Arrow Pneumatics, Inc.

HEATLESS DESICCANT AIR DRYER
INSTRUCTION & MAINTENANCE MANUAL

MODEL RH203 THROUGH RH224

HEATLESS DRYER SERIES

INSTRUCTION AND MAINTENANCE MANUAL

IMPORTANT

BEFORE INSTALLING OR OPERATING THE DRYER IT IS RECOMMENDED THAT THIS MANUAL BE STUDIED AND CLEARLY UNDERSTOOD.

1. SAFETY PRECAUTIONS

Warnings, Cautions, and Notes used in this manual have the following significance:

WARNING

MAINTENANCE OR OPERATING PROCEDURES AND TECHNIQUES THAT WILL RESULT IN PERSONAL INJURY OR LOSS OF LIFE IF NOT CAREFULLY FOLLOWED.

CAUTION

MAINTENANCE OR OPERATING PROCEDURES AND TECHNIQUES THAT WILL RESULT IN DAMAGE TO EQUIPMENT IF NOT CAREFULLY FOLLOWED.

NOTE

MAINTENANCE OR OPERATING PROCEDURES AND TECHNIQUES THAT ARE CONSIDERED IMPORTANT ENOUGH TO EMPHASIZE.

2. INSTALLATION

Arrow Regenerative Air Dryers are shipped as completely assembly packages, filled with desiccant ready to install.

Visually check the dryer to make certain that all air lines and electrical connections are securely fastened and were not damaged in transit. If there is evidence of damage, immediately enter a claim with the carrier, and notify your Arrow representative.

A. APPLICATION CHECK AND ANALYSIS

To achieve the best dryer performance, you should carefully check that the design and installation requirements outlined below are satisfied.

1. Operating pressure of your Arrow Dryer can range from 75 min to 150 max PSIG. Check dryer label and ASME nameplate to verify maximum service pressure. Air available for your air usage will vary with operating pressure.
2. The dryer should not be installed where compressed air and/or ambient temperature exceeds 120°F or drops below +32°F. Locate dryer to avoid extremes of heat and cold from other conditions. Best results occur when dryer is located as close to point of use as practical. Where applicable, dryer towers should be insulated to reduce heat loss. Avoid locating dryer outside or where it is exposed to the elements.
3. Dryers are sized according to airflow not pipe size. Dryer requires 10% to 15% of inlet air (SCFM) for regeneration. The difference between the inlet and outlet flow is the amount of purge air required. This air is purged to atmosphere and is not available for use downstream. Make certain air supply to dryer meets your air demand plus purge air requirements.

NOTE

DRYERS MUST BE SIZED FOR USABLE AIR REQUIRED PLUS PURGE AIR WHICH EQUALS REQUIRED INLET AIR FLOW TO DRYER.

B. MOUNTING SPECIFICATIONS AND DRYER LOCATION

1. Electrical connection must be hard piped with an external fused disconnect switch with proper overload protection.
2. Frame must be suitably ground.

WARNING

ARROW DRYERS ARE WIRED FOR HIGH VOLTAGE. ONLY QUALIFIED ELECTRICIANS ARE AUTHORIZED TO SERVICE THIS ELECTRICAL EQUIPMENT.

3. Generally, locate your dryer downstream from the air receiver. The only exception would be on applications with a fluctuating demand. Then the dryer should be located upstream of the receiver to avoid air surges through the dryer's desiccant beds.
4. Provide adequate space around the dryer for servicing. Bolt dryer skid to foundation, where possible.

C. SUGGESTED PIPING ARRANGEMENT

Wet air inlet is at the dryer's bottom piping assembly. Dry outlet air is from the dryer's top piping assembly (see attached flow diagram).

In situations where air supply is required 24 hours a day (it is undesirable to interrupt the airflow), a three valve bypass system is recommended to bypass the dryer. Use the fewest elbows and taper connections necessary to keep pressure drop at a minimum.

D. PREFILTERS / AFTERFILTERS

It is important that a prefilter and an afterfilter be provided in your dryer installation.

Prefilters, located before dryer, protect desiccant beds from contamination by oil, entrained water, pipe scale, etc., thereby extending dryer desiccant life. Locate prefilters as close to dryer as possible.

It is recommended that a mechanical separator be installed immediately preceding the prefilter to remove the bulk liquid oil and entrained water.

CAUTION

LIQUID WATER SHOULD BE REMOVED BEFORE THE AIR ENTERS THE DRYER. BE SURE SEPARATORS, PREFILTERS AND DRAINS ARE IN GOOD WORKING ORDER.

After filters, located after the dryer, help eliminate the possibility of desiccant dusting and carryover into the air system.

3. OPERATION

A. START-UP

After all piping and electrical connections are made, proceed as follows:

1. SLOWLY pressurize the dryer. When the dryer reaches full operating pressure, check the system for air leaks. Soap test all joints and fittings. To maintain desired dewpoint, any leaks detected must be fixed, especially those on the outlet side of the dryer.
2. Adjust purge adjustment valve so that purge pressure gauge reads appropriate pressure (see attached purge pressure chart).
3. Energize electrical circuit.
4. When electrical circuit has been energized, the control circuit board or mechanical timer- will start to operate and automatically initiate dryer operation. The timer is factory set, so that no field adjustment is necessary.

NOTE

AT INITIAL START-UP, CHECK THE DRYER OPERATION FOR ONE OR TWO CYCLES, ESPECIALLY AT THE TIME OF THE TOWER SHIFT. VERIFY THAT ALL SYSTEMS ARE OPERATING IN THEIR PROPER ORDER AND SEQUENCE. IF THE DRYER IS NOT FUNCTIONING PROPERLY, CONTACT YOU ARROW REPRESENTATIVE.

