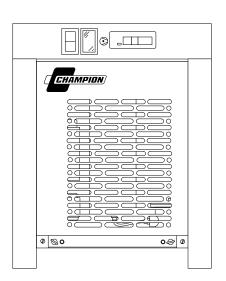


CRR SERIES REFRIGERATED DRYERS

MODELS: CRR25, CRR35, CRR50, CRR75, CRR100, CRR125, CRR150

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GENERAL SAFETY INFORMATION

RECEIVING, MOVING, AND UNPACKING



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.

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 uponunpacking, 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.

D. STORAGE

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

IMPORTANT:

READ PRIOR TO STARTING THIS EQUIPMENT

1.2 Mounting

Mount on floor or shelf free from vibration.

1.0 Installation

1.1 Location

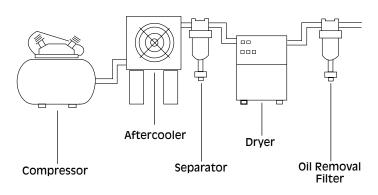
- A. For typical placement in a compressed air system, see drawing.
- B. Air compressor intake–Locate air compressor so that contaminants potentially harmful to the dryer (e.g. ammonia) are not drawn into the air system.

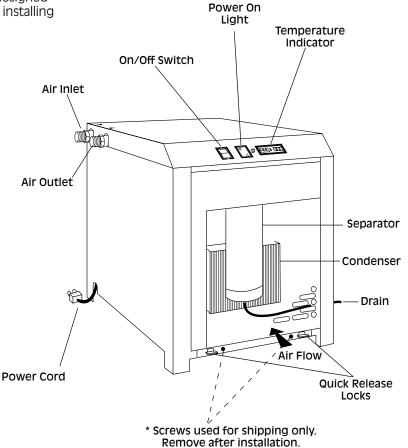
C. Clearances

Free air flow - Allow at least 12 inches (305 mm) on the front and each side of the cabinet and 6 inches (152 mm) at the back of the cabinet for free air flow. Service - To facilitate maintenance leave 24 inches (610 mm) of clearance in front of dryer.

- D. Standard units are designed to operate in ambients from 45 to 110°F (7 to 43°C).
- E. Installations in altitudes above 4500 feet (1370 meters) Dryer is adjusted to operate in altitudes up to 4500 feet (1370 meters). If dryer is installed in an altitude above this, and has not been preset at the factory for this altitude, contact manufacturer's Service Department.

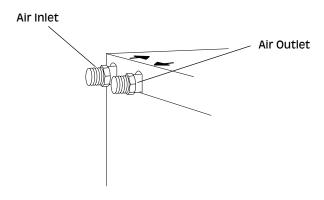
NOTE: Outdoor installation–Standard units are designed for indoor installation. Contact manufacturer if installing outdoors.





1.3 Piping connections

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



WARNING: 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 downstream air lines.
- C. By-pass piping—
 If servicing the dryer without interrupting the air supply is desired, piping should include inlet and outlet valves and an air by-pass valve.
- D. Water cooled models—cooling water inlet and outlet
 - Connect cooling water supply to cooling water inlet.
 - Connect cooling water return line to cooling water outlet connection.

NOTE

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

1.4 Electrical connections

- A. Dryer is designed to operate on the voltage, phase, and frequency listed on the serial number tag.
- B. Dryer is supplied with a cord and plug. Install in a receptacle of proper voltage.

NOTE:

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

NOTE:

Models 150 (115V only)—install plug in receptacle rated for 20 amps.

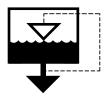


1.5 Moisture separator

A. Separator has an internal drain which automatically discharges collected condensate. It may be desirable to pipe the condensate from the Automatic Drain outlet to a suitable drain.

NOTE:

Discharge is at system pressure. Drain line should be anchored.



NOTE:

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

B. Separator has a knurled fitting with flexible drain tubing attached. Be sure knurled fitting is tightened by turning it counter-clockwise before operating dryer.



2.0 Operation

- 2.1 Minimum/Maximum operating conditions
- A. Maximum inlet air pressure: refer to dryer serial number tag
- B. Minimum inlet air pressure: 30 psig (2.1 kgf/cm²)
- 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: 45°F (7°C)

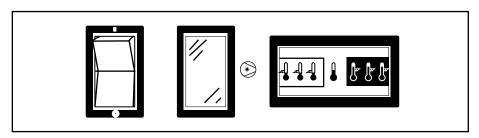
2.2 Start-up

Energize compressor by positioning the on/off switch in the on (I) position. Compressor on light will illuminate.

