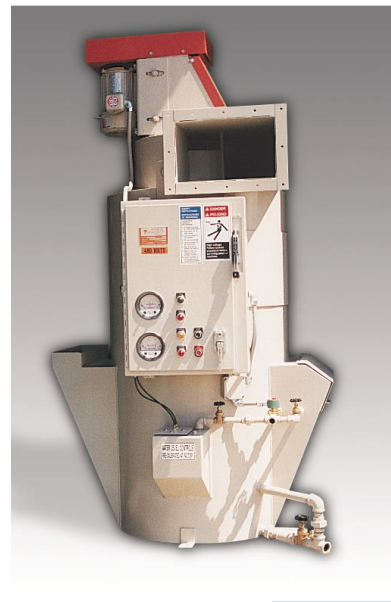
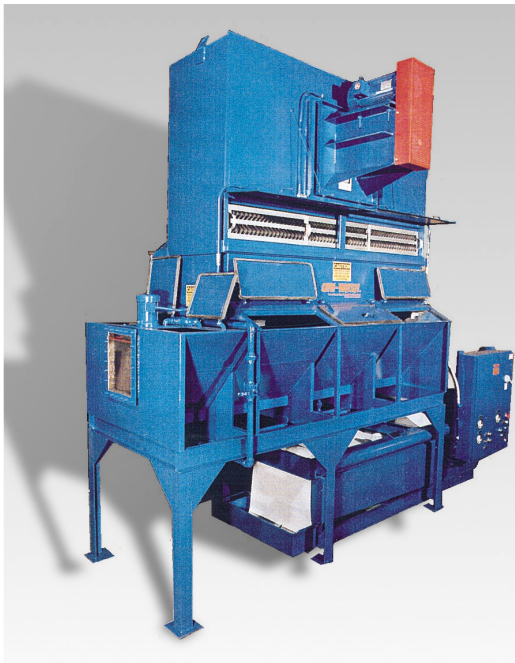


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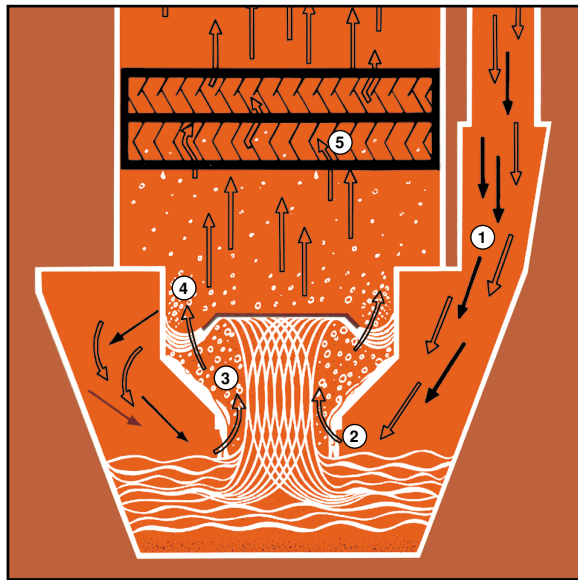


Down Draft Benches Wet Type Dust Collectors

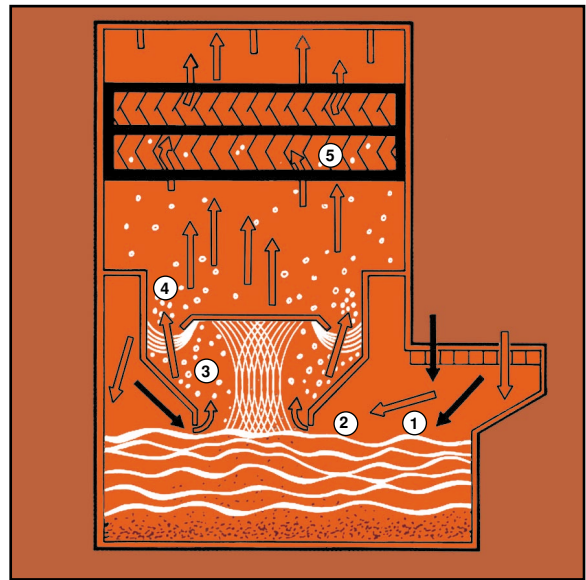
Manufactured under ISO 9001 specifications

Wet type dust collectors are designed for the capture of wettable and sinkable contaminants. These systems employ a unique, patented five-stage filtration system for scrubbing particulate out of the air and collecting it as wet sludge.

