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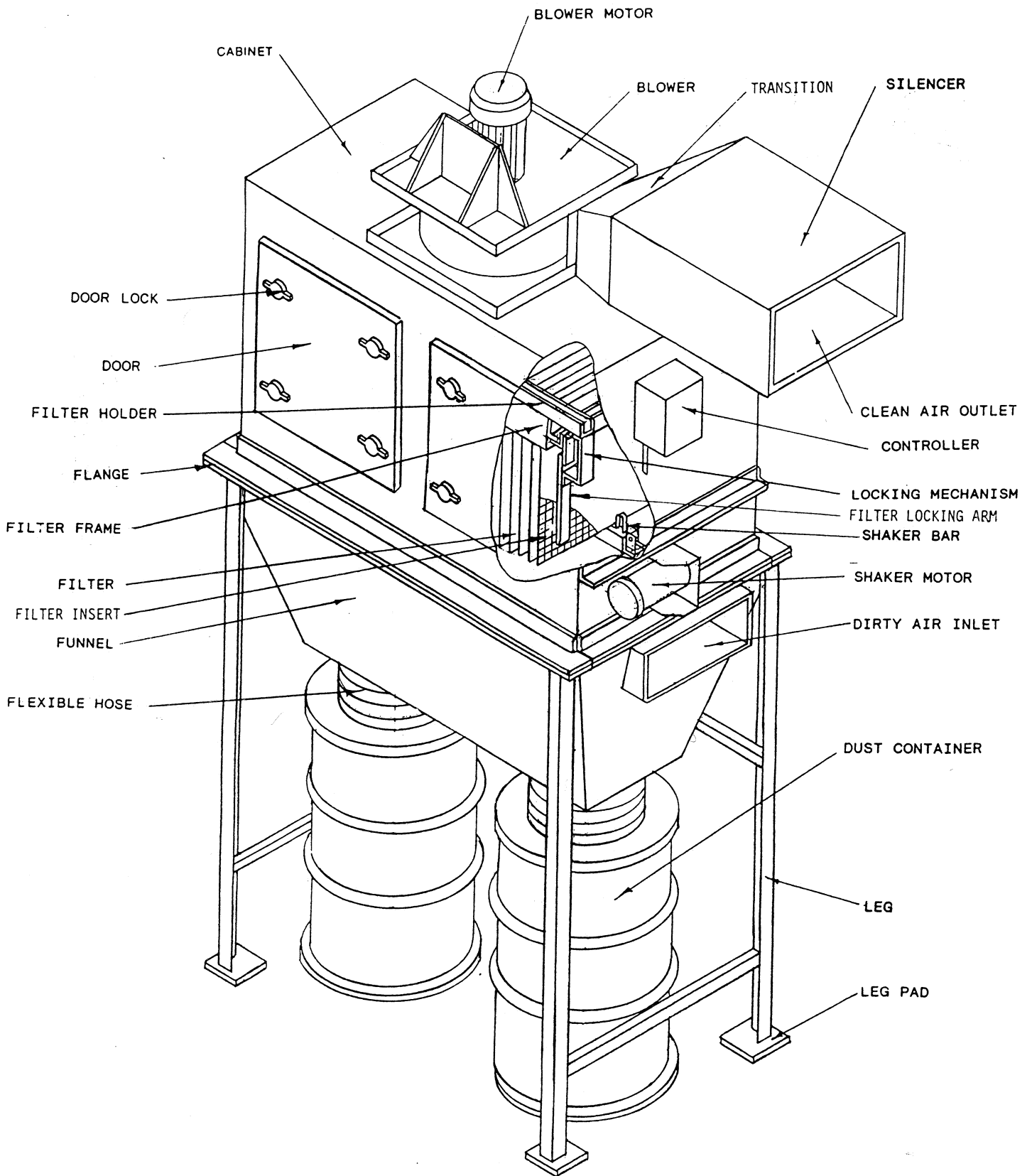
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INSTALLATION OPERATION AND SERVICE MANUAL

FOR STERNVENT SELF CONTAINED CABINET DUST ARRESTERS

VIBRACLEAN SIZES DK180-1440



TYPICAL MULTI-COMPARTMENT
VIBRACLEAN WITH FUNNEL BOTTOM

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 THE SPECIFIC USE OF THE EQUIPMENT BE DISCUSSED WITH A STERNVENT REPRESENTATIVE. PERSONNEL INVOLVED WITH THE EQUIPMENT OR SYSTEMS, SHOULD BE INSTRUCTED TO CONDUCT THEMSELVES IN A SAFE MANNER.

