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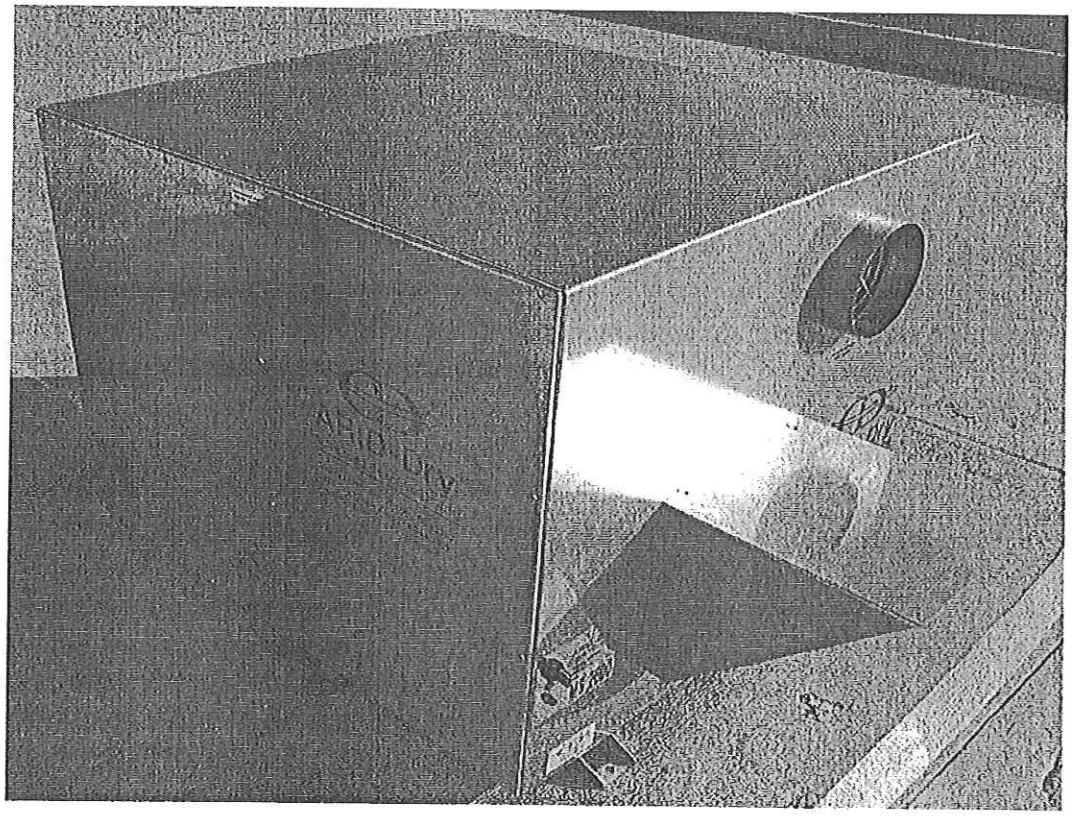
ARID-Dry™

Advanced Reactive Drying

MS-2600, 460v
DESICCANT DEHUMIDIFIER

INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTIONS



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READ THIS MANUAL

This manual is provided for the MS-2600 dehumidifier so the user can gain a thorough understanding of the proper set-up, operation, and maintenance. This dehumidifier is built around tested engineering principles and has passed a thorough inspection for quality of workmanship and function. A thorough understanding of the set-up, operation, and maintenance of this equipment will allow it to provide maximum performance and reliability.

PRINCIPLES OF OPERATION

The MS-2600 is a self-contained desiccant dehumidifier designed to efficiently remove water vapor from the air. A portion of the desiccant rotor is exposed to the "process" air effectively adsorbing moisture while the second portion of the rotor is exposed to heated "reactivation" air effectively removing the adsorbed moisture. This process is done on a continuous basis, providing constant dehumidified process air.

MACHINE SET-UP

-Carefully **remove** the machine from its shipping carton.

-Thoroughly **inspect** the machine for shipping damage. Should any damage be found, report the damage to the freight company immediately. Removal of the side access panel allows for inspection of the supply air blower and other internal components.