Continuously manufactured since 1938, Uni-Wash™ dust collectors are self-contained, water recirculating type units for removal of most industrial and foundry dusts from exhaust system air. Dirt, lint, grindings, sanding, finishing dust and other contaminants that do not float in water are all thoroughly washed out and trapped as wet sludge. In many instances the cleaned air may be returned back into the plant for substantial energy savings. Installation is simple: Units are ready for immediate hook-up to water, drain, ducts and electric power. The compact design requires minimum floor space. Shipped in sections or fully assembled, depending on size, systems are generally ready for immediate start-up. Water is continuously agitated by the suction of the air through the machine. There are no nozzles, piping or water pumps to clean, repair or replace. The consumption of water is negligible. Only normal evaporation occurs and the water loss is replenished automatically. Collected sludge is easily removed from the sloping tank side through the grating or operational access doors, or through the use of optional automatic sludge removal equipment.



STANDARD CONFIGURATION
WET TYPE DUST COLLECTOR



DOWN DRAFT BENCH CONFIGURATION
WET TYPE DUST COLLECTOR

How It Works

In operation, UNI-WASH Wet Type Dust Collectors employ a unique, patented principle for washing, scrubbing and fogging airborne particulate out of the air and collecting it as sludge. Contaminated air enters the filtration system and follows a downward path to strike the water surface violently. Fan suction continuously draws a large volume of water and air up into the cone where it impinges against a disc baffle plate and sprays off onto the wall of the cone. This forms a dense, horizontal water curtain across the air passage between the baffle plate and the cone. When the water strikes the walls of the cone it cascades onto the sloping surface with turbulence that scrubs the ascending air stream. The drain-back water drops into the tank, producing another heavy curtain through which the air must pass and be filtered. Before it is drawn through the exhaust blower and discharged, the air is finally cleansed by rapid changes of direction and impingement against the moisture separator plates. As a result only clean air, free of water droplets pass through the blower.

Thus the air is scrubbed and washed in these five separate stages shown in the above diagrams for the standard and down draft bench configuration systems:

- 1) striking turbulent water surface in tank;
- 2) passing through vertical water curtain;
- 3) scrubbed along water cascade on cone walls;
- 4) passing through horizontal water curtain; and
- 5) buffeted through the moisture separator.

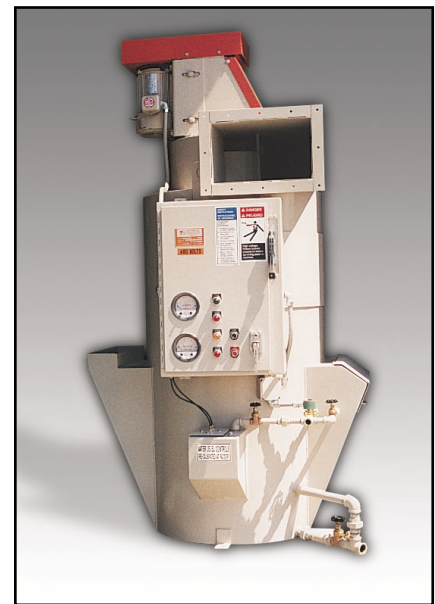
Efficiencies are ideal for a variety of plant or foundry processes, including metal grinding and deburring operation, buffing and polishing, food processing, ceramic dust and combustible metal processes.



UCBD-75 with Media Bed Conveyor Sludge Removal System.



