

Filter/Clone®

DUST CONTROL SYSTEMS



**FOR
DUST AND CHIP
COLLECTION
ON ALL
BLASTHOLE DRILLS**

**Controlled Removal of Dust
and Cuttings from
Drilled Holes -
Deposit of Cuttings for
Convenient Disposal**



The first **Filter/Clone** cyclonic dust collector was introduced in 1979 in the form of a 600 cfm total collection system used primarily on small air-track percussion rock drills. That unit was the result of 15 years of experience in research, design and development of elementary dust collectors for the mining and construction industries. Utilizing the patented and proven cyclone separation principle with barrier filtration in the vortex of the cyclone, the initial design has evolved into a complete product line of collectors with capacity to 12,000 cfm. The result is a highly-efficient design which utilizes all of the necessary relationships among volume of air, filter area, horsepower requirements, hose size, pickup and conveyance criteria, and other factors. In addition, for drilling conditions where chip collection is not required and where space requirements dictate, a line of non-cyclonic baffle type collectors has been developed.

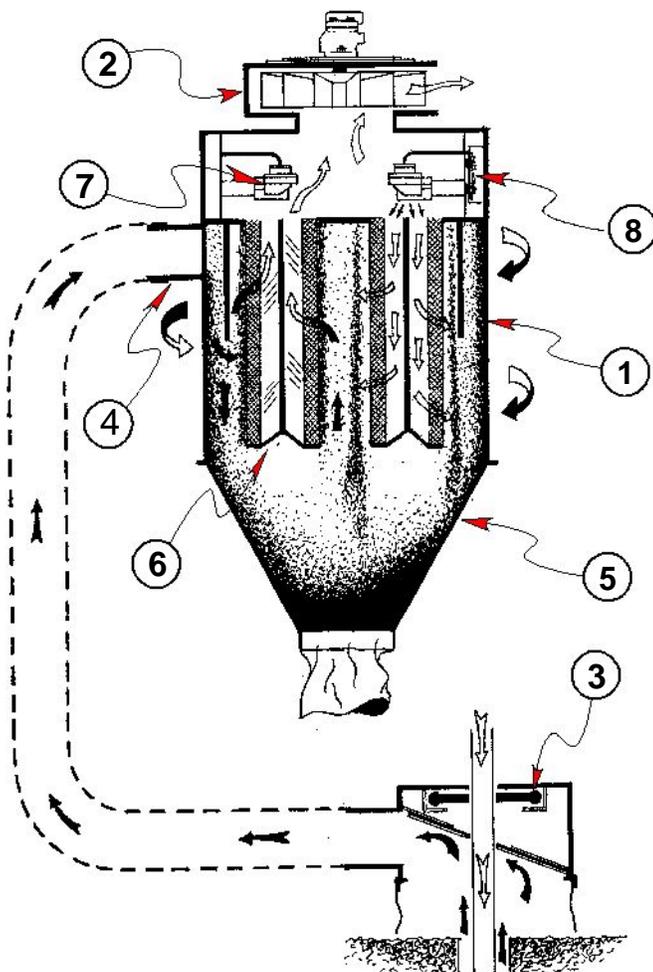
Joe Tipton, Inc. is in a unique position to meet the dust control needs of virtually any rock drill or rotary drill on the market.



BASIC OPERATION

The basic operation of the **Filter/Clone** Dust Control System can be described as follows:

1. A vacuum is induced in the **Housing (1)**, the Suction hose, and the **Pickup Pot (3)** by the **Blower (2)**. Dust and cuttings which are forced out of the drilled hole by blow air are captured at the pickup pot and conveyed to the **Tangential Inlet (4)** of the housing.
2. Heavy particles are held against the inner housing wall by the centrifugal momentum of the particles and settle rapidly to the **Dropout Cone (5)**. Lighter particles are drawn to the **Filter Element (6)** by the air flow pattern created by the blower.
3. As air is drawn through the filter, dust particles are retained on the element and clean air is discharged.
4. The element is cleaned automatically at regulated time intervals by instantaneous blasts of high-velocity air discharged from the pressure manifold (at the inner periphery of the housing) through **Impulse Valves (7)** and back through the element. This back-pulse of compressed air momentarily paralyzes the forward flow of air through one of the filter elements allowing the dust particles to release from the element and settle out in the dropout cone. A reliable **Air-Logic or Solid-State Electric Timer (8)** controls the back-pulse sequence.