-Carefully **place** the machine on a level surface or suspend from threaded rods within the space to be dried.

-**Connect** 8" insulated hose or insulated ducting from the reactivation inlet and outlet to outside. Rain louvers should be provided to keep water out of the ducts. Keep some distance between the inlet and outlet so that the exhaust air is not short cycled to the inlet. It is recommended that the ducting slope downward from the dehumidifier to outside.

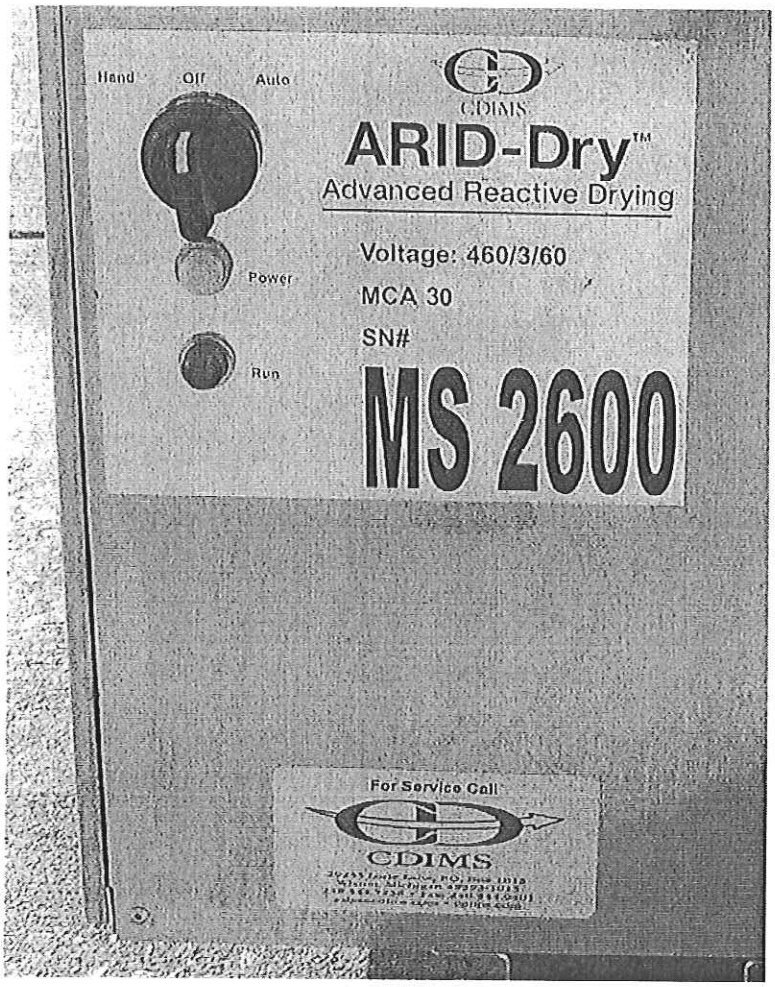
-**Connect** an appropriate 460/3/60 power supply (30 min. circuit amps) to the machine in accordance with local codes. The power entrance can be below the hinged control access panel or directly underneath from the bottom.

Check to ensure the machine is turned "off" prior to applying power. Verify rotation of the 3 phase process blower at initial start. Correct improper rotation by interchanging any two power input leads.

Adjust discharge air louvers as required for desired discharge air distribution.

OPERATION

Machine operation is fully automatic and requires no adjustments to airflow or other primary functions.



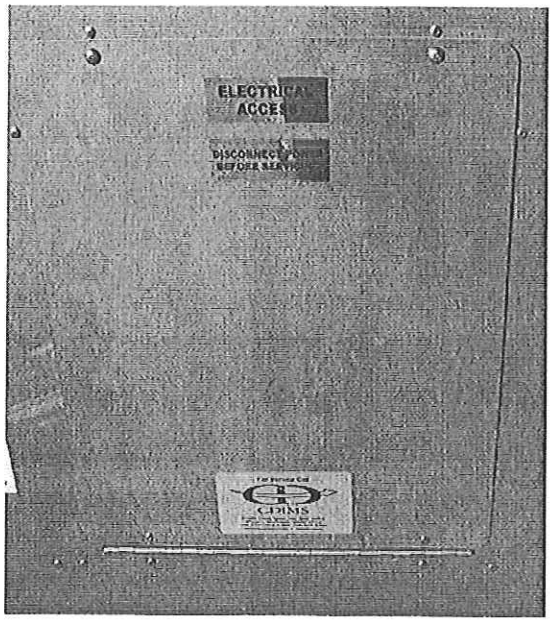
A "ON-OFF-AUTO" switch is provided for constant operation ("ON") or automatic operation ("AUTO") via customer supplied humidity control device.

