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Installation & Operation Manual For ENERGENICS WALLHUGGER SERIES

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DESCRIPTION OF LINT FILTER OPERATION

Your new Energenics Lint Filter operated with a UL approved control represents the most advanced features available in the laundry industry to date. The following list the functions and mode of operation:

Blowdown (cleaning) – The Lint Filter will monitor the system backpressure and automatically initiate the blowdown cycle. As the screen loads with lint the lint, the back pressure will increase and will result in an automatic blowdown (cleaning) when the backpressure reaches a set reference (default is .5" w.c.). The lint filter wills also blowdown every 30 minutes to insure complete screen cleaning when dryers are turned off. The setting can be adjusted by the operator by changing program values in the PLC. 70% of the lint will be removed from the screen even though the dryer(s) may be operating. During the timed blowdown with dryers off, 100% of the lint will be removed from the screen. A manual blowdown can also be done by depressing the button on the bottom of the Lint Filter control. **Note that automatic blowdown cannot occur within 20 seconds of a prior blowdown.** This is done to allow the compressed air supply to fully recover.

Optional Excess Pressure Alarm – If for any reason the Lint Filter has not blown down properly (i.e.: compressor turned off) the system will sense a higher backpressure than normal. The excess light on the filter control and the siren and the strobe light both activate. The Filter control will attempt to blowdown every 20 seconds until the excess backpressure condition has terminated. If this condition persist a manual inspection of the lint screen and observation of proper blowdown must be done.

Optional Fire Control System – A normally open sensor located inside of the filter at the top of the inlet will close at 275 degrees F. The control will open the water solenoid, illuminate the strobe as well as energize the siren. The Alarm will be active until 30 seconds after the temperature has dropped bellow 275 degrees F. After 30 seconds the alarm will automatically reset. Inside the control box is a Fire Control test button. Depress the button and the Fire Control will be activated for 30 seconds. The function of the test button is to check the circuit. It does not test the sensor itself. Using a propane torch to the sensor will test the complete system.

RECEIVING & INSTALLATION

Before you sign the Bill of Lading:

1. Receiving- Inspect units inside and out for signs of damage Verify all components are delivered per the Bill of Materials.

Report damage to the carrier IMMEDIATELY.

Note ALL damage on the Bill of Lading.

This is your responsibility and you must file all claims.

The filter is fully assembled and ready for installation. The control, valves, and lint bag are in the cardboard box.

2. Installation- Follow instructions herein:

Determine the location with reference to minimum duct work from the dryer and ease of access for inspection.

If using a lint drop pipe allow enough room for lint to travel down 4' before the first bend. Max bend angle is 30 degrees.

If using lint bag or container make sure adequate clearance is allowed.

Conduit or Sealtight between filter junction boxes should be ¾ inch.

Dependant on options ordered, not all outputs will have connected components.

If the Fire Control Option is NOT ordered the installer must supply a junction box to connect the wires from the solenoid valve to the Control Box.

When mounting the filter overhead, mount the control below the filter where it can be easily accessed.

Important Installation Considerations

All Energenics Lint Collectors can be mounted indoors or outdoors. If it is mounted outdoors we recommend our Side Discharge or a field installed swept radius elbow (Gooseneck). Do not use a conical cap on the filter exhaust discharge. All solenoid valves should be located inside the building. Also, mount the supplied air pressure gauge at the blowdown pipe on top of the filter.

All solenoids should be mounted as close to the filter as possible, but ALWAYS inside the building. This will allow most of the air and water (if equipped with optional Fire Control) piping to remain pressure charged for most efficient operation.

All wiring should be a minimum of 18 gage for proper operation.

The Filter Control box should be located in a position to be easily seen and in close proximity to personnel. In other words if the Filter Control is located outdoors, 20 feet in the air or in another room away from the laundry personnel, this would be the **wrong** location. Lint Filter controls should never be mounted outdoors.

Since the Filter uses compressed air it is important that the air receiver (if equipped) be located as close to the filter as possible. The longer the pipe runs the more restrictive. You will need to increase the pipe diameter if the run is very long (e.g.: 60 feet).

If the installation is a multi-dryer/multi-duct installation it may be necessary to use backdraft dampers to prevent lint backflow into the ducts of turned off dryers. Most dryers have them available as standard equipment or can be ordered to add on.

