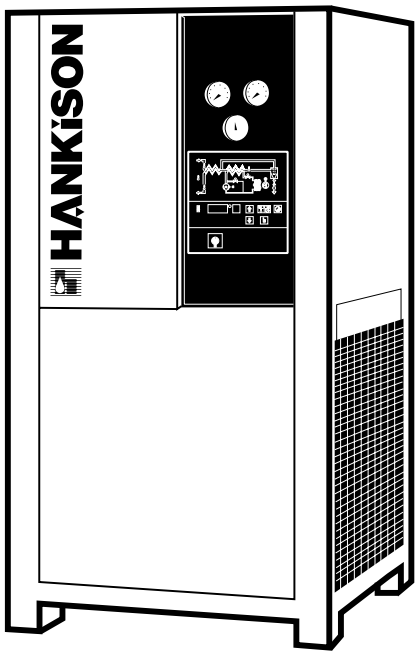
7610.483.4B 8/01

INSTRUCTION MANUAL

Models: PR500, PR600, PR700, PR800, PR1000, PR1200, PR1600, PR2000, and PR2300

IMPORTANT - 380-420V/3ph/50Hz models - control transformer is wired to operate on a voltage range of 391 to 418. For voltages outside this range rewire transformer as shown on page 12.

HANKiSON®



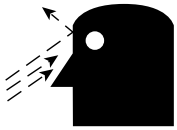
REFRIGERATED TYPE COMPRESSED AIR DRYERS

Contents

SERVICE DEPARTMENT: (724) 746-1100

GENERAL SAFETY INFORMA TION

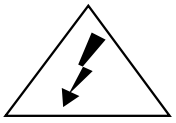
1. PRESSURIZED DEVICES:



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.

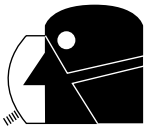
2. ELECTRICAL:



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.

3. 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.

RECEIVING, MOVING, AND UNP ACKING

A. 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.

B. 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.

C. MOVING

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

All dryers are shipped to accomodate a fork lift truck. When installing this unit, move it by means of a fork lift or other suitable means. Never lift unit by hooking on to the air inlet and outlet connections. Serious damage may result.

D. STORAGE/SHUT-DOWN

IMPORTANT - WATER-COOLED UNITS - if unit is shut down in below freezing temperatures, the water-cooled condenser may freeze and cause permanent damage.

Condenser must be drained using drain cocks located on the condenser when unit is shut down.

IMPORTANT - Do not store dryer in temperatures above 130°F, 54.4°C.

IMPORTANT - Read prior to starting this equiptment.

1.0 INST ALLATION

1.1 Location

A. For typical placement in a compressed air system, see drawing at right.

B. Air compressor intake - Locate air compressor so that contaminants potentially harmful to the dryer (e.g. ammonia) are not drawn into the air system.

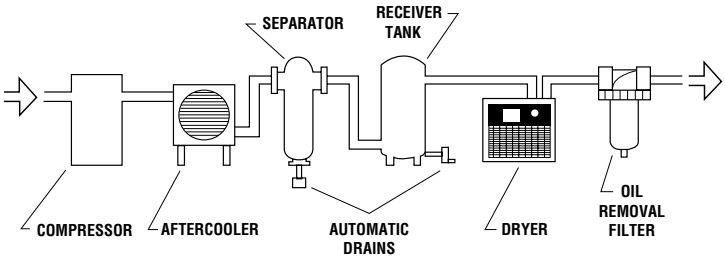
C. Air-cooled units - Free air flow - Ambient air should be free to flow across the refrigeration condenser. Do not block either side of the cabinet. Leave at least 36 inches (915 mm) clearance for free air flow.

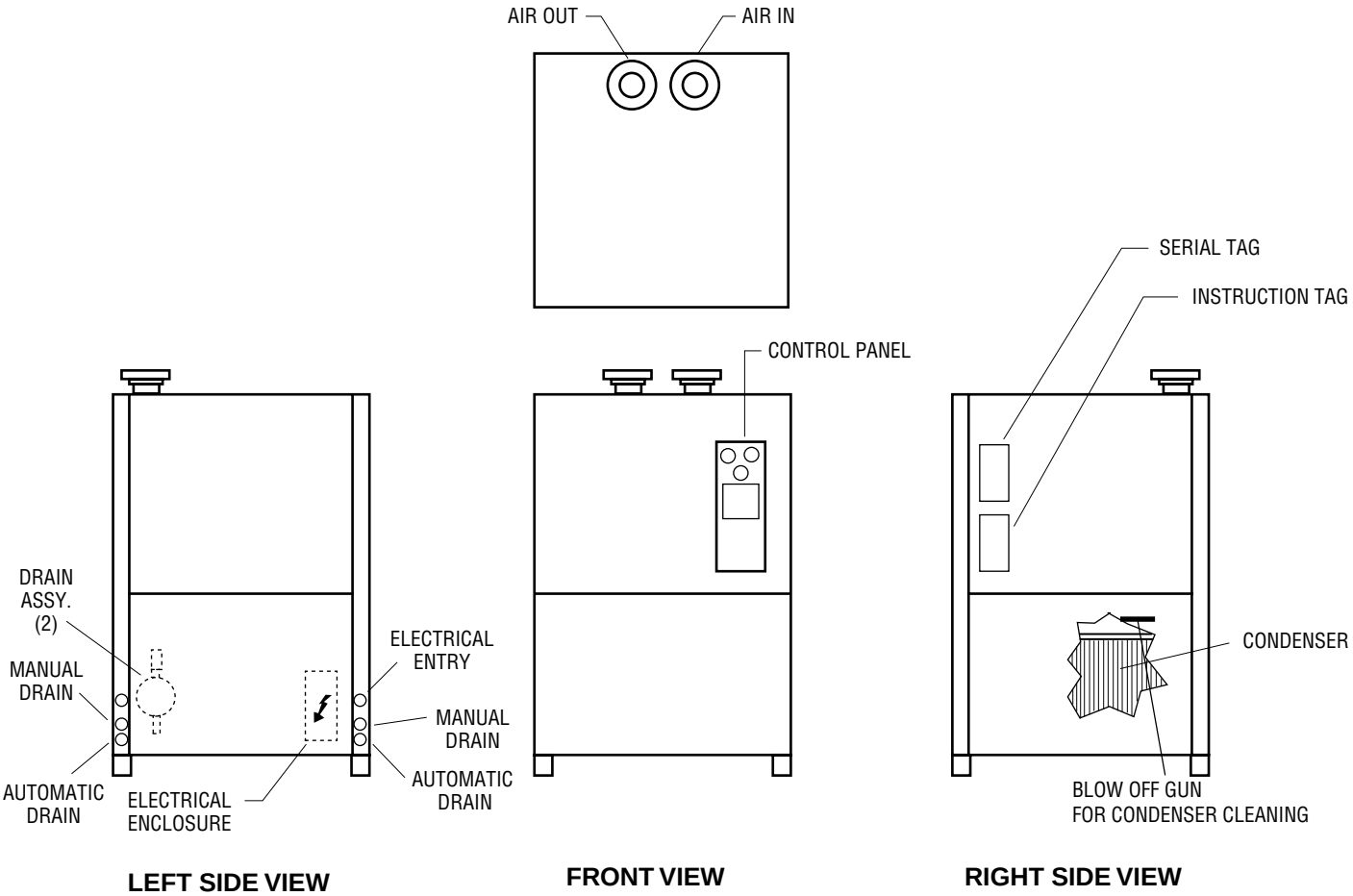
1.2 Mounting

A. Mount dryer on firm level surface.

B. Dryers are furnished with removable shipping pads. Remove prior to installation if desired. Dryers may be bolted to the floor if desired.

NOTE: Outdoor installation: Standard dryers are designed for indoor installation. Contact manufacturer if installing outdoors.

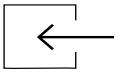




1.3 Piping connections

⚠WARNING If welding above unit make certain that sparks are kept from contacting insulation around inlet and outlet piping.

A. Air Inlet - Connect compressed air line from air source to air inlet.

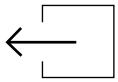


IMPORTANT: Refer to Serial Number Tag for maximum working pressure. Do not exceed dryer's Maximum Working Pressure

NOTE: Install dryer in air system at highest pressure possible (e.g. before pressure reducing valves)

NOTE: Install dryer at coolest compressed air temperature possible. Maximum inlet compressed air temperature: 120°F (49°C). If inlet air exceeds this temperature, precool the air with an aftercooler.

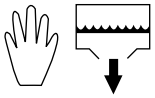
B. Air Outlet - Connect air outlet to down-stream air lines.



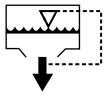
C. By-pass piping - If servicing the dryer without interrupting the air supply is desired, piping should include inlet and outletvalves and an air by-pass valve.

D. Condensate Drain

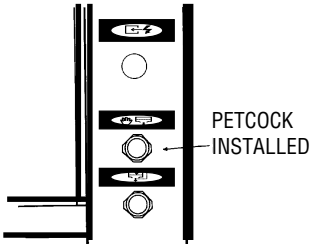
1. Manual Drains - Petcocks (2) for manual draining are attached to the manual drain lines in the cabinet. Remove petcocks and install into manual drain couplings. Make sure petcocks are closed.



2. Automatic Drains - Drain lines can be run from Automatic Drain outlets (2) to the plant drainage system.



NOTE: Condensate may contain oil. Comply with applicable laws concerning proper disposal.



NOTE: Discharge is at system pressure. Anchor drain line.

E. Water cooled models - cooling water inlet and outlet

1. Connect cooling water supply to cooling water inlet coupling.
2. Connect cooling water return line to cooling water outlet coupling.

NOTE: Strainer and water regulating valve are supplied on water cooled models.

1.4 Electrical connections

IMPORTANT - Use copper supply wires only.

A. Unit is designed to operate on the voltage, phase, and frequency listed on serial number tag.

B. Electrical entry is through hole in cabinet and into electrical enclosure. Connect power source to terminal strip in electrical enclosure as shown on Electrical Schematic attached to dryer.

NOTE: Refrigeration condensing unit is designed to run continuously and should NOT be wired to cycle on/off with the air compressor.