2.3 Operating check points

Check the following on a periodic basis:

- A. Green power on light is illuminated.
- B. Dewpoint indicator is in green area.
- C. Condensate is discharging from drain.



On/Off Switch

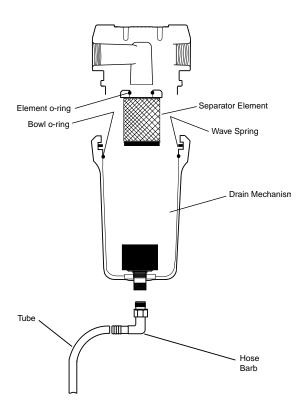
Power-On Light

Dewpoint Indicator (Green)

3.0 Maintenance

- 3.1 Condenser coil—
 Clean off accumulated dust and dirt monthly.
- 3.2 Moisture separator—
 Replace filter element when pressure drop across
 dryer is excessive or annually.
- 3.3 Check separator daily to be sure automatic drain is discharging.
- 3.4 Replace drain mechanism annually.

To facilitate service, maintenance kits are available.



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 an air-cooled model 125 handle when compressed air to be dried is at 80 psig and 90°F; ambient air temperature is 80°F; and a 35°F dew point temperature is desired?

Answer: $125 \times 1.17 \times 1.12 \times 1.0 = 163.8 \text{ scfm}.$

TABLE 1

Rated capacity (scfm) and pressure drop @ 100 psig inlet pressure, 100°F inlet temperature, and 100°F ambient temperature

MODEL		25	35	50	75	100	125	150
Rated capacity of air-cooled models (scfm)	60 Hz	25	35	50	75	100	125	150
	50 Hz	21	29	42	63	84	105	125

TABLE 2Air capacity correction factors (Multipliers)

INL	ET	INLET COMPRESSED AIR CONDITIONS INLET TEMPERATURES								
PRESS	URES	80°F	90°F	100°F	110°F	120°F				
psig	kgf/cm²	27°C	32°C	38°C	43°C	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				

CC	OLING MED	IUM*		OUTLET DEWPOINT					
AMBIENT TEMPERATURE		MULTIPLIER	DEW POINT Temperature			MULTIPLIER			
°F	°C			°F	°C				
80	27	1.12		38	3	1.0			
90	32	1.06		40	4	1.1			
100	38	1.00		45	7	1.2			
110	43	0.94		50	10	1.3			

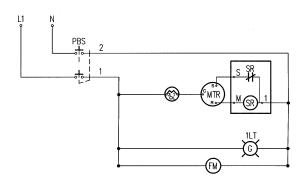
^{*}Air-cooled models; water-cooled models use 1.15 multiplier if cooling water is below 35°C , 95°F .