After everything is mounted and utilities turned on press the manual blowdown button located on the bottom of the Filter Control. The rotor on the inside the lint filter should spin. Make sure that the air pressure at the filter starts out at 100 and ends at about 60 at the end of the blowdown cycle. If it is too low the rotor won't turn.

If the Filter is equipped with Fire Suppression, the test button is on the inside of the Filter Control. It is on the inside to keep people from pushing the button as they walk by. When the button is pushed the strobe and siren will go on along with the water solenoid valve. The system operates until the button is no longer depressed.

Warning and Caution

You have purchased the finest lint filter available for your facility. Please follow these instructions to ensure a safe long life for your filter and facility.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN AN UNSAFE

OPERATING CONDITION, INCLUDING THE POSSIBILITY OF FIRE.

DO NOT OPERATE ANY DRYER CONNNECTED TO THIS FILTER WITHOUT BEING CERTAIN THE FILTER STARTUP HAS BEEN COMPLETED AND THE FILTER IS IN OPERATING CONDITION.

Insure it is installed in compliance with local codes.

- Step 1. Install the compressed air (Fire suppression plumbing if ordered), and piping system(s) including solenoid valves. If the filter is in position, make all final connections.
- Step 2. Mount the 007 control in a visible location on a solid vibration free surface and connect all components.
- Step 3. Provide dedicated electrical service to the transformer and test all systems.
- Step 4. Install sheet metal and ducting.

START UP AND OPERATION INSTRUCTIONS

Inspect the filter installation. Is it complete? Review the entire installation requirements prior to startup.

- 1. Verify the 007 control wiring.
- 2. Test the blow down cycle (push manual button on control). Watch the pressure gauge. It should start at 100psi and should not drop below 60psi during the 6-10 second cycle.

The rotor should turn 6-12 times during blow down. The rotor propulsion is adjustable by increasing the number of horizontal holes on the top horizontal portion of the rotor end.

3. Review maintenance requirements and establish a regular PM schedule.



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SCALE: 1" = 1'

DRAWING NUMBER: 1305.7

DIMENSIONS: 1"

DRAWN BY: JAH

COPYRIGHT: 9/4/91

REVISED: 3/14/95

TITLE: WALL HUGGER LINT

FILTERS

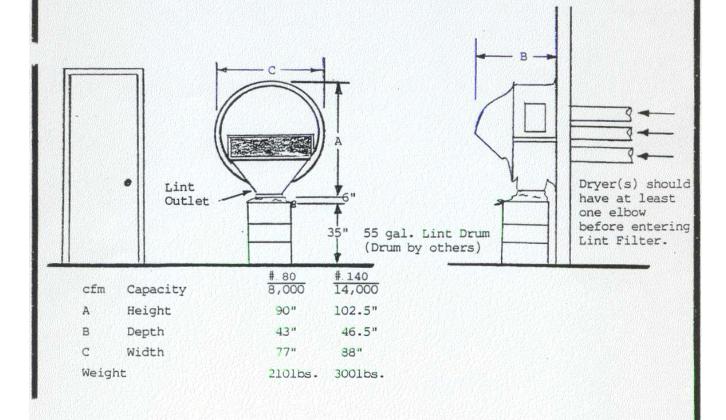
For # 80 & #140

Benefits:

Easily retrofitted to existing site with no extra sheet metal required at all.

Lines up nearly flush with side of building to not spoil sight lines. Filters can be painted to match external wall color.

- Installation: 1. Use threaded rod through concrete block walls, or use wall anchors appropriate to the surface present.
 - Bolt Filter to wall at the 6 o'clock position first (because the 2. Lint Outlet is in the way of this bolt otherwise).
 - 3. Bolt Filter to wall on either side of Lint Outlet next.
 - 4. Space bolts every 16" around perimeter thereafter. (The #80 will use 15, #140 will use 18 bolts)
 - 5. Caulk Filter edge against wall with rubberized caulk from the inside of the Filter (crawl up the 15" x 15" Lint Outlet).





Naples, FL 800/944-1711

SCALE: 1" = 1'

DIMENSIONS:

DRAWN BY: JAH

COPYRIGHT: 9/4/91

REVISED: 6 /29/93

DRAWING NUMBER: 1305.7.1

TITLE: WALL HUGGER LINT

FILTERS

FOR #35 and #60

Benefits:

Easily retrofitted to existing site with no extra sheet metal required at all.

