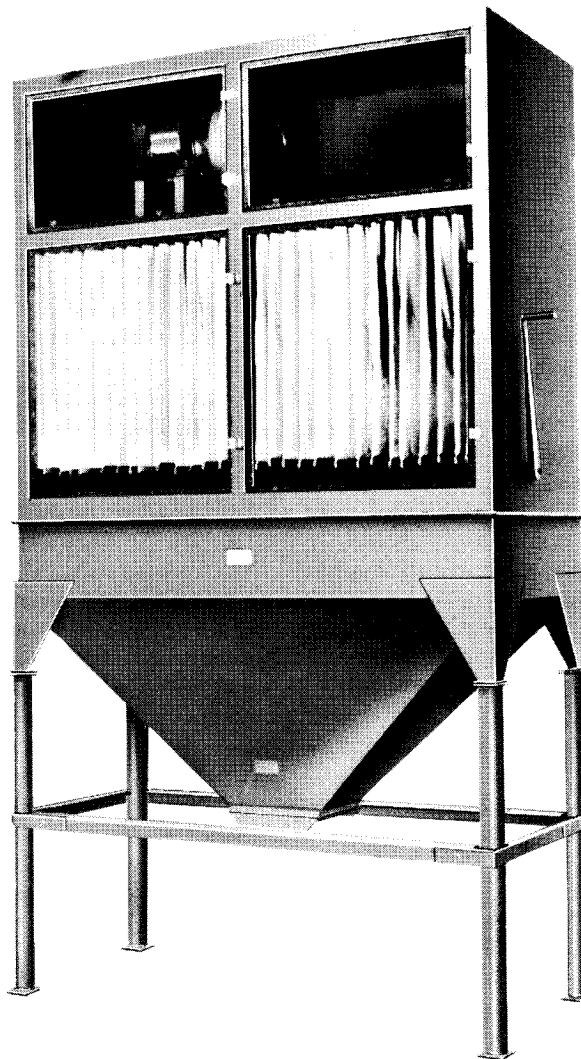


TORIT INSTALLATION AND OPERATION MANUAL

MODELS 54 / 64 / 66 / 75 / 81 / 84 / 90 / 123 / 124 / 130 / 140

Includes Installation, Operation, and Service Instructions



IMPORTANT

THIS MANUAL CONTAINS SPECIFIC PRECAUTIONARY STATEMENTS RELATIVE TO WORKER SAFETY IN APPROPRIATE SECTIONS. READ THIS MANUAL THOROUGHLY AND COMPLY AS DIRECTED. IT IS IMPOSSIBLE TO LIST ALL OF THE POTENTIAL HAZARDS OF DUST CONTROL EQUIPMENT OR SYSTEMS. IT IS IMPERATIVE THAT USE OF THE EQUIPMENT BE DISCUSSED WITH A TORIT REPRESENTATIVE. PERSONNEL INVOLVED WITH THE EQUIPMENT OR SYSTEMS, SHOULD BE INSTRUCTED TO CONDUCT THEMSELVES IN A SAFE MANNER.

WARNING

APPLICATION OF DUST CONTROL EQUIPMENT:

1. Avoid mixing combustible materials, such as, buffing lint, paper, wood, dust, aluminum and magnesium, with dust generated from grinding ferrous metals; due to the potential fire hazard caused by sparks in the dust collector.
2. Under no conditions, should the machine operator be allowed to put lit cigarettes or any burning object into the hood or ducting of any dust control system.
3. When dust collectors are used to collect fire or explosion risk dust, the dust collector should be located outside the building. Also, an installer of fire extinguishing equipment, familiar with this type of fire

hazard and local fire codes, should be consulted for his recommendations and installation of the proper fire extinguishing equipment. Dust collectors do not contain fire extinguishing equipment.

