931.2)	28.74 (730)	35.48 (901.2)	1.18 (30)	19.39 (492.6)	17.87 (454)	28.00 (711.2)	29.97 (761.2)	2.36 (60)	5.17 (131.2)	3.20 (81.2)	1.58 (40)	1.58 (40)	42.1 (1069.34)	22.93 (582.4)	2	250 (100)	575V/3PH/60HZ	R407C
DAV510NA600	7838732001	2.65 (67.2)	7.92 (201.2)	1.96 (50)	25.56 (649.2)	4.41 (112)	43.75 (1111.2)	35.83 (910)	42.57 (1081.2)	1.18 (30)	19.39 (492.6)	17.87 (454)	29.97 (761.2)	31.94 (811.3)	2.36 (60)	5.95 (151.2)	3.20 (81.2)	1.58 (40)	1.58 (40)	49.19 (1249.43)	22.93 (582.4)	2	300 (126)	575V/3PH/60HZ	R407C
DAV680NA600	7838733001	2.65 (67.2)	7.92 (201.2)	1.96 (50)	25.56 (649.2)	4.41 (112)	43.75 (1111.2)	35.83 (910)	42.57 (1081.2)	1.18 (30)	19.39 (492.6)	17.87 (454)	29.97 (761.2)	31.94 (811.3)	2.36 (60)	5.95 (151.2)	3.20 (81.2)	1.58 (40)	1.58 (40)	49.19 (1249.43)	22.93 (582.4)	2	400 (138)	575V/3PH/60HZ	R407C
DAV850NA600	7838734001	2.65 (67.2)	7.92 (201.2)	1.96 (50)	26.74 (679.2)	3.23 (82)	47.69 (1211.2)	38.19 (970)	46.50 (1181.2)	1.18 (30)	21.36 (542.6)	19.84 (504)	29.97 (761.2)	31.94 (811.3)	2.36 (60)	5.95 (151.2)	3.20 (81.2)	1.58 (40)	1.58 (40)	53.13 (1349.50)	24.9 (632.5)	2	500 (160)	575V/3PH/60HZ	R407C



