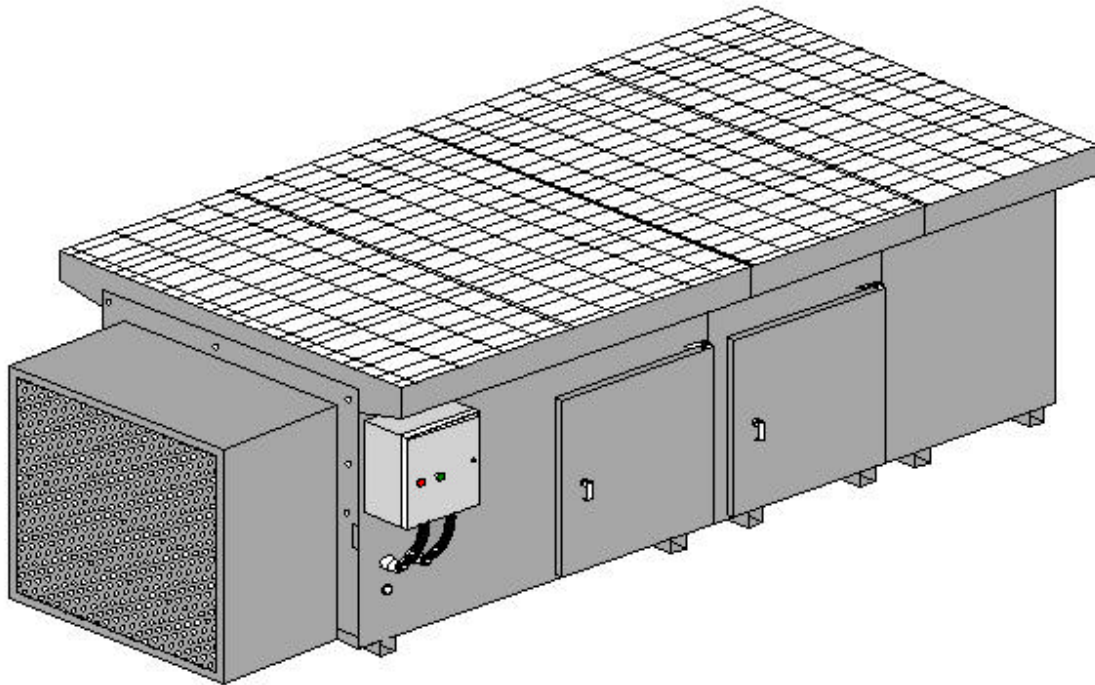


 DIVERSI-TECH inc.
DOWNDRAFT TABLES

OWNER'S MANUAL

MODEL DD4X8



IMPORTANT

This manual contains specific cautionary statements relative to worker safety. Read this manual thoroughly and follow as directed. Hazards of dust control equipment are not all listed in this manual. It is important that use of the equipment be discussed with a Diversi-tech Representative. Persons involved with the equipment or systems should be instructed to operate in a safe manner.

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Caution

Avoid mixing combustible materials, such as buffing lint, paper, wood, aluminum, and magnesium dust, and with dust generate from grinding ferrous metals due to the potential fire hazard caused by sparks in the dust collector. All users of Diversi-tech Equipment should comply with all National and Local Fire Codes and / or other appropriate codes when determining the location and operation of dust control equipment.

Upon Arrival

The Diversi-tech downdraft table is shipped on a crated skid. The skid should be inspected for any visible damage that may have occurred during shipment. If the downdraft table appears to have been damaged during shipping, please advise transport company as soon as possible.

Installations

Compressed Air

Supply 80-90 psi of compressed air to the bulkhead bushing on the side of the unit. Do NOT attempt to supply standard shop air pressure (90psi+) without a pressure regulator. The air tank in the downdraft table is fabricated to allow a maximum of 90psi.

Installation of an air dryer is recommended. Moisture in airline can damage filter(s).