4. Explosion relief vents are required on some applications. Consult with an insurance underwriter or a NFPA Manual to determine proper vent size ratio. Vents installed on dust control equipment within a building, must be vented to the outside to minimize chances of a secondary explosion. Again, consult the proper authority to determine proper method of venting. Dust collectors do not contain explosion relief vents, except on special order.

The Torit Dust Collector is a highly efficient air cleaning device. And by following these directions, you can keep it operating at maximum efficiency, day after day, for years to come.

INSTALLATION INSTRUCTIONS

1. Locate the Dust Collector as near to dust sources as you can, except in cases where dust is explosive or a fire hazard.
2. The instructions for making the electrical connections to the proper power supply lines are on the motor instruction plate. This job should be done by a qualified electrician.
3. Visually check to make sure that the blower wheel is turning in the direction indicated by the "rotation" arrow on the blower housing.

If the motor has been connected backwards during installation, the blower wheel will run in the direction opposite to the arrow on the housing. **But a much smaller than normal airflow will be generated into the ductwork and through the collector.** So be sure to check the rotation VISUALLY.

If the rotation is incorrect, the following must be completed to reverse rotation; on 3 phase motors, switch any 2 leads. On Single phase motors, switch leads as directed on the name plate wiring instructions.

4. Before operating, check to be sure that the gates are open, and that doors, drum lids and gasketing are firmly in place.
5. Check the exhaust outlet to make sure it is not blocked in any way. If the outlet is even partially blocked, the airflow will be reduced.
6. Do not attempt to change the number or the size of the inlets. If the Dust Collector is operated with more than the maximum permissible inlet area, the motor and the filters may become overloaded.
7. Ductwork
 - a. When installing ductwork, use the shortest possible runs and long radius elbows, and at least 45° branches. Avoid the use of airflow tees. Connect piping joints with sheet metal screws, rivets, or solder. And finish each joint with a single wrap of duct tape. This will assure you of a rigid, airtight system.

- b. Ductwork should be of a proper size to permit passage of the air velocities recommended for the material being collected. A complete selection of galvanized steel pipe, elbows, branches and fittings is available from Torit. If you require any assistance in the design or selection of the ductwork, simply contact our home office or your local Torit Representative.

8. With any air-moving device, a certain amount of noise is created. Normally, the noise level is not as high as that of other machinery in the area. If, however, you require an additional reduction in the noise level, exhaust silencers are available as optional equipment.

ROUTINE MAINTENANCE

1. Empty collector drawer or drums when they are approximately 2/3 full.
2. For motor maintenance, follow the manufacturer's directions. If your motor requires servicing under the manufacturer's warranty, contact an authorized service center.
3. Cloth Filters
 - a. The filters in the Dust Collector are semi-permanent and will give you long, efficient service if you perform routine maintenance.
 - b. After each day's operation, shake the filters to remove the clinging material. To perform this operation, push down vigorously on the filter shaker lever located on the side of the cabinet, or pull handle sharply on hopper models. Repeat six times.
 - c. If the collected material sticks to the filters, they may require occasional hand brushing or vacuum cleaning. Care should be taken to prevent the tearing or puncturing of filter cloth. If the filters become saturated with oil, they must be dry cleaned.
 - d. For maximum efficiency, filters should be replaced every two years under normal operating conditions. Filters should not be removed except for replacement. For replacement instructions, see following section. And be sure to include the model and serial number of your Dust Collector with your order for Torit Replacement Filters.
 - e. Torit Filters are chemically treated for fire-resistance. They will not ignite unless exposed to a continuous flame. You should not, however, attempt to collect materials like lint and grinding dust in the same collector.