B. DRYER OPERATION

The dryer is fully automatic in operation and will now operate with a minimum of maintenance and care. Each sequence of operations is programmed by a central circuit board or mechanical timer. Dryer programs may differ slightly, but all perform similar functions.

Standard dryers operate on a 10 minute NEMA cycle with 5 minutes drying and 5 minutes regenerating.

At tower switchover, a 20 second time interval is allowed to bring both towers to full line pressure before switchover, thus preventing rapid pressurization which would agitate the desiccant bed. A special repressurization circuit is energized when the purge valve closes to maintain a 30 second repressurization.

Repressurization takes place in a downward direction through the bed, minimizing desiccant dusting.

C. TIMER OPERATION

The dryer's control circuit board or mechanical timer controls the complete cycle. No field adjustment of any kind is required for proper operation.

D. ADJUSTABLE PURGE FLOW SYSTEM

RH-Series Exhaust Purge Dryers feature an adjustable purge flow system. The purge flow system consists of:

1. Purge Flow Adjustment Valve
2. Purge Flow Meter (Gauge)
3. Purge Orifice (Located in pipe union)

The purge flow system is located between the twin towers of the dryer and/or above the control box. The function of the purge flow system is to regulate the amount of purge air allowed to flow into and subsequently regenerate the off-line (0 PSIG) tower.

The purge air flow is controlled by adjusting the purge flow valve to a specific setting as indicated on the purge flow meter (gauge). Once set, the purge flow adjusting valve in conjunction with the purge orifice plate will allow a certain fixed purge air flow.

CAUTION

TO MAINTAIN THE PROPER OUTLET DEWPOINT, THE DRYER MUST RECEIVE THE PROPER AMOUNT OF PURGE AIR. IF THERE IS EXCESSIVE BACK PRESSURE IN THE TOWER BEING REGENERATED, CHECK THE PURGE MUFFLER AND PURGE PIPING. BACK PRESSURE IS INDICATED WHEN OFF-LINE TOWER PRESSURE GAUGE READS HIGHER THAT 5 PSIG. THE PIPING AND PURGE MUFFLER MUST BE KEPT CLEAN TO MAINTAIN THE PROPER PURGE RATE.

WARNING

WHEN SERVICING PURGE MUFFLER AND PURGE SYSTEM, DEPRESSURIZE BEFORE DISASSEMBLY. BACK PRESSURE CAUSED BY DIRTY MUFFLER/PURGE SYSTEM CAN CAUSE INJURY SHOULD YOU ATTEMPT TO DISASSEMBLY WHILE PRESSURIZED.

E. PURGE FLOW CALCULATION

To calculate Purge Air Flow required for your application, you must first complete the formula refer to Purge Flow Calculation Chart below.

For gauge pressure (PSIG) we provide idea Purge Flow Calculation Chart that converts the Purge Flow Meter reading from PSIG to SCFM. This chart allows you to calculate changes in purge settings as operating pressure varies.

PURGE FLOW FORMULA

Inlet System Requirement	=	SCFM
Absolute Pressure (PSIA)	=	Gauge Pressure (PSIG) + Atmospheric Pressure (14.7 PSI)
Regenerative Constant	=	16.2 (allowing safety factor)
$\frac{\text{SCFM} \times 16.2}{\text{Abs. Pres.}}$	=	Purge Air Flow (SCFM)

E. MOISTURE INDICATOR OPERATION

Moisture Indicator is provided to warn operating personnel of dryer malfunction. If dryer is functioning properly, desiccant in Moisture Indicator will be blue. Should blue color fade or turn pink, discontinue dryer use and consult Troubleshooting Guide.

F. OPTIONAL EQUIPMENT (IF APPLICABLE)

1. Dewpoint Demand System (DDS)

A. The function of DDS is to conserve energy by eliminating unnecessary dryer cycling and heater power consumption.
B. The DDS works by utilizing a moisture sensitive probe to measure the water vapor content of the outlet air from the drying instantaneously to a change in the moisture content of air stream. The moisture content of the sample air stream indicates the wetness of the drying tower's desiccant bed.

The purpose of the probe and its associated electronics is to first measure the "wetness" of the air within the desiccant beds and then regenerate the desiccant beds only when the moisture loading reaches a pre-set maximum dewpoint.

C. Dewpoint Demand System Startup and Operation

1. Put dryer's auto/manual selector switch in "manual" position.
2. Close DDS sample valve.
3. Pressurize the dryer
4. Energize the dryer. Allow dryer cycle for 8 to 16 hours. Observe that both towers have completed a full regeneration cycle.

5. Allowing the dryer to operate for two complete cycles ensures that the probe will not be exposed to high humidity and damaging liquid water. This is especially important when dryer has been stored or sitting idle for several months.
6. After this period, slowly open the DDS sample valve so that a small flow of air passes across the probe (approximately 2 to 3 SCFH). This valve should be open at all times when dryer is in operation.
7. Now turn the auto/manual selector switch to the "auto" position. The DDS operational light will come on to provide indication that the Dewpoint Demand System has been activated.

> **NOTE**
>
> IT IS RECOMMENDED THAT THE DRYER BE OPERATED IN THE MANUAL MODE FOR A PERIOD OF 4 TO 6 MONTHS WHILE DESICCANT AGING OCCURS.

2. Failure to Shift Alarm (FTSA)

A. The Failure to Shift Alarm monitors tower shifting and energize an alarm light on the front panel of the control box should the regenerative dryer fail to cycle.
B. Should dryer fail to cycle because of malfunction of a system component the FTSA light will be energized. Should FTSA alarm light be observed, refer to "Troubleshooting Guide" and reset the alarm.