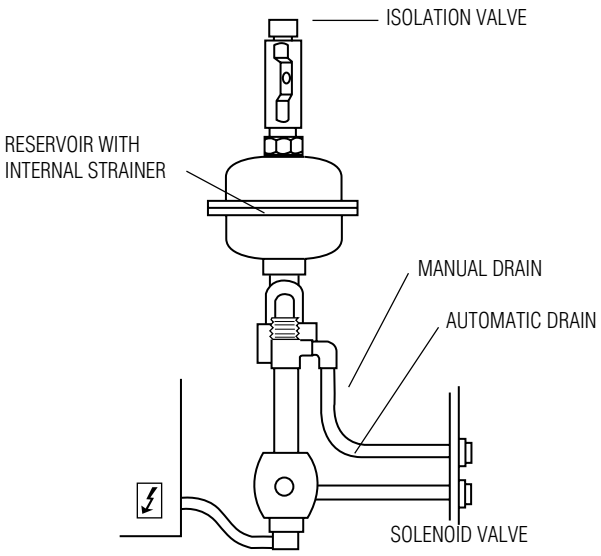
1.5 Automatic condensate drains

A. Models with electric drains

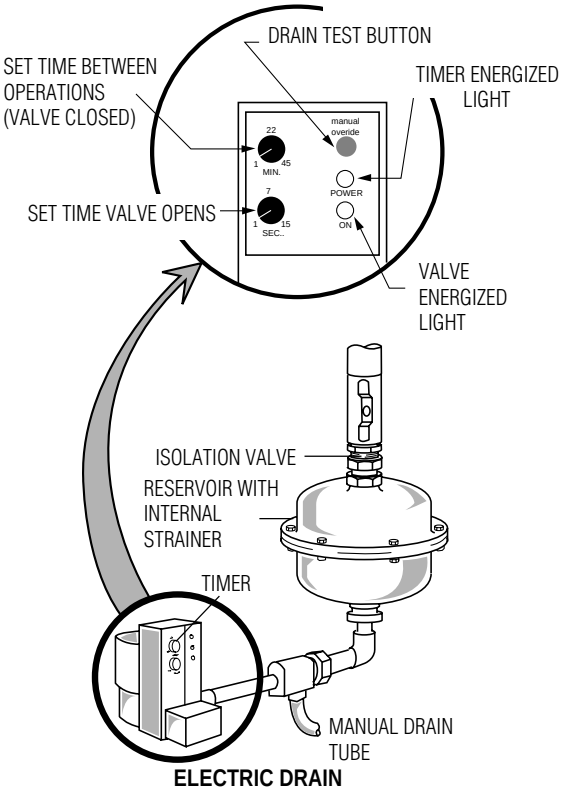
1. Verify that isolation valves are open.
2. Verify time settings.
   After dryer is operating, verify that valve remains open long for all condensate to be ejected from the system. If all condensate is not ejected during valve open time, shorten time between operations.
   a. MODELS WITH STANDARD CONTROL PANEL AND ELECTRIC DRAIN - Drain timers (2) are factory set for 5 minutes between operations (valve closed) and 5 seconds valve open time
   b. MODELS WITH DIGITAL CONTROL PANEL - TIME BETWEEN OPERATIONS (valve closed) is factory set for 2.5 minutes, valve open time is not adjustable. See instructions under 2.3 to adjust time.

B. Models with mechanical drains

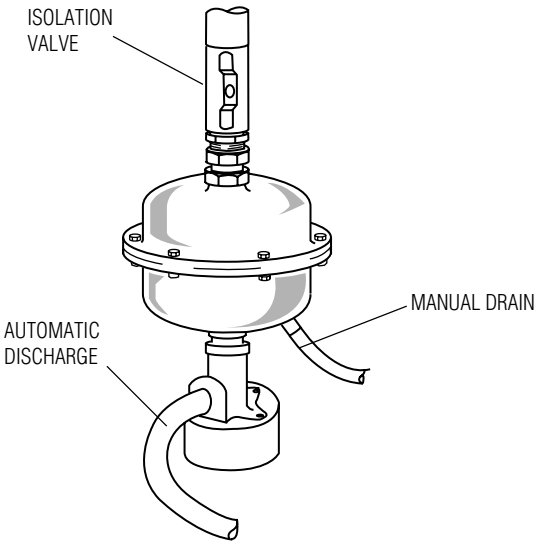
1. Verify that isolation valves are open.



ELECTRIC DRAIN
(Supplied with digital control panel)



ELECTRIC DRAIN
(Optional with Three Light Control Panel)



MECHANICAL DRAIN

2.0 OPERA TION

2.1 Minimum/maximum operating conditions

A. Maximum inlet air pressure: refer to unit serial number tag

B. Minimum inlet air pressure: 20 psig (1.4 kgf/cm^2)

C. Maximum inlet air temperature: 120°F (49°C)

D. Maximum ambient temperature:
Air-cooled models: 110°F (43°C)
Water-cooled models: 130°F (54°C)

E. Minimum ambient temperature: 35°F (2°C)

2.2 Start-up

IMPORTANT: Energize dryer disconnect switch 24 hours before refrigeration compressor is started! Never use the disconnect switch to shut-down the dryer for a extended period of time (except for repair). Failure to follow these instructions may result in a non-warrantable compressor failure.

NOTE: Start unit before introducing air flow. High pressure switch has a manual reset. If refrigerant pressure cut-out (compressor off light) illuminates during start-up, reset switch.

A. Control Panel

1. After making sure that on/off switch is off (“O”), energize dryer. Green power-on light will glow.
2. On water-cooled units - after 24 hours start flow of water through condenser.
3. After 24 hours, energize compressor by positioning the on/off switch in the on ("I") position. Green compressor-on light will glow.

NOTE: COMPRESSOR ROTATION - Model 800 thru 2300 only - ensuring proper compressor rotation - Dryer contains a scroll compressor which must rotate in the proper direction. If after starting dryer an unusual noise is heard and the suction pressure fails to drop into the normal range, stop dryer, reverse two power leads, restart, and verify that suction pressure is reading as stated on serial no. tag.

B. Alarms

1. High temperature alarm - If the Lowest Air Temperature exceeds the alarm set point, the red high temperature warning light will glow.
2. Refrigerant pressure cut out alarm - If the high or low refrigerant pressure set points have been exceeded, the dryer will shut down. The green compressor-on light will turn off and the red refrigerant pressure cut out light will glow.

NOTE: High refrigerant pressure switch has a manual reset. After correcting fault, manually reset switch to resume operation.

C. Drain Test Button (models with electric drains)

Standard Control Panel: Push test button on drain valve to manually activate. Drain energized light will glow.

Digital Control Panel: Push test button on digital board.

2.3 Operating check points – Check the following on a periodic basis:

A. Power-on light glows indicating power to the dryer.

B. Compressor-on light (green) glows indicating the refrigerator compressor is operating.

C. Standard Panels

1. High air temperature warning light is out. The high air temperature warning light will illuminate when unit is energized. Light should go out approximately 15 minutes after start-up. If light remains lit after 30 minutes or lights again after going out, refer to Troubleshooting Guide.
2. Refrigerant pressure cut out light is out.

D. Digital panels - Check for alarms - compressor on light - red indicating compressor off because of refrigerant pressure cut out. High temperature alarm. High level alarm (optional).

E. Suction pressure gauge indicates proper low side refrigerant pressure. (Refer to engineering data)

F. Outlet pressure gauge - Compare with pressure at inlet to dryer to determine if a higher than normal pressure drop exists.

G. Inlet temperature gauge (supplied on models with Standard Control Board) - inlet temperature should read below 120°F (49°C).

H. Condensate is discharging from drain

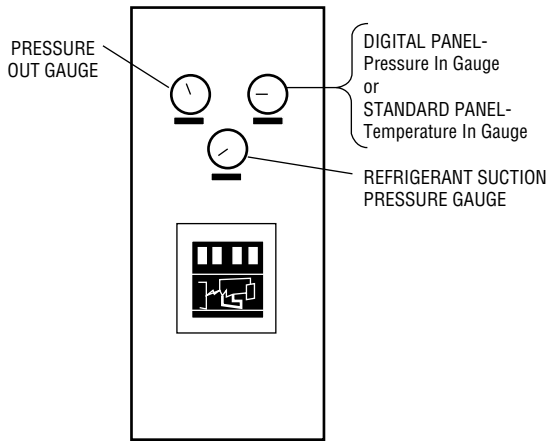
2.4 Using the Digital Panel

A. Function Lights

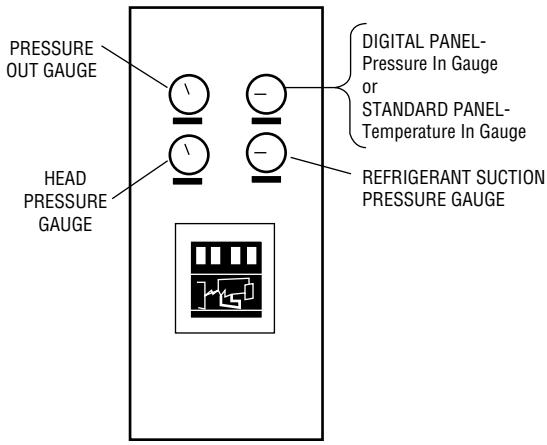
1. Power-on light - indicates power to dryer
2. Compressor-on light - indicates power to control circuit, refrigeration compressor should be running
3. Drain energized light - indicates power to solenoid valve, drain should be open

B. Numeric Display - When the on/off switch is placed in the ON position, the Numeric Display indicates Lowest Air Temperature. Additional temperatures, alarm setpoints, and electric drain adjustment are available by pressing the mode selector button in the following sequence:

