

# BAHNSON TYPE E SELF-CONTAINED HUMIDIFIER

# DnB

DnB Humidifier Mfg., Inc.  
175 Dixie Club Road  
Winston-Salem, NC 27107-9806  
Phone 336-764-2076  
Fax 336-764-4277

## INSTRUCTIONS FOR OPERATION EIA AND EIIA

### LOCATION

Bahnson E Humidifiers should be located so that the screened opening at the top is a minimum of 12" below the ceiling, beam, or truss which is directly above the unit. They should be suspended so that the mist which is delivered horizontally through the center opening, will not strike any columns, pipe, or other obstructions near the unit. Discharge shields can be furnished to prevent moisture from striking nearby obstructions. The discharge shield is a soft elastomer tubing that is installed by compressing and inserting into the vapor discharge opening.

### SUSPENDING

The unit should be suspended by means of pipe strapping or chain, dropped straight down to the 3 socket hangers. The hangers are approximately 13" apart.

While the unit is being suspended, it should be leveled as accurately as possible. The level can be readjusted later after the water supply has been piped to the unit.

### WATER SUPPLY

The water supply to the unit should be clean water at any pressure up to 80 psi. The supply line to each unit should be 1/4" copper tubing or 1/8" galvanized pipe

### OVERFLOW

A 3/8" MPT overflow fitting is provided with each unit and a drain line may be field installed if desired as a safety assurance against overflows.

### ELECTRICAL CONNECTIONS

Electrical wiring should be in accordance with local electrical codes. A wiring diagram is shown on the back page showing straight connections or through a MBE1 control.

### OPERATION

After the unit has been installed and leveled, and water and electrical connections have been made, the unit should be tested. With the water valve shut off, turn on the electric current to the unit. With the motor operating, check to see that nothing has been damaged. With the motor off turn on the water valve, observe the float valve and its cut off level. When the water reaches a depth of 1 1/2" to 1 3/4" in the reservoir the unit is operating normally. If further adjustment is needed remove the reservoir, and bend the float arm up or down as required.

The humidifier is now in operating condition. With the motor running the unit should produce a fine mist.

See the operation instructions on page 4 and 5 if a humidistat is being used.

### MAINTENANCE

Under normal operating conditions cleaning and inspection should be at 30 day intervals. If the operating environment results in a rapid accumulation of foreign material, it may be necessary to inspect the unit more often. If an excessive amount of fibrous material is present, filter screen part no. 26817 should be used, filter media part no. 19796 should be used over the filter screen if fine particular matter is present.

# TYPE E HUMIDIFIER



## CLEANING

1. Turn electrical and water supply off.
2. Remove reservoir and clean with soap and water.
3. Remove and clean Y strainer.
4. Remove pump housing cover. Inspect pump rotor and housing. Clean if necessary.
5. Inspect pump discharge tube, clean if necessary.
6. Inspect grid and all surfaces of discharge opening. These items may be cleaned in place. If the accumulation of foreign material is substantial, the parts should be disassembled and cleaned individually with soap and water. (See disassembly instructions)
7. Replace reservoir.
8. Turn water supply on.
9. Turn electrical supply on.

## DISASSEMBLY

1. Before disassembling the humidifier please review the data sheet which shows parts list and a cross section drawing on the last page of this catalog.
2. Close off water supply valve no. 6138.
3. Disconnect electrical supply.
4. Remove reservoir assembly no. 26586 by removing the 3 nuts.
5. Disconnect the humidifier from its water supply at compression fitting no. 1799 next to strainer no. 26792.
6. Remove the humidifier from its suspension straps or chains and place upright on a flat surface.
7. Remove intake screen retainer no. 26916 and intake screen no. 26917 by removing 4 screws no. 5282s.
8. Remove top fan no. 26562 by loosening the retaining screw in the fan collar.
9. Invert the humidifier so its resting on shroud no. 26593.
10. Remove 3 of 4 screws no 4871 on pump housing cover no. 26575. Pivot cover on remaining screw so pump rotor no. 26573 is exposed.
11. Maintain light pressure on disc no. 26569 to keep pump rotor no. 26573 from rotating and remove the rotor retaining screw no. 4947s.
12. Remove pump rotor no. 26573.
13. Remove plastic tubing no. 19642 from tube adaptor no. 26579.
14. Remove the 3 mounting nuts no. 26584.
15. Lift out air casing no. 26589.
16. Remove grid no. 26568.
17. Hold disc no. 26569 to keep motor shaft from rotating and turn pump shaft no. 26572 counter clockwise to remove.
18. Lift off disc retainer no. 26571, bottom fan no. 26570 (E11A only), disc no. 26569, and back head no. 37404.
19. Remove electrical plug no. 40126, if utilized, and feed motor cord through rubber grommet no. 1423.
20. Remove the 3 socket hangers no 6141.
21. Hold motor mount assembly no. 26590 securely and remove the 3 support rods no. 26582.
22. Remove motor no. 26563 from motor mount assembly no. 26590 by removing the 4 cap screws no. 5159.