3. High Humidity Alarm (HHA)

A. The High Humidity Alarm monitors the outlet moisture condition and energizes an alarm light on the front panel of the control box should the regenerative dryer fail to provide proper dewpoint performance.
B. Should dryer dewpoint elevate because of malfunction of a system component, overflow condition, oil contamination, or desiccant attrition, the HHA light will be energized. Should alarm light be observed, refer to "Troubleshooting Guide".

4. MAINTENANCE AND SYSTEM CHECK

B. PREFILTERS AND AFTERFILTERS

1. Prefilters - The cartridges of the prefilters must be changed as often as required to prevent contamination of the regenerative dryer's desiccant bed.

The prefilter MUST BE DRAINED DAILY. To prolong filter cartridge life, it is recom mended that a mechanical air/moisture separator be placed immediately before the prefilter. If an automatic drain trap is used, check its operation every 48 hours.

2. Afterfilters - The purpose of the afterfilter is to remove residual desiccant dust.

NOTE

SHOULD THE DRYING SYSTEM BE OVERLOADED AND/OR MALFUNCTIONING, CAUSING HIGH PRESSURE DROP, AFTERFILTERS WILL PREMATURELY PLUG. THIS PROBLEM CAN BE AVOIDED BY FREQUENT INSPECTION AND CLEANING OF CARTRIDGES.

C. SOLENOID VALVES

Periodically clean all solenoid valves. If the solenoid valves fails to operate, check the following:

1. Control Circuit - Check the outlet voltage from circuit board to verify that the solenoid is receiving electric current.
2. Burned out solenoid cell.
3. High/low voltage - Voltage should be plus or minus 10% of nameplate readings.
4. Solenoid valve leaking - Disassemble, clean and repack or replace.

D. TIMER

The control circuit board or mechanical timer has no maintenance features. Should the sequencing of towers fail, check voltage signals to the appropriate solenoids.

G. EXHAUST MUFFLER

THE EXHAUST MUFFLER MUST BE PERIODICALLY CHECKED FOR ANY RESTRICTIVE DEBRIS. At high pressures, a clogged muffler could result in high backpressure and could result in mechanical failure or personal injury.

EXHAUST MUFFLER CHANGEOUT PROCEDURE

> **WARNING**
>
> TO AVOID INJURY, DEPRESSURIZE DRYER BEFORE PERFORMING ANY SERVICE.

1. If possible, shut off supply airflow to dryer.
2. Check that one of the dryer towers is off-line at 0 PSIG and that air is purging through the muffler.
3. Turn control power off.
4. Shut purge flow adjustment valve off
5. Allow air to bleed off so that no air flow is evident through muffler. If muffler is clogged, **slowly** loosen the muffler and allow the air to bleed off.
6. Replace muffler.
7. Return purge flow adjusting valve to original position.
8. Turn control power back on.

5. PREVENTATIVE MAINTENANCE

A. DAILY

1. Check and record inlet pressure, temperature and flow. Verify that it is within specifications.
2. Check tower pressure gauge readings within operating tolerance.
3. Check tower pressure gauges for proper dryer cycling
4. Check that there is no condense discharged from prefilters.
5. Verify that pressure in purging tower is 5 PSIG or less.
6. Verify that prefilters and afterfilters differential pressure is within operating limits.

C. MONTHLY

1. Check your operating conditions: inlet flow, inlet pressure, and inlet temperature.
2. Check prefilters and afterfilters.
3. Check dryer cycle and sequence of operations. (i.e. drying, depressurizing, regenerating, heating, and cooling)
4. Check tower temperature gauges during third and fourth hour of regeneration cycle.

D. EVERY 3 MONTHS

1. Replace prefilter and afterfilter elements.
2. Check pilot air filter element and clean.

E. SEMI-ANNUALLY

1. Check outlet dewpoint.
2. Blow down relief valves.

F. ANNUALLY

1. Check desiccant and replace if necessary.
2. Inspect and clean pilot operated valves and replace packings as required.
3. Inspect and clean pilot operated valves and replace packings as required.
4. Inspect and clean solenoid valves, check valves, purge lines and lubricated plug valves.
5. Test lights and switches, replace as necessary.
6. Test electrical components, replace as necessary.