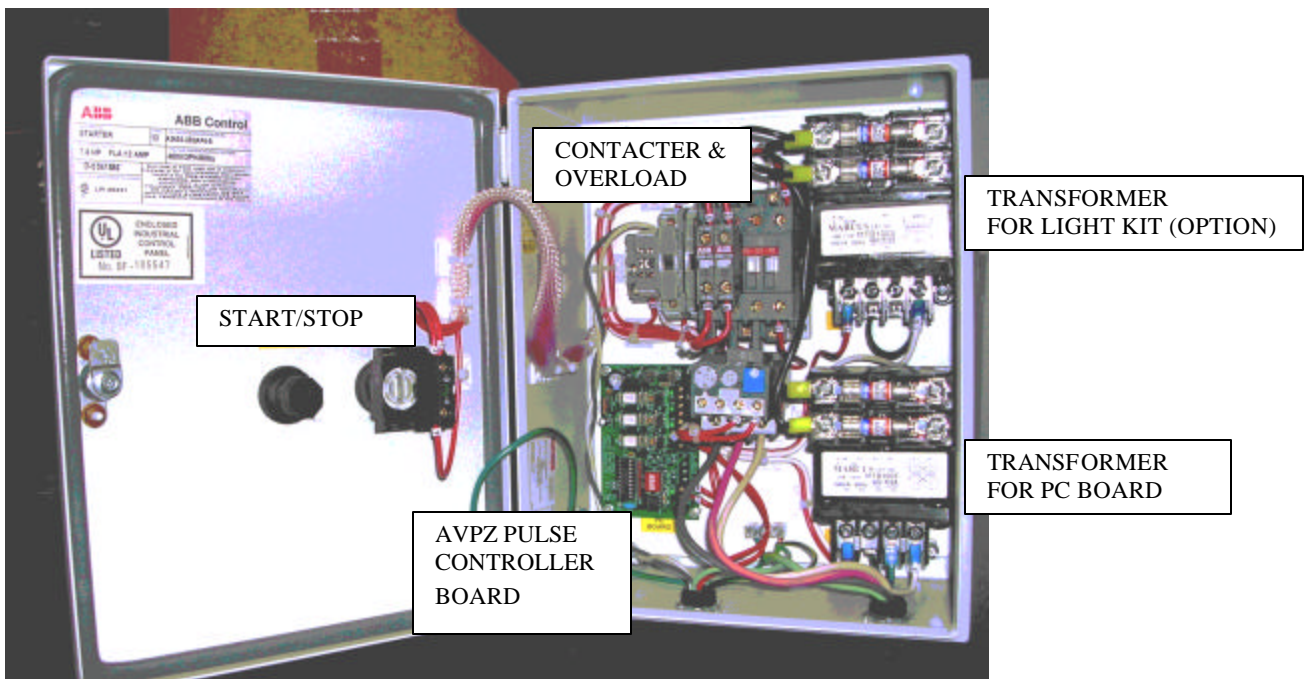
Electrical Connection

Supply voltage to the starter. Make sure the downdraft table's voltage matches the shop voltage. With a flathead screwdriver, open the control box (located on the left side underneath the overhang, on the front of the table). The three power leads must be connected to L1, L2 and L3 on the top part of the contactor. The ground must be connected as well. See wiring diagram (included in this owner's manual) for more details.

Note: If on start-up the downdraft table seems to be lacking performance or the table sounds very loud, the motor is most likely running in the reverse direction. Reversing leads L1 and L3 will reverse motor rotation in the right direction.

Blower wheel's correct direction of rotation : Clockwise

Warning: Always disconnect power supply before servicing the blower wheel & motor or working with the unit for any reason.



Filter Cleaning System

The downdraft table is equipped with a reverse pulse automatic filter cleaning system. The system is controlled by a PC board inside the control box (Labelled “AVP-Z”). The system can work offline and/or online, depending on the dip switch settings on the AVP-Z board. The number of pulses and pulse duration can be modified as well. The AVP-Z board is factory set for both online and offline pulsing. (For aluminum dust, offline pulsing only). The online pulsing sequence is factory set to 1 air blast into the filter every 45 seconds. The offline pulsing sequence is factory set to 10 air blasts at 15 second intervals after a 30 second rest period.

Solenoid operated air valves discharge large blasts of air through the filter cartridges thus dislodging particles embedded in the filter media. The particles fall into a dust drawer located below the cartridge. The angled v-shaped baffles above the drawer prevent the dust from re-entering the cabinet when the machine is turned on.

Neglecting to pulse the filter regularly will reduce filter life.

AVP-X Pulse board settings:

Factory set:

Dip switch#	Setting
1	Left
2	Left
3	Left
4	Left

The pre-set factory settings allow for online and offline pulsing, 1 second pulse duration, and 30 pulses offline.

To modify the dip switch settings:

Dip Switch #1

Left	Online & Offline Pulsing
Right	Offline Pulsing only

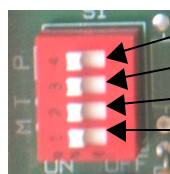
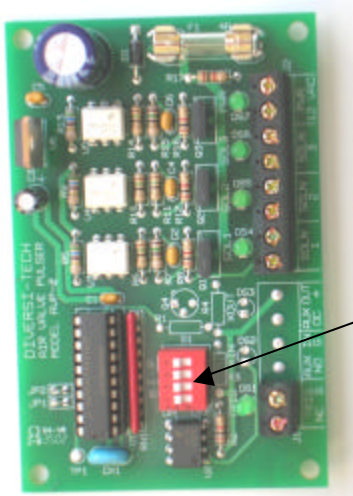
Dip Switch #2

Left	Pulse duration @ 1/2second
Right	Pulse duration @ 1 second

Dip Switch #3 and #4

# of Pulses	Dip Switch#3	Dip Switch#4
5	Right	Right
10	Right	Left
20	Left	Right
30	Left	Left

“AVP-Z” PC BOARD



- Dip Switch # 4
- Dip Switch # 3
- Dip Switch # 2
- Dip Switch # 1

Maintenance

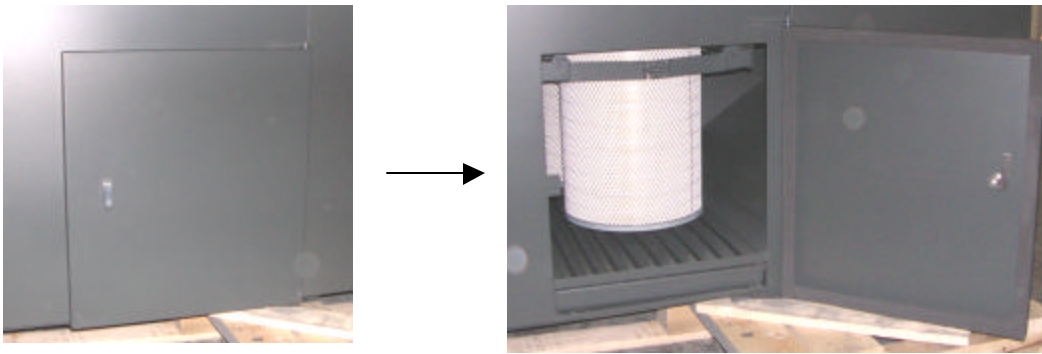
Filter Cartridges

The filter's pulsing system is a successful way to clean the filter. Filter life is increased when the system is pulsed regularly according to usage. Over a period of time, a visual inspection or a decrease in air flow may indicate that the filter be removed from the table for manual cleaning.

