PRE·SEPARATORS

POWDER RECOVERY | LIQUID RECOVERY

3D ADDITIVE MANUFACTURING
FOOD INDUSTRY

PHARMACEUTICAL INDUSTRY
METAL INDUSTRY

Tiger-Vac®
...The name to vacuum with

SPECIALIZING IN THE DESIGN AND MANUFACTURE
OF LEGALLY CERTIFIED PORTABLE INDUSTRIAL VACUUM
AND DUST COLLECTION SYSTEMS FOR CONTAMINATION
CONTROLLED ENVIRONMENTS AND HAZARDOUS LOCATIONS
Since 1983

Pre-Separation System using the cyclone for inertial separation

PRE-SEPARATION SYSTEM FOR FINE DUST

Removal of particulate matter by centrifugal and inertial forces, induced by forcing particulate-laden gas to change direction.

This type of technology is a part of the group of air pollution controls collectively referred to as "pre-cleaners," because they are oftentimes used to reduce the inlet loading of particulate matter to downstream collection devices by removing larger, abrasive particles. Cyclones are also referred to as Cyclone Collectors, Cyclone Separators, Centrifugal Separators, and Inertial Separators.

The collection efficiency of cyclones varies as a function of particle size and cyclone design. Cyclone efficiency generally increases with particle size and/or density, inlet duct velocity, cyclone body length, number of gas revolutions in the cyclone, ratio of cyclone body diameter to gas exit diameter, dust loading, and smoothness of the cyclone inner wall. Cyclone efficiency will decrease with increases in gas viscosity, body diameter, gas exit diameter, gas inlet duct area, and gas density. A common factor contributing to decreased control efficiencies in cyclones is leakage of air into the dust outlet.

High Efficiency Cyclones are designed to achieve higher control of smaller particles than conventional cyclones, being able to remove 5 micrometers particles at up to 90% efficiency, with higher efficiencies achievable for larger particles. The control efficiency ranges for High Efficiency Cyclones are 80% to 99% for particulate matter, 60% to 95% for particulate matter less than or equal to 10 micrometers in aerodynamic diameter, and 20% to 70% for particulate matter less than or equal to 2.5 micrometers in aerodynamic diameter. Higher Efficiency Cyclones come with higher pressure drops, which require higher energy costs to move the waste gas through the cyclone. Cyclone design is generally driven by a specified pressure-drop limitation, rather than by meeting a specified control efficiency.

EXPERTISE

Tiger-Vac® provides comprehensive solutions to guarantee production safety, product quality, and employee's health during the cleaning process. Since 1983, Tiger-vac® has been committed to provide a variety of Industrial Dust Collection solutions worldwide.

PRE-SEPARATION SYSTEM FOR FINE DUST

- Pre-Separation System using the cyclone for inertial separation
- Designed specifically for the recovery of Combustible Dust and non-Combustible Dust

Must be used in conjunction with a Portable Vacuum System

GUARANTEED
FOR THE SAFE RECOVERY OF COMBUSTIBLE / CONDUCTIVE DUSTS

HEC-25L (4W)

HIGH PRESSURE

SUCTION INLET	1.5 in.
AIR OUTLET	1.5 in.
REC. CAPACITY	6.6 gal. (25 L)
LENGTH	18 in.
WIDTH	18 in.

SAE 304
STAINLESS STEEL CONSTRUCTION

D1 DESIGNED FOR USE IN :
DIVISION 1 · CLASS I · GROUPS A, B, C, D
DIVISION 1 · CLASS II · GROUPS E, F, G
HAZARDOUS LOCATIONS AS DEFINED IN THE NATIONAL ELECTRICAL CODE (NFPA 70)

PRE-SEPARATION SYSTEM FOR FINE DUST

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GUARANTEED
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HEC-85L (4W)

HIGH PRESSURE

SUCTION INLET	2 in.
AIR OUTLET	2 in.
REC. CAPACITY	22 gal. (85 L)
LENGTH	18 in.
WIDTH	18 in.

SAE 304
STAINLESS STEEL CONSTRUCTION

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ESD SAFE
CONDUCTIVE POLYLINER RECOVERY BAG

ESD SAFE
CONDUCTIVE PLASTIC

ESD SAFE
CONDUCTIVE PAINT, OR STAINLESS STEEL LID

SAFE FROM ELECTROSTATIC DISCHARGES

HEC-35L (4W)

CYCLONIC PRE-SEPARATOR

SUCTION INLET	2 in.
AIR OUTLET	1.5 in.
REC. CAPACITY	9 gal. (35 L)
LENGTH	17 in.
WIDTH	17 in.