Lines up flush with side of building to not spoil sight lines.

Filters supplied painted to match external wall color.

Installation: 1. Use threaded rod through concrete block walls, or use wall anchors appropriate to the surface present.

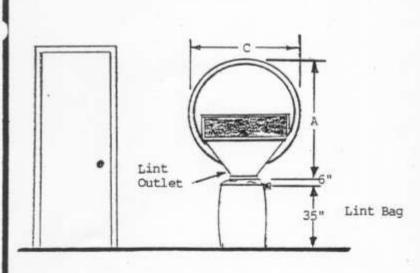
2. Bolt Filter to wall at the 6 o'clock position first (because the

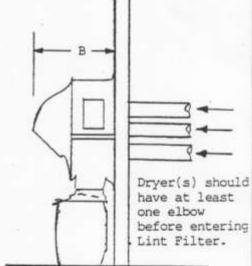
Lint Outlet is in the way of this bolt otherwise).

3. Bolt Filter to wall on either side of Lint Outlet next.

4. Space bolts every 16" around perimeter thereafter. The #60 will use 13 bolts, the #35 will use 6 bolts.

Caulk Filter edge against wall with rubberized caulk.





CFM	Conneller	#35	# 60
CEM	Capacity	3,500	6,000
A	Height	55"	76"
В	Depth	34"	41"
C	Width	48"	66" .
	Weight	751bs.	1601bs.



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Slope to drain indoors

ed hereon is copyrighted and the sole pro-

!" Water Connection

each side.

SCALE: NONE

DIMENSIONS: ± 1" DRAWN BY: HPP

COPYRIGHT: 12/30/93

REVISED: 4/12/95

DRAWING NUMBER: 1306.1

TITLE:

INSTALLATION REQUIREMENTS Piping

WALLHUGGERS #35,60,80 & 140

LEGEND

Furnished by installer

Furnished by Energenics (standard)

Furnished by Energenics (option)

COMPRESSED AIR REQUIREMENTS

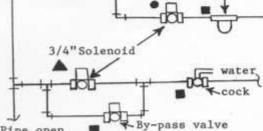
Energenics' Wallhugger 30 and 65 Lint Filters consume cu.ft of free air at 100 pai during a 6 second blowdown. For one dryer exhausting 15 one lint filter, blowdowns occur approx. 15 secs after dryer and-of-cyc For one dryer exhausting into

If the plant compressed air system is already adequate for the existing equipment, the addition of the Lint Filter will cause no undue drain on plant compressed air. If existing air system is marginal or inadequate, add a 60 gallon (or larger) air receiver tank within 50 linear feet of the Lint Filter. Use 3/4" pipe, or oversize the air line per proper engineering tables to ensure adequate air delivery to the Lint Filter. WARNING: Dry Lint Filters use much more compressed air during their 6 eec. blowdown than washers or laundry pressure at dequate air volume" is determined by a compressed air pressure reading of 80 psi on the factory installed gage on the Lint Filter during the blowdown. The air pressure during the 6 eec. blowdown should not drop below 60 psi. For multiple dryers exhausting into one Lint Filter, Filter blwodowns occur approx. every 1-3 hrs (adjustable). "Adequate air volume"

Filter (Grainger's or equivalent)

valve

60/80GALLON OR LARGER AIR RECEIVER, LOCATE WITHIN 50 LINEAR PT. OF FILTER



1/8" Pipe open to gravity drain

3/4" I.D.

(USE WHEN FILTER MAY BE SUBJECTED TO SUB-FREEZING TEMPERATURES.