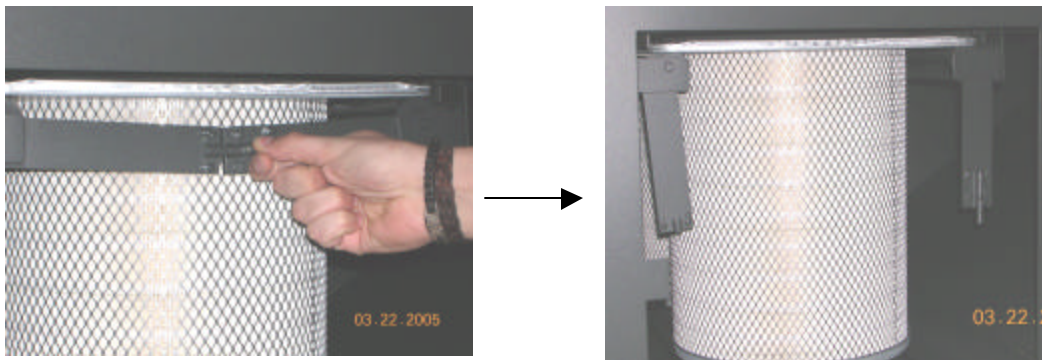
Filter cartridge life will range from 6 to 18 months, depending on application and hours of usage. Eventually, even after manual maintenance, the blower will not be capable of drawing air through the cartridge due to excessive static build up. A new cartridge is required.

To remove the filter cartridge(s):

- Open the filter door located on the front side of the table.



- Unhook the barrel bolt latch joining the 2 bars.
- Push down to rotate the bars outwards. This action decompresses the filters.



- Slide out the filter cartridge(s).



CONTINUED ON NEXT PAGE...

Warning

Cleaning should be carried out on water-soluble materials only. Hydrocarbons may not be removable. The use of solvents may attack certain components of the filter, thus consultation of the manufacturer is required. Do not attempt to clean filters containing hazardous materials, be aware that all sewage and waste ordinances have been followed. The filter is of paper-pleat material, do not attempt to wash the filters.

Do not wet or clean the cartridge with any liquid, as it may cause the forming of unwanted blockage on the filter media. The cartridge may be weakened causing perforations to the media and ultimately damage of the blower.

The cartridge needs to be replaced periodically. The filter life can range from 6 to 18 months depending on many factors ranging from type of application, density, particle size, humidity, oil, etc. . .

Dust Drawer

The dust drawer should be emptied periodically. Perform visual inspections during the first few weeks of operation to determine proper dumping cycle. Periodically inspect the gasket on the drawer to ensure proper sealing. If the table is used for aluminum dust applications, the drawer must be emptied daily.

Baffle Trays

The Baffle trays located underneath the steel bar grating should be cleaned out periodically. Perform visual inspections during the first few weeks of operation to determine proper cleaning cycle.

Metal Mesh Prefilters (option)

The Prefilters located inside the baffle trays should be taken out and either blown out with compressed air or washed depending on how dirty they have become.

Safety Valve (located on the air tank in the blower/motor housing)

Test the safety valve by pulling on the spring tensioned ring. A short spur of air will be heard and will confirm that it is functioning properly.

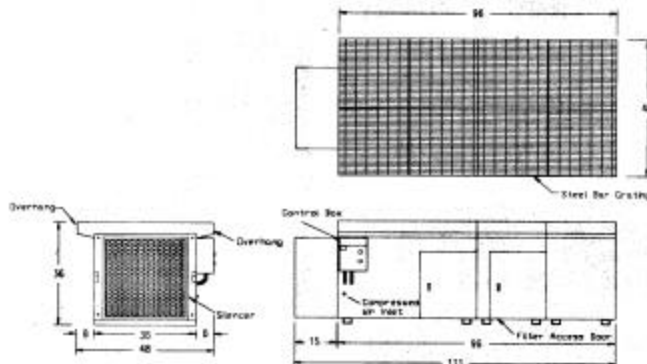
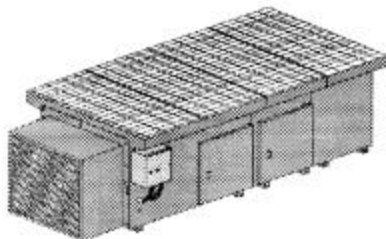
Continuous Cleaning Operations

Particles and stray material at the surface should be blown into the table towards the filter using compressed air. If a PVC mat (option) is used, it must be swept clean with a broom, directing particles into the table.

DIVERSITECH
DOWNDRAFT TABLES

Model DD4x8

Specifications



General Info:

The Diversi-tech self cleaning downdraft table eliminates the need for costly maintenance and replacement filters. Compressed air is blown through the filter in the reverse direction, dislodging smoke and dust from the filter. The solid pollutants are then collected in the dust drawer and emptied periodically. The self cleaning system is automatically activated each time the table is turned off. This table is suitable for collection of smoke and dust and comes complete with motor starter, cleaning controls and silencer. The dual overhang enables the workers to operate both at the front and back of the table.