UCBD-150 with Single Strand Sludge Conveyor



UCBD-25

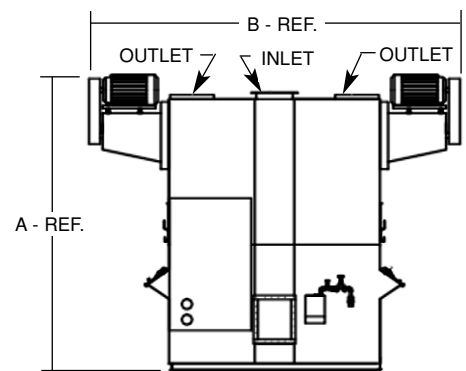
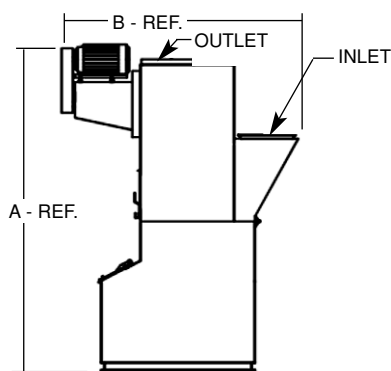
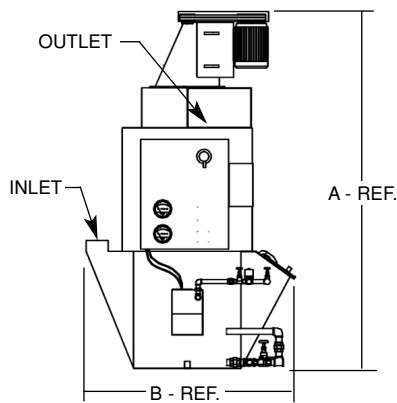
STANDARD FEATURES

- Standard construction on all units regardless of size will consist of one or more of the following hot rolled steel thicknesses: 1/4" plate, 3/16" plate, 10 gauge, 14 gauge, 16 gauge
- Rustproof coatings
- Washing section components consist of 304 stainless steel cone, cone mounting plate, deflector plate and threaded deflector plate support
- 3" channel base construction (Models 4000 CFM and larger)
- 5" W.G. external suction (Model 500 -3000 CFM)
- 8" W.G. external suction (Models 4000 CFM and larger)
- Schedule 40 cast iron drain and fresh water piping connections
- NEMA 12 electrical cabinet
- Push-button Start/Stop operation
- Throw and lock disconnect
- T.E.F.C. 230/460 volt, 3 phase, 60 Hz. T-frame motors
- 16 gauge galvanized eliminator pack construction
- Primed and painted industrial enamel

OPTIONAL FEATURES

- Performance enhancements
- Explosion proof wiring
- Single or dual strand sludge removal (Models 4000 CFM and larger)
- Sludge level view port access window
- Stainless steel construction
- Special CFM capacities not shown above.
- NEMA 7 and 9 electrical wiring
- Duct connections and fitting
- Aluminum or stainless steel eliminator pack construction

Wet type dust collectors may be required by the NFPA for the capture of combustible dusts such as aluminum, magnesium, titanium, zirconium and lithium.



Small capacity systems are offered from 500 to 3000 CFM (Models UC-5 to UCBD-30) and operate at five (5) inches (11.2 cm) external suction. Units in this range feature a small, cylindrical shape effective in removal of heavy dust concentrations at a single machine operation, or lighter dust concentrations collected from a small group of machine operations. These smaller units are ideal for tool rooms or individual installations with large milling machines, grinders, etc. The collector outlet direction can be changed by rotating the fan housing. The blower is directly connected to the motor on Models UC-5 and UC-10. Model UCBD-20 and larger systems are all belt driven.

Mid-range capacity models from 4000 to 12,500 CFM (Models UCBD-40 to UCBD-125) feature eight (8) inches (17.92 cm) external suction. These mid-size systems are driven by one fan assembly integral to the unit, located on the clean air side. The system size is suitable for capture of all types of wettable industrial dusts where the dust loading is moderate to heavy. The number of scrub chambers increases as a function of the unit size, based on 2000 cfm (57 m³/min) per chamber, on Models UCBD-40 and UCBD-60. Model UCBD-50 and UCBD-75 through UCBD-125 utilize multiple scrub chambers based on 2500 (71 m³/min) per chamber.