Model	Value Size	Air	Tank Size
#35	3/4"	60	gallon
#60	3/4"	60	gallon
#80	1"	80	gallon
#140	1"	80	gallon

WATER REQUIREMENTS FOR OPTIONAL FIRE CONTROL SYSTEM

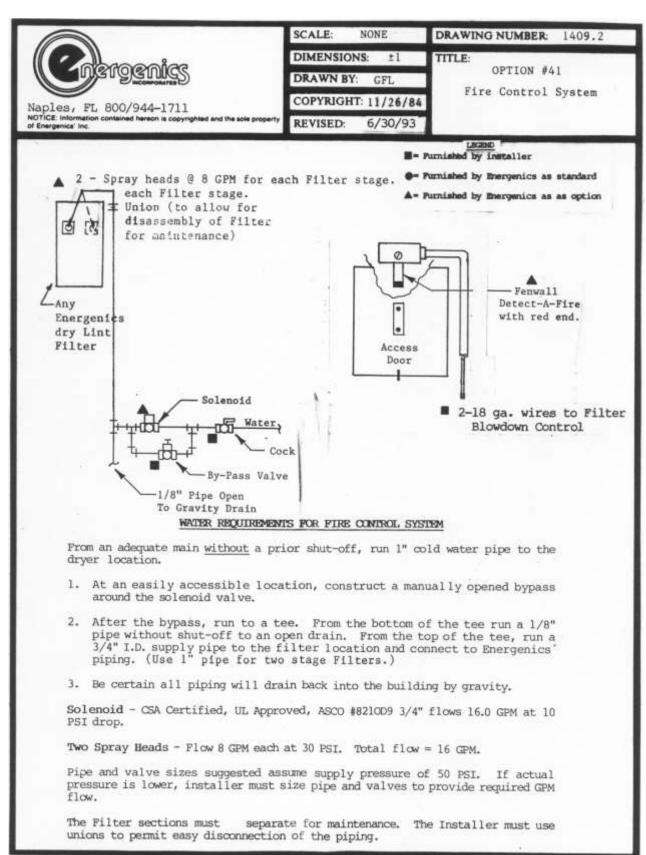
From an adequate main without a prior shutoff, run $3/6^{\circ}$ cold water pipe to the dryer location.

- At an essily accessible location, construct a manually opened bypass around the solenoid valve.
- After the bypass, run to a tee. From the bottom of the tee, run a 1/8" pipe without shutoff to an open drain.
 From the top of the tee, run a 3/4" supply pipe to the filter location and connect to Energenics" piping.
- 3. Be certain all piping will drain back into the building

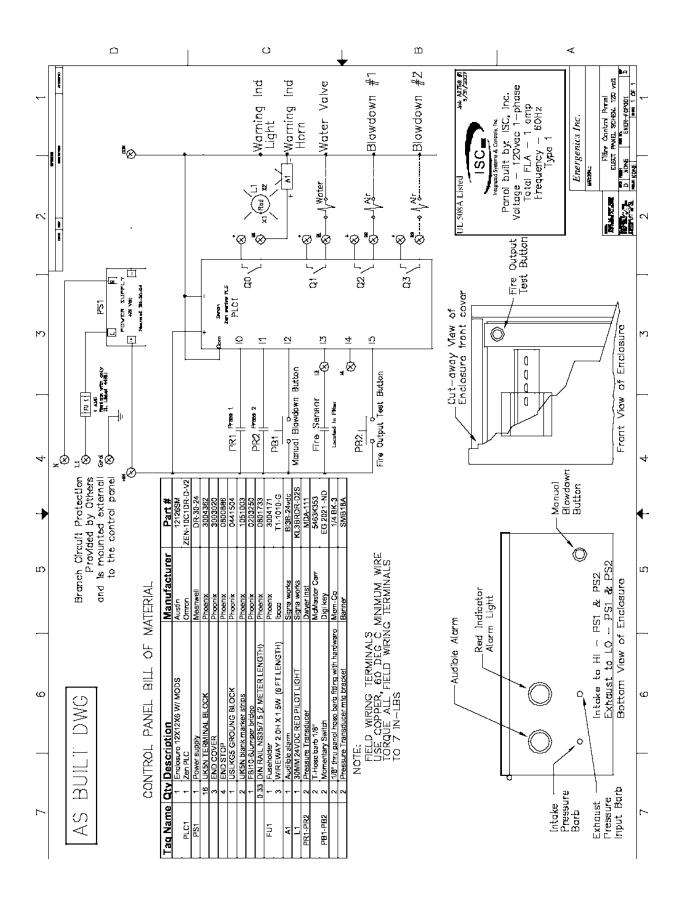
Sclenoid: CSA certified, UL approved, ASCO #821009-3/4" flows 16.0 GPH at 10 pei drop.