G. EVERY 3 YEARS

1. Replace desiccant if necessary.

6. TROUBLESHOOTING GUIDE

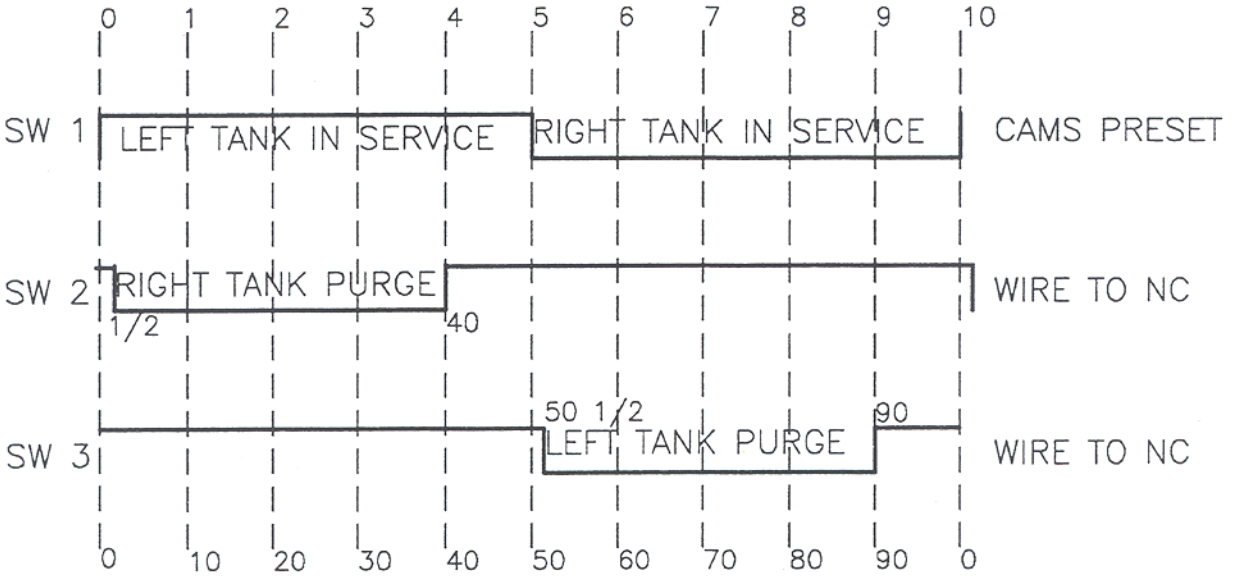
PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Elevated Dewpoint	Insufficient purge rate	1. Check purge flow settings. 2. Check purge piping for obstruction. 3. Clean purge piping and muffler.
	Inlet air/gas pressure below design condition	1. Check pressure source.
	Flow rate higher than design condition	1. Check flow rate and caused for increased Demand.
	Inlet temperature above design condition.	1. Check aftercooler, clean and service as necessary
	Entrained water entering desiccant bed.	1. Check air/moisture separator and prefilter. 2. Replace dryer desiccant if necessary.
	Desiccant contaminated by oil	1. Install suitable prefilter 2. Replace dryer desiccant.
Excessive pressure drop in dryer.	Excessive flow rate.	1. Check flow rate. 2. Locate cause for increased air demand.
	Inlet pressure below design condition.	1. Check pressure source.
Failure to shift towers from drying to regenerating service.	Not input power.	1. Check input voltage
	Defective timer	1. Check input and output voltages.
	Defective solenoid valve.	1. Check input voltage to solenoid valve. 2. Check outlet air flow from solenoid valve.
	No pilot air	1. Check pilot air-line for blockage 2. Check to see if pilot air-line filter is clean. Replace element if needed.
	Defective inlet valves	1. Check for pilot air to operate valve. Refer to steps above if no pilot air is detected.

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Dryer fails to pressurize	Faulty purge valve	1. Check purge valve and its solenoid valve. Refer to earlier steps if no pilot air is detected. 2. Check timer sequencing.
Dryer depressurizes too rapidly	Purge valve does not close; dryer depressurizing through purge valve.	1. Check purge valve and its solenoid valve. Refer to earlier steps if pilot air is detected. 2. Check depressurization timer circuit.
Dryer fails to purge	Purge valve does not open; Purge valve stuck in closed position.	1. Check timer micro-switch. 2. Check solenoid valve. Repair and replace if necessary.
	Purge muffler is clogged	1. Refer to Purge Muffler replacement procedure.
Excessive back pressure in regenerating tower (above 5PSIG)	Purge muffler is clogged	1. Refer to Purge Muffler replacement procedure.
	Outlet check valve stuck open	1. Clean and/or replace.

7. PURGE FLOW CHART

MODEL	SCFM	PURGE FLOW	METER SETTING
RH203	35	4.9	45 PSIG
RH204	50	7.0	45 PSIG
RH205	75	10.6	42 PSIG
RH206	100	14.12	60 PSIG
RH207	125	17.5	39 PSIG
RH208	150	21.2	50 PSIG
RH209	200	28.25	50 PSIG
RH210	250	35.3	45 PSIG
RH211	300	42.37	42 PSIG
RH212	350	48.1	50 PSIG
RH213	400	56.5	45 PSIG
RH214	500	70.6	38 PSIG
RH215	650	88.7	35 PSIG
RH216	750	105.9	44 PSIG
RH217	900	127.1	40 PSIG
RH218	1100	155.4	40 PSIG
RH219	1300	183.6	47 PSIG
RH220	1500	211.8	55 PSIG
RH221	1800	254	55 PSIG

TIME IN MINUTES



CAM DIVISION NUMBERS

REV	ECN	DATE	DESCRIPTION

UNLESS SPECIFIED TOLERANCES ARE:
FRACTIONS +/- 1/32"
DECIMALS +/- .010"
ANGLES +/- 1 DEG

BREAK SHARP EDGES

DRAWN BY	DATE
DMT	8-28-95
CHECKED BY	DATE
SCALE	

NAME

TIMER CHART, 203A-220A
MECHANICAL TIMER

ARROW PNEUMATICS INC.