FILTER REPLACEMENT Series 50, 60, 70, 80 & 90

UNIT	FILTER INSERTER LOCATION
52	Filters 7 & 8 From Left
54	Filters 7 & 8 From Left
62	Filters 6 & 7 From Left
64	Filters 6 & 7 From Left
66	Filters 6 & 7 From Left
75	Filters 4 & 5 From Right
75-80	Filters 6 & 7 From Right
80	Filters 6 & 7 From Left
81	Filters 6 & 7 From Right
83	Filters 6 & 7 From Left
84	Filters 6 & 7 From Right

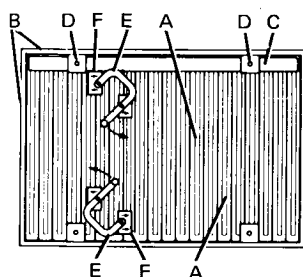


FIGURE 1

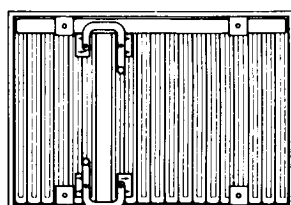


FIGURE 2

1. To remove filters loosen Set Screws "D" and remove front and back hold down bars "C". Lift bag collar from filter frame until filter bag clip clears the bag frame. Remove from cabinet.

2. Place as many Filter Envelopes, "A" in Figure No. 1 above, in Dust Collector Filter Frame "B" as can be done without using any mechanical aid for leverage. You should be able to get all but two or three in place. A Model 90 has spacers at both left and right side of filter frame. Spacers must be in place to achieve air tight integrity.

3. Place rear Hold Down Bar "C" in position and finger tighten Set Screws "D".

4. Select the proper location for Filter Inserters "E" from Table No. 1 above.

5. Locate the Filter Inserters as shown in Figure No. 1, with the legs of the Angle Plate "F" inside the appropriate collars. Make certain that the arrows on the Angle Plates point away from each other, and that the legs of the Angle Plates are inserted inside of the adjacent filter collars. **If inserted in the same collar, or between collars, it will result in damage to the collars.**

6. Rotate the handle of the rear Filter Inserter to the right, and at the same time push toward the rear of the cabinet, until the Angle Plates are parallel. See Figure No. 2 for proper position when completed.

7. Rotate the handle of the front Filter Inserter to the left, and at the same time pull toward the front of the cabinet, until the Angle Plates are parallel. See Figure No. 2 for proper position when completed.

8. Place one of the remaining filters in the space created.

9. Release the Filter Inserters and repeat steps No. 3-8 until the complete set has been installed.

10. When the last filter has been put in place, release the Filter Inserters and leave them there. This is an excellent storage place, and they will not interfere with the operation of the unit.

11. Make sure that the Front Hold Down Bar is in position. Lock both Hold Down Bars in place by tightening the Set Screws with an Allen Wrench.

12. To inspect for dust-tight integrity, use an extension

cord with a 40 to 75 watt bulb. Remove the guard. From below, insert the lighted bulb between the adjacent filters and move it from front to back. Keep the bulb in motion, as it will scorch the cloth if it is left too long in one place. If you can see light between the felt filter gaskets, when viewed from above, close the opening with one of the clips provided with the filters. The clip should be pressed down directly over the opening, with the legs inside the adjacent filters. Re-check the clipped area for dust tightness.