BASIC:

Model #: DD4x8
 Cleaning Method: Automatic Reverse Pulse Self Cleaning System
 Air Flow (CFM): 5,050cfm
 Avg Velocity (FPM): 270 fpm
 Operating Temp.: 70°F.± ambient

FAN:

Motor H.P./voltage: 10HP TEFC motor, 208-230/460/575v, 3 phase
 Blower Model: 16" BI Flat-Blade Aluminum Wheel & Cone
 Capacity: 5,050cfm @ 4" s.p
 Starter: Magnetic starter with contactor, overload & reset controls

FILTER:

Qty: 4 (6 With High Static Option)
 Dimensions: 8-3/8" inner dia 12-3/4" outer dia. x 16" (L)
 Material: Paper-pleat Cellulose (80% paper, 20% polyester)
 Efficiency: 99.7% 0.5 microns
 Max.Temp: 275°F
 Cartridge removal: Hinged front door access
 Inlet: Top baffle trays
 Filtration area: 53.3sqft/ea.
 Discharge: 2 dust drawer (3 for High Static Option)

SPARK ARRESTANCE FEATURES:

1. Metal mesh prefilters (optional)
2. Spark trap: baffle tray (std)
3. Fire retardant cartridge (std)
4. Baffle for elimination of dust re-entrainment (std)

CABINET:

Weight: 900lbs
 Dimensions:
 Work Surface: 48" x 96"
 Cabinet: 48" x 96" x 36" high
 Material: Mild steel
 Thickness: Reinforced 14&16 gauge
 Color: Dark Grey
 Paint Finish: Powder Coat primer & finish
 Surface preparation: Cleaned and brushed
 Table Surface: Steel bar grating w/ 1"x4" slot openings

CARTRIDGE CLEANING SYSTEM:

Type: Reverse Pulse
 Control: Automatic Reverse Pulse Self Cleaning System
 Compressed air: 80 - 90 p.s.i.g.
 Air properties: Clean, dry without oil/ water

COMPRESSED AIR TANK:

Quantity, size: 1 per table, 6" x 6" x 19" long
 Location: Internal blower compartment
 Requires: 80-90psi of compressed air

OPTIONS:

- High Static (upgrade to 6 filter cartridges)
- Side Walls with Middle Separator
- Plexiglass Middle Separator
- Polyester Cartridges (in lieu of Paper-Pleat Cellulose)
- PVC matting above steel bar grating
- Metal mesh prefilters
- Paint arrestor prefilters
- Fiberglass/Aluminum or 2" High Steel Bar Grating
- Side stack silencer
- H.E.P.A filter
- Activated Carbon Filtration
- Casters
- Minihelic Gauge
- Dust Proof Light Kits
- Capture Arm mounted to table 8"dia. x 11' long
- Grounding lug

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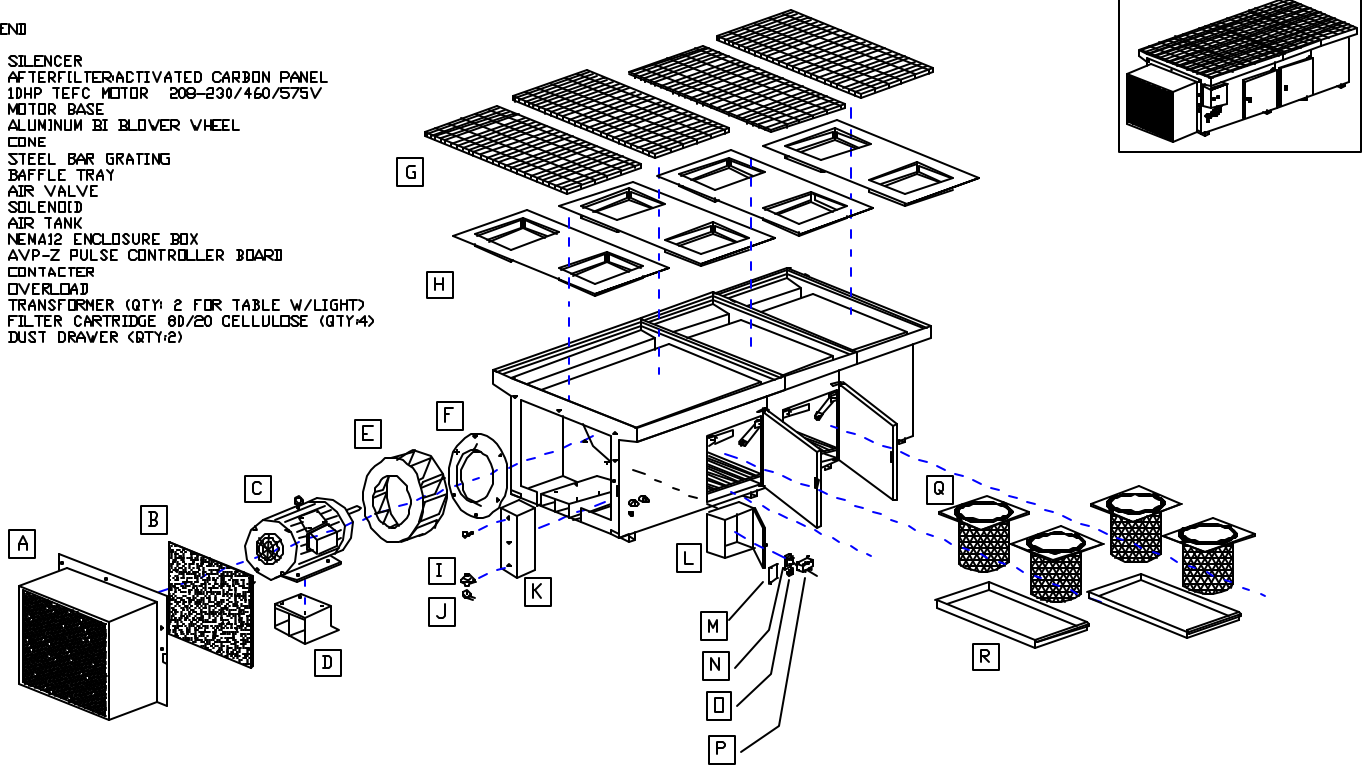
Standard Specifications