Large capacity models from 15,000 to 30,000 CFM (Models UCBD-150 to UCBD-300) feature eight (8) inches (17.92 cm) external suction and are recommended for larger installations. These systems should be utilized where unusually long ducting is required, where heavy or coarse dusts which are difficult to convey must be captured, or where hazardous or toxic materials necessitate more thorough exhaust. The inlets may be either horizontal or vertical and exhaust is of the upblast type. All large capacity units are belt driven.

MODEL	M ³ /MIN CFM	CM INCHES	KILOWATTS H.P.	CM INCHES	CM INCHES	NUMBER OF BLOWERS	CM FEET, INCHES	CM FEET, INCHES	CM FEET, INCHES	KILOGRAMS POUNDS	LITERS GALLONS
	EXHAUST VOLUME	EXTERNAL SUCTION, W.G.	POWER	INLET SIZE	OUTLET SIZE		LENGTH	DIM A-REF.	DIM B-REF.	SHIP WEIGHT	TANK CAPACITY
UC-5*	14	12.7	1	13 x 33	9 x 17	1	ROUND	160	86	181	76
	500	5"	1.5	5" x 13"	3 1/2" x 6 3/4"		UNIT	5' - 3"	2' - 10"	400	20
UC-10*	28	12.7	2	13 x 46	13 x 17	1	ROUND	196	107	318	159
	1,000	5"	3	5" x 18"	5 1/4" x 6 3/4"		UNIT	6' - 5"	3' - 6"	700	42
UCBD-20	57	12.7	4	15 x 51	44 x 28	1	ROUND	257	137	327	329
	2,000	5"	5	6" x 20"	17 3/8" x 10 7/8"		UNIT	8' - 5"	4' - 5 13/16"	720	87
UCBD-25	71	12.7	4	15 x 66	28 x 44	1	ROUND	257	137	386	367
	2,500	5"	5	6" x 26"	11" x 17 1/2"		UNIT	8' - 5"	4' - 5 15/16"	850	97
UCBD-30	85	12.7	5.5	15 x 66	44 x 30	1	ROUND	257	148	435	428
	3,000	5"	7.5	6" x 26"	17 3/8" x 11 15/16"		UNIT	8' - 5"	4' - 10 1/8"	960	113
UCBD-40	113	20.32	11	36 x 36	53 x 35	1	165	274	213	1,406	984
	4,000	8"	15	14" x 14"	21" x 13 3/4"		5' - 5"	9' - 0"	7' - 0"	3,100	260
UCBD-50	142	20.32	11	36 x 36	60 x 38	1	183	305	229	1,588	1,094
	5,000	8"	15	14" x 14"	29 9/16" x 14 15/16"		6' - 0"	10' - 0"	7' - 6 1/2"	3,500	289
UCBD-60	170	20.32	15	38 x 38	60 x 39	1	248	274	234	1,769	1,249
	6,000	8"	20	15" x 15"	23 1/2" x 15 1/2"		8' - 1 1/2"	9' - 0"	7' - 8"	3,900	330
UCBD-75	212	20.32	15	41 x 41	72 x 47	1	274	305	234	1,950	1,420
	7,500	8"	20	16" x 16"	28 5/8" x 18 9/16"		9' - 0"	10' - 0"	7' - 8"	4,300	375
UCBD-100	283	20.32	19	48 x 48	72 x 51	1	366	305	243	2,177	1,415
	10,000	8"	25	19" x 19"	28 5/8" x 20"		12' - 0"	10' - 0"	7' - 11 1/2"	4,800	577
UCBD-125	354	20.32	22	53 x 53	72 x 54	1	457	305	247	2,449	1,979
	12,500	8"	30	21" x 21"	28 5/8" x 21 7/16"		15' - 0"	10' - 0"	8' - 1 1/16"	5,400	779
UCBD-150**	425	20.32	15	76 x 41	73 x 47	2	274	325	384	4,536	2,585
	15,000	8"	20	30" x 16"	28 5/8" x 18 9/16"		9' - 0"	10' - 8"	12' - 7"	10,000	683
UCBD-200**	566	20.32	18	101 x 41	73 x 51	2	366	325	401	5,670	3,229
	20,000	8"	25	40" x 16"	28 5/8" x 20"		12' - 0"	10' - 8"	13' - 2"	12,500	853
UCBD-250**	708	20.32	22	130 x 41	73 x 54	2	457	325	409	7,257	4,035
	25,000	8"	30	51" x 16"	28 5/8" x 21 7/16"		15' - 0"	10' - 8"	13' - 5"	16,000	1,066
UCBD-300**	850	20.32	30	54 x 46	81 x 60	2	547	325	427	8,391	4,959
	30,000	8"	40	54" x 18"	31 13/16" x 23 13/16"		18' - 0"	10' - 8"	14' - 3"	18,500	1,310