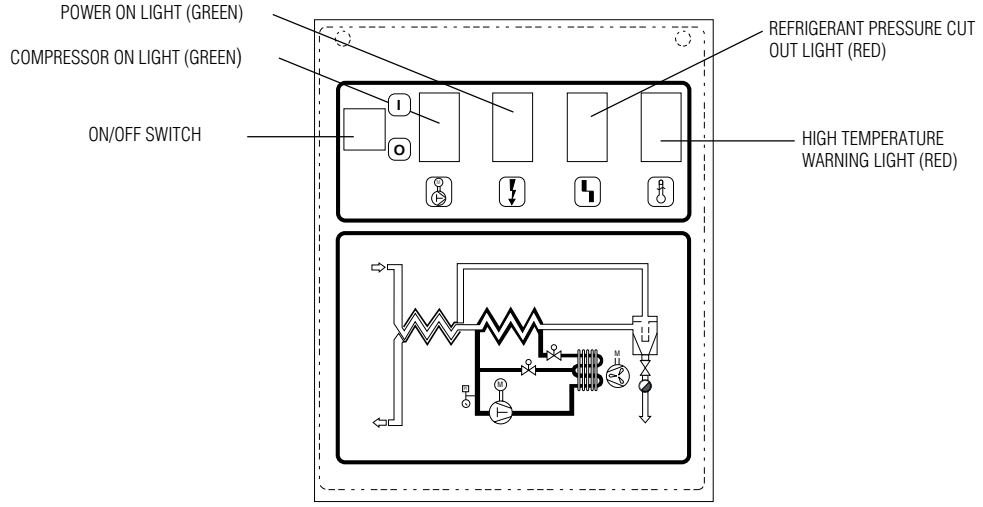
1. Display indicates Outlet Air Temperature. Outlet temperature light glows.
2. Display indicates Ambient Temperature. Ambient temperature light glows.
3. Display indicates Inlet Temperature Alarm set point. Green light glows in Temperature Alarm box. Set point may be changed by pushing up and down arrows.
4. Display indicates Lowest Air Temperature Alarm set point. Green light glows in Temperature Alarm box. Set point may be changed by pushing up and down arrows.
5. Used on models with Electric Drains (if dryer is not equipped with electric drain sequence through this step) Display indicates Electric Drain Closed time in minutes and tenths of a minute. Green light in drain time box glows. Time between valve openings may be changed by pushing up and down arrows.
6. Display indicates inlet air temperature. Inlet temperature light glows.



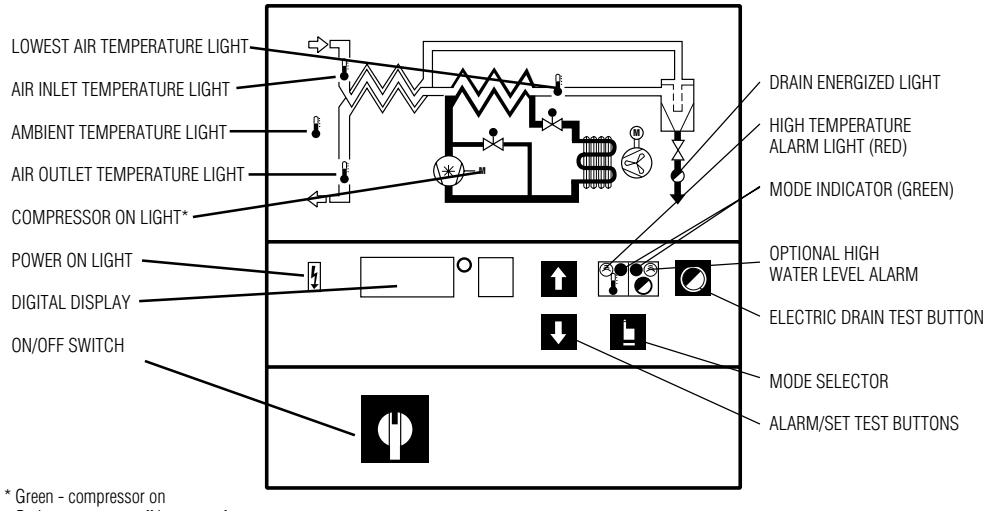
CONTROL PANEL FOR MODELS 500 TO 1200



CONTROL PANEL FOR MODELS 1600, 2000, 2300



STANDARD CONTROL PANEL



* Green - compressor on
Red - compressor off because of
refrigerant pressure cut out

DIGITAL CONTROL PANEL

2.5 Shutdown and Restart

A. Shutdown

1. Turn on/off switch to off "O". Leave dryer energized unless servicing.

B. Restart

NOTE: Dryer should be energized 24 hours prior to start-up.

1. Make certain air inlet and outlet isolation valves are closed.
2. Turn on/off switch to on "I"
3. After 15 minutes, slowly open isolation valves and close by-pass valve.

3.0 MAINTENANCE

3.1 Air-cooled models

A. Condenser coil - Clean off accumulated dust and dirt monthly.

NOTE: A blow-gun is supplied with dryer for this purpose. Remove condenser screen to access blow gun.

3.2 Water-cooled models

A. Strainer - Clean strainer periodically to prevent restriction of water flow

3.3 Automatic condensate drains

A. Check daily to be sure automatic drain is discharging.

B. Manually drain separator weekly by opening manual drain.

C. Electric drains - periodically clean strainer in drain reservoirs.

D. Mechanical drains - Rebuild drain mechanisms annually. Use repair parts kit - 05.7501-03.

SIZING

Determining dryer capacity at actual operating conditions

To determine the maximum inlet flow capacity of a dryer at various operating conditions, multiply the rated capacity from Table 1 by the multipliers shown in Table 2.
EXAMPLE: How many scfm can a model 1000 handle when the compressed air to be dried is at 80 psig and 90°F; ambient air temperature is 80°F; and a 38°F dew point temperature is desired?

ANSWER: 1000 x 1.17 x 1.12 x 1.0 = 1310 scfm.

Pressure Drop

To determine pressure drop at increased flows, multiply the pressure drop at rated conditions from Table 1 by the multiplier shown in Table 3 for the appropriate air flow rate and operating pressure.

EXAMPLE: What is the pressure drop across a model 1000 when flowing 1500 scfm at 200 psig ?
ANSWER: 1500/1000 = 1.5; multiplier below at 1.5 and 200 psi = 1.1; 1.1 x 4.2 psi = 4.6 psi.

TABLE 1
Rated capacity and Pressure @ 100 psig inlet pressure,
100°F inlet temperature, and 100°F ambient temperature

MODEL		500 scfm	600 scfm	700 scfm	800 scfm	1000 scfm	1200 scfm	1600 scfm	2000 scfm	2300 scfm
Rated Capacity of Air-Cooled Models (scfm)	60 Hz	500	600	700	800	1000	1200	1600	2000	2300
	50 Hz	500	560	580	745	830	1000	1330	1660	1910
Pressure Drop (psi)	60 Hz	3.2	3.6	4.0	3.6	4.2	4.1	3.9	4.7	5.0
	50 Hz	3.2	3.2	2.9	3.2	3.0	2.9	2.8	3.4	3.6

scfm x 0.0286 = m^3_{in}/min

TABLE 2
Air capacity correction factors (multipliers)

INLET COMPRESSED AIR CONDITIONS						
INLET PRESSURES		INLET TEMPERATURES				
psig	kg/cm²	80°F 27°C	90°F 32°C	100°F 38°C	110°F 43°C	120°F 49°C
50	3.5	1.35	1.05	0.84	0.69	0.56
80	5.6	1.50	1.17	0.95	0.79	0.66
100	7.0	1.55	1.23	1.00	0.82	0.70
125	8.8	1.63	1.31	1.07	0.91	0.74
150	10.5	1.70	1.37	1.13	0.95	0.80
175	12.3	1.75	1.42	1.18	0.99	0.84
200	14.0	1.80	1.47	1.22	1.03	0.89

COOLING MEDIUM*		
AMBIENT TEMPERATURE °F	°C	MULTIPLIER
80	27	1.12
90	32	1.06
100	38	1.00
110	43	0.94

OUTLET DEWPOINT		
DEW POINT TEMPERATURE °F	°C	MULTIPLIER
38	3	1.0
40	4	1.1
45	7	1.2
50	10	1.3

* Air-cooled models; water-cooled models use 1.15 multiplier if cooling water is below 95°F, 35°C

TABLE 3
Pressure drop correction factors (multipliers)

AIR FLOW	OPERATING PRESSURE psig / kg/cm²			
	60 / 4.2	100 / 7	180 / 12.6	200 / 14.0
2.0 x rated flow	5.4	3.5	2.1	1.9
1.5 x rated flow	3.2	2.1	1.2	1.1
1.2 x rated flow	2.1	1.4	0.8	0.7