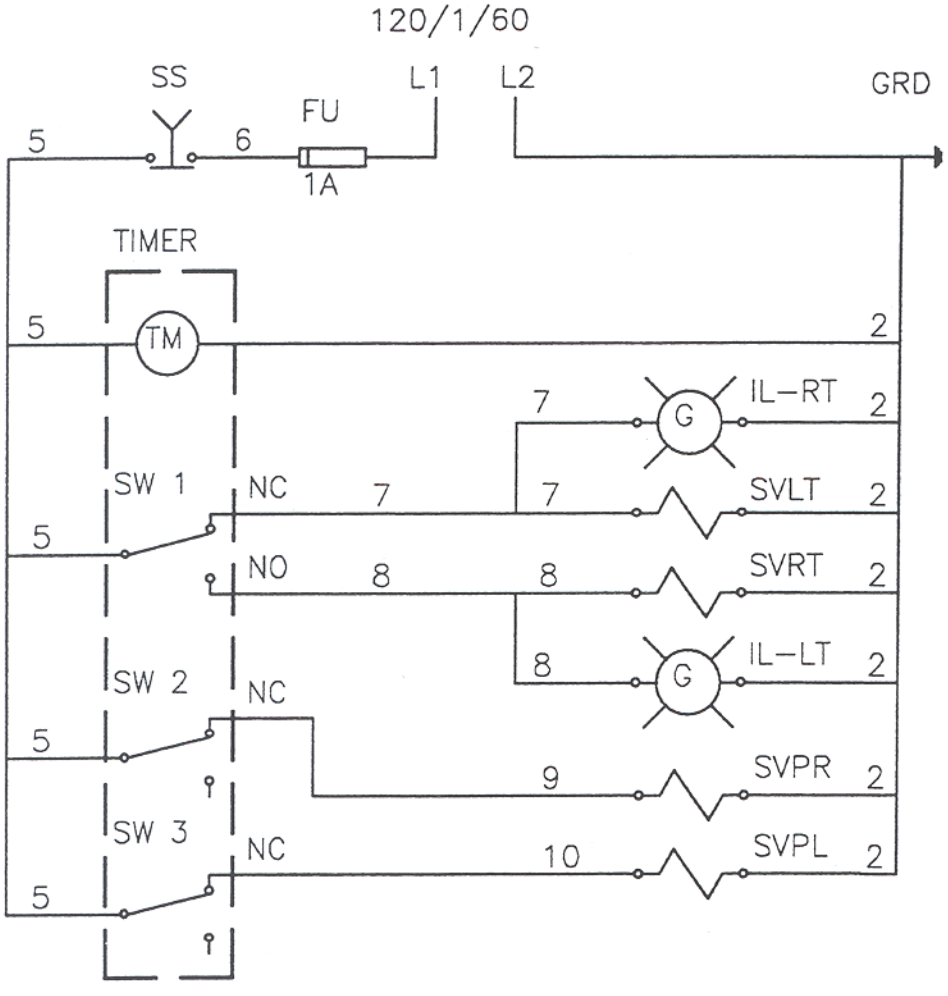
MATERIAL

TREATMENT

FINISH

PART NO.
TIMER CHART

TM	TIMER MOTOR
SS	START/STOP SWITCH
FU	FUSE
SW	TIMER SWITCH
IL–RT	IND LIGHT RIGHT TANK
IL–LT	IND LIGHT LEFT TANK
SVLT	SOL VALVE, LEFT TANK
SVRT	SOL VALVE, RIGHT TANK
SVPL	SOL VALVE, PURGE LEFT
SVPR	SOL VALVE, PURGE RIGHT
GRD	GROUND



REV	ECN.	DATE	DESCRIPTION
		1-8-96	REVISED LAMP DESCRIPTION
		4-29-96	PL/PR REVERSED

UNLESS SPECIFIED TOLERANCES ARE:
FRACTIONS +/- 1/32"
DECIMALS +/- .010"
ANGLES +/- 1 DEG
BREAK SHARP EDGES

DRAWN BY	DATE
DMT	8-28-95
CHECKED BY	DATE
SCALE	

NAME

WIRING DIAGRAM, 203A–220A MECHANICAL TIMER

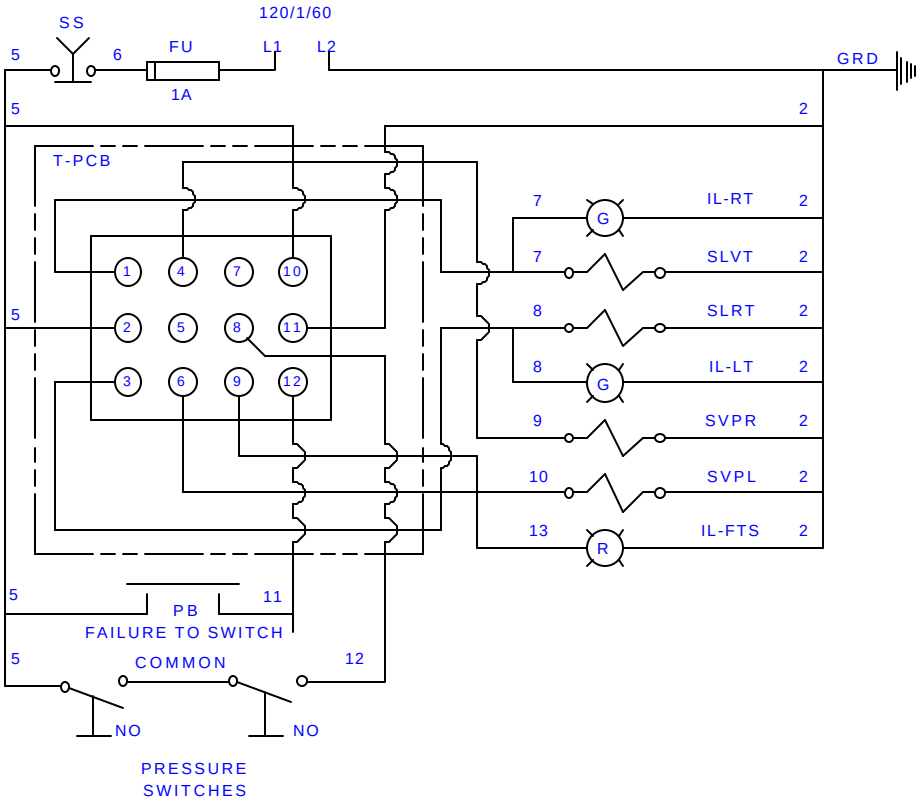
MATERIAL

TREATMENT

FINISH

ARROW PNEUMATICS INC.