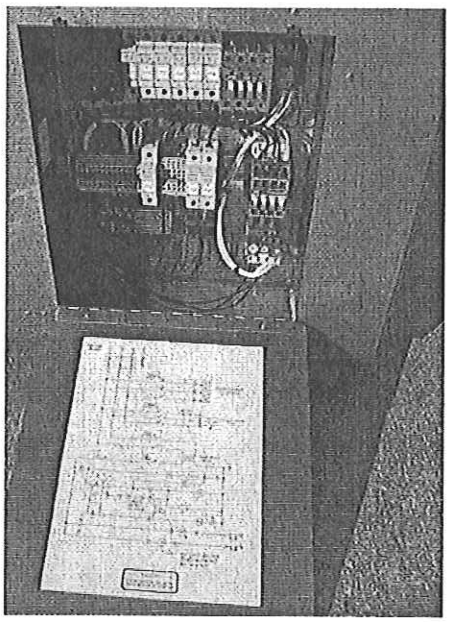
A "POWER ON" lamp is provided to indicate that power is applied to the machine.

A "RUN" lamp is provided to indicate that the unit is operational.

If **humidity control** is desired to prevent over drying, terminals are provided within the control panel which accept a dry contact closure (rated at 115v, 5a) from a remote humidity sensor.
-DO NOT APPLY EXTERNAL VOLTAGE TO THIS CIRCUIT.

CONTROLS/ELECTRICAL





The controls in this machine are UL, C-uL listed and provide for automatic operation and protection of the electrical components. Access to the control panel is via a hinged access cover.

Air flow is accomplished using a belt drive blower for process and direct drive blower for reactivation air.

A fractional hp gear motor drives the desiccant rotor.

Self-regulating PTC heater elements provide the "heat source" for reactivation.

MAINTENANCE

This machine is designed for minimal maintenance and years of trouble free service.
All motors and bearings provided are permanently sealed and require no maintenance.