MODEL	MINI-DD	DD2X4	DD3X4	DD3X6	DD3X8	DD4x4	DD4x6	DD4X8
Cleaning method	manual	push button reverse pulse	reverse pulse auto-clean	reverse pulse auto-clean	reverse pulse auto-clean	reverse pulse auto-clean	reverse pulse auto-clean	reverse pulse auto-clean
Avg air flow (cfm)	1200cfm @ 2.5"h20	1500cfm @ 4"h20	3000cfm @ 4"h20	4300cfm @ 4"h20	5050cfm @ 4"h20	3000cfm @ 4"h20	4300cfm @ 4"h20	5050cfm @ 4"h20
Avg open face velocity (fpm)	200fpm	280fpm	250fpm	240fpm	210fpm	300fpm	325fpm	270fpm
Motor	1hp (120v)	1.5hp (120v)	7.5 hp (208-230/460/575v)	7.5 hp (208-230/460/575v)	10 hp (208-230/460/575v)	7.5 hp (208-230/460/575v)	7.5 hp (208-230/460/575v)	10 hp (208-230/460/575v)
High static option	n/a	3hp / 2600cfm/ 325fpm	n/a	10hp / 5000cfm/ 4 cartridge/ 310fpm	6 cartridges	n/a	10hp / 5000cfm/ 4 cartridge/ 400fpm	6 cartridges
Table dimensions (d x w x h)	38"x30"x34"	32" x 48" x 39"	42" x 48" x 36"	42" x 72" x 36"	42" x 96" x 36"	48" x 48" x 36"	48" x 72" x 36"	48" x 96" x 36"
Work surface dimensions	38" x 30"	32" x 48"	42" x 48"	42" x 72"	42" x 96"	48" x 48"	48" x 72"	48" x 96"
Weight	145lbs	280lbs	450lbs	650lbs	850lbs	500lbs	700lbs	900lbs
Sound level (dBA) @2'	72dBA	75dBA	79dBA	79dBA	81dBA	79dBA	79dBA	81dBA
Construction	14-16 gauge CRS	14-16 gauge CRS	14-16 gauge CRS	14-16 gauge CRS	14-16 gauge CRS	14-16 gauge CRS	14-16 gauge CRS	14-16 gauge CRS
Main filter	Paper pleat 20"x25"x2" filter	Paper pleat 17" dia x 20"long cartridge	Paper pleat 12" dia x 16"long cartridge	Paper pleat 12" dia x 16"long cartridge	Paper pleat 12" dia x 16"long cartridge	Paper pleat 12" dia x 16"long cartridge	Paper pleat 12" dia x 16"long cartridge	Paper pleat 12" dia x 16"long cartridge
Filter efficiency	92% @ 2 micron qty:1	99.5% @0.5 micron qty:1	99.5% @0.5 micron qty:2	99.5% @0.5 micron qty:2	99.5% @0.5 micron qty:4	99.5% @0.5 micron qty:2	99.5% @0.5 micron qty:2	99.5% @0.5 micron qty:4