ENGINEERING DA TA

MODELS		500	600	700	800	1000
MINIMUM - MAXIMUM OPERATING CONDITIONS						
Max. Inlet Air Pressure (compressed air @ inlet dryer	Std.	200 psig (14 bar)				
	Optional	300 psig (21 bar)				
Max. Inlet Air Temperature (compressed air @ inlet dryer)		120°F (49°C)				
Min.- Max. Ambient Temperature (Air Cooled)		35°F (1.7°C) -110°F (43°C)				
Min.- Max. Ambient Temperature (Water Cooled)		35°F (1.7°C) -130°F (54°C)				
REFRIGERATION SYSTEM DATA						
Condensing Unit Mfg.		Copeland				
Compressor Type		Hermetic - Non-Cycling			Hermetic Scroll / Non-cycling	
Refrigeration Compressor Horsepower		3	3	3	4	4
BTU/HR - Refrigeration Only @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient	60/50 Hz	28592 / 23827	28592 / 23827	28592 / 23827	42140 / 35117	42140 / 35117
Outlet Air Temperature (nominal at rated conditions)		85°F (29°C)				
Refrigerant Type		R-134A	R-134A	R-134A	R-404A	R-404A
Refrigerant Charge		See dryer serial number tag				
Suction Pressure Setting psig (bar)		30.5 (2.1)	30.5 (2.1)	30.5 (2.1)	78 (5.4)	78 (5.4)
Compressor Control Ranges (out/in) (psig)	A/C High	281 - 190	281 - 190	281 - 190	450 - 350	450 - 350
	A/C Low	24 - 34	24 - 34	24 - 34	67 - 84	67 - 84
Compressor Control Ranges (out/in) (psig)	W/C High	200 - 160	200 - 160	200 - 160	320 - 280	320 - 280
	W/C Low	22 - 34	22 - 34	22 - 34	67 - 84	67 - 84
Condenser Fan Switch Setting (in/ out) (psig)	Fan 1	113 - 78	113 - 78	113 - 78	300 - 230	300 - 230
(air-cooled models only)	Fan 2	183 - 124	183 - 124	183 - 124	-	-
Air Flow Across Condenser (cfm)	60/50 Hz	2650 / 2208	2650 / 2208	2650 / 2208	3400 / 2833	3400 / 2833
CONDENSER COOLING WATER REQUIREMENTS (water cooled models)						
Recommended Water Pressure psig (bar) *		-40 (2.8) Min. - 120 (8.4) Max.				
gpm of water @ 85°F cooling water	60/50 Hz	6 / 5	7 / 6	8 / 7	9 / 8	12 / 10
ELECTRICAL DATA						
Nominal Voltage		**208-230/3/60**	**208-230/3/60**	**208-230/3/60**	**208-230/3/60**	**208-230/3/60**
Max. - Min. Voltage		253 - 187	253 - 187	253 - 187	253 - 187	253 - 187
Amperage Draw	Total Full Load **	22.9	22.9	22.9	19.1	19.1
Compressor Rated Load (amps)		20.7	20.7	20.7	15	15
Compressor Locked Rotor (amps)		90	90	90	99	99
Unit Protection Fuse Size (amps) **		25	25	25	20	20
Branch Circuit Fuse Size (amps) Max. ***		45	45	45	35	35
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		3600	3600	3600	5020	5020
Resistance (ohms)	Three phase (total)	0.853	0.853	0.853	-	-
Nominal Voltage		**460/3-60**	**460/3-60**	**460/3-60**	**460/3-60**	**460/3-60**
Max. - Min. Voltage		506 - 414	506 - 414	506 - 414	506 - 414	506 - 414
Amperage Draw	Total Full Load **	11	11	11	10.3	10.3
Compressor Rated Load (amps)		9.9	9.9	9.9	8.2	8.2
Compressor Locked Rotor (amps)		45	45	45	49.5	49.5
Unit Protection Fuse Size (amps) **		12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
Branch Circuit Fuse Size (amps) Max. ***		20	20	20	20	20
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		3600	3600	3600	5020	5020
Resistance (ohms)	Three phase (total)	.0.853	0.853	0.853	-	-
Nominal Voltage		**200-220/3/50**	**200-220/3/50**	**200-220/3/50**	**200-220/3/50**	**200-220/3/50**
Max. - Min. Voltage		242 - 180	242 - 180	242 - 180	242 - 180	242 - 180
Amperage Draw	Total Full Load **	22.9	22.9	22.9	19.1	19.1
Compressor Rated Load (amps)		20.7	20.7	20.7	15	15
Compressor Locked Rotor (amps)		90	90	90	99	99
Unit Protection Fuse Size (amps) **		25	25	25	20	20
Branch Circuit Fuse Size (amps) Max. ***		45	45	45	35	35
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		2929	2929	2929	4183	4183
Resistance (ohms)	Three phase (total)	0.853	0.853	0.853	-	-
Nominal Voltage		**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
Max. - Min. Voltage		462 - 342	462 - 342	462 - 342	462 - 342	462 - 342
Amperage Draw	Total Full Load **	11	11	11	10.3	10.3
Compressor Rated Load (amps)		9.9	9.9	9.9	8.2	8.2
Compressor Locked Rotor (amps)		45	45	45	49.5	49.5
Unit Protection Fuse Size (amps) **		12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
Branch Circuit Fuse Size (amps) Max. ***		20	20	20	20	20
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		2929	2929	2929	4183	4183
Resistance (ohms)	Three phase (total)	0.853	0.853	0.853	-	-
Nominal Voltage		**575/3/60**	**575/3/60**	**575/3/60**	**575/3/60**	**575/3/60**
Max. - Min. Voltage		632 - 518	632 - 518	632 - 518	632 - 518	632 - 518
Amperage Draw	Total Full Load **	11	11	11	9.8	9.8
Compressor Rated Load (amps)		9.9	9.9	9.9	8.2	8.2
Compressor Locked Rotor (amps)		45	45	45	40	40
Unit Protection Fuse Size (amps) **		12-1/2	12-1/2	12-1/2	12-1/2	12-1/2
Branch Circuit Fuse Size (amps) Max. ***		20	20	20	20	20
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		3600	3600	3600	5020	5020
Resistance (ohms)	Three phase (total)	0.853	0.853	0.853	-	-

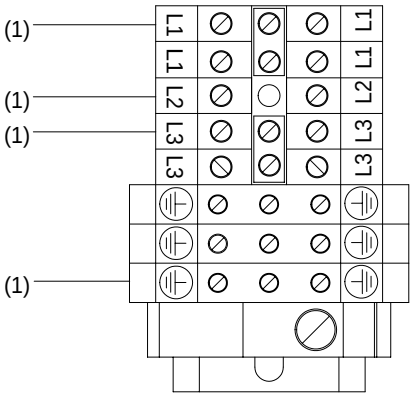
* Allows continued operation with some restriction in the water strainer, ** Air cooled models only, *** HACR type per NEC

ENGINEERING DA TA

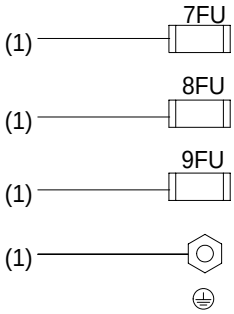
MODELS		1200	1600	2000	2300
MINIMUM - MAXIMUM OPERATING CONDITIONS					
Max. Inlet Air Pressure (compressed air @ inlet dryer)	Std.	200 psig (14 bar)			
	Optional	300 psig (21 bar)			
Max. Inlet Air Temperature (compressed air @ inlet dryer)		120°F (49°C)			
Min.- Max. Ambient Temperature (Air Cooled)		35°F (1.7°C) -110°F (43°C)			
Min.- Max. Ambient Temperature (Water Cooled)		35°F (1.7°C) -130°F (54°C)			
REFRIGERATION SYSTEM DATA					
Condensing Unit Mfg.		Copeland			
Compressor Type		Hermetic Scroll / Non-cycling			
Refrigeration Compressor Horsepower		6	7-1/2	10	12
BTU/HR - Refrigeration Only @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient	60/50 Hz	57310 / 47758	69370 / 57808	92550 / 77125	106090 / 88408
Outlet Air Temperature (nominal at rated conditions)		85°F (29°C)			
Refrigerant Type		R-404A	R-404A	R-404A	R-404A
Refrigerant Charge		See dryer serial number tag			
Suction Pressure Setting psig (bar)		78 (5.4)	78 (5.4)	78 (5.4)	78 (5.4)
Compressor Control Ranges (out/in) (psig)	A/C High	450 - 350	450 - 350	450 - 350	450 - 350
	A/C Low	67 - 84	67 - 84	67 - 84	67 - 84
Compressor Control Ranges (out/in) (psig)	W/C High	320 - 280	320 - 280	320 - 280	320 - 280
	W/C Low	67 - 84	67 - 84	67 - 84	67 - 84
Condenser Fan Switch Setting (in/out) (psig)	Fan 1	300 - 230	300 - 230	300 - 230	300 - 230
(air-cooled models only)	Fan 2	325 - 255	325 - 255	325 - 255	325 - 255
Air Flow Across Condenser (cfm)	60/50 Hz	4230 / 3525	5300 / 4417	4900 / 4083	4900 / 4083
CONDENSER COOLING WATER REQUIREMENTS (water cooled models)					
Recommended Water Pressure (psig) *		40 Min. - 120 Max.			
gpm of water @ 85°F cooling water	60/50 Hz	14 / 12	21 / 18	27 / 23	35 / 30
ELECTRICAL DATA					
Nominal Voltage		**208-230/3/60**	**208-230/3/60**	**208-230/3/60**	**208-230/3/60**
Max. - Min. Voltage		253 - 187	253 - 187	253 - 187	253 - 187
Amperage Draw	Total Full Load **	26.9	39.3	53.1	62.8
Compressor Rated Load (amps)		23.9	30.9	44.9	54.4
Compressor Locked Rotor (amps)		156	189	278	350
Unit Protection Fuse Size (amps) **		30	45	60	70
Branch Circuit Fuse Size (amps) Max. ***		50	70	100	125
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		7540	9630	14370	17490
Resistance (ohms)	Three phase (total)	-	-	-	-
Nominal Voltage		**460/3-60**	**460/3-60**	**460/3-60**	**460/3-60**
Max. - Min. Voltage		506 - 414	506 - 414	506 - 414	506 - 414
Amperage Draw	Total Full Load **	11.1	20	25.5	29.6
Compressor Full Load (amps)		9.3	16.2	21.7	25.8
Compressor Locked Rotor (amps)		70	94	127	158
Unit Protection Fuse Size (amps) **		15	25	30	35
Branch Circuit Fuse Size (amps) Max. ***		20	40	50	60
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		7540	9630	14370	17490
Resistance (ohms)	Three phase (total)	-	-	-	-
Nominal Voltage		**200-220/3/50**	**200-220/3/50**	**200-220/3/50**	**200-220/3/50**
Max. - Min. Voltage		242 - 180	242 - 180	242 - 180	242 - 180
Amperage Draw	Total Full Load **	26.9	39.3	53.1	62.8
Compressor Rated Load (amps)		23.9	30.9	44.9	54.4
Compressor Locked Rotor (amps)		156	189	278	350
Unit Protection Fuse Size (amps) **		30	45	60	70
Branch Circuit Fuse Size (amps) Max. ***		50	70	100	125
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		6283	8025	11975	14575
Resistance (ohms)	Three phase (total)	-	-	-	-
Nominal Voltage		**400/3/50**	**400/3/50**	**400/3/50**	**400/3/50**
Max. - Min. Voltage		462 - 342	462 - 342	462 - 342	462 - 342
Amperage Draw	Total Full Load **	11.1	20	25.5	29.6
Compressor Rated Load (amps)		9.3	16.2	21.7	25.8
Compressor Locked Rotor (amps)		74	99	127	167
Unit Protection Fuse Size (amps) **		15	25	30	35
Branch Circuit Fuse Size (amps) Max. ***		20	40	50	60
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		6283	8025	11975	14575
Resistance (ohms)	Three phase (total)	-	-	-	-
Nominal Voltage		**575/3/60**	**575/3/60**	**575/3/60**	**575/3/60**
Max. - Min. Voltage		632 - 518	632 - 518	632 - 518	632 - 518
Amperage Draw	Total Full Load **	9.3	15.2	20	24
Compressor Rated Load (amps)		7.9	11.8	16.6	20.6
Compressor Locked Rotor (amps)		54	74	100	125
Unit Protection Fuse Size (amps) **		12-1/2	17-1/2	25	30
Branch Circuit Fuse Size (amps) Max. ***		15	25	40	50
Watts @ 35°F (1.7°C) Evaporator & 100°F (38°C) Ambient		7540	9630	14370	17490
Resistance (ohms)	Three phase (total)	-	-	-	-