## ASSEMBLY

1. Apply a thread sealant to motor retaining cap screws no. 5159.
2. Position motor no. 26563 on motor mount assembly no. 26590 so electrical cord will be adjacent to rubber grommet no. 1423 when the shroud no. 26593 is in place.
3. Assemble motor no. 26563 to motor mount assembly no. 26590 with cap screws no. 5159 and flat washers no. 5914.
4. Inspect plastic tubing no. 19642. 7" to 7 1/2" should be left above motor mount grommet to form a large loop between the grommet and the copper feed pipe fastened to the motor mount assembly.
5. Feed electrical cord thru rubber grommet no. 1423 located on shroud no. 26593.
6. Place grid retaining washer no. 13018 against shoulder of the longest end of support rod no. 26582.
7. Assemble support rods no. 26582 to motor mount assembly no. 26590.
8. Place grid retaining washer no. 13018 and support rod spacer no. 26583 as shown on assembly drawing.
9. Fasten shroud no. 26593 to parts thus far assembled with grid retaining washer no. 13018 and socket hanger no. 6141.
10. Place assembly so it is resting on top of shroud no. 26593.
11. Assemble back head no. 37404, disc no. 26569, bottom fan no. 26570 (EIIA only), disc retainer no. 26571 and pump shaft no. 26572 to the motor shaft.
12. Place short side of grid no. 26568 against motor mount assembly no. 26590.
13. Place O ring no. 4623 in position on support rods no. 26582.
14. Run plastic tubing no. 19642 through grommet no. 1423 located in the air casing no. 26589. Do not disturb loop from motor mount grommet to feed pipe.
15. Align waterpipe no. 26581 with grommet no. 1423 located in motor mount assembly no. 26590.
16. Assemble air casing no. 26589 with mounting nuts no. 26584 and grid retaining washers no. 13018.
17. Assemble tube adapter, part no. 26579, to pump housing, part no. 26574, with tube adapter nut, part no. 15459.
18. Place screen assembly no. 26822 over pump shaft no. 26572 so screen can be fastened to the pump housing no. 26574.
19. Fasten pump housing no. 26574 to air casing no. 26589 with hex nuts no. 4405, machine screws no. 4889, and flat washers no. 5914. The pump housing should be positioned so the pump shaft no. 26572 is in the center of the water intake hole of the pump housing.
20. Assemble pump rotor no. 26573 to pump shaft no. 26572 with machine screw no. 4947s.
21. Fasten pump housing cover no. 26575 to pump housing no. 26574, and screen assembly no. 26822 with machine screw no. 4871.
22. Connect plastic tubing no. 19642 to tube adapter no. 26579.
23. Position O-ring no. 26560 on mounting nut no. 26584.
24. Secure reservoir assembly no. 26586 by tightening nuts.
25. Place humidifier right side up.
26. Pull motor cord to remove any slack between motor no. 26563 and shroud no. 26593.
27. Assemble electrical plug no. 40126, if utilize.
28. Assemble top fan no. 26562 to motor shaft by tightening retaining screw in fan collar to motor shaft.
29. Fasten intake screen no. 26916 and screen retainer no. 26917 to shroud no. 26593 with screws no. 5232.

## RECOMMENDATIONS

1. Do not use in tape fed computer rooms due to mineral deposits forming on the paper.
2. When using type E humidifiers in offset printing press areas, the stainless screen and filter media must be used. Letter press operations do not require a filter.
3. The MBE-1 humidistat can handle the current required to control 3 type E humidifiers.
4. Do not use the MBE-1 humidistat in grain storage areas since insects have a tendency to eat the paper elements.
5. When used in printed circuit areas, demineralized water should be used so mineral deposits will not form.
6. Even in no-operating seasons, the motor should be energized a minimum of once month to prolong motor life.