Exploded View of Model DD4x8 Downdraft Table

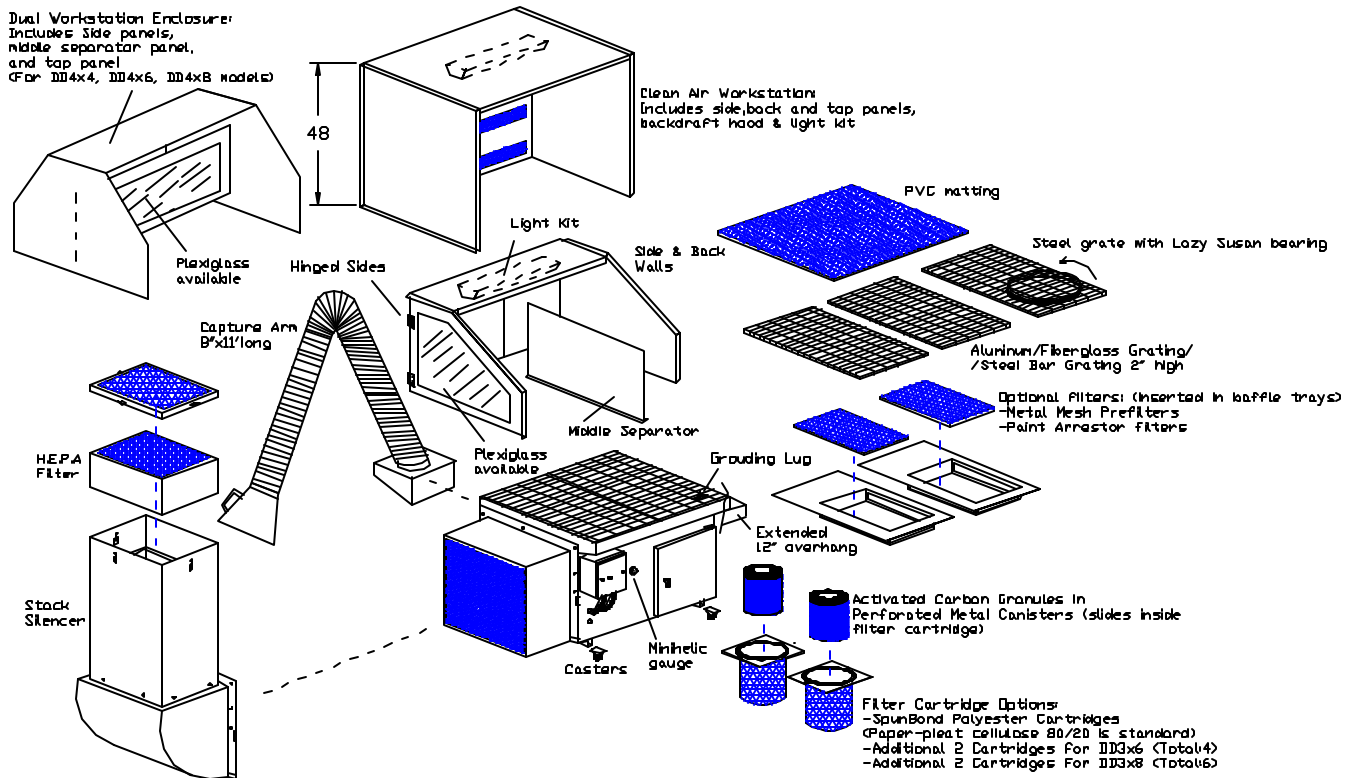
LEGEND

- A SILENCER
- B AFTERFILTER/ACTIVATED CARBON PANEL
- C 10HP TEFC MOTOR 208-230/460/575V
- D MOTOR BASE
- E ALUMINUM BI-BLOWER WHEEL
- F CONE
- G STEEL BAR GRATING
- H BAFFLE TRAY
- I AIR VALVE
- J SOLENOID
- K AIR TANK
- L NEMA12 ENCLOSURE BOX
- M AVP-Z PULSE CONTROLLER BOARD
- N CONTACTOR
- O OVERLOAD
- P TRANSFORMER (QTY: 2 FOR TABLE W/LIGHT)
- Q FILTER CARTRIDGE 80/20 CELLULOSE (QTY:4)
- R DUST DRAWER (QTY:2)

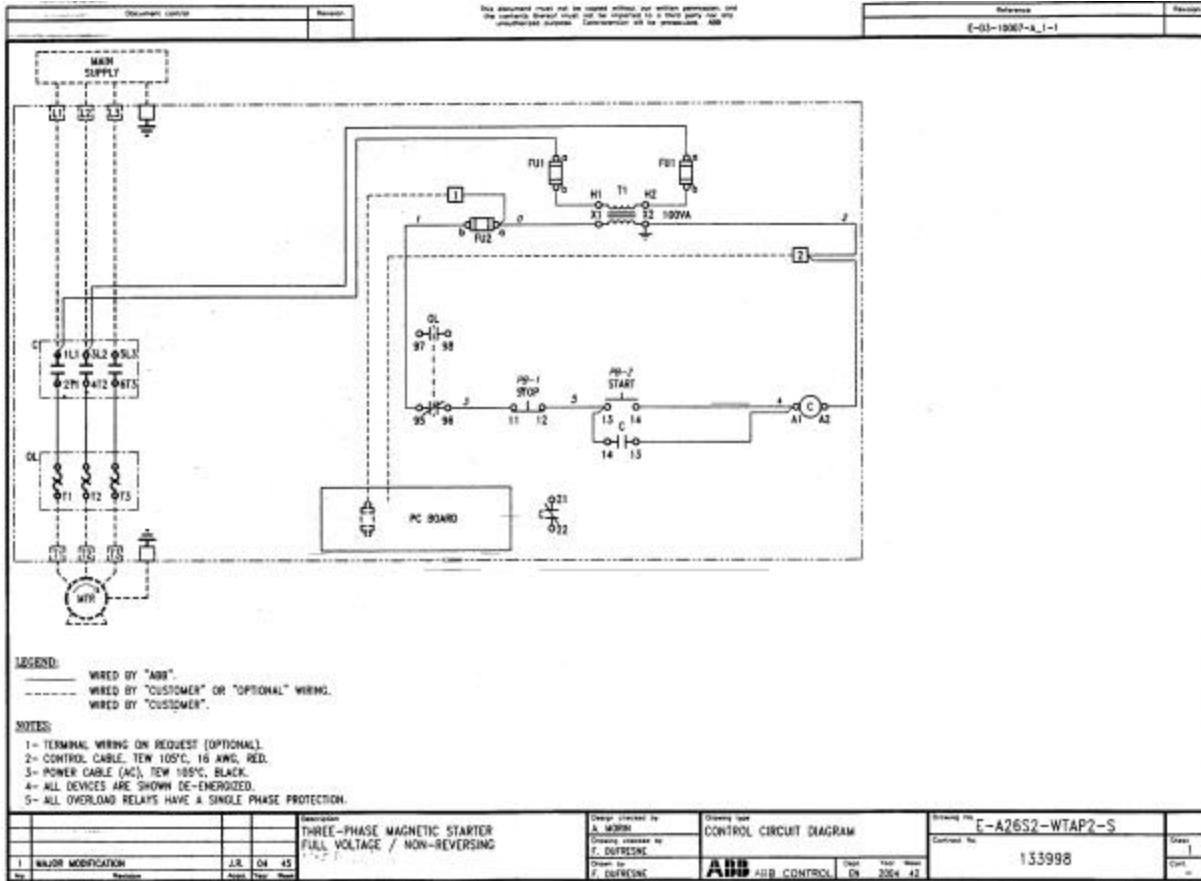


Exploded View of Downdraft Table Options

Dual Workstation Enclosure:
Includes side panels,
middle separator panel,
and top panel
(For 113x4, 113x6, 113x8 models)