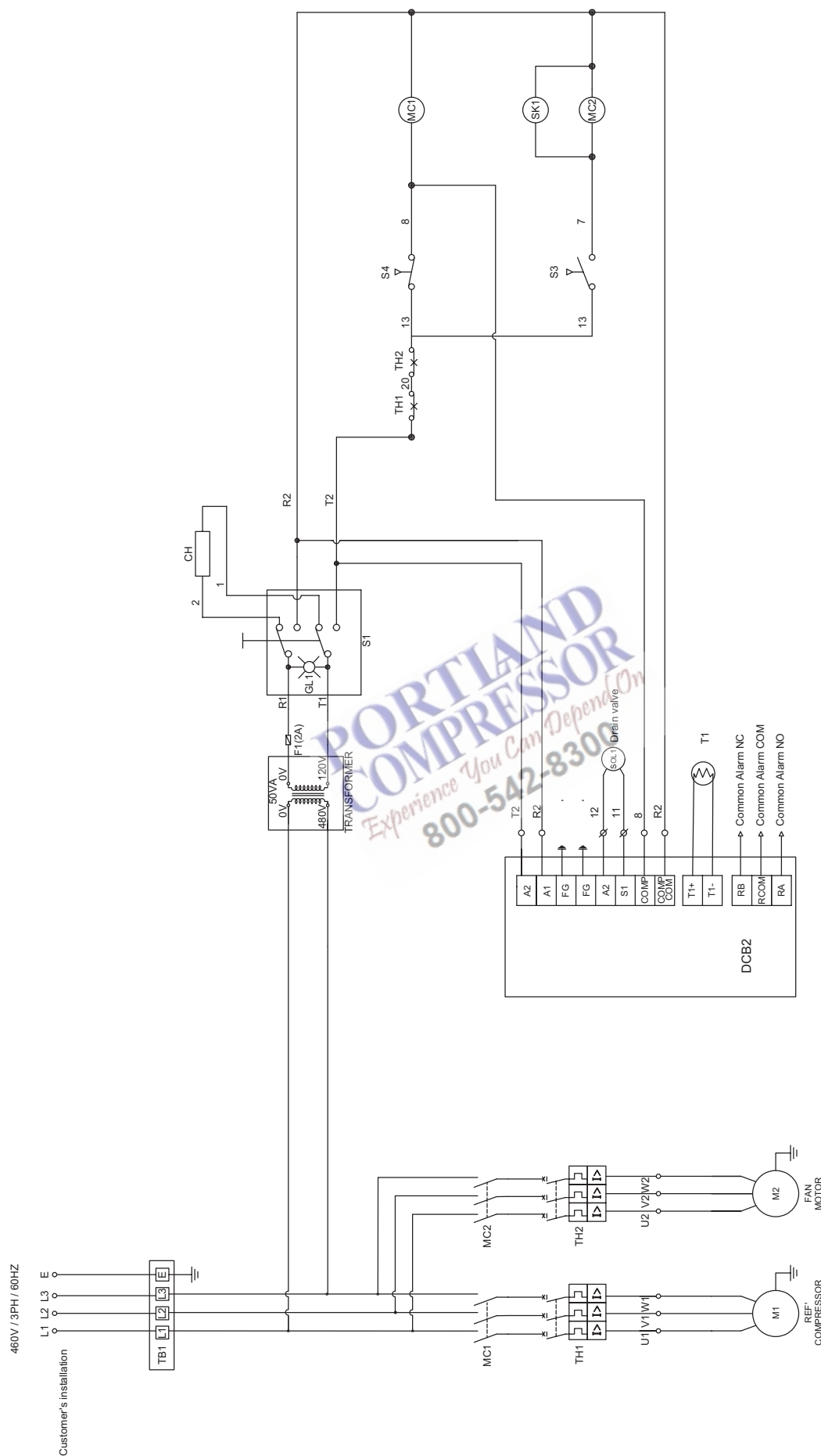
ELECTRICAL SCHEMATICS

Models DAV127INA100 through DAV255INA100



47816556-A
(Ref. Drawing)