* Allows continued operation with some restriction in the water strainer, * * Air cooled models only, * * * HACR type per NEC

ELECTRICAL CONNECTIONS

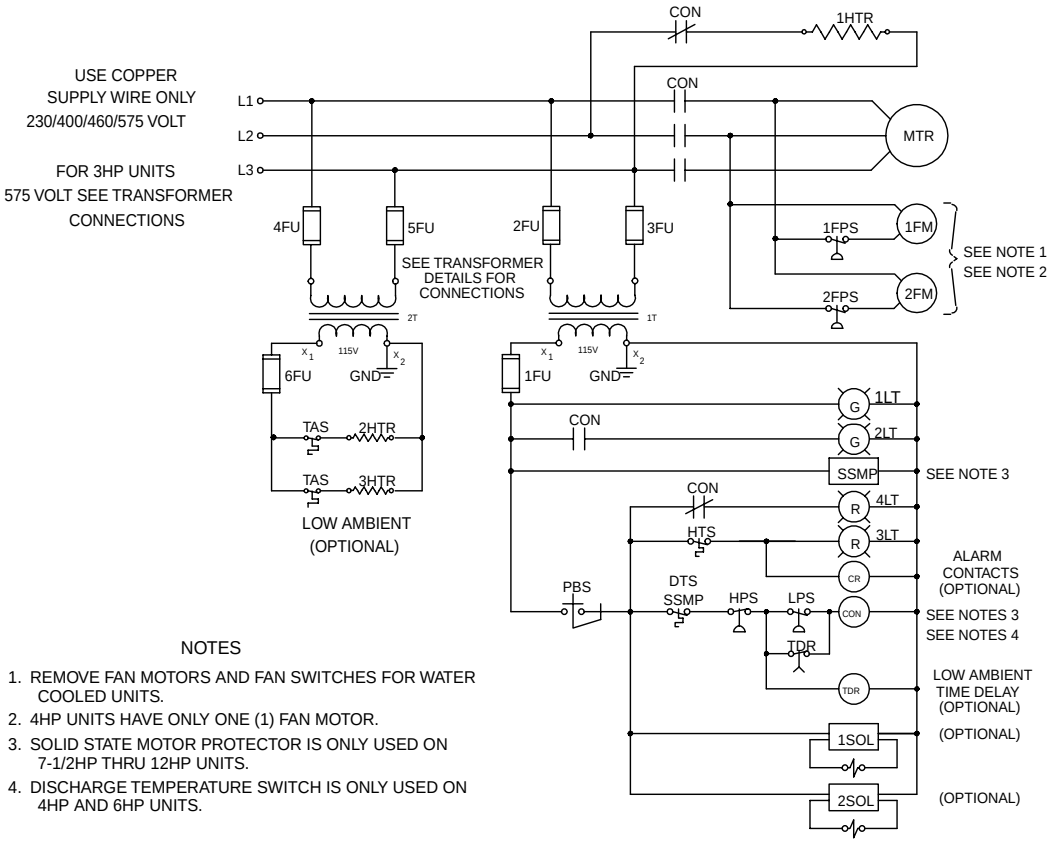


(1) CUSTOMER ELECTRICAL CONNECTIONS (TERMINAL STRIP)
3HP THRU 12HP 230/460 VOLT AND
4HP THRU 12HP 575 VOLT UNITS



(1) CUSTOMER ELECTRICAL CONNECTION (ENTRY ENCLOSURE)
3HP 575 VOLT UNITS ONLY

WIRING DIAGRAM (ST ANDARD CONTROL P ANEL)



NOTES

1. REMOVE FAN MOTORS AND FAN SWITCHES FOR WATER COOLED UNITS.
2. 4HP UNITS HAVE ONLY ONE (1) FAN MOTOR.
3. SOLID STATE MOTOR PROTECTOR IS ONLY USED ON 7-1/2HP THRU 12HP UNITS.
4. DISCHARGE TEMPERATURE SWITCH IS ONLY USED ON 4HP AND 6HP UNITS.

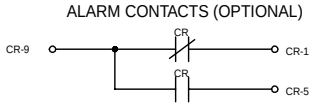
LEGEND

PBS - DRYER-ON/OFF SWITCH
1HTR - CRANKCASE HEATER
1FU - FUSE, LITTELFUSE, FLM 6/10, 250V
2FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
3FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
HPS - HIGH PRESSURE SWITCH
LPS - LOW PRESSURE SWITCH
FPS - FAN PRESSURE SWITCH
HTS - HIGH TEMPERATURE SWITCH
FM - FAN MOTOR
1T - CONTROL TRANSFORMER
CON - CONTACTOR
MTR - COMPRESSOR
1LT - POWER ON LIGHT
2LT - COMPRESSOR ON LIGHT
3LT - HIGH TEMPERATURE LIGHT
4LT - REFRIGERANT FAULT LIGHT
DTS - DISCHARGE TEMPERATURE SWITCH
SSMP - SOLID STATE MOTOR PROTECTOR

OPTIONAL FEATURES BELOW

CR - CONTROL RELAY
4FU - FUSE, LITTELFUSE, FLM 1-1/4, 250V
5FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
6FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
2T - LOW AMBIENT TRANSFORMER
2HTR - LOW AMBIENT HEAT TAPE
3HTR - LOW AMBIENT HEAT TAPE
TAS - THERMOSTAT
TDR - TIME DELAY RELAY
1SOL - ELECTRIC DRAIN VALVE
2SOL - ELECTRIC DRAIN VALVE

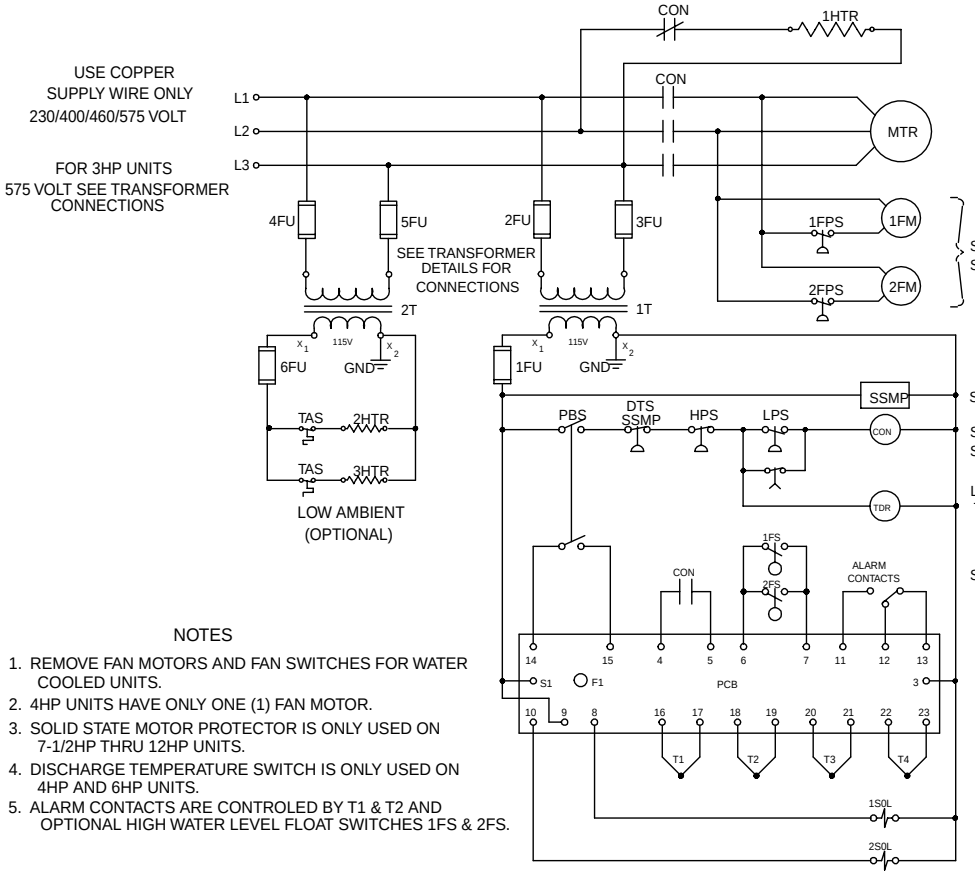
ALARM CONTACTS (OPTIONAL)



ALARM CONTACT RATINGS

7.5A @ 120VAC
7A @ 240VAC
7.5A @ 30VDC

WIRING DIAGRAM (DIGIT AL CONTROL P ANEL)



SEE NOTE 1
SEE NOTE 2
SEE NOTE 3
SEE NOTE 3
SEE NOTE 4
LOW AMBIENT
TIME DELAY
(OPTIONAL)
SEE NOTE 5
(OPTIONAL)
(OPTIONAL)

LEGEND

PBS - DRYER-ON/OFF SWITCH
1HTR - CRANKCASE HEATER
1FU - FUSE, LITTELFUSE, FLM 6/10, 250V
2FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
3FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
F1 - FUSE,WICKMANN TYPE TR5 250mA, 250V
HPS - HIGH PRESSURE SWITCH
LPS - LOW PRESSURE SWITCH
FPS - FAN PRESSURE SWITCH
HTS - HIGH TEMPERATURE SWITCH
FM - FAN MOTOR
1T - CONTROL TRANSFORMER
CON - CONTACTOR
MTR - COMPRESSOR
T1 - INLET TEMPERATURE SENSOR
T2 - EVAPORATOR TEMPERATURE SENSOR
T3 - AMBIENT TEMPERATURE SENSOR
T4 - OUTLET TEMPERATURE SENSOR
DTS - DISCHARGE TEMPERATURE SWITCH
SSMP - SOLID STATE MOTOR PROTECTOR