Series 123, 124, 130 & 140

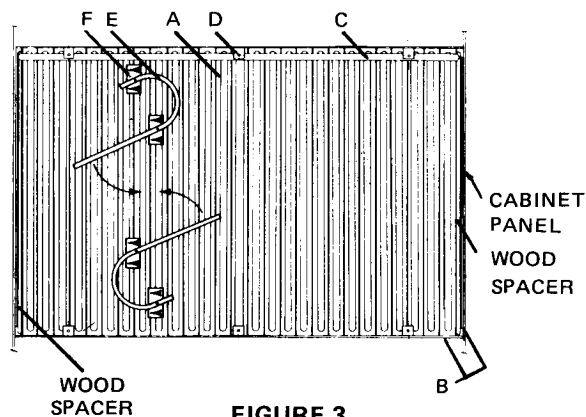


FIGURE 3

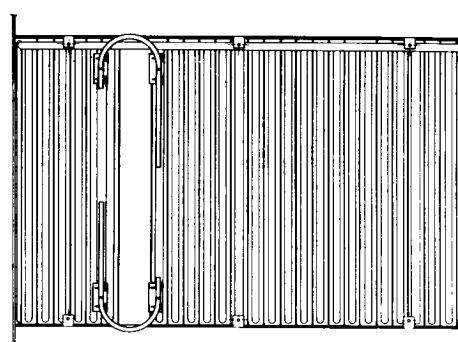


FIGURE 4

1. To remove filters loosen Set Screws "D" and remove front and back hold down bars "C". Lift bag collar from filter frame until filter bag clip clears the bag frame. Remove from cabinet. When the old filters have been removed, leave the wood spacers in their place at each end of the frame.

2. To insert the new filters, place as many Filter Envelopes, "A" in Figure No. 3 above, in Dust Collector Filter Frame "B" as can be done by hand. All but one or two should go in.

3. Place rear Hold Down Bar "C" in position and finger tighten Set Screws "D".

4. At any convenient location, place one Filter Inserter "E" as far back and one as far forward as possible. Use positions shown in Figure No. 3 as a guide. The arrows on the Angle Plates "F" must be pointing in the same direction. And the legs of the Angle Plate must be inside the adjacent filter collars. **If inserted inbetween filter collars, bowing will result. And it would then be necessary to remove the bent filter and straighten it.**

5. Rotate the handle of the rear Filter Inserter to the right and at the same time, push toward the rear of the cabinet until the Angle Plates are parallel. See Figure No. 4 for proper position when completed.

6. Rotate the handle of the front Filter Inserter to the left and at the same time, pull towards the front of the cabinet until the Angle Plates are parallel. See Figure

- No. 4 for proper position when completed.
7. Place one of the remaining filters in the space created.
 8. Release both of the Filter Inserters and repeat steps No. 4-7 until the complete set has been installed.
 9. When the last filter has been put in place, release the Filter Inserters and leave them there. This is an excellent storage place, and they will not interfere with the operation of the unit.
 10. With the front Hold Down Bar in position, tighten the Set Screws.
 11. To inspect for dust-tight integrity, use an extension cord with a 40 to 75 watt bulb. Remove the guard. From below, insert the lighted bulb between the adjacent filters and move it from front to back. Keep the bulb in motion, as it will scorch the cloth if it is left too long in one place. If any light shows through between the filter collars, bowing has occurred. Remove any bowed filters. Straighten and then replace them.

TROUBLESHOOTING

Motor Running Hot/Starter Kicking Out

1. Do not accept air movement as an indication of proper fan rotation. A fan that is running backward may deliver as much as 60% of its rated capacity. Visually check the fan wheel. Or remove the bearing cover on the end bell and visually check the motor shaft on the vertical motors.
2. Check for improper wire size. Electrical connections must be up to national and/or local codes.
3. Check starter to make sure it is not undersized.
4. Check heater coils to make sure that they are not undersized.

5. Check for low line voltage. A 10% variation is permissible.
6. Check for loose connections in the starter or line connections. This will cause single phasing on the 3 phase circuits. And often the heater coils are damaged as the motor attempts to reach its rated RPM. Motor hum or growling is an indicator of this condition.
7. Check for a large leak in the storage chamber or, in 55-gallon drum applications, make sure that the drum is under the lid.
8. Check line voltage to make sure it is not overloaded, i.e. 460 volts on a 230 volt motor.

Insufficient Air At Hoods

1. Check for a large leak in the storage chamber or, in 55-gallon drum applications, make sure that the drum is under the lid.
2. Check for a large diameter branch on a long, extended duct system. The first hood takes all of the air. Use blast gates.
3. Check for obstructions in the ductwork.
4. Check the filters to make sure they are not plugged.
5. Check the exhaust, in line and at the end, to make sure there are no restrictions.
6. Check ducts and hoods for improper sizing.
7. Rag type grinding or polishing wheels create their own air circulation. More air may be needed to overcome the airflow that they create.
8. Check for loose, leaky joints in the ductwork.
9. Check for improper voltage, i.e. 230 volts to a 430 volt motor will cause it to run at half speed. Motor damage may result.