SAE 430
STAINLESS STEEL CONSTRUCTION

D1 DESIGNED FOR USE IN :
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ESD SAFE
CONDUCTIVE PAINT

HEC-200L (4W)

LOW / HIGH PRESSURE

SUCTION INLET	70 mm / 6 in.
AIR OUTLET	3 in. / 6 in.
REC. CAPACITY	55 gal. (200 L)
CART TYPE	4-Wheel Dolly

HD HEAVY DUTY
POWDER COATED STEEL CONSTRUCTION

The HEC can be powered by either a Low Pressure or High Pressure Vacuum System or Dust Collector

55 gal.
RECOVERY DRUM

PRE-SEPARATION SYSTEM FOR FINE DUST

- Pre-Separation System using the Cyclone for inertial separation
- The suction inlet is Ø70 mm / 6 in. The outlet (elbow) which connects to the Vacuum Producer is 3 in. / 6 in. outside diameter

SAFE PROCESSING

- The best way to prevent particles from settling on surfaces and equipment where they can cross-contaminate is to collect them at the source while they are being processed and are still airborne.
- Tiger-Vac® engineered Industrial Pre-Separators/Dust Collectors/Vacuum Systems are designed to meet the multiple and specific challenges that processing facilities face.
- They capture airborne particles where they are generated and do not allow them to settle.
- These Pre-Separators/Dust Collectors/Vacuum Systems are a proven engineering control to filter dust-borne allergens and significantly reduce risk of cross-contamination.

LESS CLOGGING AND MORE PRODUCTIVITY WITH A 21.78 ft²
PLEATED FILTER

SS SAE 430
STAINLESS STEEL CONSTRUCTION

TO BE USED
WITH A PORTABLE VACUUM PRODUCER
OR WITH A CENTRAL VACUUM SYSTEM

2-WAY CONNECTOR
METAL CONNECTOR FOR SUCTION HOSE

CONNECTOR
METAL CONNECTOR FOR SUCTION HOSE

PRESEP-198

PRE-SEPARATION SYSTEM

SUCTION INLET	80 mm
AIR OUTLET	3 in.
CART TYPE	Carriage Base
FILTER CLEANING	Manual Filter Shaker
FILTER TYPE	Star-Shaped Filter
FILTER SURFACE AREA	21.78 ft²
RECOVERY CAPACITY	17 gal. (65 L)
LENGTH	29 in.
WIDTH	24.5 in.
HEIGHT	53 in.

MFS
MANUAL FILTER SHAKER

16 gal.
DETACHABLE RECOVERY TANK

RECOVERY OF LARGE VOLUME OF POWDERS

The HEC can be powered by either a Low Pressure or High Pressure Vacuum System or Dust Collector

GUARANTEED
FOR THE SAFE RECOVERY OF COMBUSTIBLE / CONDUCTIVE DUSTS

HEC-200L (4W)

LOW / HIGH PRESSURE

SUCTION INLET	4 in. Camlock
AIR OUTLET	4 in. Camlock
CART TYPE	4-Wheel Dolly
DRY RECOVERY	55 gal.
LENGTH	24 in.
WIDTH	24 in.
HEIGHT	74 in.

SAE 304
STAINLESS STEEL CONSTRUCTION

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DIVISION 1 · CLASS II · GROUPS E, F, G
HAZARDOUS LOCATIONS AS DEFINED IN THE NATIONAL ELECTRICAL CODE (NFPA 70)

4 in. / 6 in. / 8 in.
INLET / OUTLET

CAN BE FITTED WITH
SANITARY FITTINGS

4 in.
FEMALE CAMLOCK

1.5 in.
MALE CAMLOCKS

3-WAY CONNECTOR

AIR OUT

AIR IN
RECOVERED MATERIAL

THE CYCLONE EFFECT

Cyclone separators work much like a centrifuge, but with a continuous feed of dirty air. In a cyclone separator, dirty flue gas is fed into a chamber. The inside of the chamber creates a spiral vortex, similar to a tornado. The lighter components of this gas have less inertia, so it is easier for them to be influenced by the vortex and travel up. Contrarily, larger components of particulate matter have more inertia and are not as easily influenced by the vortex. Out of all of the particulate-control devices, cyclone separators are among the least expensive. They are often used as a pre-treatment before the flue gas enters more effective pollution control devices.