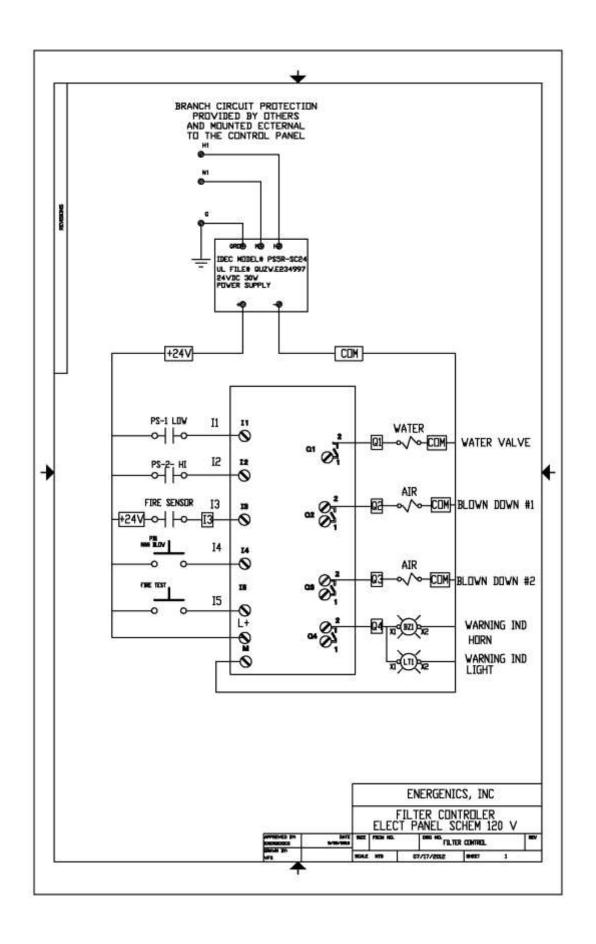
Two apray heads flow 8 GPM at 30 pai, each.

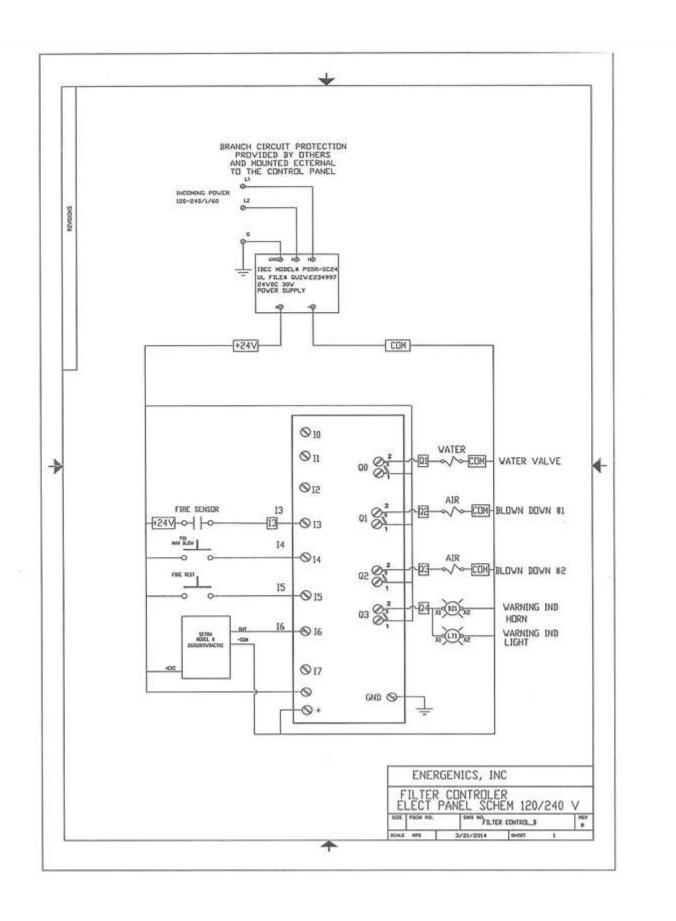
Pipe and valve sizes suggested assume supply pressure of 50 psi. If actual pressure is lower, installer must size pipe and valves to provide required GPM flow.



ALL OR PART OF THESE DEVICES ARE COVERED BY U.S. PATENT NO'S 4,349,362 AND 4,267,643.