WARNING

1. Avoid mixing combustible materials such as, buffing lint, paper and wood with dust generated from grinding ferrous metals, due to the potential fire hazard caused by sparks in the dust collector.
2. This dust collector should never be used for the collection of aluminum or magnesium dust. It is not possible to list all hazardous material which are not suitable for collection by this type of dust collector. It is the responsibility of the user to consult with their liability insurance company, local fire department and the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, telephone number 1-800-344-3555 for additional safety information.
3. Under no conditions, should the machine operator be allowed to put burning cigarettes or any burning object into the hood or ducting of any dust control system.
4. 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/her recommendations and installation of the proper fire extinguishing equipment. Dust collectors do not contain fire extinguishing equipment.
5. Explosion relief vents are required on some applications. Consult with your liability insurance company and National Fire Protection Association. Vents installed on dust control equipment within a building, must be vented to the outside to minimize chances of a secondary explosion. Dust collectors do not contain explosion relief vents, except when specifically ordered.
6. It is the responsibility of the user to comply with all applicable national or local fire and safety codes.

(CCP, D, DK, DDB, TL, SPV)

VIBRACLEAN MANUAL

The Vibraclean is furnished with a factory wired controller consisting of magnetic starters for both blower and shaker motors, step down transformer and solid state delay timer. A separate push button station and blower exhaust duct silencer are also furnished.

A. GENERAL

Sternvent VIBRACLEAN dust collectors provide economical and effective solutions to a wide variety of industrial dust problems. Designed for years of efficient service in intermittent applications such as woodworking, grinding, mixing, packaging and silo venting, they are available in capacities ranging from 1,000-9,000 CFM. Multi-pocket filter modules featured in the VIBRACLEAN provide maximum utilization of filter area with minimal space requirements and are automatically cleaned by the vibra-shaker each time the fan is shut off, thereby eliminating dependence on the worker.

SHIPMENT

The VIBRACLEAN dust collector is packaged for domestic transit and shipped FOB factory. Notify your carrier immediately if there is any damage or discrepancy in the shipping papers.

FOUNDATIONS

The foundation must be level and adequate to support the collector's operating weight including dust load, discharge devices, wind load if applicable, plus any auxiliary equipment if applicable.

SPACE REQUIREMENTS

The dust collector should be located with consideration for maintenance, inspection, shortest run for location of duct work, electrical and air connections and access for emptying the dust.

Access to the front (and rear for Model DK720 and larger) of the unit is necessary for dust removal and filter module replacement. Top access is required for motor and fan service and side access is required for shaker component service.

Explosion vent, if any, should be ducted outside and away from any area containing personnel or equipment.

INSTALLATION

The VIBRACLEAN dust collector requires an inlet duct which must be of proper size to handle air volume required at recommended air velocity for dust to be collected. When installing duct work, use shortest possible runs and large radius elbows. Close coupling a duct to either the air inlet or outlet will cause excessive air resistance and reduced suction. Elbows should be a minimum of three to four duct diameters from the inlet. Seal all joints.

If a duct is to be connected to the clean air outlet (for recirculation of the air), a flexible duct connection should be used to prevent transmission of vibration from the filter shaker, which can cause the duct and/or building wall to vibrate and result in possible damage.

All electrical work must be done by a qualified electrician according to local codes. Make sure the line voltage corresponds to the voltage indicated on the orange tag attached to the factory wired controller. A maximum of 10% variation is permissible.

ANCHORING

The VIBRACLEAN unit is designed for installation on a flat surface. Units must be suitably anchored. For funnel and hopper bottom units, anchor holes are provided at the base of the support legs.

FIELD ASSEMBLY OF MAJOR COMPONENTS

Gasket or mortite and necessary hardware are furnished for bolting together the cabinet onto the funnel, hopper or flat bottom.

The inlet and if applicable, the outlet ducts are connected.

The drum top flexible hose is attached to the funnel bottom with two (2) clamps. For funnel bottom units drums should always be in place during operation and all connections should be airtight.

C. OPERATION

IMPORTANT

SHAKER MOTOR IS ACTIVATED
15 SECONDS AFTER

1. APPLYING POWER TO CIRCUIT OR
2. PRESSING STOP PUSH BUTTON

The wiring diagram is located in the controller enclosure box. Holes are required in enclosure for power line and push button wires. Refer to the wiring diagram for proper wiring connections. Check the fan rotation against the rotation arrow for correct motor connections (before bolting the duct silencer) by pressing start button quickly followed by stop button. (Automatic shaker will start 15 seconds after stop button is pushed). As blower coasts to a stop, check that rotation is in direction of arrow. If rotation is incorrect reverse any two power line leads.