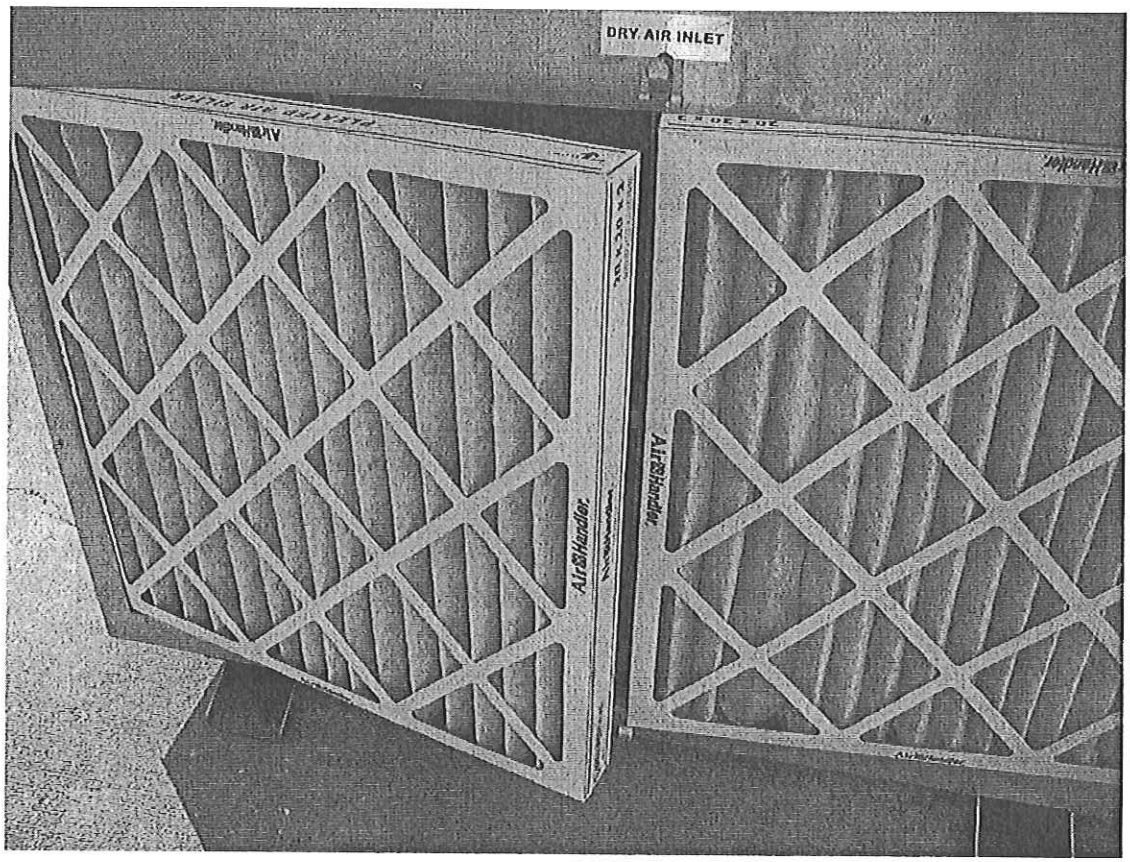
Clean the exterior of the machine with a damp cloth and mild soap if necessary.
DO NOT use a garden hose or pressure washer to clean this machine !

Check to ensure all access panels and covers are in place and secure.

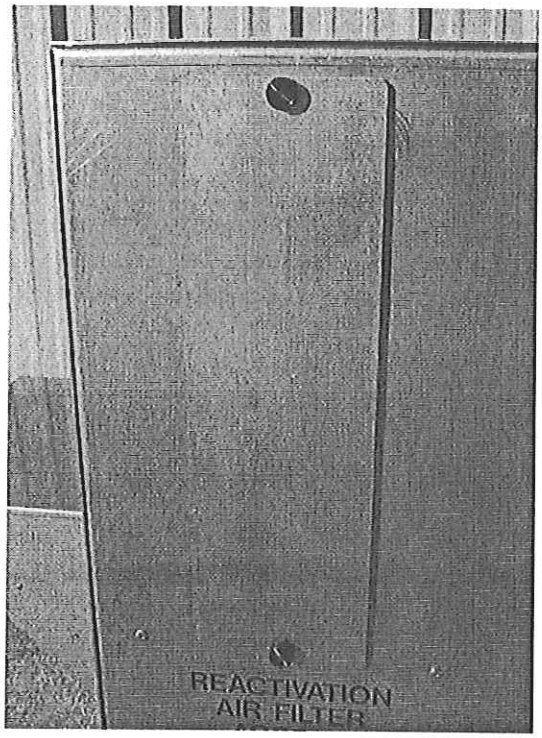
Inspect filters regularly and replace if dirty. Regular air filter maintenance is critical to extending the life of the desiccant rotor and maintaining moisture removal efficiency.

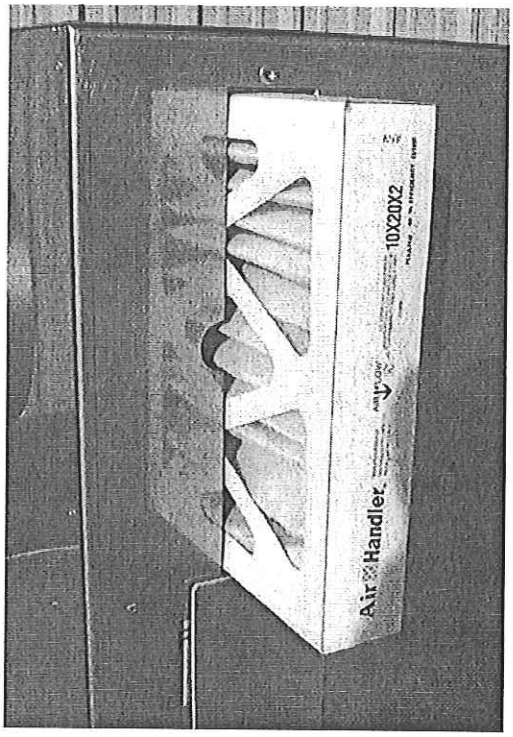
Keeping filters clean is the most important long term maintenance on this machine !
In dusty or dirty environments, the filter replacement interval will be greatly reduced. A filter replacement interval should be established to prevent operation with extremely dirty filters.