INSTRUCTIONS TO CHANGE BLOWDOWN & EXCESS PRESSURE SET-POINT ON LINT FILTER CONTROL WITH SETRA PRESSURE TRANSDUCER

- 1. Start at the "HOME SCREEN". The Home Screen is indicated with "SYSTEM IS OK" and a display at the bottom with a bar at the bottom indicating -2.5"-+2.5" W.C.
- 2. Press the "Down" arrow once to display the "Running Screen".
- 3. Press and hold the "ESC" button. While holding down the "ESC" button press the "OK" button, then release both buttons to display "Device Monitor" (#2 of 4 selections listed).
- 4. Press "Down" arrow to Device Manager
- 5. Press "OK" button.
- 6. To change Blowdown set-point press "Left" Arrow to "D000" (#1 of 4 selections listed).
- 7. Press and hold the "OK" button until arrow is displayed next to "D000". Release "OK" button.
- 8. Press "OK" button to highlight the value field, then release.
- 9. Pressing the "Left" or "Right" buttons will highlight each digit.
- 10. When desired digit is "blinking" press the "Up" or "Down" button to increase or decrease the value.
- 11. When desired value is displayed, press the "OK" button.
- 12. To change Excess Pressure set-point press "Down Arrow" button until display arrow is adjacent to "D001" (#2 of 4 selections listed).
- 13. Press "OK" button to highlight the value field, then release.
- 14. Pressing the "Left" or "Right" buttons will highlight each digit.
- 15. When desired digit is "blinking" press the "Up" or "Down" button to increase or decrease the value.
- 16. When desired value is displayed, press the "OK" button.
- 17. Press "ESC" button 3 times to display "Running Screen".
- 18. Press "Up" arrow to display "Home Screen".
- 19. Turn power off and power up to reset the control. The "HOME SCREEN" will be displayed and the control is now ready for normal automatic operation.