Engineering Data

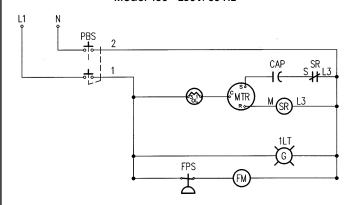
Minimum – Maximum Operating Conditio		25	35	50	75	100 / 125	150	
MinMax. Inlet Air Pressure (compressed air at inlet to	dryer)	30 psig (2.1 kgf/cm²) - 250 psig (17.6 kgf/cm²)						
Max. Inlet Air Temp. (compressed air at inlet to dryer)	120°F (49°C)							
MinMax. Ambient Temperature	Air-coole	ed 45°F (7°C) - 11	0°F (43°C) Water	-cooled 45°F (7°C)) - 130°F (54°C)			
Refrigeration System Data								
Compressor Type			Hermetic	c - Resistance Sta	rt, Induction Run -	Non-Cycling		
Refrigeration Compressor Horsepower		1/6	1/5	1/4	1/3	1/2	3/4	
BTU/HR – Refrigeration Only								
@ 35°F Evaporator & 100°F Ambient	60 Hz / 50 Hz	1010 / 842	1380 / 1150	2160 / 1800	2780 / 2317	4430 / 3692	6020 / 50	
Refrigerant Type		R-134a	R-134a	R-134a	R-134a	R-134a	R-134a	
Refrigerant Charge				See dryer serial n	umber tag			
Suction Pressure Setting (controlled by hot gas by-pass	s valve)	31.5 psig	31.5 psig	31.5 psig	31.5 psig	31.5 psig	31.5 psiç	
Condenser Fan Switch Setting (in-out) (psig)		NA	NA	NA	NA	NA	110-70	
Air Flow Across Condenser (cfm)	60 Hz / 50 Hz	105 / 98	235 / 196	275 / 229	220 / 183	350 / 292	530 / 440	
Condenser Cooling Water Requirements (gpm @ 85°F))	NA	NA	NA	NA	NA	2.2 / 1.8	
(water-cooled models only) (40 psig min. pressure)		INA	IVA	IVA	INA	INA	2.2 / 1.0	
Electrical								
Nominal Voltages				115/1/60	ı	1	ı	
Max Min. Voltage		127-104	127-104	127-104	127-104	127-104	127-104	
Rated Load Amps		3.4	3.9	5.9	7.4	10.3	14.7	
Locked Rotor Amps		18.0	22.0	28.0	35.0	48.0	66.3	
Minimum Circuit Ampacity		4.0	4.7	7.3	9.1	12.4	18.3	
Branch Circuit Fuse Size (amps)	15	15	15	15	20	25		
Watts @ 35°F Evaporator & 100°F Ambient	280	290	465	600	815	1060		
Resistance (ohms) Single phase	Start C/S						3.15	
	Run C/R						0.416	
Overload				Thermal & Cu	rrent (Auto reset)			
Nominal Voltages		208-230/1/60						
MaxMin. Voltage		253-187	253-187	253-187	253-198	253-187	253-198	
Rated Load Amps		1.8	2.1	3.0	4.1	5.1	8.3	
Locked Rotor Amps		8.5	13.7	14.4	19.0	23.0	33.5	
Minimum Circuit Ampacity		2.2	2.6	3.7	5.1	5.2	10.5	
Branch Circuit Fuse Size (amps)		15	15	15	15	15	15	
Watts @ 35°F Evaporator & 100°F Ambient		280	290	470	600	815	1060	
Resistance (ohms) Single phase	Start C/S						7.92	
	Run C/R						1.55	
Overload				Thermal & Cu	rrent (Auto reset)			
Nominal Voltages		220-240/1/50						
MaxMin. Voltage		264-198	264-198	264-198	264-198	264-198	264-198	
Rated Load Amps		1.6	1.8	2.6	3.5	4.2	7.6	
Locked Rotor Amps		8.7	10.7	14.5	15.2	21.0	53.0	
Minimum Circuit Ampacity		2.0	2.2	3.2	4.4	5.2	9.9	
Branch Circuit Fuse Size (amps)		15	15	15	15	15	15	
Watts @ 35°F Evaporator & 100°F Ambient		223	257	395	507	669	930	
Resistance (ohms) Single phase	Start C/S						10.49	
, , , , , , , , , , , , , , , , , , , ,	Run C/R						1.8	
		1	i .	1	1	1		

Electrical Schematic

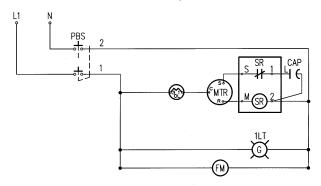
Models 25, 35 - 115V/60 Hz; 208-230V/60Hz; 220-240V/50 Hz Model 50 - 115V/60 Hz; 220-240V/50 Hz Model 75 - 115V/60 Hz



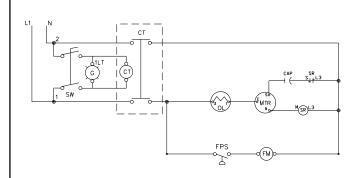
Model 150 - 230V/60 Hz



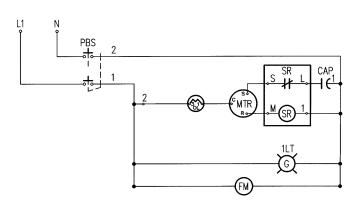
Model 50 - 208-230V/60Hz Model 75 - 208-230V/60 Hz; 220-240V/50 Hz