A Word About Blower Motors

A blower motor is easily overloaded when it is forced to handle TOO MUCH AIR. An insufficient air supply causes few if any problems. Torit Dust Collectors are designed to make maximum use of the motor's horsepower. But they are not underpowered. Any motor that indicates an amperage draw in excess of 10% of the manufacturer's recommendation on the nameplate is overloaded. Overloading may be caused by one or more of the conditions in the previous section titled, "Motor Running Hot/Starter Kicking Out". Or the motor may be faulty. The Torit Division does not assume responsibility for faulty motors. You should contact the manufacturer directly. PLEASE READ, THOROUGHLY, THE GUARANTEE INCLUDED IN THIS BROCHURE.

A Word Of Caution

Using your hand to test the running temperature of a motor can be a very painful experience:

Normal body temperature	98.6°F
Threshold of pain caused by heat	120.0°F
Average temperature of hot tap water	140.0°F
Average temperature of hot coffee	180.0°F
Normal operating temperature of a fully loaded electric motor, open type, 70° ambient temperature.	174.0°F

**YOU CANNOT WASH YOUR HANDS IN 140°F WATER!
YOU CANNOT STIR A FRESH CUP OF COFFEE WITH YOUR FINGER!
YOU CANNOT PLACE YOUR HAND ON A MOTOR THAT IS OPERATING PROPERLY WITHOUT BURNING YOUR HAND!**

GUARANTEE

Torit hereby warrants that it will replace free of charge f.o.b. its factory at Nicholasville, Kentucky, such products furnished by Torit as were manufactured by Torit and as are or become defective within one year after the date of shipment because of defects of material or workmanship provided, after notice to Torit and its written consent thereto, the product is shipped prepaid to Torit at

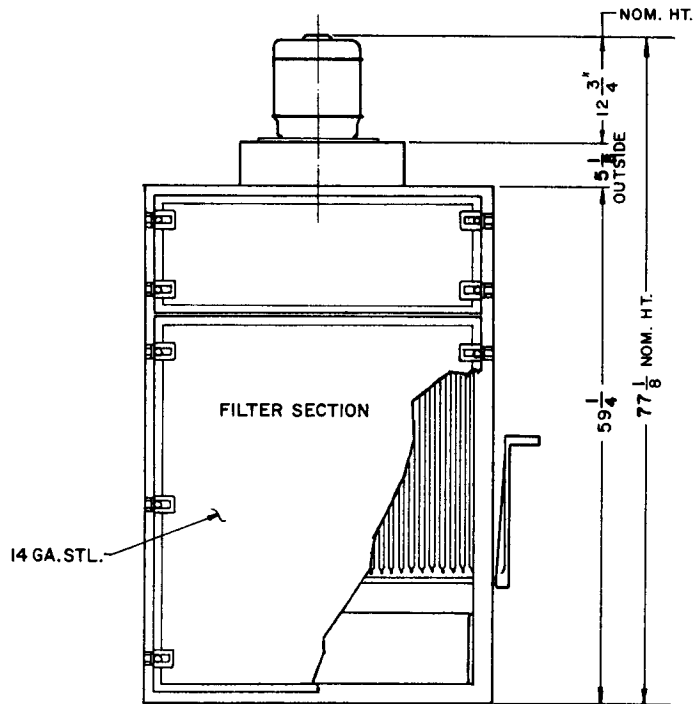
Nicholasville, Kentucky, and provided the parts in question prove, to the satisfaction of Torit, to be defective because of defects of material and workmanship. **This warranty does not apply to or include the cost of removal of any part and the cost of installation of any replacement part.** This warranty is in lieu of all and any other warranties of any kind, express, or implied, and of any other liability or obligation on the part of Torit.