* 3450 rpm

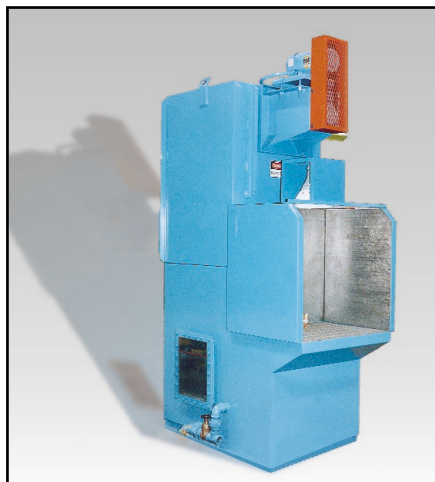
** Two motors and drive assemblies per unit.

Water Connections: For Unit Capacities of 500-3,000 CFM (14 m³/min - 71 m³/min): Water Inlet 3/4", Drain 1 1/4" (3.17 cm);

For Unit Capacities of 4,000 - 30,000 CFM (142 m³/min - 850 m³/min: Water Inlet 1 3/4" (4.45 cm), Drain 2" (5.08 cm).

Ideal for hand-held operations, the Uni-Wash Down Draft Bench Wet type dust collector draws contaminated air away from the product and the worker through the work space work deck.

SINGLE SIDED DOWN DRAFT BENCH (DOUBLE SIDED BENCHES ALSO AVAILABLE)