PART NO. WD-HTLS DRYER



SS	START/STOP SWITCH
FU	FUSE
IL-RT	INDICATOR LIGHT- RIGHT TANK
IL-LT	INDICATOR TANK - LEFT TANK
SVLT	SOLENOID VALVE - LEFT TANK
SVRT	SOLENOID VALVE - RIGHT TANK
SVPL	SOLENOID VALVE - PURGE LEFT
SVPR	SOENOID VALVE - PURGE RIGHT
PB	PUSH BUTTON/RESET
GRD	GROUND
T-PCB	TIMER - PRINTED WIRING BOARD

REV	ECN	DATE	DESCRIPTION

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
.0 +/- .060"
.00 +/- .030"
.000 - AS SPECIFIED
ANGLES +/- 1 DEG

REMOVE ALL BURRS
BREAK SHARP EDGES

DO NOT SCALE DRAWING

FINISH

TREATMENT

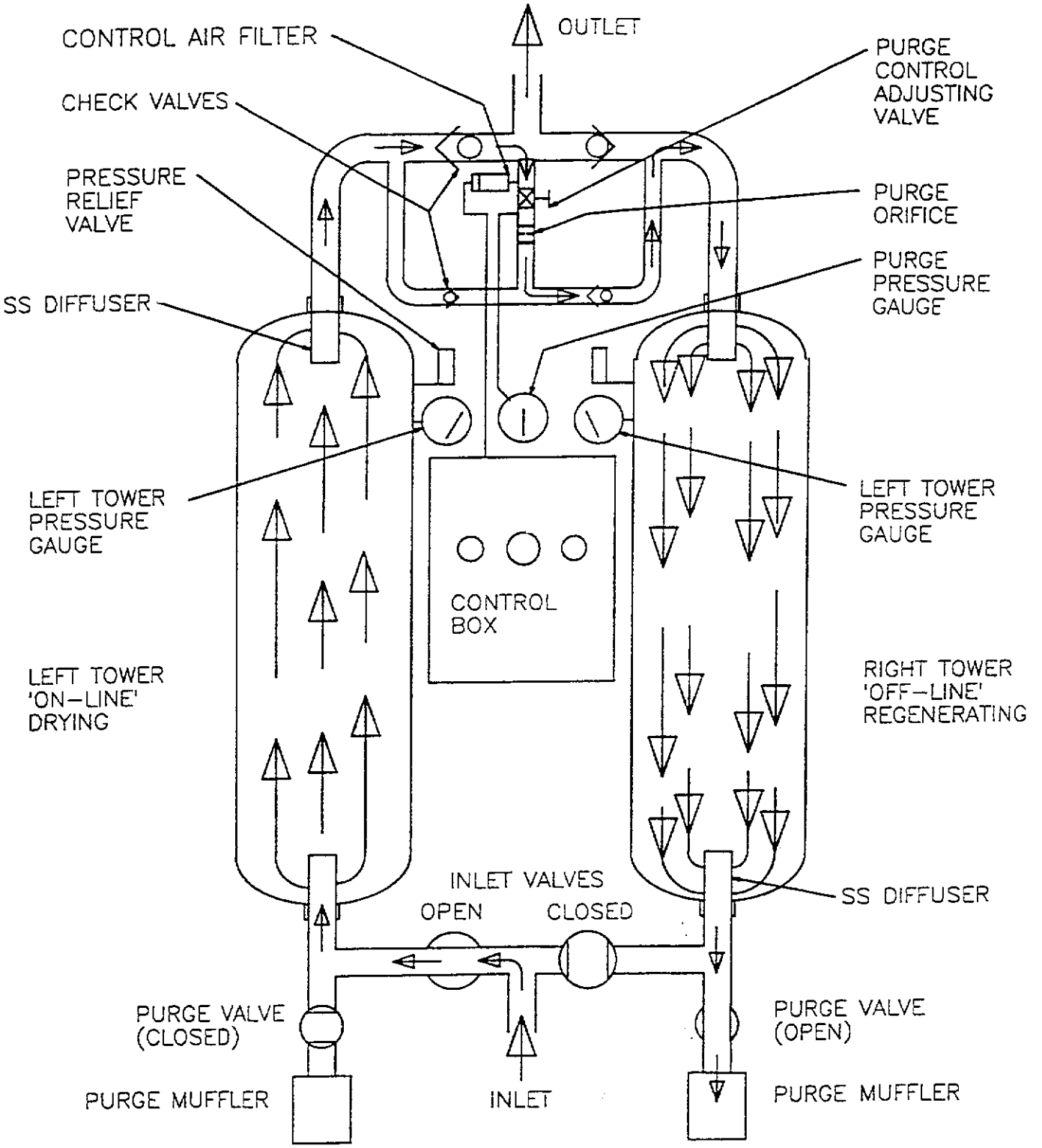
MATERIAL

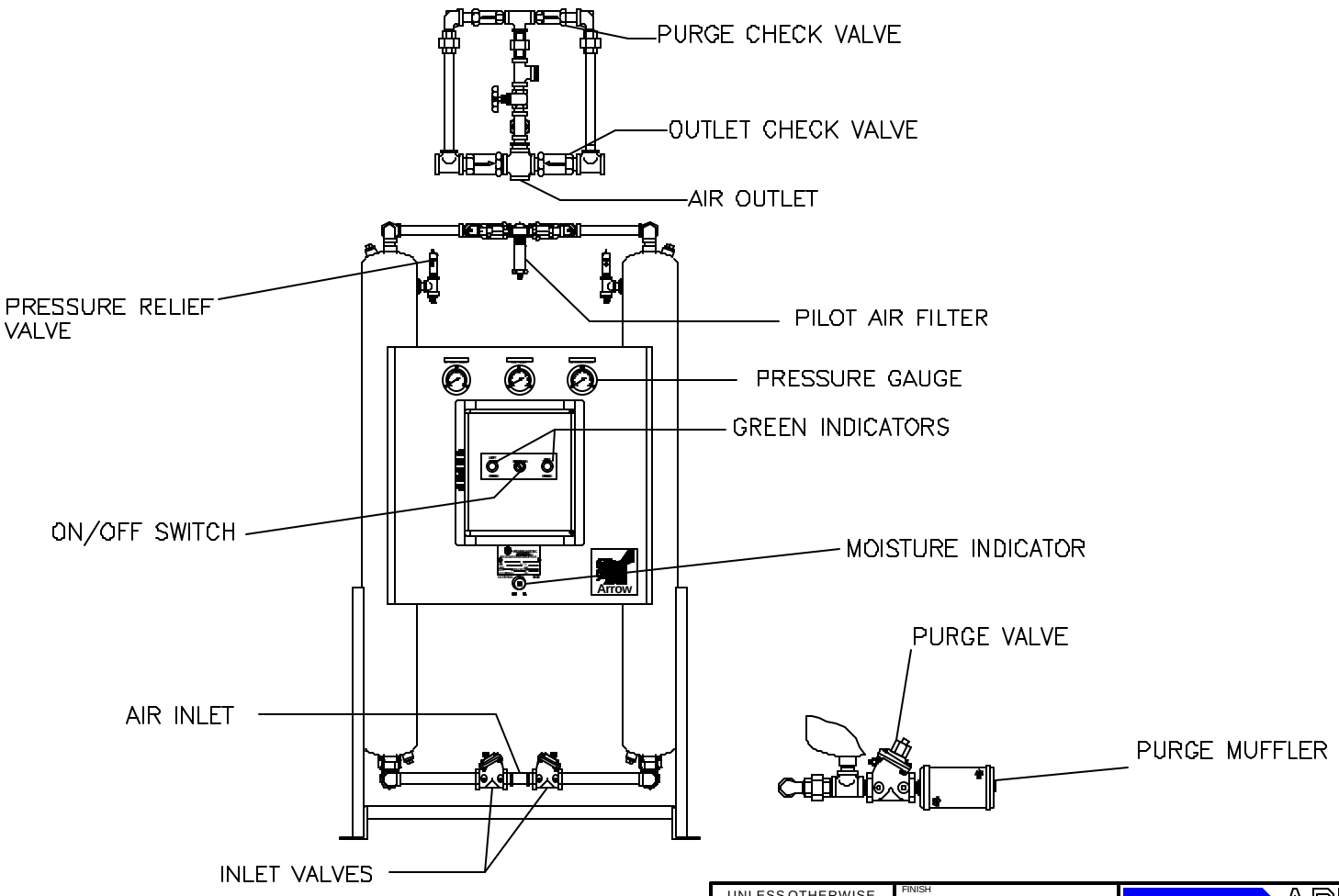
ARROW PNEUMATICS, INC.

NAME
WIRING DIAGRAM, HEATLESS, SOLID STATE TIMER, FAILURE TO SHIFT ALARM

DRAWN BY	DATE		SCALE	REV.
B. CIOTTI	9-22-98	B		
CHECKED BY	DATE	PART NO.	STD & FTS	

HEATLESS DRYER FLOW DIAGRAM





UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
.0 +/- .060"
.00 +/- .030"
.000 - AS SPECIFIED
ANGLES +/- 1 DEG

REMOVE ALL BURRS
BREAK SHARP EDGES

DO NOT SCALE DRAWING

FINISH

TREATMENT

MATERIAL

ARROW PNEUMATICS, INC.