donaldson

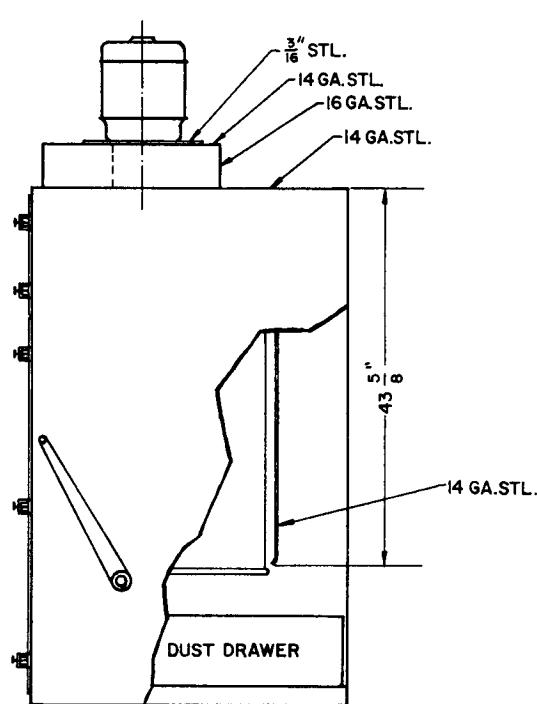


Donaldson Company, Inc.
Torit Division
P.O. Box 1299
Minneapolis, Minnesota 55440
Parts & Service
1-800-365-1331

**TORIT — THE INDUSTRIAL AIR
POLLUTION PROBLEM SOLVERS**

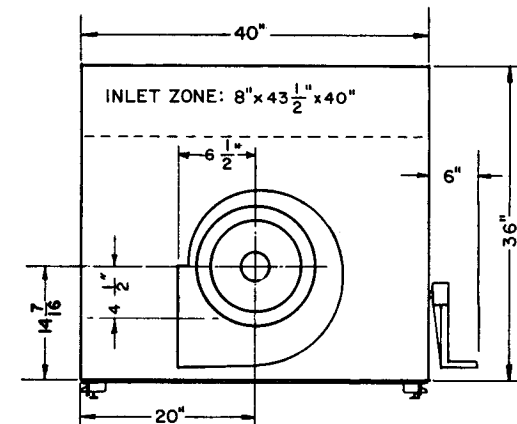


FRONT VIEW



SIDE VIEW

CERTIFICATION
 THIS DRAWING IS CERTIFIED TO BE
 CORRECT.
 BY: _____ DATE: _____
 ENGINEERING DEPT.



PLAN VIEW

MULTIPLE RATING TABLES			
INLET	CFM	FPM	EXT. S.P.
ONE 7" INLET	1535	5734	4.50
	1432	5343	5.50
	1215	4531	6.53
ONE 6" INLET	1425	7275	5.40
	1203	6139	6.40
	895	4566	7.10
TWO 5" INLETS (each tests)	793	5831	3.55
	751	5521	4.80
	649	4773	6.05

SPECIFICATIONS	
1. MOTOR SHALL BE 3HP, 3600 RPM, 230-460 VOLT, 60 CYCLE, 3 PHASE.	
2. DRAWER CAPACITY SHALL BE 5.5 CU.FT.	
3. STANDARD INLET LOCATION SHALL BE: ONE 7" INLET ON TOP REAR CENTERED SIDE TO SIDE IN INLET ZONE	
4. FILTER AREA SHALL BE 250 SQ. FT. (25 FILTERS 24" X 30" EACH.)	
5. BLOWER EXHAUST CAN BE ROTATED AT 45° INCR.	
6. NET WT. <u>500</u> SHIPPING WT. <u>650</u>	