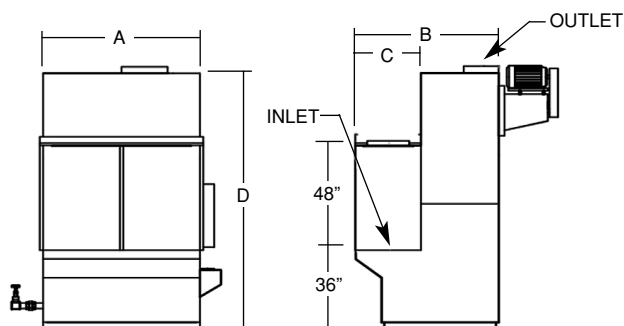
DDB-25 Single Station



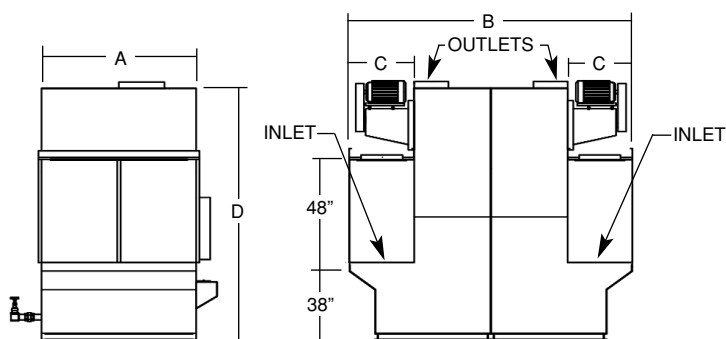
DDB-50 Two Station



DDB-75 Three Station



Single Sided Down Draft Bench



Double Sided Down Draft Bench

UNI-WASH 2,500 CFM (71 m³/min) 12,500 CFM (354 m³/min) Down Draft Benches

MODEL	UNIT DIMENSIONS				KILOWATTS HP POWER	M ³ /MIN CFM EXHAUST VOLUME	M/MIN FPM WORK SURF. VELOCITY	CM INCHES OUTLET DIMENSIONS	LITERS GALLONS TANK CAPACITY	KILOGRAMS POUNDS SHIP WEIGHT
	CM	CM	CM	CM						
	INCHES A	INCHES B	INCHES C	INCHES D						
DDB-25	91 3' - 0"	168 5' - 6"	76 2' - 6"	305 10' - 0"	2 3	71 2,500	105 334	40 x 30 15 7/8" x 11 15/16"	704 186	1,225 2,700
DDB-50	183 6' - 0"	168 5' - 6"	76 2' - 6"	305 10' - 0"	4 5	142 5,000	105 334	49 x 38 19 3/8" x 14 9/16"	1,147 303	1,588 3,500
DDB-75	274 9' - 0"	168 5' - 6"	76 2' - 6"	305 10' - 0"	5.5 7.5	212 7,500	105 334	60 x 45 23 9/16" x 17 11/16"	1,722 455	1,950 4,300
DDB-100	366 12' - 0"	168 5' - 6"	76 2' - 6"	305 10' - 0"	7.5 10	283 10,000	105 334	73 x 54 28 5/8" x 21 3/8"	2,294 606	2,177 4,800
DDB-125	457 15' - 0"	168 5' - 6"	76 2' - 6"	305 10' - 0"	11 15	354 12,500	105 334	73 x 54 28 5/8" x 21 3/8"	2,869 758	2,449 5,400

NOTE: All dimensions are \pm 1 cm or \pm .25 inches.

Over thirty years ago the Uni-Wash design established the industry standard in wet type down draft bench dust collectors. These machines are precision crafted for use in applications requiring down draft process air containment from an industrial manufacturing operation. Most important in the selection of this kind of equipment is the way in which containment occurs. Uni-Wash wet type down draft bench dust collectors are designed with the highest work deck capture velocities in industry. Uni-Wash down draft benches incorporate the same design features and attention to detail found in the standard configuration collectors, but are designed for meeting source capture requirements.

Many hand held grinding, sanding, deburring and finishing operations lead to fires which could be eliminated through use of a wet type down draft bench that captures the hot process particle from the grinding wheel and isolate it under water. This type of equipment is a must for combustible metal operations due to the extreme hazard that finely divided particles in air can present if introduced to a spark.

Stainless steel internal scrubber components are the foundation of design for these machines with such features as nested ball bearing turntables, roller conveyor decking and hardwood work surfaces as available options.

All units are supplied complete with NEMA 12 control cabinets fully wired and tested for all control components to make on-site start-up immediate. Plumbing connections for fresh water and drain are included and (4) point water level control monitoring is standard.

The real secret of these machines lies in their ability to be modified for specific customer needs by incorporating work deck modifications to add or remove surface area, adding ergonomic features such as extra hood lighting, hood insulation, foot rest, pneumatic or electrical connections or tool shelves. Larger machines can accommodate several worker stations at one machine! - Thus, eliminating the need to pipe individual stations to a remote dust collector - all taking up considerable and valuable floor space.

STANDARD FEATURES

- Standard construction on all units regardless of size will consist of one or more of the following hot rolled steel thicknesses: 1/4" plate, 3/16" plate, 10 gauge, 14 gauge, 16 gauge
- Washing section components consist of 304 stainless steel cone, cone mounting plate, deflector plate and threaded deflector plate support
- 3" channel base construction
- Nominal grating velocity of 334 FPM (105 m/min) most models
- Schedule 40 cast iron drain and fresh water piping connections
- 4-point electro-pneumatic type control with pneumatic pump and Photohelic control gauge
- NEMA 12 electrical cabinet
- Push-button Start/Stop operation
- T.E.F.C. 230/460 volt, 3 phase, 60 Hz. T-frame motors
- 16 gauge galvanized eliminator pack construction
- Primed and painted industrial enamel
- Industrial rated heavy gauge steel fan assemblies backward curve, Class II rated construction or equal

OPTIONAL FEATURES

- Sound insulated work stations
- Custom double sided work stations
- NEMA 7 and 9 electrical wiring
- Fluorescent lighting
- Explosion proof wiring
- Sludge level view port access window
- Stainless steel construction
- Special CFM capacities
- Duct connections and fittings
- Nested ball bearing turntables
- Hood crane slots
- Side wall fluorescent lighting
- Horizontal fan discharges
- Adjustable work surfaces
- Tool shelves
- Electrical outlets
- Footrests
- Roller conveyors

Ergonomic features for ease of use and worker comfort are available, including sound insulation, lighted hood assemblies, hand tool electrical connections, nested ball-bearing turntables, foot rests and tiltable work surfaces.