WIRING DIAGRAM FOR DOWNDRAFT TABLE 208-230/ 460/ 575v 1/3/60



WIRING DIAGRAM FOR DOWNDRAFT TABLE WITH LIGHT KIT 208-230/ 460/ 575v 1/3/60

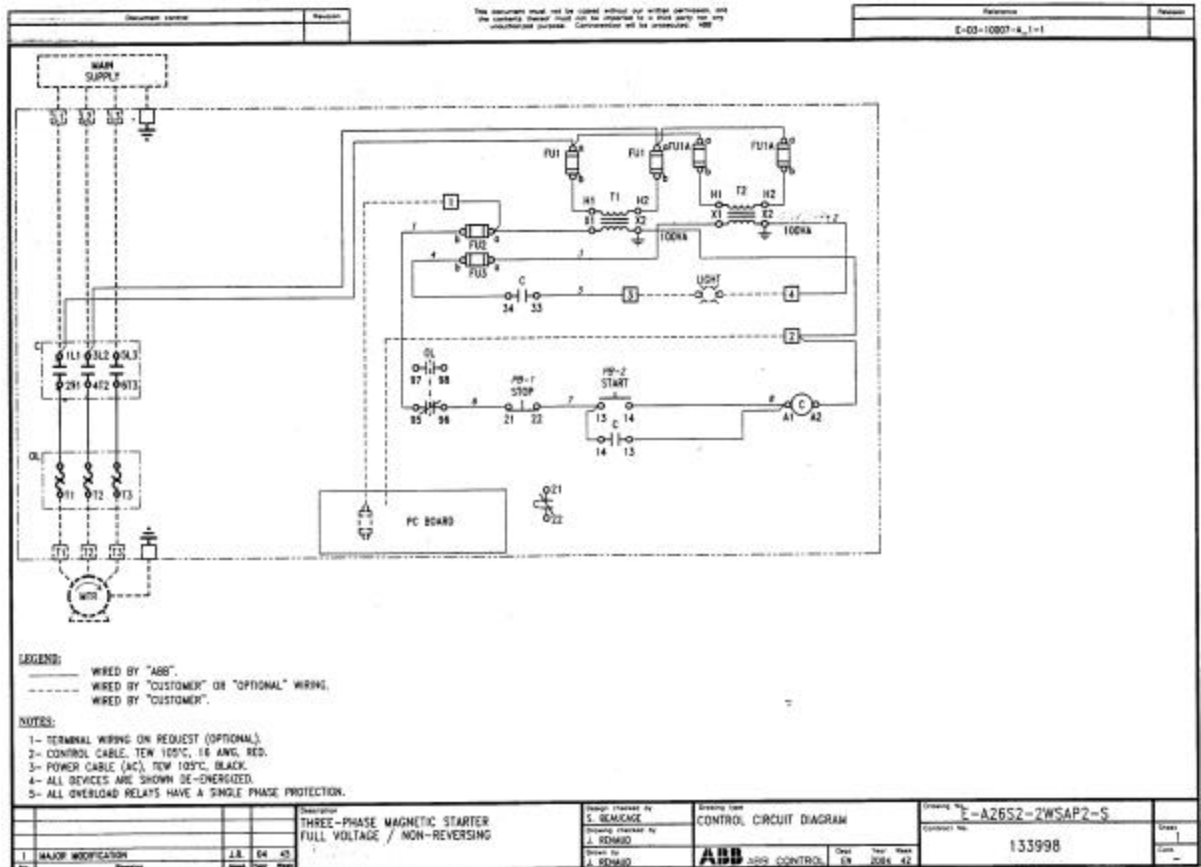


Table Options Replacement Parts

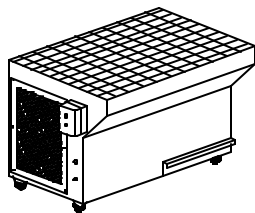
Part Number	Description
O-4X8-SB	16" Filter cartridge polyester spun-bond (4 req'd)
O-4X8-SBWM	Side and back walls w/ middle separator
O-4X8-SBWMP	Side and back walls w/ plexiglass separator
O-4X8-PVC	PVC mat (placed above grating on table surface)
O-4X8-MM	Metal mesh prefilter and frame
O-4X8-FG	Fiberglass grating
O-4X8-AG	Aluminum grating
O-4X8-SG	Steel bar grating
O-4X8-SSS	Side stack silencer
O-4X8-LS	Steel grate with lazy susan bearing
O-4X8-HFM	Hepa filter and frame
O-4X8-GOA	Gas odor adsorption kit (for 4 cartridges)
O-4X8-C	Casters (Qty:6)
O-4X8-MH	Minihelic gauge
O-4X8-LK	Dust proof light kit
O-4X8-ET	Empty table with collar
O-4X8-MS	Middle Separator
O-4X8-CA	Capture arm 8" dia.x11" long
O-4X8-GL	Grounding lug