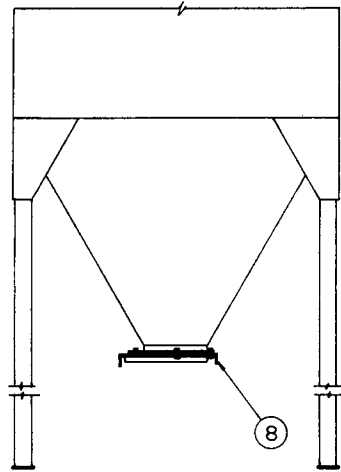
NOTES	
1. THIS DRAWING IS FOR A STANDARD 90 DUST COLLECTOR ANY DEPARTURE FROM THIS DESIGN SHALL REQUIRE SPECIAL FABRICATION AND AN INCREASE IN COST	
2. THIS PRINT IS NOT CERTIFIED FOR CONSTRUCTION PURPOSES UNLESS PROPERLY SIGNED BY TORIT ENG. DEPT.	
3. HT. OF MOTOR SUPPLIED OR SPEC. MAY VARY FROM NOM. HT. SHOWN. TORIT WILL VERIFY WHERE REQ'D	

TORIT

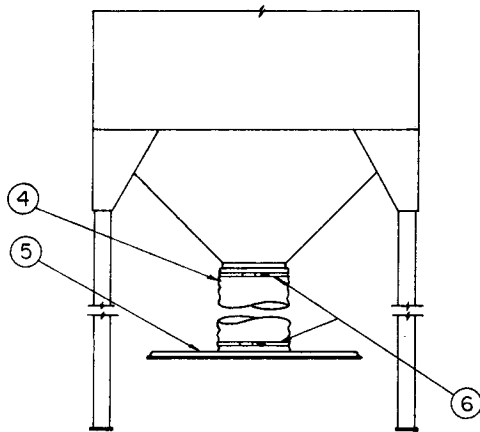
THE TORIT CORPORATION ST. PAUL, MINN. 55116
 SPECIFICATION CONTROL DRAWING

MODEL NO. 90 DUST COLLECTOR

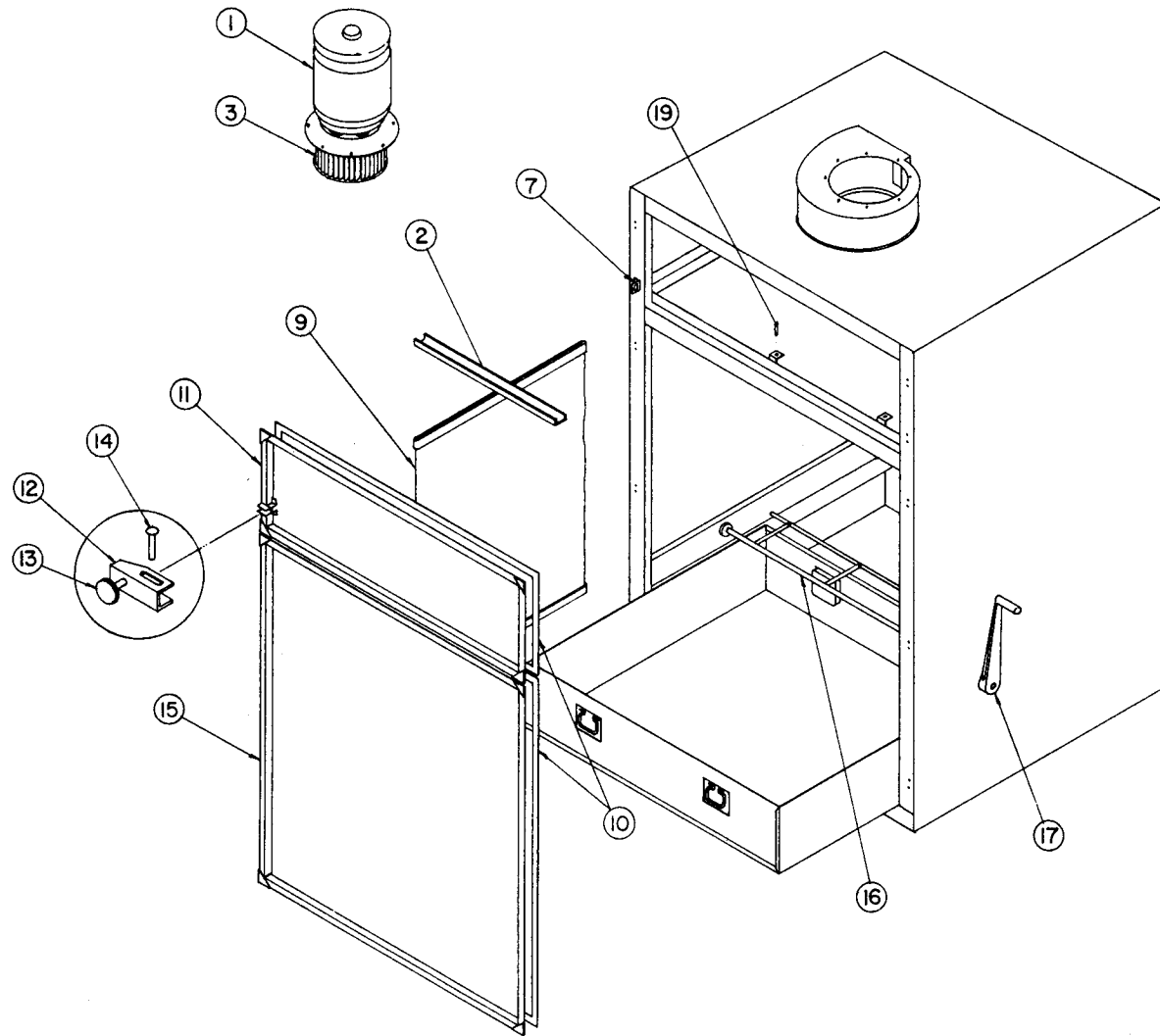
DRAWN: T. M. [Signature]	DRWG. NO: 90-000
APP'D: [Signature]	REV. D 1-3-73



HOPPER MODELS



DRUM MODELS



PARTS LIST				ITEM	PART NO	QTY	NAME	ITEM	PART NO.	QTY.	NAME
1	6MM000-16615-01	1	MOTOR (ORDER BY NAME PLATE)	8	6MM000-00356-02	1	SLIDE 8 INCH	16	4MA000-11529-00	1	SHAKER SUB-ASY