IMPROVED FEATURES

● HIGH EFFICIENCY BLOWER ASSEMBLY.

Blowers on **Filter/Clone** dust collectors are not purchased from standard product lists of fan manufacturers -- they have been custom designed to meet the specific requirements of the **Filter/Clone** system. Precision manufacturing and dynamic balancing of the fabricated aluminum fan wheel produce a highly efficient, light weight blower system which greatly reduces thrust loading on hydraulic motor bearings.

● JTI DESIGNED ALL ELECTRONIC TIMER

Highly reliable, state-of-the-art electronic timers are available in either 12 or 24 Volt DC or 110 Volt AC models to match the drill system capability. The timer is conveniently located in a watertight compartment formed integrally with the dust collector housing and is easily programable to regulate impulse air in accordance with drilling conditions.

● QUALITY CONSTRUCTION

Rugged, heavy duty design, in-house control of all fabricated parts, and use of high-quality components (valves, motors, etc.) from major manufacturers produce a rugged, reliable system. Over 13 years experience in manufacturing dust collectors for blasthole drills, combined with a full factory inventory of spare parts make the **Filter/Clone** system the most efficient and dependable dust control option available.

● HIGH FILTER AREA TO SUCTION CAPACITY RATIO

Heavy duty pleated filter elements provide a large area of filter media within a small space, thereby offering higher air flow and lower filter loading. The filter media is a synthetic fiber specially designed to resist wet and humid conditions.

The following is a partial list of some of the drill models on which **Filter/Clone** Dust Control Systems have been successfully installed:

Gardner-Denver

RDC-16
SCH-2500
SCH-3500BV
SCH-4500
GD-25
GD-45
GD-70
GD-100
GD-120

Ingersoll-Rand

T4
DM-25,35
DM-36,46
DML
DMM
DMH
DM-60
ECM-450
All crawlairs

Driltech

D25K
D35K
D40K
D60K
D75K

Bucyrus-Erie

45R

50R
60R
61R

Robbins

R10

R12
R10HD
60

Sullivan (Joy)

Mustang

Ram2
Ram3
Stallion

Marion

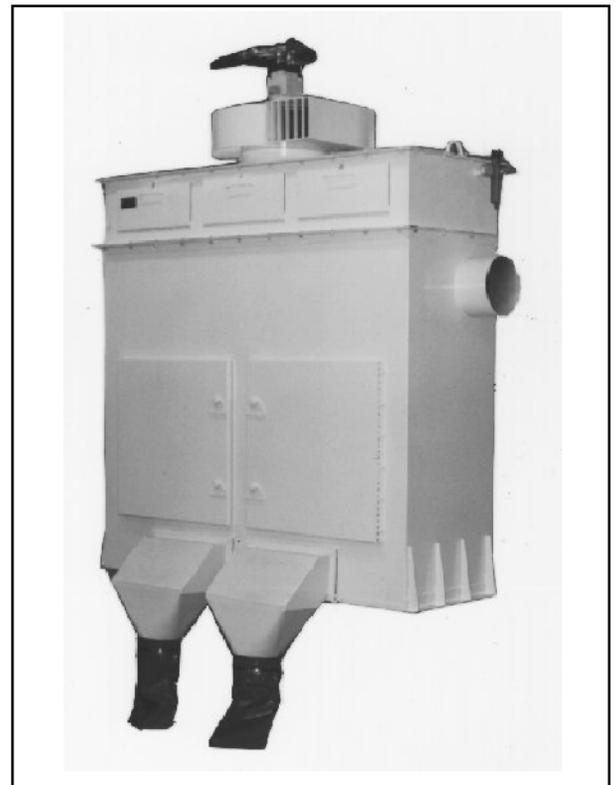
M4,M5

Chicago Pneumatic

CP650

Reeddrill

SK35



FC-4500



Size 4SB



FC-4500



Size 1.5



Size 3SB

Manufactured By:

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