Models DAV340INA400 through DAV850INA400

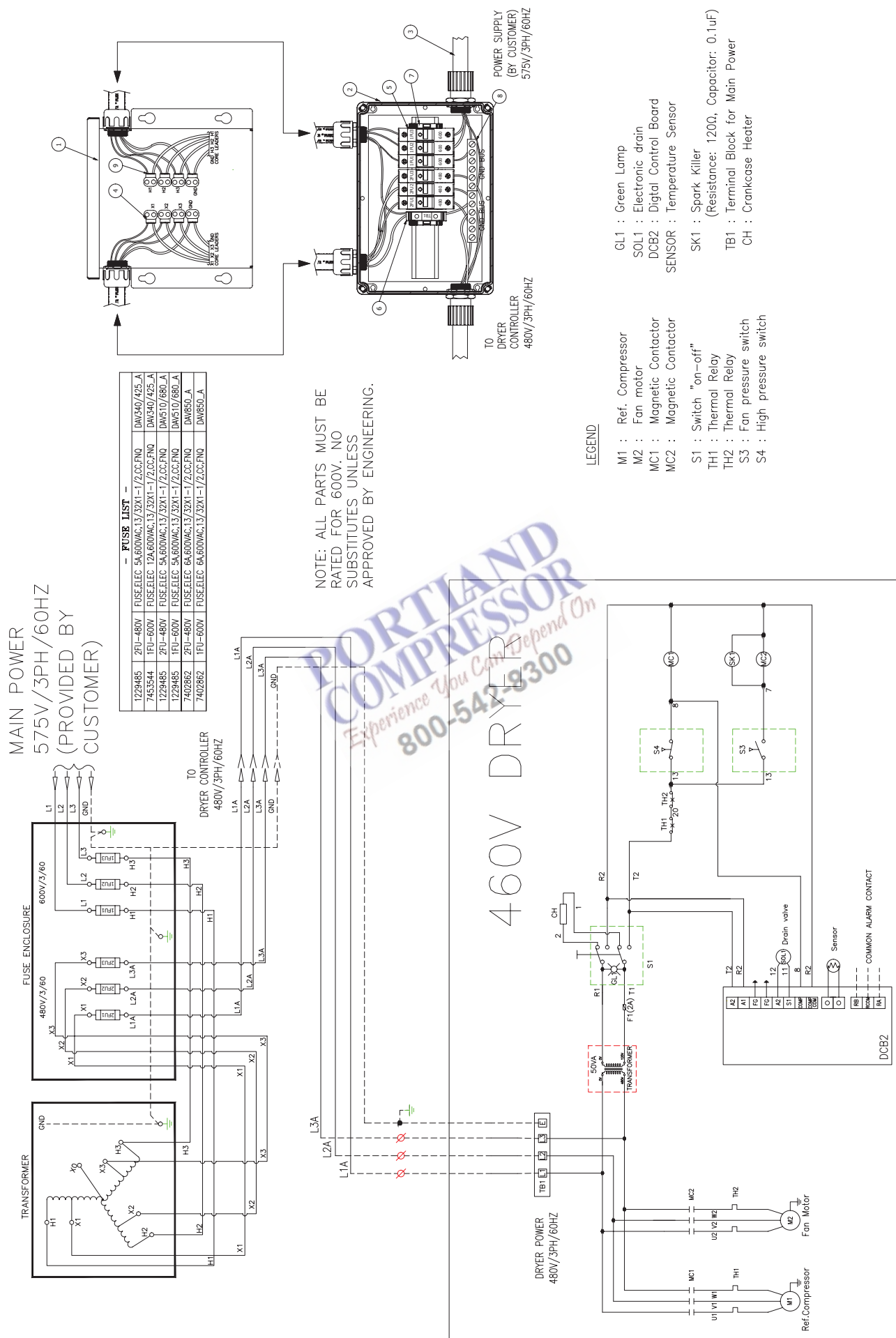


LEGEND

M1 : Ref. Compressor
 M2 : Fan motor
 MC1 : Magnetic Contactor
 MC2 : Magnetic Contactor
 S1 : Switch "on-off"
 TH1 : Thermal Relay
 TH2 : Thermal Relay
 S3 : Fan pressure switch
 S4 : High pressure switch
 SK1 : Spark Killer
 GL1 : Green Lamp
 T : Temperature Sensor
 SOL1 : Electronic drain
 DCB : Digital Control Board
 CH : Crankcase Heater

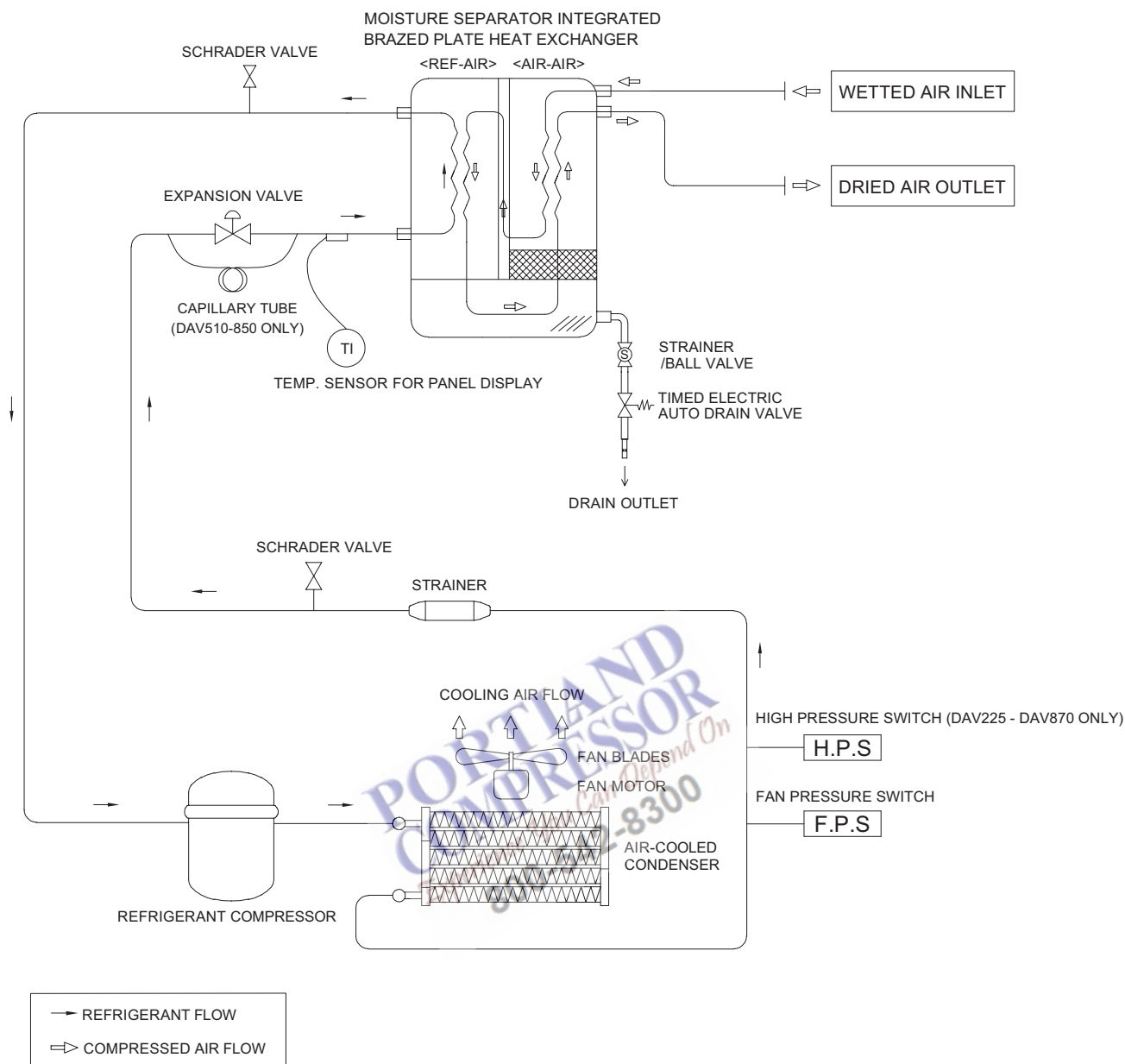
47816555-A
(Ref. Drawing)