The start/stop push button controls the blower. Once the stop button is pressed the automatic shaker will start 15 seconds after stop button is pushed and remain on for approximately 45 seconds. The duration of the shaking process is adjustable from 1.8 to 180 seconds.

The blower must be off and the cleaning cycle complete before the collected dust can be disposed. The dust container(s) is removed by lifting the drum cover or opening the dust cart door(s). The container(s) should not be allowed to fill to the level where it would be difficult to handle when emptying.

D. MAINTENANCE

Beyond removal of collected dust on a daily or weekly basis the only other maintenance required is periodic replacement of filters and lubrication of bearings if unit is belt driven (DKT and DKR Models).

Typically the filters will last between 1-3 years depending on type of dust and frequency of use. Filters should be replaced either because of holes in the filter media or a reduction in air flow due to dust which can not be dislodged from the fabric by the vibra-shaker.

FILTER REPLACEMENT

1. Shut off and lock out disconnect switch.
2. Remove access door(s)
3. Loosen filter assembly by pushing the two filter locking arms away from you. Filter assembly will lower by approximately 1/2".
4. Slide filter assembly out. It will be necessary to pull individual pockets until they are free from the shaker assembly.
5. Remove the inserts from each pocket. The inserts must be retained for use with new filter. Do not throw away inserts.
6. Remove filter assembly from main filter frame.
7. To install new filter assembly, reverse above steps.
8. Once new filter assembly is installed make sure that top front and sides of assembly are sealed against the gasket.

MAINTENANCE FOR BELT DRIVE UNITS:

The blower shaft and motor require lubrication on different schedules per the manufacturers' recommendations, based on hours per day usage and environmental conditions. Shaft bearings require more frequent lubrication than motor bearings.

TYPICAL BEARING LUBRICATION SCHEDULE

Use high quality #2 multi-purpose bearing grease with polyurea base such as a Shell Dolium R or Chevron SR1.

MOTOR BEARINGS - Lubricate every 12 months or 3,000 hours of use, whichever comes first.

SHAFT BEARINGS - Lubricate every 6 months or 1,500 hours of use, whichever comes first.

TROUBLE SHOOTING

1. MOTOR WILL NOT START. Check if power is switched on. Check fuses and overload heater in motor starter by pushing reset button.
2. MOTOR STARTS WITH A WHINE AND IS NOT RUNNING AT FULL SPEED. Stop motor immediately. It is single phasing (getting current on only two legs) and will burn out if not stopped.
Check fuses and wires for a poor connection.
3. MOTOR MAKES A SCRAPING KNOCKING NOISE. Check that the motor cooling fan is not rubbing against its cover.
4. MOTOR STOPPED WORKING. Check if power is on, push starter reset. Call your electrician.
5. LITTLE OR NO SUCTION. Check that the fan is rotating in direction indicated by arrow on blower housing. If rotation is incorrect, reverse any two power line leads. A fan running backwards will deliver only 50% of its rated air capacity.
Check for blockage in ducts.
Filter bags may be dirty or plugged up and not allowing air to pass through freely. Shake filters to dislodge dust. Replace every two to three years.
Too many machines and branch pipes may have been added, exceeding the dust collector air capacity. Eliminate the new machines from this dust collector and add another Sternvent dust collector.
If belt driven fan, belts may be slipping. Adjust tension or replace belts.
6. DUST COMING OUT THE EXHAUST. Check that filter modules are locked in place and sealed to gasket. Check for rips or tears in the filter media.

7. EXCESS FAN VIBRATION.

SHUT OFF POWER TO THE UNIT IMMEDIATELY to prevent serious personal injury and/or property damage. Check that the unit is level.

Remove filters and inspect fan wheel. Contact your Sternvent sales representative.

8. EXCESS SHAKER VIBRATION.

With the power off, inspect the shaker assembly drive attached to the shaft of the shaker motor and also the internal shaker attachments.

WARRANTY

STERNVENT equipment is guaranteed against defects in materials and workmanship for a period of one year from date of shipment (with the exception of filter bags and flexible connections, which carry a ninety (90) day warranty and motors which are guaranteed by their manufacturers). In the event of defects developing within that period under normal and proper use, seller will furnish F.O.B. its plant, without charge, parts required to replace material found defective. Seller shall not be held liable for any further costs, expenses, indirect or consequential damages and liability shall not exceed price of purchased equipment.

Revised
2/18/97