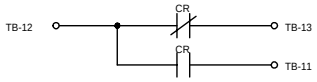
OPTIONAL FEATURES BELOW

4FU - FUSE, LITTELFUSE, FLM 1-1/4, 250V
5FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
6FU - FUSE, LITTELFUSE, KLDR 1/2, 600V
2T - LOW AMBIENT TRANSFORMER
2HTR - LOW AMBIENT HEAT TAPE
3HTR - LOW AMBIENT HEAT TAPE
TAS - THERMOSTAT
TDR - TIME DELAY RELAY
1SOL - ELECTRIC DRAIN VALVE
2SOL - ELECTRIC DRAIN VALVE
1FS - FLOAT SWITCH
2FS - FLOAT SWITCH

NOTES

1. REMOVE FAN MOTORS AND FAN SWITCHES FOR WATER COOLED UNITS.
2. 4HP UNITS HAVE ONLY ONE (1) FAN MOTOR.
3. SOLID STATE MOTOR PROTECTOR IS ONLY USED ON 7-1/2HP THRU 12HP UNITS.
4. DISCHARGE TEMPERATURE SWITCH IS ONLY USED ON 4HP AND 6HP UNITS.
5. ALARM CONTACTS ARE CONTROLED BY T1 & T2 AND OPTIONAL HIGH WATER LEVEL FLOAT SWITCHES 1FS & 2FS.

ALARM CONTACTS

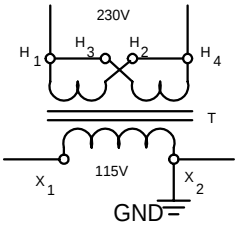


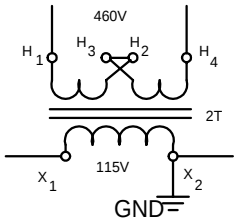
ALARM CONTACT RATINGS

7.5A @ 120VAC
7A @ 240VAC
7.5A @ 30VDC

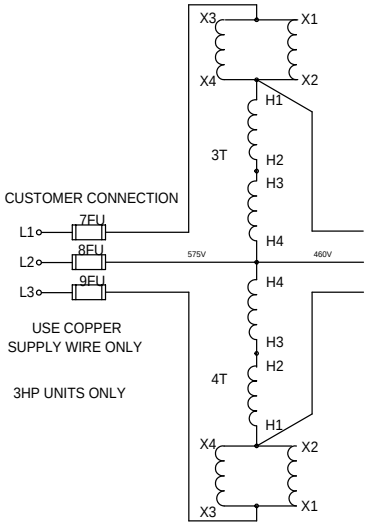
CONTROL TRANSFORMER CONNECTIONS

FOUR LEAD TRANSFORMER
230 & 460 V/ 3ph/60Hz





575 VOL T POWER TRANSFORMER CONNECTION FOR 3 HP UNITS

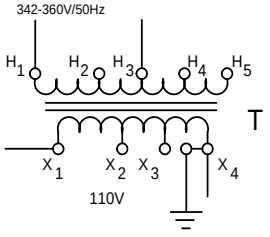


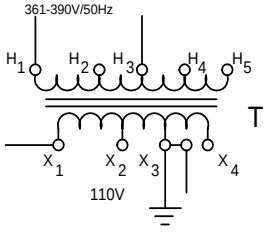
7FU - FUSE, LITTELFUSE, CCMR15, 600V (SEE NOTE 2)
8FU - FUSE, LITTELFUSE, CCMR15, 600V (SEE NOTE 2)
9FU - FUSE, LITTELFUSE, CCMR15, 600V (SEE NOTE 2)

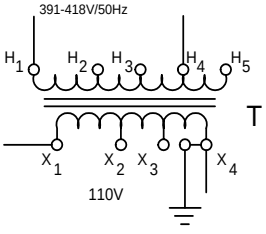
FIVE LEAD TRANSFORMER
380 - 420V/ 3hp/50Hz
460 & 575v/3hp/60Hz

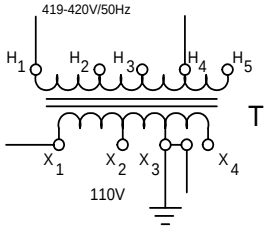
SELECTION TABLE 50 Hz		
LINE VOLTAGE RANGE	PRIMARY TAPS	SECONDARY TAPS
342 - 360V	H1/H3	X1/X4
361 - 390V	H1/H3	X1/X3
391 - 418V	H1/H4	X1/X4
419 - 420V	H1/H4	X1/X3

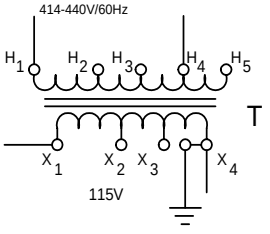
SELECTION TABLE 60 Hz		
LINE VOLTAGE RANGE	PRIMARY TAPS	SECONDARY TAPS
414 - 440V	H1/H4	X1/X4
441 - 492V	H1/H4	X1/X3
493 - 506V	H1/H5	X1/X4