Models DAV340INA600 through DAV850INA600 (575V Option)



47844443-A
(Ref. Drawing)

AIR AND REFRIGERANT FLOW SCHEMATIC



47816561-A
(Ref. Drawing)

REPLACEMENT PARTS

Description	DAV127INA100	DAV170INA100	DAV212INA100	DAV255INA100
COMPRESSOR	CX04491	CX03950	CX03950	CX06259
PTC RELAY, COMP	EEC0104	EEC0104	EEC0104	-
OVERLOAD RELAY, COMP	EEE0277	EEE0278	EEE0278	-
STARTING CAPACITOR, COMP	EEC0102	EEC0102	EEC0102	-
RUNNING CAPACITOR, COMP	EEC0100	EEC0100	EEC0100	EEE0282
CRANK CASE HEATER	-	-	-	CX06839
CONDENSER	CX11306	CX11306	CX11306	CX11306
FAN MOTOR	C008983	C008983	C008611	C008611
STRAINER	C000444	C000444	C000444	C009275
EXPANSION VALVE	CX11149	CX11149	CX11149	C000451
HEAT EXCHANGER ASSY	BA11117	BA11118	BA11119	BA11011
DRAIN VALVE, WITH TIMER	CX10654	CX10654	CX10654	CX10654
STRAINER BALL VALVE	CX06179	CX06179	CX06179	CX06179
DIN SOCKET	EEB0032	EEB0032	EEB0032	EEB0055
FAN PRESSURE SWITCH	C016223	C016223	C016223	C016224
HIGH PRESSURE SWITCH	-	-	-	C005507
COLOR INDICATOR	C000042	C000042	C000042	C000042
ON/OFF SWITCH	C003495	C003495	C003495	CX00805

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EN

Description	DAV340INA400 DAV340INA600	DAV425INA400 DAV425INA600	DAV510INA400 DAV510INA600	DAV680INA400 DAV680INA600	DAV850INA400 DAV850INA600
COMPRESSOR	C004463	C004463	C004464	C004465	C004465
CRANK CASE HEATER	CX01004	CX01004	CX01004	CX01004	CX01004
CONDENSER	CX00587	CX00587	CX00588	CX00588	CX00588
FAN MOTOR ASSY (MOTOR, BLADE & GRILL)	CX09414	CX09414	CX09414	CX09414	CX09407
STRAINER	C009275	C009275	C009275	C009275	C009275
EXPANSION VALVE	C000451	C000451	C000451	C000451	C000451
CAPILLARY TUBE	-	-	C002789	C002789	C005068
HEAT EXCHANGER ASSY	BA11120	BA11121	BA11122	BA11123	BA11124
DRAIN VALVE	CX07401	CX07401	CX07401	CX07401	C000876
STRAINER BALL VALVE	C005721	C005721	C005721	C005721	C005721
DIN SOCKET	EEB0055	EEB0055	EEB0055	EEB0055	EEB0032
FAN PRESSURE SWITCH	C016224	C016224	C016224	C016224	C016224
HIGH PRESSURE SWITCH	C005507	C005507	C005507	C005507	C005507
PRINTED CIRCUIT BOARD	CX10199	CX10199	CX10199	CX10199	CX10199
TEMP SENSOR	EKD1360	EKD1360	EKD1360	EKD1360	EKD1360
ON/OFF SWITCH	CX00805	CX00805	CX00805	CX00805	CX00805
CONTACTOR, COMP	C005175	C005175	C005175	C005175	C005175
OVER CURRENT RELAY, COMP	EEE0606	EEE0606	EEE0606	EEE0607	EEE0607
CONTACTOR, FAN	C005174	C005174	C005174	C005174	C005174
OVER CURRENT RELAY, FAN	CX11368	CX11368	CX11368	CX11368	CX11368
TRANSFORMER	CX00925	CX00925	CX00925	CX00925	CX00925
SUPPRESSOR (SPARK KILLER)	EEE0029	EEE0029	EEE0029	EEE0029	EEE0029