OPTIONAL EQUIPMENT

Automatic Sludge Conveyor (Models UCBD-40 and Larger Collectors only)

Uni-Wash Dust Collectors trap and hold dust in the form of wet sludge. All models are equipped with manual clean-out doors. However, when large amounts of dust and dirt are being accumulated, or manual maintenance is not desired, an automatic sludge conveyor is recommended. Automatic Sludge Conveyors are available for standard configuration systems 4000 cfm and larger (Model UCBD-40 and larger). The sludge conveyor is installed with cross flight scrapers that move the wet sludge up to the discharge point. Driven by an independent motor and speed reducer, protection against overload or jamming is assured by an electronic power monitor wired to the drive motor. Idlers and take-up provide proper conveyor tension and level for thorough cleaning over the entire tank length. Sludge removal may be continuous with the conveyor activated by the automatic water level control, or sludge may be removed at set intervals using a timer switch. Ideal for applications where the dust collected is very heavy.



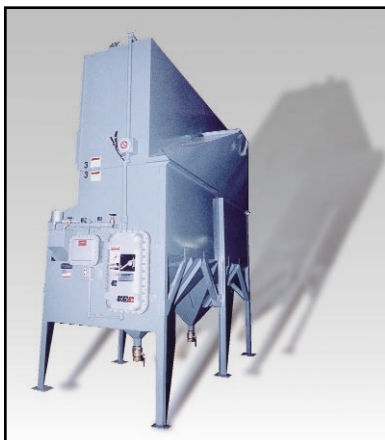
Ultra

The Ultra™ option offered on all dust collectors and down draft benches is a water filtering system designed to continually remove particles from the water bath and return filtered water back to the system. Filtered water is used in the collector to assist with air filtration through the use of removable water fogging nozzles in the scrubber section(s) of the machine to add yet another scrub stage. The added scrub stage in the machine is used to assist with particles in the one-micron range. This option requires no additional water consumption and is completely self-contained. The water filtering components ship on their own platform separately from the dust collector. The pump for the system is the only moving part associated with the process and is

easily removed for maintenance as necessary. Only (4) new connections are necessary for hook-up in the field. Collected sludge contains considerably less water than if collected by means of a drag chain sludge conveyor. Ideal for applications where process air dust particles drop out in water quickly, usually between 3-5 minutes after entry. Available on all sizes.

Roll Media Bed Filter

Usually sized by job requirement, this option offers the advantages of the Ultra™ option shown above, but uses roll media to filter (strain) water for recirculation through removable fogging nozzles in the scrubber section for added scrub performance. Units purchased with this option will require a leg structure to locate the media filter bed underneath thus raising the height of the machine from its standard catalog height. Various media filter performances are available depending on the application and how clean return water must be. Ideal for applications where there may be a floating constituent to the particles collected. Available on all sizes.



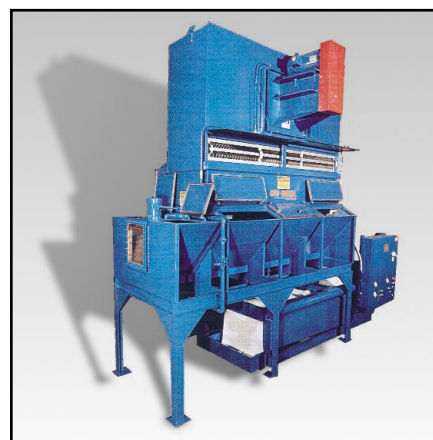
Sludge Hopper

This option is used where the customer has requested a hopper configuration for the tank of the machine and either manually opens the sludge valve at the bottom of the hopper periodically to remove accumulated heavy fines or may be hooked up to a water treatment/recirculating system in a larger facility. Often used in the food processing industry due to the ease in which the machine may be cleaned between uses. Available on all sizes.