Model 150 - 115V/60 Hz



Models 100, 125 - All Voltages



Legend

PBS - Push button switch

1LT - Power-on light

SR - Start Relay

CAP - Start Capacitor

MTR - Compressor

FM - Fan Motor

OL - Overload

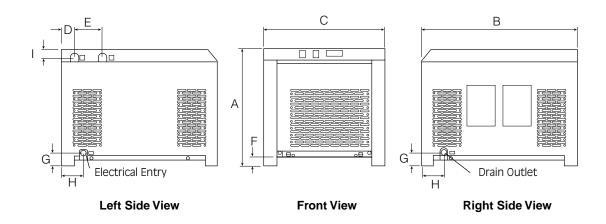
FPS - Fan Pressure Switch (Only on 150 scfm)

CT - Contactor w/115v coil

SW - On/Off Switch

Dimensions/Weights

			Dimensions inches	3			
Model	25	35	50	75	100	125	150
Α	17	17	19-15/16	21-9/16	21-9/16	26-15/16	26-15/16
В	22	22	24-7/16	28-11/16	28-11/16	30-1/8	30-1/8
C	17	17	17	20	20	23-3/4	23-3/4
D	1-13/16	1-13/16	1-15/16	1-15/16	1-15/16	2-3/16	2-3/16
E	4	4	5	5	5	5	5
F	15/16	15/16	15/16	15/16	15/16	15/16	15/16
G	1-7/8	1-7/8	1-7/8	1-7/8	1-7/8	1-7/8	1-7/8
Н	3	3	3	3	3	3	3
I	1-3/16	1-3/16	1-3/16	1-3/16	1-3/16	1-3/16	1-3/16
Inlet/Outlet							
Connections	3/4	3/4	1	1	1	1-1/2	1-1/2
Weights Ibs	105	118	156	180	198	229	230



Troubleshooting Guide

	SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
A.	Water downstream of dryer	Residual free moisture remaining in downstream pipelines Air by-pass system is open Inlet and Outlet connections are reversed	Blow out system with dry air Check valve positions Check for correct connection
		4. Temperatures surrounding air lines downstream of dryer have dropped below dryers dew point rating 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 inlet6. Condensate not being automati-	Install separator ahead of dryer
		cally drained Drain mechanism is clogged or inoperative.	Replace drain mechanism if inoperative
		Drain line is restricted or frozen. Electric drains–timer not set to allow for sufficient condensate removal	Open drain line 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.
		Refrigeration system not functioning properly resulting in elevated dew point.	See D below
В.	High pressure drop across dryer	Excessive air flow Freezing of moisture in evaporator because of refrigeration system improperly functioning.	Check flow rate See D below
		Separator filter element clogged.	Replace filter element.
C.	Dew point indicator in red area	Dryer overloaded resulting in high air outlet temperature.	See A 7
	arca	Refrigeration system not functioning properly resulting in high air outlet temperature.	See D below
D.	Refrigeration system not functioning properly		
	1. Compressor on light off	a. Power failureb. Line disconnect switch openc. Blown fuses, open breakerd. Faulty wiring, loose terminals	Check power to unit Close disconnect switch Check for continuity Have electrician check electrical connections
	Refrigerant compressor cycles on and off	Air-cooled models–Dirty, clogged condenser fins, obstructed air flow across condenser, or non functioning fan motor or fan control switch.	Check min./max. temperature ranges 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.

Parts List

	25				35		50			
PARTS Description	115/1/60 100/1/50	208-230/1/60	220-240/1/50	115/1/60 100/1/50	208-230/1/60	220-240/1/50	115/1/60 100/1/50	208-230/1/60	220-240/1/50	
Condensing Unit (air-cooled)	C41301207	C41301208	C41301209	C41301218	C41301219	C413012110	C413012210	C413012211	C413012215	
Compressor Only	C413010834	C413010861	C413010835	C413010838	C413010839	C413010840	C413010841	C413010842	C413010843	
Overload	C59255702	C92557824	C59255703	C59255781	C59255782	C59255783	C59255784	C59255785	C59255786	
Start Relay	C59456555	C594568324	C59456556	C59456831	C59456832	C59456833	C59456834	C59456835	C59456836	
Start Capacitor Fan Motor Fan Blade Condenser (air-cooled)	—	—	—	—	—	—	—	C591010323	—	
	C61052391	C61052374	C61052374	C610523827	C610523828	C610523828	C610523829	C610523830	C610523830	
	C41402282	C41402282	C41402282	C414022717	C414022717	C414022717	C414022718	C414022718	C414022718	
	C413011026	C413011026	C413011026	C413011118	C413011118	C413011118	C413011119	C413011119	C413011119	
Dryer	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	
Hot gas by-pass valve	CC98021	C98021	C98021	C98021	C98021	C98021	C98021	C98021	C98021	
By-pass valve strainer	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	
Light assy., green	C635045711	C63504574	C63504574	C6635045711	C63504574	C63504574	C6635045711	C63504574	C63504574	
Dew Point Indicator	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	
On/off switch	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	
Maintenance Kit	CRRMK2	CRRMK2	CRRMK2	CRRMK2	CRRMK2	CRRMK2	CRRMK3	CRRMK3	CRRMK3	
Element	C35BE	C35BE	C35BE	C35BE	C35BE	C35BE	C60BE	C60BE	C60BE	
Drain	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	