Process Air Inlet Filters (2 ea. 20x20x2" pleated)
Filter access is accomplished by releasing the two (2) snap latches and removing the filters at an angle. Replace only with filters of equal or greater efficiency.



Reactivation Air Inlet Filter (1 ea. 10x20x2" pleated)
Filter access is accomplished by loosening the thumb screws on the filter access cover, removing the top screw, and rotating downward to exposing the end of the filter element. Slide the filter straight out. Replace only with filters of equal or greater efficiency.

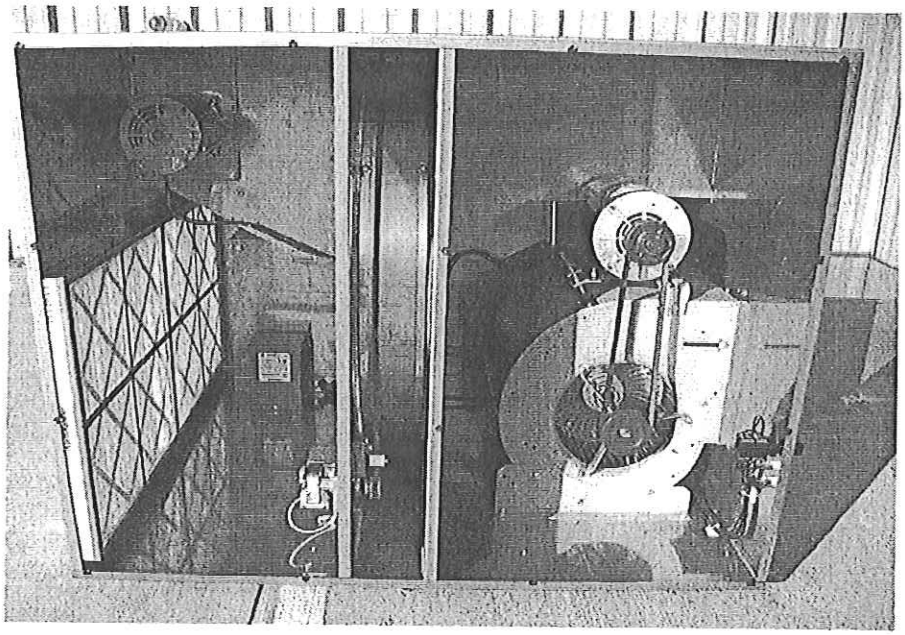




Process Blower

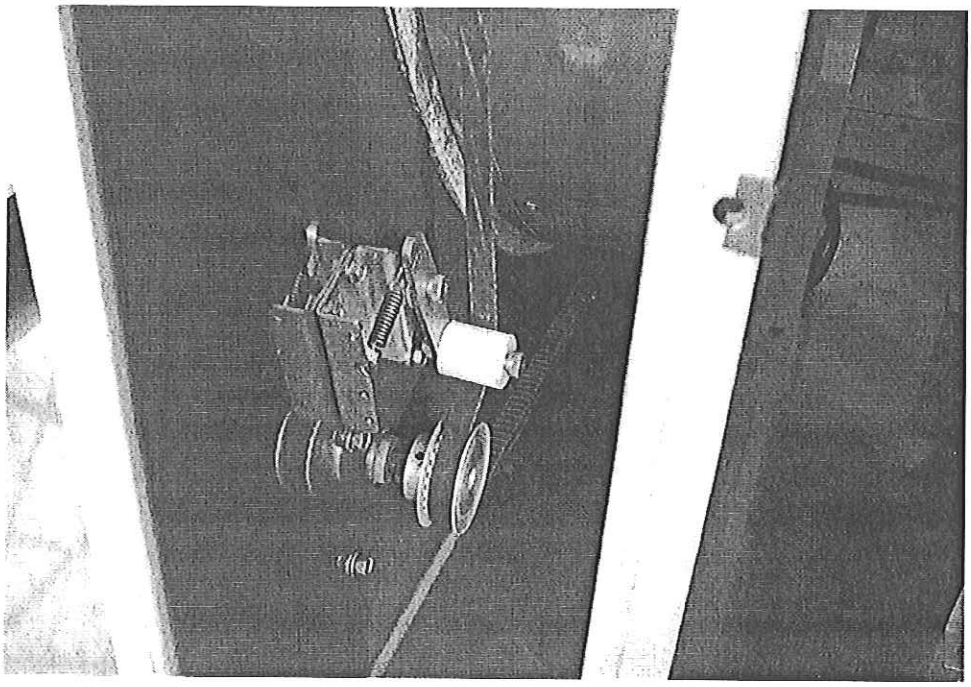