Stainless Steel

Machines with the stainless steel option are often used in the food processing industry due to the ease in which the machine may be cleaned between uses. All housing, fan and structural components of the machine are 304 stainless steel. Various finishes may be supplied to meet customer requirements or the machine

may be painted. Combination mild steel housing sections supplied with stainless steel tank sections are another way of reducing the cost of this option. Available on all sizes.



For complete information on the Uni-Wash, Inc. family of air pollution control and ventilation systems, please visit our website at: www.uniwashinc.com

UNI-WASH™

WET TYPE DUST COLLECTORS

WET TYPE DOWN DRAFT BENCH COLLECTORS

STATIONARY DOWN DRAFT WORK TABLES

INTERCEPT™

HORIZONTAL, VERTICAL & HIGH PRESSURE DUST COLLECTORS

INTERCEPT V-4000™

VERTICAL CARTRIDGE DOWN DRAFT BENCHES

INTERCEPT WDT-3500™

HORIZONTAL CARTRIDGE DOWN DRAFT WALK-AROUND WORK TABLES

SIDEKICK™

PORTABLE CARTRIDGE DUST COLLECTORS

ENVIRO-CELL™

ENVIRONMENTAL WORK BOOTHS

MACHINEMASTER™

OIL & WATER MIST COLLECTORS

TORNADO™

CYCLONE COLLECTORS

SHAKEMASTER™

SHAKER TYPE DUST COLLECTORS

SIDE-ARM™

FLEXIBLE EXHAUST ARMS

BINPACK™

BIN VENTS

PULSEMAX™

CARTRIDGE FILTERS

Wet Type Dust Collector Specifications; Standard & Down Draft Bench Configurations

The wet type dust collector shall be of the low energy type with predetermined air flow capacity and shall suitably scrub by orifice washing action the pneumatically conveyed industrial process dust with minimum carry over in the atmosphere. Standard components of the collector shall not include pumps of any kind for the purpose of recirculating process water but shall include an integral water and sludge reservoir to extend underneath the housing section. Air entering the collector shall be directed through that water bath into the orifice cone washing section(s) to the mist eliminator section(s) and then exhausted to the atmosphere or ducted elsewhere by a limit loading fan, motor and drive assembly located on the clean air side of the collector. Units will be supported by a structural steel channel base. All units shall have eliminator access door(s) located in the housing section and tank inspection door(s) located in the tank section for immediate access to the interior of the unit without dismantling of the unit or its duct work. Operation of the unit shall be by a push button start/stop control in a NEMA 12 cabinet containing all necessary electrical components pre-wired for immediate customer operation. Water level control shall be performed by means of a 4-point electro-pneumatic type control with pneumatic pump and Photohelic control gauge to maintain the water level in the collector at all times providing proper and efficient operation. Continuous overflow to maintain water level will not be allowed. All fresh water and drain piping connections shall be provided and the unit will be constructed of suitable materials for the service intended. Tank sections will be coated of corrosion resistant materials or fabricated of corrosion resistant steel. Internal scrubber section components shall be constructed of stainless steel. Integral channeled lift slots shall be provided on the bottom of the equipment as well as lifting lugs on the top of the housing section. The dust collector shall be shop tested and quality checked prior to delivery.

For Down Draft Bench Configurations, add this specification to the above:

The bench section(s) of the collector shall be integral to the tank section and stand adjacent and below the housing section. The volume capacity shall be a function of the surface capture velocity and work surface area. The surface capture velocity shall not be less than 300 FPM (76.2 m/min). The work surface of the bench sections shall be fiberglass grating, and of substantial construction to support a load of 200 pounds (90.72 kgf) per work station. The bench section will have ample knee room underneath to accommodate the operator(s) in the sitting position.

For DDBC units, a mechanical float type water level control shall be standard with the 4-point water level control as an optional component.

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