Item No. Part No. Part Name

2	37404	Back Head
4	144602	Thick Flat Washer
5	88	Shim Washer
6	1423	Rubber Grommet
7	1799	Compression Fitting
9	40124	Cord Assy.
10	4405	Hex. Nut
11	4623	O-Ring
12	4871	Machine Screw
13	4889	Machine Screw
14	4947	Machine Screw
15	5159E	Cap Screw
16	5282	Tapping Screw
17	5914	Flat Washer
18	144603	Flat Washer
19	6138	Shut-off Cock
20	6141	Hanger Socket
21	13018	Grid Retaining Washer
22	19642	Plastic Tubing 20'
23	26560	O-Ring
24	26561	Float Valve
25	26562	Top Fan
26	26563	Motor
27	26568	Grid
28	26569	Disc
29	26570	Bottom Fan
30	26571	Disc Retainer
31	26572	Pump Shaft
32	26573	Pump Rotor
33	26574	Pump Housing
34	26575	Pump Housing Cover
35	26579	Tube Adapter
36	15459	Tube Adapter Nut
37	26581	Water Pipe
38	26582	Support Rod
39	26583	Support Rod Spacer
40	26584	Mounting Nut
41	26586	Reservoir Assembly
42	26589	Air Casing
43	26590	Motor Mount Assembly
44	26593	Shroud
45	26792	"Y" Strainer
46	01800	Nipple
47	26817	Filter Screen (Optional)
48	26822	Screen Assembly
49	26916	Intake Screen
50	26917	Screen Retainer
51	27137	Valve Guard
52	27246	Cap
53	33899	Slinger
54	34407	Spacer

**BAHNSON TYPE E HUMIDIFIERS**

**MODELS Ia & IIa**

Evaporation: Model Ia-1½ G.P.H., Model IIa-3 G.P.H. Motor: both models 2.8 Amp.; 115 Volts-60 Hz. - Single Phase

1 or 2 Humidifiers with 1 Control 15 Amp. Circuit



3 or 4 Humidifiers with 1 Control 20 Amp. Circuit

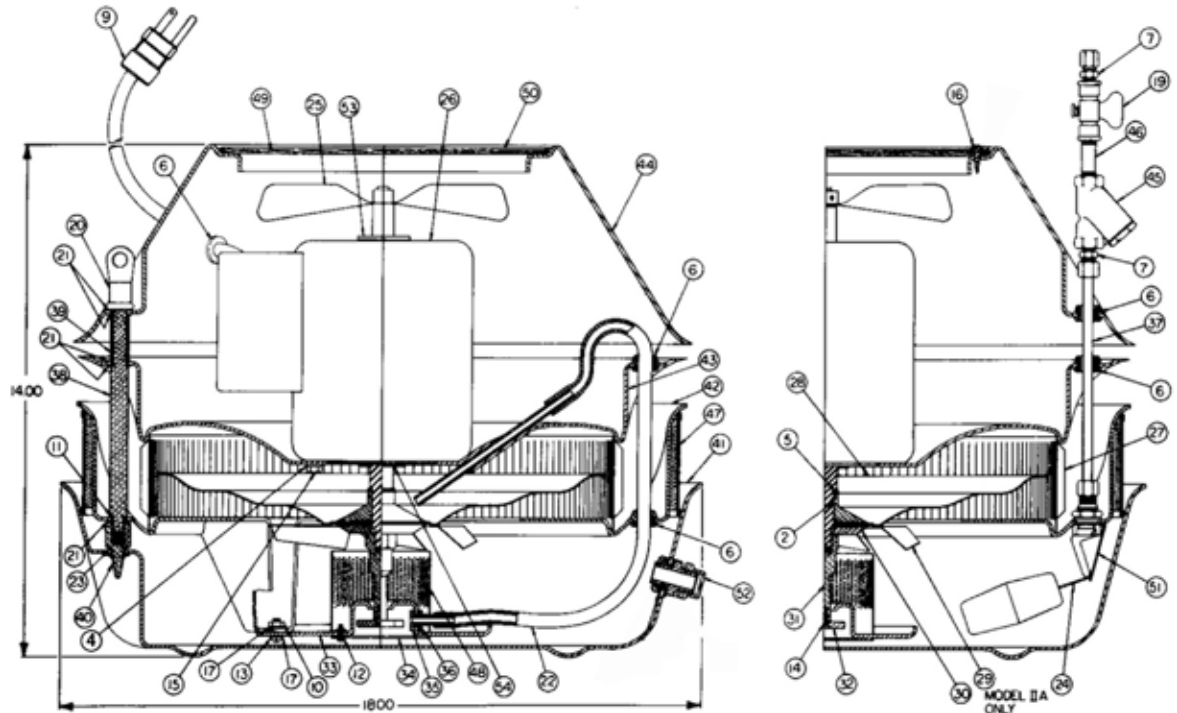


5 or 6 Humidifiers with 1 Control 20 Amp. Circuit



ⓔ Type E, Model Ia or IIa Humidifier  
Ⓜ Type MBE1 Humidity Control

Ⓞ Size O Magnetic Contractor, 3, Pole, NEMA 1 Enclosure  
Ⓛ Size 1 Magnetic Contractor, 3, Pole, NEM 1 Enclosure



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