The blower can be accessed by removing the Service Access Cover. Occasionally **inspect** the blower drives to ensure the belt is in good shape, properly tensioned and the pulleys are secure. Belt should be aligned and taught, but not too tight.

-DISCONNECT POWER BEFORE REMOVING THE ACCESS COVER-



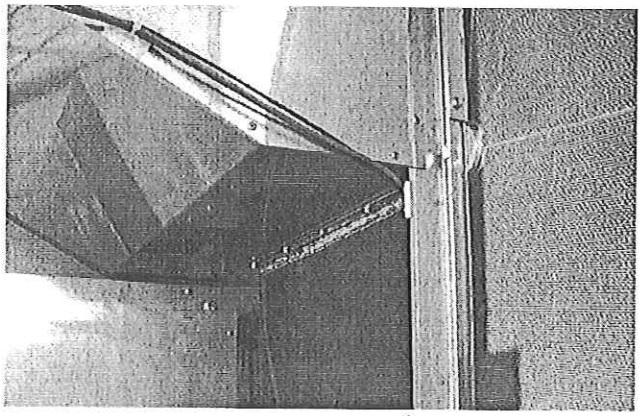
Desiccant Rotor Drive

The rotor drive system consists of a fractional hp gear motor, timing pulley, timing belt, and spring tensioner. The gear motor is sealed and permanently lubricated. Check the motor fasteners and timing pulley to be secure. Inspect the timing belt for cracks, tears, or abrasion. The tensioner should keep slack form the belt with light tension.



Rotor Seals

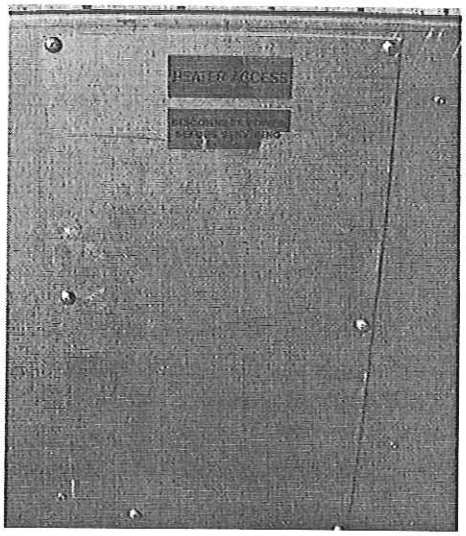
Periodically inspect the rotor seals for damage, tears, or gaps.