SET-POINT VALUE TABLE

.50"-----600

.75"-----650

1.00"----700

1.25"----750

1.50"----800

1.75"----850

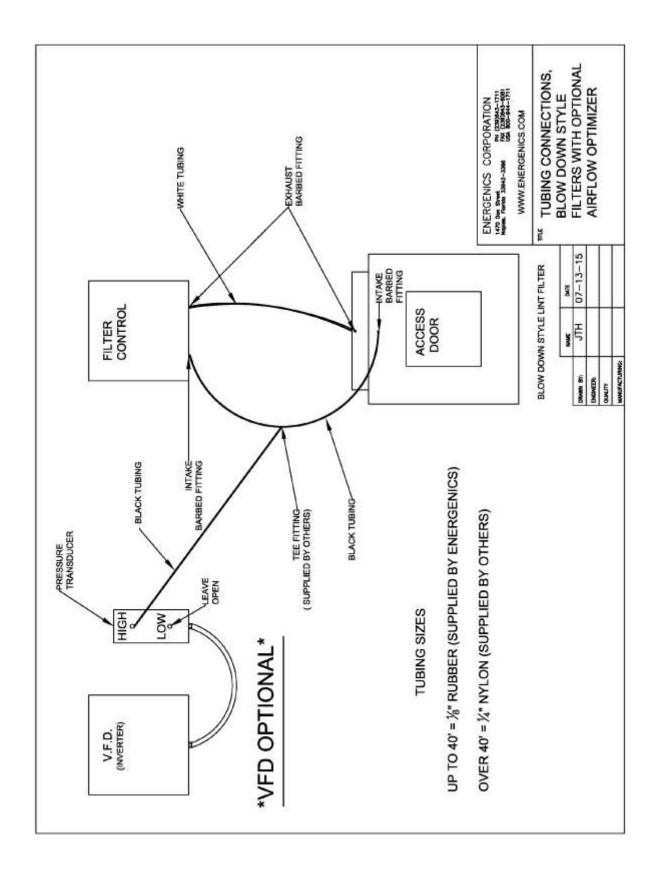
2.00"----900

INSTRUCTIONS TO CHANGE TIMED BLOWDOWN INTERVALS ON LINT FILTER CONTROL WITH SETRA PRESSURE TRANSDUCER

- 1. Start at the "HOME SCREEN". The Home Screen is indicated with "SYSTEM IS OK" and a display at the bottom with a bar at the bottom indicating -2.5"-+2.5" W.C.
- 2. Press the "Down" arrow once to display the "Running Screen".
- 3. Press and hold the "ESC" button. While holding down the "ESC" button press the "OK" button, then release both buttons to display "Device Monitor" (#2 of 4 selections listed).
- 4. Press "Down" arrow to Device Manager
- 5. Press and release "OK" button.
- 6. Press "Left" Arrow to "D002" (#3 of 4 selections listed).
- 7. Press and hold the "OK" button until arrow appears next to "D000". Release "OK" button.
- 8. Press "Down" arrow" to place arrow cursor next to "D002". The value on right is in seconds of time.
- 9. Press "OK" button and release to highlight the value field.
- 10. Pressing the "Left" or "Right" buttons will highlight each digit.
- 11. When desired digit is "blinking" press the "Up" or "Down" button to increase or decrease the value.
- 12. When desired value is displayed, press the "OK" button.
- 13. Press "ESC" button 3 times to display "Running Screen".
- 14. Press "Up" arrow to display "Home Screen".
- 15. Turn power off and power up to reset the control. The "HOME SCREEN" will be displayed and the control is now ready for normal automatic operation.

INSTRUCTIONS TO DISABLE TIMED BLOWDOWN WHEN ALL DRYERS TURN OFF FOR LINT FILTER CONTROL WITH SETRA PRESSURE TRANSDUCER

- 1. Start at the "HOME SCREEN". The Home Screen is indicated with "SYSTEM IS OK" and a display at the bottom with a bar at the bottom indicating -2.5"-+2.5" W.C.
- 2. Press the "Down" arrow once to display the "Running Screen".
- 3. Press and hold the "ESC" button. While holding down the "ESC" button press the "OK" button, then release both buttons to display "Device Monitor" (#2 of 4 selections listed).
- 4. Press "Down" arrow to Device Manager
- 5. Press and release "OK" button.
- 6. Press "Left" Arrow to "M020" (#3 of 4 selections listed).
- 7. Press and hold the "OK" button until arrow appears next to "M000". Release "OK" button.
- 8. Press "Down" arrow" to place arrow cursor next to "M020".
- 9. Press "OK" button and release to highlight the value field.
- 10. Pressing the "Left" or "Right" buttons will highlight each digit.
- 11. Press "Right" arrow button to highlight the digit "5"
- 12. Press "OK" button to have the digit "5" highlighted with a black box. This black box indicator disables the "Dryer Off" blowdown. Pressing the "OK" button again to remove the black box highlight enables the "Dryer Off" blowdown.
- 13. Press "ESC" button 3 times to display "Running Screen".
- 14. Press "Up" arrow to display "Home Screen".
- 15. Turn power off and power up to reset the control. The "HOME SCREEN" will be displayed and the control is now ready for normal automatic operation.



MAINTENANCE REQUIREMENTS

The frequency of your maintenance requirements depends upon the number of hours of operation and upon variances in your product output. For a single-shift operation, without special problems, the frequency recommended below should suffice. You should set your own schedule based on your experience.

1. WEEKLY

Visually inspect the filter inside and outside, its controls and their operation. At time of such inspection, note and correct any discrepancies from normal operation.

2. MONTHLY

Check the static pressure. Disconnect the lower pressure hose, and then use a magnehellic gauge, manometer, or U-tube to measure and record the resistance. This will show the pattern of operation of your system. If pressure exceeds 1 inch W.C., insure the rotor is correctly turning and cleaning the screen.

Watch the air pressure gauge on the filter. Record the drop in pressure during the blow down cycle. A normal pressure is from 100psi at the start to 60psi after ten seconds. The minimum pressure is 60psi. Any less will not reliably clean the screen. If the pressure were to fall from 100psi to 40psi, the air supply is inadequate or obstructed.

3. QUARTERLY

On filters using fire protection control, carefully test the Fenwall fire sensor accessed through the inspection door. First disconnect the initiator/solenoid leads from the panel and connect a 24 VDC bulb to initiator terminals in the control unit. Heat the Fenwall fire sensor with a heat lamp or other convenient source. When the bulb in the control unit changes state, remove heat source and allow Fenwall fire sensor to cool. Reset control unit. Test lamp must change state and stay changed after system is reset. Do not reconnect initiator/solenoid leads until all Fenwall fire sensors have cooled below set point as indicated by test lamp.