Part Number	Description
S-4X8-0001	10hp motor (specify voltage)
S-4X8-0002	16" Filter cartridge 80/20 cellulose (4 req'd)
S-4X8-0003	16" Filter cartridge polyester spun-bond (4 req'd)
S-4X8-0004	Starter w/ auxiliary contact
S-4X8-0005	10HP BI Blower Wheel
S-4X8-0006	Step down transformer
S-4X8-0007	Overload
S-4X8-0008	Solenoid valve 12VAC
S-4X8-0009	Fiberglass grating 24"x48" (4 req'd)
S-4X8-0010	Aluminum grating 24"x48" (4 req'd)
S-4X8-0011	Perforated Steel grill 24"x48" (4 req'd)
S-4X8-0012	Steel Bar Grating 24"x48" (4 req'd)
S-4X8-0013	Baffle Tray (4 req'd)
S-4X8-0014	Metal mesh prefilter (without frame)
S-4X8-0015	AVPZ Pulse Cleaning Controller Board
S-4X8-0016	55lbs bag of A40 activated carbon
S-4X8-0017	10 spare paint arrestor filters
S-4X8-0018	Paint arrestor filter frame
S-4X8-0019	HEPA Filter 99.95% Eff.
S-4X8-0020	Control Panel c/w starter, overload, pc board and transformer
S-4X8-0021	Activated carbon filter (inserted in silencer)

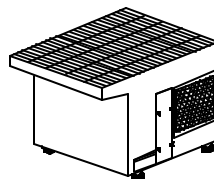
Application Kits Available

Part Number	Description
K-4X8-WELD	WELDING APPLICATIONS KIT Grounding Lug, Side Walls and Middle Separator
K-4X8-GD	GRINDING & DEBURRING KIT Metal mesh prefilters Side Walls and Middle Separator
K-4X8-AGD	ALUMINUM GRINDING & DEBURRING KIT Metal mesh prefilters, Side Walls and Middle Separator, PVC mat, offline pulsing only
K-4X8-GOA	GAS&ODOR ADSORPTION KIT Activated carbon granules in perforated metal cannister (qty:4, slides into filter cartridge)
K-4X8-SP	SPRAY&TOUCH UP PAINT KIT Side Walls and Middle Separator, Paint arrestor filter & frames, 10 spare filters, polyester cartridge, activated carbon granules in perforated metal cannister

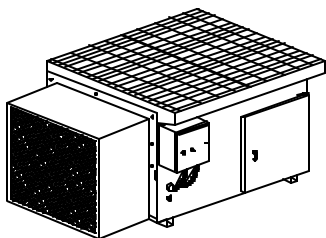
The Downdraft Table Family



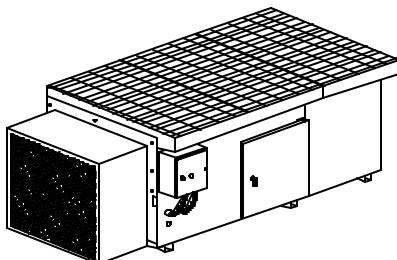
DD2X4



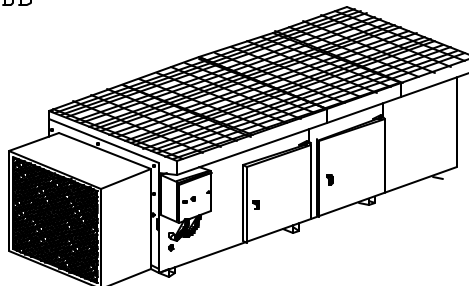
MINIDD



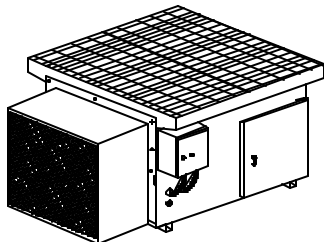
DD3X4



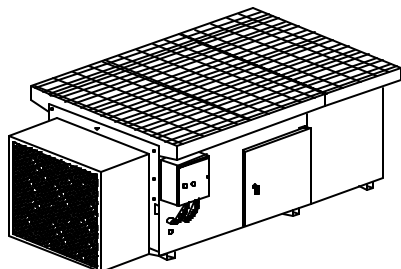
DD3X6



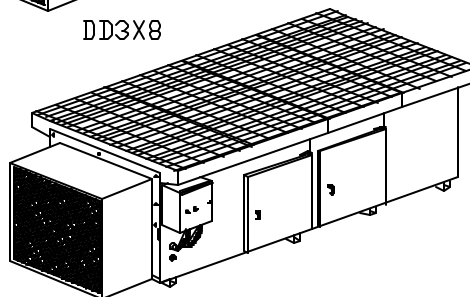
DD3X8



DD4X4



DD4X6



DD4X8

WARRANTY

Effective immediately, the following policy will apply to all equipment.

LIMITED EQUIPMENT WARRANTY

All Diversi-Tech units are warranted to be free from defects in material and workmanship for a period of two years from the date of purchase. Diversi-Tech Inc. will repair or replace, at our option, any defective parts returned to the manufacturer's plant in Montreal - Quebec freight prepaid- which fail during the warranty period. This warranty is limited to replacement parts and labour ONLY, subject to on site or in house evaluation of defective materials and does not apply to any personal liability or property loss that occurs due to the use or installation of this equipment.

FREIGHTCLAIMS

All Diversi-Tech units are sold ex-plant, Montreal, Qc., Canada. Therefore, it is the user's responsibility to file any freight claims for obvious or concealed damages which developed in transit from Montreal to your location or when drop shipped.

RETURN MATERIAL POLICY

1. Prior to the return of material, for whatever reason, a return manufacturing authorization number (RMA#) is required from the Diversi-Tech production control department.
This procedure is necessary for proper control and handling of returned materials. Fax us or call to obtain the RMA.
2. All material must be returned prepaid. Credit will be given for returns for warranty repair or replacement. Freight collect shipments will not be accepted. It is the shipper's responsibility to insure that material being returned to Diversi-Tech is adequately packaged for shipment to preclude damages.

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