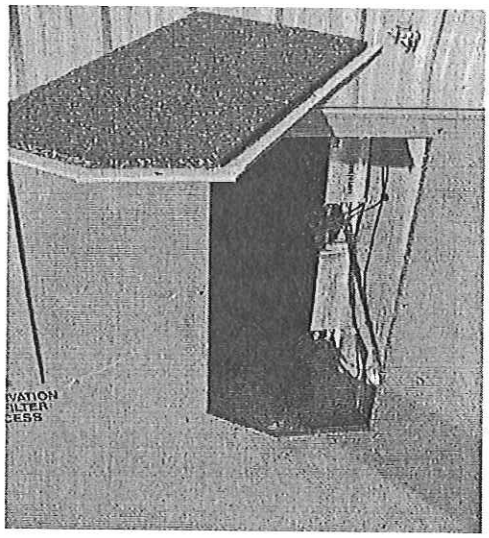


Reactivation Electrical Heaters

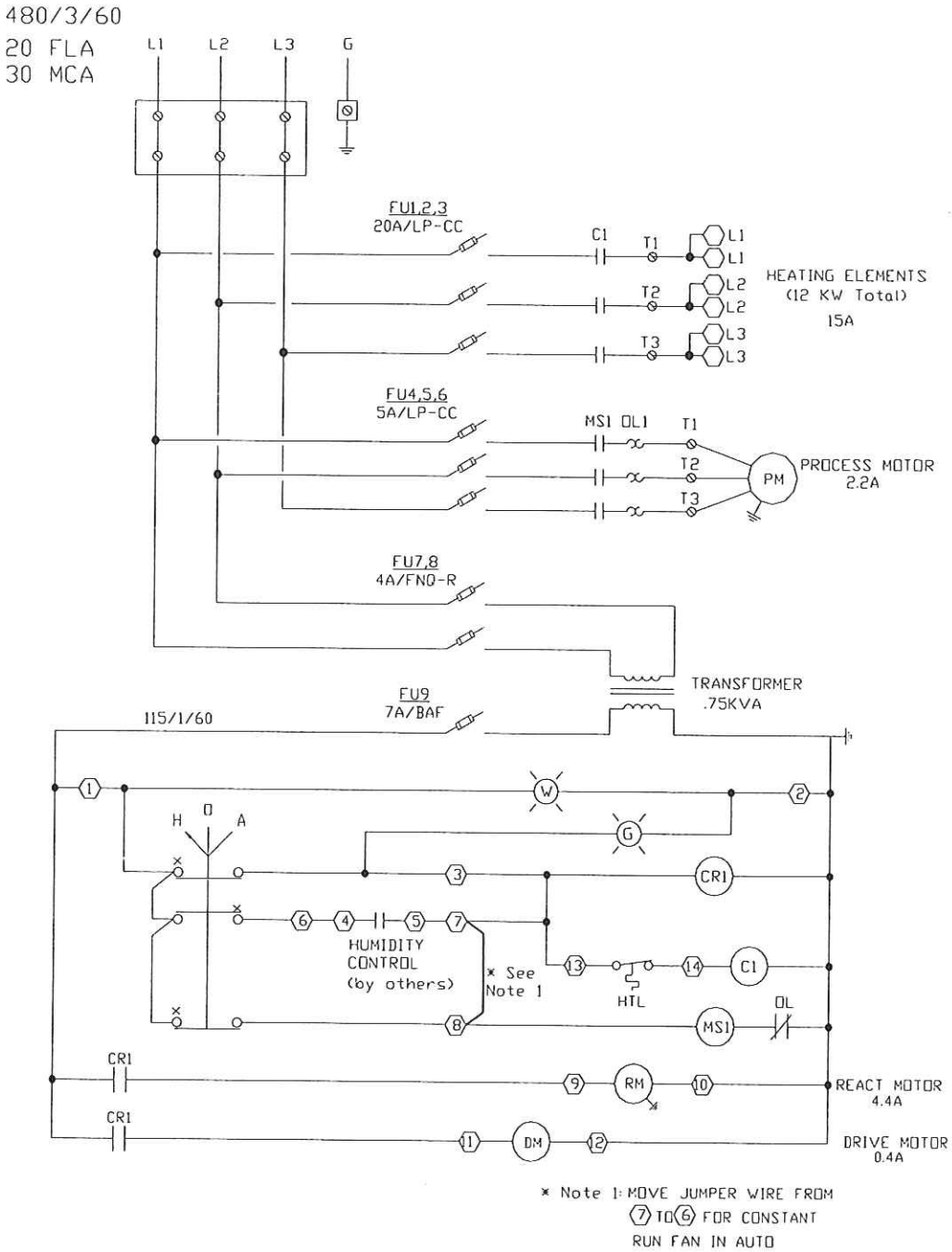
The heating elements are self regulating PTC type and require no maintenance. Elements can be accessed through the access cover for service or replacement as required.