	75				100 & 125			150			
PARTS Description	115/1/60 100/1/50	208-230/1/60	220-240/1/50	115/1/60 100/1/50	208-230/1/60	220-240/1/50	115/1/60 100/1/50	208-230/1/60	220-240/1/50		
Condensing Unit (air-cooled)	C413012212	C413012213	C413012214	C413012312	C413012313	C413012314	C413013431	C413013432	C413013433		
Compressor Only	C413010844	C413010845	C413010846	C413010847	C413010848	C413010849	C413010850	C413010851	C413010852		
Overload	C59255787	C59255788	C59255789	C592557810	C592557811	C592557812	C592557813	C592557814	C592557815		
Start Relay	C59456837	C59456838	C59456839	C594568310	C594568311	C594568312	C594568313	C594568314	C594568315		
Start Capacitor	_	C591010326	C5910.103.27	C591010328	C591010329	C591010329	C591010337	C591010338	C591010339		
Fan Motor	C610523831	C610523832	C610523832	C610523833	C610523834	C610523834	C610523835	C610523836	C610523836		
Fan Blade	C414022719	C414022725	C414022725	C414022720	C414022720	C414022720	C414022721	C414022721	C414022721		
Condenser (air-cooled)	C413011120	C413011120	C413011120	C413011121	C413011121	C413011121	C413011122	C413011122	C413011122		
Dryer	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514	C413016514		
Fan Pressure Switch	_	_	_	_	_	_	C413013813	C413013813	C413013813		
Hot gas by-pass valve	C98021	C98021	C98021	C98021	C98021	C98021	C98021	C98021	C98021		
By-pass valve strainer	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018	C41307018		
Light assy., green	C6635045711	C63504574	C63504574	C6635045711	C63504574	C63504574	C6635045711	C63504574	C63504574		
Dew Point Indicator	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831	C66852831		
On/off switch	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066	C61107066		
Condenser (water-cooled)	_	_	_	_	_	_	C413013434	C413013435	C413013436		
Water Control Valve	_	_	_	_	_	_	C413014522	C413014522	C413014522		
Water Strainer	_	_	_	_	_	_	C47317351	C47317351	C47317351		
Screen, water strainer	_	_	_	_	_	_	C47317355	C47317355	C47317355		
Contactor	_	_	_	_	_	_	C591013411	_	_		
Maintenance Kit	CRRMK4	CRRMK4	CRRMK4	*	*	*	CRRMK5	CRRMK5	CRRMK5		
Element	C100BE	C100BE	C100BE	**	**	**	C170BE	C170BE	C170BE		
Drain	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110	C446015110		

^{*} Model 100 - CRRMK4 Model 125 - CRRMK5

^{**} Model 100 - C100BE Model 125 - C170BE

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 or workmanship for a period as specified below, 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. The warranty covers parts and labor for the warranty period unless otherwise specified. 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 EXPRESSLY 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.

Warranty Period

Parts and labor for two (2) years from the date of shipment from the factory; heat exchangers are covered (parts only) for an additional three (3) years (total of five I5]). On units that manufacturer requests be returned to the factory, a one time removal/reinstallation labor allowance as noted in the Service Warranty Policies and Procedures Handbook will apply. Freight to the factory from the installation site and to the installation site from the factory will be paid by the manufacturer; means of transportation to be specified by manufacturer.

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



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Due to Champion's continuning product develpoment program, specification and materials are subject to change without notice.