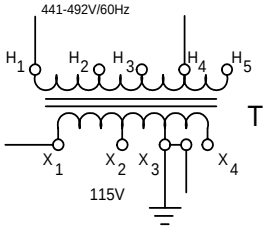


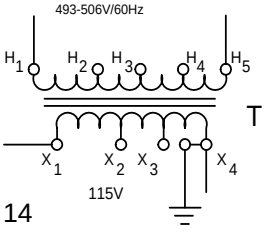


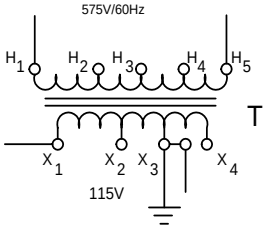








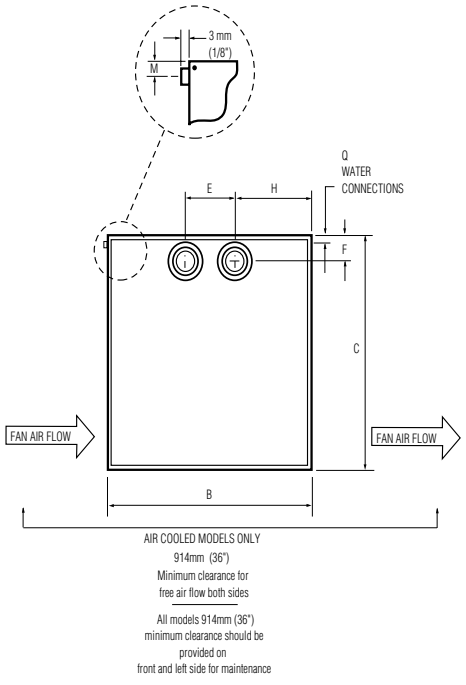




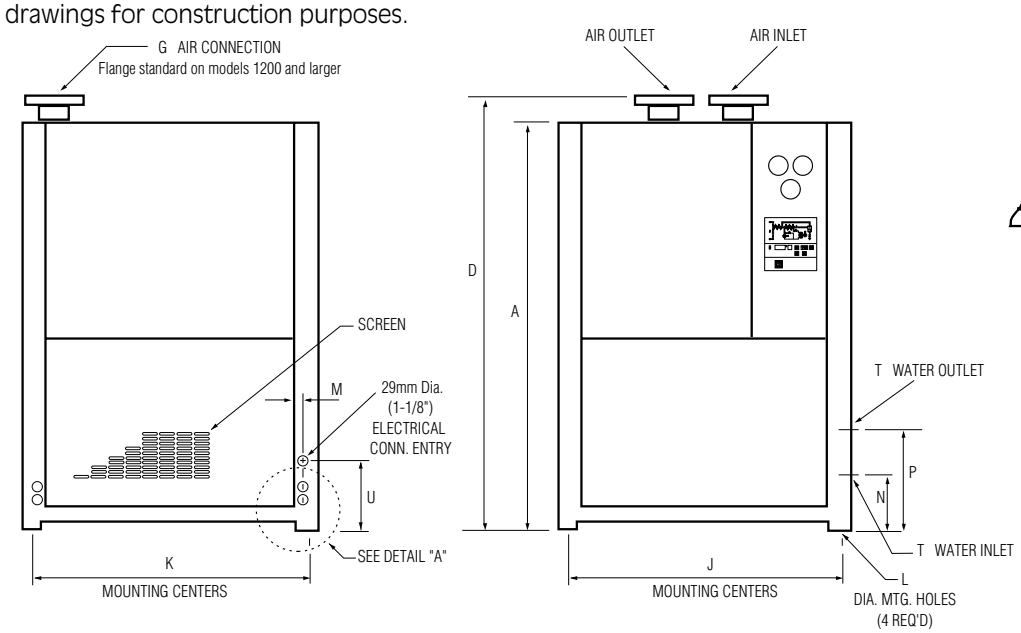
DIMENSIONS AND WEIGHTS

DIMENSIONS inches [*mm*]					
MODEL	**500-600-700**	**800-1000**	**1200**	**1600**	**2000/2300**
A	65-1/4 [*1657*]	75-3/4 [*1924*]	70-3/4 [*1797*]	85 [*2159*]	85 [*2159*]
B	38 [*965*]	38 [*965*]	48 [*1219*]	48 [*1219*]	48 [*1219*]
C	44 [*1118*]	44 [*1118*]	50 [*1270*]	50 [*1270*]	50 [*1270*]
D	68-1/2 [*1740*]	79 [*2007*]	74-1/4 [*1886*]	87-3/4 [*2229*]	87-3/4 [*2229*]
E	12-1/2 [*318*]	12-1/2 [*318*]	13-1/4 [*337*]	13-1/4 [*337*]	13-1/4 [*337*]
F	5-1/4 [*133*]	5-1/4 [*133*]	5-1/4 [*133*]	6-1/4 [*159*]	6-1/4 [*159*]
G	3" NPT or DN80 Flange	3" NPT or DN80 Flange	4" ANSI or DN100 Flange	6" ANSI or DN150 Flange	6" ANSI or DN150 Flange
H	12-3/4 [*324*]	12-3/4 [*324*]	17-3/8 [*441*]	17-3/8 [*441*]	17-3/8 [*441*]
J	35-3/8 [*899*]	35-3/8 [*899*]	44-3/4 [*1137*]	45-3/8 [*1150*]	45-3/8 [*1150*]
K	41-3/8 [*1051*]	41-3/8 [*1051*]	45-3/4 [*1162*]	47-3/8 [*1203*]	47-3/8 [*1203*]
L	5/8 [*16*]	5/8 [*16*]	5/8 [*16*]	5/8 [*16*]	5/8 [*16*]
M	2 [*51*]	2 [*51*]	2 [*51*]	2 [*51*]	2 [*51*]
N	10-3/4 [*273*]	10-3/4 [*273*]	9-1/2 [*241*]	10-1/4 [*260*]	10-1/4 [*260*]
P	16-3/4 [*426*]	16-3/4 [*426*]	15-1/2 [*394*]	16-3/4 [*425*]	16-3/4 [*425*]
Q	2 [*51*]	2 [*51*]	2 [*51*]	2 [*51*]	2 [*51*]
R	7 [*178*]	7 [*178*]	5-3/4 [*146*]	5-3/4 [*146*]	5-3/4 [*146*]
S	9 [*229*]	9 [*229*]	7-3/4 [*197*]	7-3/4 [*197*]	7-3/4 [*197*]
T	1/2"	3/4"	3/4"	3/4"	3/4"
U	13-1/2 [*343*]	19 [*483*]	12-1/4 [*311*]	12-1/4 [*311*]	12-1/4 [*311*]
WEIGHTS					
A/C	912 lbs [*414 kg*] 1024lbs [*465 kg*] 1066 lbs [*484 kg*]	1288 lbs [*584 kg*] 1365 lbs [*619 kg*]	1486 lbs [*675 kg*]	2173 lbs [*986 kg*]	2396 lbs. [*1087 kg*] 2715 lbs [*1232 kg*]
W/C	892 lbs [*404 kg*] 1004 lbs [*455 kg*] 1046 lbs [*474 kg*]	1230 lbs [*558 kg*] 1305 lbs [*592 kg*]	1466 lbs [*666 kg*]	2153 lbs [*977 kg*]	2376 lbs [*1078 kg*]

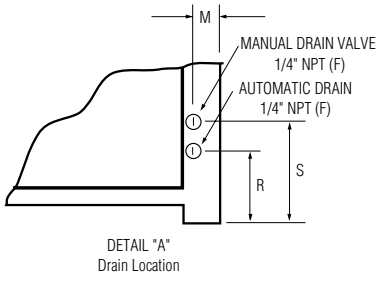
NOTE: Dimensions and Weights are for reference only. Request certified drawings for construction purposes.



TOP VIEW



LEFT SIDE VIEW **FRONT VIEW**



DETAIL "A"
Drain Location

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
A) Water downstream of dryer	1. Residual free moisture remaining in downstream pipelines	Blow out system with dry air
	2. Air by-pass system is open	Check valve positions
	3. Inlet and Outlet connections are reversed	Check for correct connection
	4. Temperatures surrounding air lines downstream of dryer have dropped below dryers dew point rating	Insulate or heat trace air lines exposed to low ambients or dry air to lower dew point
	5. Excessive free moisture (bulk liquid) at dryer inlet	Install separator ahead of dryer
	6. Condensate not being automatically drained	Rebuild drain mechanism if inoperative
	Drain mechanism is clogged or inoperative.	
	Drain line is restricted or frozen.	Open drain line
	Electric drains - timer not set to allow for sufficient condensate removal	Electric drains - reset time so that all liquid is discharged
	7. Dryer overloaded resulting in elevated dew point.	Check inlet air temperature and pressure, flow rate (compressor capacity) and ambient air or water temperature.
	8. Refrigeration system not functioning properly resulting in elevated dew point.	See D below
B) High pressure drop across dryer	1. Excessive air flow	Check flow rate
	2. Freezing of moisture in evaporator because of refrigeration system improperly functioning.	See D below
C) High Temperature Alarm	1. Dryer overloaded resulting in high air outlet temperature.	See A 7
	2. Refrigeration system not functioning properly resulting in high air outlet temperature.	See D below
	3. Unit functioning normally but thermostatic switch is malfunctioning or not securely mounted.	Contact qualified refrigeration repair-man or manufacturer's service depart-ment
D) Refrigeration system not functioning properly		
1. Power on light off	a. Power failure	Check power to unit
	b. Line disconnect switch open	Close disconnect switch
	c. Blown fuses, open breaker	Check for continuity
	d. Faulty wiring, loose terminals	Have electrician check electrical connections
2. Refrigerant Suction Pressure Gauge in red area	a. Refrigeration compressor not running	Contact qualified refrigeration repairman or manufacturer's service department.
	b. High inlet air temperature	Check temperature
	c. High ambient air temperature	Check temperature
	d. 800-2300 models - compressor rotation incorrect	See special instructions Section 2.2.
3. Refrigerant Suction Pressure Gauge in blue area	a. Hot gas by-pass valve improperly set	Contact qualified refrigeration repairman or manufacturer's service department.
	b. Low on refrigerant	
4. Refrigerant pressure cut out light on (with on/off switch in on position)	a. High or low ambient temperature	Check ambient temperature range
	b. Air-cooled models - Dirty, clogged condenser fins, obstructed air flow across condenser, or non functioning fan motor or fan control switch.	Clean condenser and check for free air flow, if problem persists contact qualified refrigeration repairman or manufacturer's service department.
	c. Water-cooled models - Cooling water temperature too high, or flow too low, faulty water regulating valve, clogged water strainer.	Clean strainer, check water flow and temperature, if problem persists contact qualified refrigeration repairman or manufacturer's service department.
	d. Start-up - high pressure switch may have tripped.	Manually reset and restart without load.

PARTS LIST

Parts Description	500/600/700			800/1000			1200		
Voltage	**208 230/3/60**	**400/3/50 460/3/60**	**575/3/60**	**208 230/3/60**	**400/3/50* 460/3/60**	**575/3/60**	**208 230/3/60**	**400/3/50* 460/3/60**	**575/3/60**
Condensing unit (Air-cooled)	4130.129.1	4130.129.2	4130.129.2	4130.129.3	4130.129.4	4130.129.5	4130.129.6	4130.129.7	4130.129.8
Compressor	4130.108.64	4130.108.65	4130.108.65	4130.106.57	4130.106.48	4130.106.58	4130.106.59	4130.106.49	4130.106.60
Crankcase Heater	5920.327.12	5920.327.13	5920.327.13	5920.330.18	5920.330.16	5920.330.19	5920.330.18	5920.330.16	5920.330.19
Contactor	5910.135.6	5910.135.4	5910.135.4	5910.135.19	5910.135.4	5910.135.4	5910.135.10	5910.135.4	5910.135.4
Aux Contactor NO	6110.101.13	6110.101.13	6110.101.13	6110.101.13	6110.101.13	6110.101.13	6110.101.13	6110.101.13	6110.101.13
Aux Contactor NC	6110.101.14	6110.101.14	6110.101.14	6110.101.14	6110.101.14	6110.101.14	6110.101.14	6110.101.14	6110.101.14
Aux Contactor NC\NO	—-	—-	—-	—-	—-	—-	—-	—-	—-
Control Circuit Transformer	6120.092.11	6120.092.11	6120.092.11	6120.092.1	6120.092.1	6120.093.6	6120.092.1	6120.092.1	6120.093.6
Fuse, Control Circuit	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20
Fuse, Primany, Transformer	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19
Power Transformer	—-	—-	6120.277.1	—-	—-	—-	—-	—-	—-
Fuse, Power Transformer	—-	—-	5920.274.34	—-	—-	—-	—-	—-	—-
High Refrigerant Pressure Switch (Air-cooled)	4130.138.25	4130.138.25	4130.138.25	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28
High Refrigerant Pressure Switch (Water-cooled)	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2
Low Refrigerant Pressure Switch	4130.138.22	4130.138.22	4130.138.22	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29
Discharge Temperature Switch	—-	—-	—-	5930.190.8	5930.190.8	5930.190.8	5930.190.8	5930.190.8	5930.190.8
Solid State Motor Protector	—-	—-	—-	—-	—-	—-	—-	—-	—-
On/Off Switch	6110.706.9	6110.706.9	6110.706.9	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6
Light - Red	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12
Light - Green	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11
Hight Temperature Light Sensor	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1
Hot Gas By-pass Valve	4130.690.5	4130.690.5	4130.690.5	4130.690.18	4130.690.18	4130.690.18	4130.690.18	4130.690.18	4130.690.18
Thermal Expansion Valve	4130.829.14	4130.829.14	4130.829.14	4130.829.15	4130.829.15	4130.829.15	4130.829.16	4130.829.16	4130.829.16
Filter Dryer (liquid line)	4130.166.2	4130.166.2	4130.166.2	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4
Sight Glass	4130.725.3	4130.725.3	4130.725.3	4130.725.3	4130.725.3	4130.725.3	4130.725.4	4130.725.4	4130.725.4
De-Superheating Valve	—-	—-	—-	—-	—-	—-	—-	—-	—-
Suction Filter	—-	—-	—-	—-	—-	—-	—-	—-	—-
Condenser (Air-cooled)	4130.111.28	4130.111.28	4130.111.28	4130.113.11	4130.113.11	4130.113.11	4130.112.12	4130.112.12	4130.112.12
Condenser (Water-cooled)	4130.115.16	4130.115.16	4130.115.16	4130.115.11	4130.115.11	4130.115.11	4130.115.11	4130.115.11	4130.115.11
Cooling Water Regulating Valve	4130.145.23	4130.145.23	4130.145.23	4130.145.3	4130.145.3	4130.145.3	4130.145.3	4130.145.3	4130.145.3
Cooling Water Strainer	4731.735.1	4731.735.1	4731.735.1	4731.735.2	4731.735.2	4731.735.2	4731.735.2	4731.735.2	4731.735.2
Cooling Water Strainer Screen	4731.735.5	4731.735.5	4731.735.5	4731.735.7	4731.735.7	4731.735.7	4731.735.7	4731.735.7	4731.735.7
Fan Motor	6105.238.39	6105.238.40	6105.238.40	6105.238.46	6105.238.23	6105.238.47	6105.238.48	6105.237.14	6105.238.49
Fan Blade	4140.227.24	4140.227.24	4140.227.24	4140.227.14	4140.227.14	4140.227.14	4140.228.10	4140.228.10	4140.228.10
Fan Cut-out Switch (Fan 1)	4130.138.23	4130.138.23	4130.138.23	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26
Fan Cut-out Switch (Fan 2)	4130.138.24	4130.138.24	4130.138.24	—-	—-	—-	4130.138.27	4130.138.27	4130.138.27
Air Pressure Gauge	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1
Air Temperature Gauge	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6
Suction Pressure Gauge	6685.287.14	6685.287.14	6685.287.14	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3
Head Pressure Gauge	—-	—-	—-	—-	—-	—-	—-	—-	—-
Digital Panel	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01
Sensor (set of 4)	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3
MECHANICAL DRAIN Repair Rarts Kit	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03
ELECTRIC DRAIN Timer	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4
Coil and Valve	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38