FILTER SCREEN MAINTENANCE

Chemicals present in the laundry uniforms, shop towels or other linen may eventually clog the filter screen. When this occurs, try the following:

- 1. Spray with an engine degreaser like GUNK. Allow soaking per the instructions for cleaning an auto engine. Spray clean with water.
- Operate one dryer without a load to blow hot air through the filter to dry it.
- 3. Restart the dryer. Operation should be perfectly normal. It should not be necessary to replace the screen unless it is punctured.

MODEL WH35

PART	
NUMBER	DESCRIPTION
35140	Rotor And Rotor Support Assly
35001	Wall Section (One Piece)
35005	Outlet
35570	Lint Screen With Cables (210 Micron)
35580	Lint Screen Without Cables (210 Micron)
BWH35	Lint Bag $(46'' \times 27^{\frac{1}{2}})''$
10180	Flex Connector (14" Round)
6557	3/4" Air Solenoid Valve (24 VAC)
6557	3/4" Water Solenoid Valve (24 VAC)
6015	Fenwall Fire Sensor
6690	Spray Head (Water Nozzle)
90002	9002 Main Control Box
9001PC	9001 PC Board
9002PC	9002 PC Board
90001	Pressure Input Box
4211	Siren Alarm
4210	Strobe Alarm
90009	10 Conductor Wire
90003-OLD	9001 Transformer W/Box
90003	9002 Transformer W/Box

MODEL WH60

PART	
NUMBER	DESCRIPTION
13140	Rotor And Rotor Support Assly
13001	Top Half Of Center Section
13004	Bottom Half Of Center Section
13005	Outlet
13570	Lint Screen With Cables (210 Micron)
13580	Lint Screen Without Cables (210 Micron)
BWH60	Lint Bag $(76'' \times 27^{\frac{1}{2}})''$
10160	Flex Connector (15" Sq.)
6557	3/4" Air Solenoid Valve (24 VAC)
6558	3/4" Water Solenoid Valve (24 VAC)
6015	Fenwall Fire Sensor
6691	Spray Head (Water Nozzle)
90002	9002 Main Control Box
9001PC	9001 PC Board
9002PC	9002 PC Board
90001	Pressure Input Box
4211	Siren Alarm
4211	Strobe Alarm
90009	10 Conductor Wire
90003-OLD	9001 Transformer W/Box
90003	9002 Transformer W/Box

MODEL WH80

PART	
NUMBER	DESCRIPTION
14140	Rotor And Rotor Support Assly
14001	Top Half Of Center Section
14004	Bottom Half Of Center Section
14005	Outlet
14570	Lint Screen With Cables (210 Micron)
14580	Lint Screen Without Cables (210 Micron)
BWH80	Lint Bag (76" x 27 ½")
10160	Flex Connector (15" sq.)
6558	1" Air Solenoid Valve (24 VAC)
6559	3/4" Water Solenoid Valve (24 VAC)
6015	Fenwall Fire Sensor
6692	Spray Head (Water Nozzle)
90002	9002 Main Control Box
9001PC	9001 PC Board
9002PC	9002 PC Board
90001	Pressure Input Box
4211	Siren Alarm
4212	Strobe Alarm
90009	10 Conductor Wire
90003-OLD	9001 Transformer W/Box
90003	9002 Transformer W/Box

MODEL WH140

PART	
NUMBER	DESCRIPTION
17140	Rotor And Rotor Support Assly
17001	Top Half Of Center Section
17004	Bottom Half Of Center Section
17005	Outlet
17570	Lint Screen With Cables (210 Micron)
17580	Lint Screen Without Cables (210 Micron)
BWH140	Lint Bag $(76'' \times 27^{\frac{1}{2}})''$
10160	Flex Connector (15" Sq.)
6558	1" Air Solenoid Valve (24 VAC)
6560	3/4" Water Solenoid Valve (24 VAC)
6015	Fenwall Fire Sensor
6693	Spray Head (Water Nozzle)
90002	9002 Main Control Box
9001PC	9001 PC Board
9002PC	9002 PC Board
90001	Pressure Input Box
4211	Siren Alarm
4213	Strobe Alarm
90009	10 Conductor Wire
90003-OLD	9001 Transformer W/Box
90003	9002 Transformer W/Box