-DISCONNECT POWER BEFORE REMOVING THIS COVER-





Wiring Diagram



* Note 1: MOVE JUMPER WIRE FROM (7) TO (6) FOR CONSTANT RUN FAN IN AUTO

--- CAUTION ---

3 PHASE PROCESS FAN MOTOR
CHECK ROTATION AT START-UP

MS-2600 XXCP-2830 R1

Spare Parts

Mechanical Components

P/N	Description	Qty Req'd
PPSR-770-100	Desiccant rotor ass'y	1 ea.
BT-100	Belt Tensioner Assembly	1 ea.
24XL037-6FA4	Drive Pulley, 1/5P Timing Pulley	1 ea.
1020XL037NG	Drive Belt	1 ea.
2W232	Filter, 20x20x2 Pleated	2 ea.
6C514	Filter, 10x20x2 Pleated	1 ea.
VSS-01	Viton Seal Strip, 1" x .040"	26 ft.
92196A194	#8-32 x 1/2" Socket Cap Screw, 18-8 SS	2 ea.
94052A025	Plastic Press Fit Thumb Screw Head	2 ea.
4TM01	FC Blower, 10" Belt Drive	1 ea.
3X775	Pulley, 3.2pd, 3/4 bore (AK34)	1 ea.
2L461	Variable pulley, 1.9-2.9 pd, 7/8" bore (1VP34)	1 ea.
6A144	V belt, "A" profile, A36	1 ea.

Electrical Components

ID	P/N	Description	Qty Req'd
DM	2Z805	Drive Motor, 115v, 2rpm	1 ea.
PM	E716	Motor, 1.5hp, ODP, 1750rpm, 145T, 460/3/60	1 ea.
RM	G216	Motor, 1/3 hp, ODP, 3450rpm, 56C, 120/1/60	1 ea.
HTR	HI416U44B1	1500 Watt Heater, 460v	12 ea.
TX	750SVIF	Transformer, 460/120vac, 750 va	1 ea.
HOA	JR22P3M20B	Selector Switch	1 ea.
FU1,2,3	LP-CC20	Fuse, 20a, 600v	3 ea.
FU4,5,6	LP-CC5	Fuse, 5a, 600v	3 ea.
FU7,8	FNQ-R4	Fuse, 4a, 600v	2 ea.
FU9	FNQ-R7	Fuse, 7a, 600v	1 ea.
C1	A26-30-10-84	Contactor, 3 pole, 115v coil	1 ea.
MS1	A16-30-10-84	Motor Contactor, 115v coil	1 ea.
	TA25DU2.4	Motor Overload, 1.5 hp, 460v	1 ea.
CR1	K-10P-11A15	Relay, DPDT, 115v coil	1 ea.
W	678-0069	White Pilot Lamp, 115v	1 ea.
G	678-9792	Green Pilot Lamp, 115v	1 ea.
HTL	STO-160	High Temp Limit Switch	1 ea.

WARRANTY CLAIMS

Defective material may be repaired or replaced at our option. If replaced, full credit will be issued in the amount of the original purchase price, plus freight, for the returned material in the event the material is found to be not defective, or to be damaged or abused, we reserve the right to return the material "as is" to the sender and at his freight cost. If CDIMS agrees to keep such material, credit will be issued minus the cost of repair and reconditioning, less freight for the return and less restocking charges.

REPLACEMENT PARTS

When writing or calling to CDIMS for service parts, provide the serial number of the unit as stamped on the unit plate attached to the electrical door. For questions regarding wiring diagrams, it will be necessary to provide the number on the specific diagram. If replacement parts are required, include the date of installation, the date of failure, an explanation of the malfunction, and a description or part number of the replacement parts required.