(*) For 400/3/50 use control transformer 6120.093.6

PARTS LIST

Parts Description	1600			2000			2300		
Voltage	**208 230/3/60**	**400/3/50 460/3/60**	**575/3/60**	**208 230/3/60**	**400/3/50* 460/3/60**	**575/3/60**	**208 230/3/60**	**400/3/50* 460/3/60**	**575/3/60**
Condensing unit (Air-cooled)	4130.129.9	4130.129.10	4130.129.11	4130.129.12	4130.129.13	4130.129.14	4130.129.15	4130.129.16	4130.129.17
Compressor	4130.106.61	4130.106.50	4130.106.62	4130.106.63	4130.106.51	4130.106.64	4130.106.65	4130.106.52	4130.106.66
Crankcase Heater	5920.330.20	5920.330.17	5920.330.21	5920.330.20	5920.330.17	5920.330.21	5920.330.20	5920.330.17	5920.330.21
Contactor	5910.135.12	5910.135.19	5910.135.19	5910.135.16	5910.135.19	5910.135.19	5910.135.16	5910.135.19	5910.135.19
Aux Contactor NO	—-	—-	—-	—-	—-	—-	—-	—-	—-
Aux Contactor NC	—-	—-	—-	—-	—-	—-	—-	—-	—-
Aux Contactor NC\NO	6110.101.20	6110.101.20	6110.101.20	6110.101.20	6110.101.20	6110.101.20	6110.101.20	6110.101.20	6110.101.20
Control Circuit Transformer	6120.092.1	6120.092.1	6120.093.6	6120.092.1	6120.092.1	6120.093.6	6120.092.1	6120.092.1	6120.093.6
Fuse, Control Circuit	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20	5920.274.20
Fuse, Primany Transformer	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19	5920.274.19
Power Transformer	—-	—-	—-	—-	—-	—-	—-	—-	—-
Fuse, Power Transformer	—-	—-	—-	—-	—-	—-	—-	—-	—-
High Refrigerant Pressure Switch (Air-cooled)	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28	4130.138.28
High Refrigerant Pressure Switch (Water-cooled)	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2	4130.139.2
Low Refrigerant Pressure Switch	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29	4130.138.29
Discharge Temperature Switch	—-	—-	—-	—-	—-	—-	—-	—-	—-
Solid State Motor Protector	5925.580.7	5925.580.7	5925.580.7	5925.580.7	5925.580.7	5925.580.7	5925.580.7	5925.580.7	5925.580.7
On/Off Switch	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6	6110.706.6
Light - Red	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12	6350.457.12
Light - Green	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11	6350.457.11
Hight Temperature Light Sensor	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1	5930.189.1
Hot Gas By-pass Valve	4130.690.19	4130.690.19	4130.690.19	4130.690.19	4130.690.19	4130.690.19	4130.690.19	4130.690.19	4130.690.19
Thermal Expansion Valve	4130.829.16	4130.829.16	4130.829.16	4130.829.17	4130.829.17	4130.829.17	4130.829.18	4130.829.18	4130.829.18
Filter Dryer (liquid line)	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4	4130.166.4
Sight Glass	4130.725.4	4130.725.4	4130.725.4	4130.725.4	4130.725.4	4130.725.4	4130.725.4	4130.725.4	4130.725.4
De-Superheating Valve	4130.829.19	4130.829.19	4130.829.19	4130.829.20	4130.829.20	4130.829.20	4130.829.20	4130.829.20	4130.829.20
Suction Filter	4130.246.1	4130.246.1	4130.246.1	4130.246.1	4130.246.1	4130.246.1	4130.246.1	4130.246.1	4130.246.1
Condenser (Air-cooled)	4130.111.16	4130.111.16	4130.111.16	4130.111.16	4130.111.16	4130.111.16	4130.111.16	4130.111.16	4130.111.16
Condenser (Water-cooled)	4130.115.12	4130.115.12	4130.115.12	4130.115.12	4130.115.12	4130.115.12	4130.115.12	4130.115.12	4130.115.12
Cooling Water Regulating Valve	4130.145.3	4130.145.3	4130.145.3	4130.145.5	4130.145.5	4130.145.5	4130.145.6	4130.145.6	4130.145.6
Cooling Water Strainer	4731.735.2	4731.735.2	4731.735.2	4731.735.3	4731.735.3	4731.735.3	4731.735.4	4731.735.4	4731.735.4
Cooling Water Strainer Screen	4731.735.7	4731.735.7	4731.735.7	4731.735.8	4731.735.8	4731.735.8	4731.735.9	4731.735.9	4731.735.9
Fan Motor	6105.238.50	6105.238.25	6105.238.51	6105.238.50	6105.238.25	6105.238.51	6105.238.50	6105.238.25	6105.238.51
Fan Blade	4140.227.15	4140.227.15	4140.227.15	4140.227.15	4140.227.15	4140.227.15	4140.227.15	4140.227.15	4140.227.15
Fan Cut-out Switch (Fan 1)	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26	4130.138.26
Fan Cut-out Switch (Fan 2)	4130.138.27	4130.138.27	4130.138.27	4130.138.27	4130.138.27	4130.138.27	4130.138.27	4130.138.27	4130.138.27
Air Pressure Gauge	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1	6685.279.1
Air Temperature Gauge	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6	6685.281.6
Suction Pressure Gauge	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3	6685.287.3
Head Pressure Gauge	6685.279.2	6685.279.2	6685.279.2	6685.279.2	6685.279.2	6685.279.2	6685.279.2	6685.279.2	6685.279.2
Digital Panel	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01	03.5817-01
Sensor (set of 4)	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3	6625.471.3
MECHANICAL DRAIN Repair Parts Kit	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03	05.7501-03
ELECTRIC DRAIN Timer	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4	5945.693.4
Coil and Valve	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38	4810.741.38

(*) For 400/3/50 use control transformer 6120.093.6

NOTES

WARRANTY

The manufacturer warrants the product manufactured by it, when properly installed, operated, applied, and maintained in accordance with procedures and recommendations outlined in manufacturer's instruction manuals, to be free from defects in material and workmanship for a period of one (1) year from the date of shipment to the buyer by the manufacturer or manufacturer's authorized distributor, or eighteen months from the date of shipment from the factory, whichever occurs first (refrigerated dryers, models 25 thru 2300 scfm inclusive, for a period of two years from the date of shipment from the factory), provided such defect is discovered and brought to the manufacturer's attention within the aforesaid warranty period.

The manufacturer will repair or replace any product or part determined to be defective by the manufacturer within the warranty period, provided such defect occurred in normal service and not as a result of misuse, abuse, neglect or accident. Normal maintenance items requiring routine replacement are not warranted. For refrigerated dryers model 25 thru 2300 scfm, the manufacturer will include parts and labor for 18 months from the date of shipment from the factory and parts only for an additional six (6) months. On all other products, the warranty covers parts and labor for the warranty period. Repair or replacement shall be made at the factory or the installation site, at the sole option of the manufacturer. Any service performed on the product by anyone other than the manufacturer must first be authorized by the manufacturer.

Unauthorized service voids the warranty and any resulting charge or subsequent claim will not be paid.

Products repaired or replaced under warranty shall be warranted for the unexpired portion of the warranty applying to the original product.

The foregoing is the exclusive remedy of any buyer of the manufacturer's product. The maximum damages liability of the manufacturer is the original purchase price of the product or part.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, OR STATUTORY, **AND IS EXPRESSED IN LIEU OF THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.** THE MANUFACTURER SHALL NOT BE LIABLE FOR LOSS OR DAMAGE BY REASON OF STRICT LIABILITY IN TORT OR ITS NEGLIGENCE IN WHATEVER MANNER INCLUDING DESIGN, MANUFACTURE OR INSPECTION OF THE EQUIPMENT OR ITS FAILURE TO DISCOVER, REPORT, REPAIR, OR MODIFY LATENT DEFECTS INHERENT THEREIN.

THE MANUFACTURER, HIS REPRESENTATIVE OR DISTRIBUTOR SHALL NOT BE LIABLE FOR LOSS OF USE OF THE PRODUCT OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE BUYER, WHETHER ARISING FROM BREACH OF WARRANTY, NEGLIGENCE OR STRICT LIABILITY IN TORT.

The manufacturer does not warrant any product, part, material, component, or accessory manufactured by others and sold or supplied in connection with the sale of manufacturer's products.

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AUTHORIZATION FROM THE SERVICE DEPARTMENT IS NECESSARY
BEFORE MATERIAL IS RETURNED TO THE FACTORY OR IN-WARRANTY REPAIRS ARE MADE.

SERVICE DEPARTMENT: (724) 746-1100

HANKISON INTERNATIONAL
hankisonintl.com
Division Of Hansen Inc.
Canonsburg, PA 15317-1700 U.S.A.
Tel 724-745-1555 Fax 724-745-6040
service@hankisonintl.com