Description	DAV340INA600	DAV425INA600	DAV510INA600	DAV680INA600	DAV850INA600
TRANSFORMER, 3KVA, 600/480Y, 60HZ	7484775	7484775	-	-	-
TRANSFORMER, 6KVA, 600/480Y, 60HZ	-	-	7453546	7453546	7453546
FUSE, 5A,600VAC (2FU-480V)	1229485	1229485	-	-	-
FUSE, 4A,600VAC (1FU-600V)	1228980	1228980	-	-	-
FUSE, 5A,600VAC (2FU-480V)	-	-	1229485	1229485	-
FUSE, 5A,600VAC (1FU-600V)	-	-	1229485	1229485	-
FUSE, 6A,600VAC (2FU-480V)	-	-	-	-	7402862
FUSE, 6A,600VAC (1FU-600V)	-	-	-	-	7402862
BLOCK, FUSE PULLER, 3P, 600V, 30A, CC, LED	3143039	3143039	3143039	3143039	3143039

NOTICES AND DISCLAIMERS

Machine models represented in this manual may be used in various locations worldwide. Machines sold and shipped into European community countries shall display the CE Mark and conform to various directives. In such cases, the design specification of this compressor has been certified as complying with CE directives. Any modification to any part is absolutely prohibited and would result in the CE certification and marking being rendered invalid.

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Details of approved equipment are available from **Ingersoll Rand** Service departments.

The company accepts no responsibility for errors in translation of this manual from the original English version.

The design of this Compressor package and certain features within it are covered by patents held by **Ingersoll Rand** and patents pending.

WARRANTY

The Company warrants that the equipment manufactured by it and delivered hereunder will be free of defects in material and workmanship for a period of twelve months from the date of placing the Equipment in operation or eighteen months from the date of shipment from the factory, whichever shall first occur. The Purchaser shall be obligated to promptly report any failure to conform to this warranty, in writing to the Company in said period, whereupon the Company shall, at its option, correct such nonconformity, by suitable repair to such equipment or, furnish a replacement part F.O.B. point of shipment, provided the Purchaser has stored, installed, maintained and operated such Equipment in accordance with good industry practices and has complied with specific recommendations of the Company. Accessories or equipment furnished by the Company, but manufactured by others, shall carry whatever warranty the manufacturers have conveyed to the Company and which can be passed on to the Purchaser. The Company shall not be liable for any repairs, replacements, or adjustments to the Equipment or any costs of labor performed by the Purchaser or others without Company's prior written approval.

The effects of corrosion, erosion and normal wear and tear are specifically excluded. Performance warranties are limited to those specifically stated within the Company's proposal. Unless responsibility for meeting such performance warranties are limited to specified tests, the Company's obligation shall be to correct in the manner and for the period of time provided above.

THE COMPANY MAKES NO OTHER WARRANTY OR REPRESENTATION OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY DISCLAIMED.

Correction by the Company of nonconformities whether patent or latent, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of the Company for such non conformities whether based on contract, warranty negligence, indemnity, strict liability or otherwise with respect to or arising out of such Equipment.

The purchaser shall not operate Equipment which is considered to be defective, without first notifying the Company in writing of its intention to do so. Any such use of Equipment will be at Purchaser's sole risk and liability.

Note that this is **Ingersoll Rand** standard warranty. Any warranty in force at the time of purchase of the compressor or negotiated as part of the purchase order may take precedence over this warranty.



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