2	8PP000-10335-00	2	CHANNEL HOLD DOWN	9	3EA000-11485-01	25	FILTER BAG ASY	17	5PM000-11486-00	1	HANDLE SHAKER
3	5PM000-16015-00	1	WHEEL BLOWER	10	8PP000-15556-00	AR	SEAL FELT	18	4MA000-00106-03	1	DUST PAN ASY
4	3EA000-10417-00	1	HOSE WIRE MOLD	11	3EA000-00155-05	1	TOP DOOR ASY	19	8PP000-06155-00	6	SCREW SET SOCKET
5	8PP000-12418-00	1	DRUM COVER ASS'Y	12	4MA000-11158-00	10	SLIDE LATCH				
6	8PP000-12418-00	2	HOSE CLAMP	13	8PP000-06274-00	10	LATCH THUMB SCREW				
7	4MA000-11159-00	10	STRIKE LATCH	14	8PP000-06273-00	10	TUBULAR RIVETS				
				15	3EA000-00157-05	1	BOTTOM DOOR ASY				



THE TORIT CORP., 1133 RANKIN ST., ST. PAUL, MINN.

SPECIFICATION CONTROL DRAWING
PARTS LIST - 90 COLLECTOR

DRAWN: T. W. [Signature]
APP'D: DAN H. NO: 90-005
REV. D 1-4-73