NAME

REPLACEMENT PARTS FOR HEATLESS REGENS

DRAWN BY	DATE	B	SCALE	REV.
CHECKED BY	DATE	PART NO.	HEATLESS	

ARROW PNEUMATICS, INC.
2111 WEST 21ST STREET
BROADVIEW, IL 60155
WWW.ARROWPNEUMATICS.COM

RECOMMEND SPARE PARTS LIST
RH-203A THRU RH-224A

PART DESCRIPTION	MODEL				
	RH203, RH204, & RH205	RH206 & RH207	RH208, RH209, & RH210	RH211 & RH212	RH213 & RH214
INLET VALVE	126150	126155	126156	126157	126157
REPAIR KIT (INLET VALVE)	126150-RK	126155-RK	126156-RK	126157-RK	126157-RK
PURGE VALVE	126151	126151	126151	126151	126151
(REPAIR KIT) PURGE VALVE	126151/54-RK	126151/54-RK	126151/54-RK	126151/54-RK	126151/54-RK
OUTLET CHECK VALVE	25526	25527	126167	126168	126168
PURGE CHECK VALVE	122091	122091	25526	25526	25526
TIMER - CIRCUIT BOARD	126593	126593	126593	126593	126593
TIMER - MECHANICAL	25552	25552	25552	25552	25552
ON/OFF SWITCH	126503	126503	126503	126503	126503
SOLENOID VALVE BLOCK	126183	126183	126183	126183	126183
INDICATOR LIGHT (GREEN)	126504	126504	126504	126504	126504
INDICATOR LIGHT BULBS QTY 10	126353	126353	126353	126353	126353
PURGE MUFFLER	126060	126060	126060	126060	126060
PRESSURE GAUGE	122150	122150	122150	122150	122150
PRESSURE RELIEF VALVE	126026	126026	126026	126026	126026
MOISTRURE INDICATOR ASSEMBLY	126502	126502	126502	126502	126502
PILOT AIR FILTER	9052	9052	9052	9052	9052
(ELEMENT KIT) PILOT AIR FILTER	EK9052	EK9052	EK9052	EK9052	EK9052
REPLACEMENT DESSICCANT TOTAL ACTIVATED ALUMINA - 1/8" BEADS)	RH203: 42 LBS, RH204: 58 LBS, RH205: 88 LBS	RH206: 116 LBS, RH207: 146 LBS	RH208: 174 LBS, RH209: 232 LBS, RH210: 290 LBS	RH211: 348 LBS, RH212: 406 LBS	RH211: 348 LBS, RH212: 406 LBS
ACTIVATED ALUMINA 400 LBS. FIBER DRUM 1/8" BEADS	34010	34010	34010	34010	34010
ACTIVATED ALUMINA 50 LBS. FIBER DRUM 1/8" BEADS	34011	34011	34011	34011	34011
PRESSURE SWITCH	122245	122245	122245	122245	122245
DEWPOINT DEMAND PLUS SENSOR (OPTIONAL)	126535	126535	126535	126535	126535
DEWPOINT DEMAND PLUS CONTROLLER (OPTIONAL)	126536	126536	126536	126536	126536
RELAY (OPTIONAL)	122290	122290	122290	122290	122290
MANUAL/AUTO/OFF SWITCH (OPTIONAL)	126543	126543	126543	126543	126543
INDICATOR LIGHT - RED (OPTOINAL)	126509	126509	126509	126509	126509
INDICATOR LIGHT - WHITE (OPTOINAL)	126556	126556	126556	126556	126556
CIRCUIT BOARD - DEWPOINT DEMAND/HIGH HUMIDITY (OPTIONAL)	122717	122717	122717	122717	122717
HIGH HUMIDITY SENSOR (OPTIONAL)	123079	123079	123079	123079	123079
DEWPOINT DEMAND SENSOR (OPTIONAL)	122158	122158	122158	122158	122158
TRANSFORMER (480V OPTIONAL)	122297	122297	122297	122297	122297

ARROW PNEUMATICS, INC.
2111 WEST 21ST STREET
BROADVIEW, IL 60155
WWW.ARROWPNEUMATICS.COM

RECOMMEND SPARE PARTS LIST
RH-203A THRU RH-224A

PART DESCRIPTION	MODEL			
	RH215 & RH216, & RH217	RH218 & RH219	RH220, RH221, & RH222	RH223, & RH224
INLET VALVE	126158	126227	126160	126160
REPAIR KIT (INLET VALVE)	126158-RK	126227-RK	126160-RK	126160-RK
PURGE VALVE	126154	126154	126154	126154
(REPAIR KIT) PURGE VALVE	126151/54-RK	126151/54-RK	126151/54-RK	126151/54-RK
OUTLET CHECK VALVE	126228	126228	126166	126166
PURGE CHECK VALVE	25527	25527	25527	25527
CIRCUIT BOARD TIMER	126593	126593	126593	126593
TIMER - MECHANICAL	25552	25552	25552	25552
ON/OFF SWITCH	126503	126503	126503	126503
SOLENOID VALVE BLOCK	126183	126183	126183	126183
INDICATOR LIGHT (GREEN)	126504	126504	126504	126504
INDICATOR LIGHT BULBS QTY 10	126353	126353	126353	126353
PURGE MUFFLER	126061	126061	126061	126061
PRESSURE GAUGE	122150	122150	122150	122150
PRESSURE RELIEF VALVE	126026	126026	126026	126026
MOISTURE INDICATOR ASSEMBLY	126502	126502	126502	126502
PILOT AIR FILTER	9052	9052	9052	9052
(ELEMENT KIT) PILOT AIR FILTER	EK9052	EK9052	EK9052	EK9052
REPLACEMENT DESICCANT TOTAL ACTIVATED ALUMINA - 1/8" BEADS	RH215: 754 LBS, RH216: 870 LBS RH217: 1044 LBS	RH218: 1276 LBS, RH219: 1508 LBS	RH220: 1740 LBS, RH221: 2088 LBS, RH222: 2436 LBS	RH223: 2750 LBS, RH224: 3300 LBS
ACTIVATED ALUMINA 400 LBS. FIBER DRUM 1/8" BEADS	34010	34010	34010	34010
ACTIVATED ALUMINA 50 LBS. FIBER DRUM 1/8" BEADS	34011	34011	34011	34011
PRESSURE SWITCH	122245	122245	122245	122245
DEWPOINT DEMAND PLUS SENSOR (OPTIONAL)	126048	126048	126048	126048
DEWPOINT DEMAND PLUS CONTROLLER (OPTIONAL)	126536	126536	126536	126536
RELAY (OPTIONAL)	122290	122290	122290	122290
MANUAL/AUTO/OFF SWITCH (OPTIONAL)	126543	126543	126543	126543
INDICATOR LIGHT - RED (OPTIONAL)	126509	126509	126509	126509
INDICATOR LIGHT - WHITE (OPTIONAL)	126556	126556	126556	126556
CIRCUIT BOARD - DEWPOINT DEMAND/HIGH HUMIDITY (OPTIONAL)	122717	122717	122717	122717
HIGH HUMIDITY SENSOR (OPTIONAL)	123079	123079	123079	123079
DEWPOINT DEMAND SENSOR (OPTIONAL)	122158	122158	122158	122158
TRANSFORMER (480V OPTIONAL)	122297	122297	122297	122297