SAE 304
STAINLESS STEEL CONSTRUCTION

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HEC-100L (4W)

LOW / HIGH PRESSURE

SUCTION INLET	4 in. Camlock
AIR OUTLET	4 in. Camlock
CART TYPE	4-Wheel Dolly
DRY RECOVERY	26 gal.
LENGTH	24 in.
WIDTH	24 in.
HEIGHT	51 in.

26 gal.
DRY RECOVERY CAPACITY

PRE-SEPARATION SYSTEM FOR FINE DUST

- Ideal for use in conjunction with the Dust Collector for recovering a larger volume of powders
- The HEC can be used with customer's existing Dust Collection System
- Available in a variety of sizes
- Available in Powder Coated and Stainless Steel

PRE-SEPARATION
SYSTEM FOR FINE DUST
USING THE CYCLONE
FOR INERTIAL SEPARATION

RECOVERY OF LARGE VOLUME OF POWDERS

The HEC can be powered by either a Low Pressure or High Pressure Vacuum System or Dust Collector

FORKLIFT DRUM CADDY
1000 lb CAPACITY

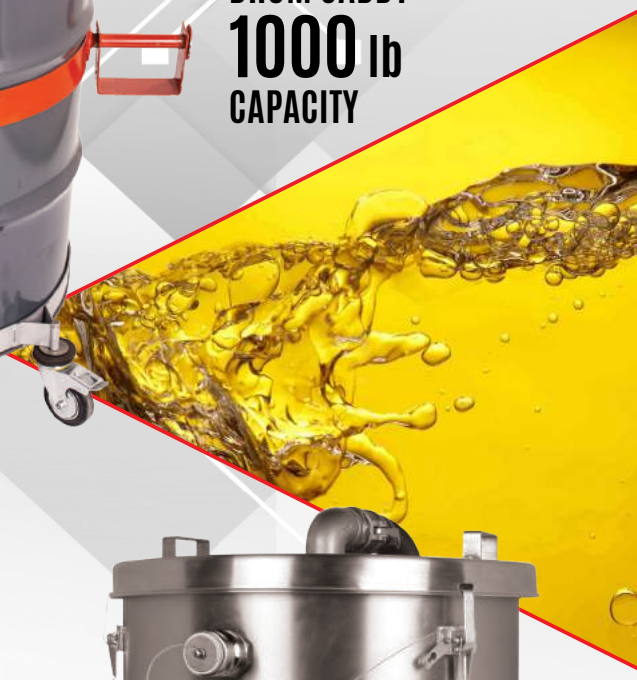
TRANSFER LID ASSEMBLY
CLIENT CAN USE LID IN CONJUNCTION WITH HIS OWN DRUM

OPEN TOP DRUM FILLING

SAE 304 STAINLESS STEEL CONSTRUCTION

WET RECOVERY DESIGNED FOR LIQUID RECOVERY

FORKLIFT DRUM CADDY 1000 lb CAPACITY



TIMPORTANT NOTES TO KEEP IN MIND:

There is a difference between flammable and combustible liquids. Flammable liquids will catch on fire and easily burn at normal working temperatures, whereas combustible liquids need heat before they can ignite.The Resource Conservation and Recovery Act (RCRA) classifies flammable liquids differently than the NFPA. Under the RCRA:Liquids that have a flashpoint of less than 140°F are considered ignitable and are regulated with a D001 waste code.Liquids that have a flashpoint of greater than 140°F are considered combustible and are not subject to federal regulations as flammable.

WET / DRY RECOVERY DESIGNED FOR DUST RECOVERY AND LIQUID RECOVERY

ESD SAFE — SAFE FROM ELECTROSTATIC DISCHARGES

- STATIC DISSIPATIVE SUCTION HOSE
- CONNECTION HOSE ASSEMBLIES

GUARANTEED FOR THE SAFE RECOVERY OF FLAMMABLE LIQUIDS

SAE 304 STAINLESS STEEL CONSTRUCTION

INT-55 (4W) EX

RECOVERY OF FLAMMABLE LIQUIDS

SUCTION INLET	2 in.
CART TYPE	4-Wheel Dolly
RECOVERY CAPACITY	55 gal.

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