Shimi
RESEARCH CENTER PVT. LTD.

AN ISO 9001:2015 COMPANY

ONLINE AND OFFLINE BAG FILTERS BROCHURE

WHO WE ARE

25 years of extensive experience in design and manufacturing of environment friendly technologies, has made Shimi Research Center Pvt. Ltd., the prime choice of leading companies across many sectors both in India and overseas.

With our vast expertise in evaluating the nature and quantum of pollutants across various industries, we are able to satisfy our clients with our **custom engineered solutions**.

Shimi's range of online and offline bag filters are result of continuous feedback from clients and trials at the company's level to delivers reliable, efficient and robust systems.

The term bag filter and baghouse are intermittently used for the dust collection systems where the pollutants are removed by filtration method.

Typical advantages of bag filters compared to other pollution control equipment:

- Available in many shapes, sizes and arrangements to fit the clients' need
- Work well in dust laden environment
- Very low maintenance system
- Filtration efficiency up to 99.9%
- Durable, cleaner and more manageable system

OUR RANGE

ONLINE BAGFILTER :

An online bag filter is a traditional filtration system where all the filters are fitted in a single compartment and subjected to continuous filtration and simultaneous cleaning.

It works on the principal of pulse jet cleaning mechanism in which the dust laden air enters the bag filter housing where the heavier particles falls into the collection hopper and fine dust particles are collected on the surface of filter bags. The dust is removed in pre-determined cycle using a series of pulses of high pressure compressed air. A short burst of compressed air is released and injected by jet tubes into the filter bag to dislodge the dust layer. The accumulated dust particles at the hopper are continuously removed using Screw Conveyer / Rotary Airlock system.

OFFLINE BAGFILTER :

The offline pulse jet bag filters are generally used in the area where flow is high and dust particles are very fine. In this case, cleaning process is required to be done offline to ensure smooth filtration and effective cleaning. In this process, the system is designed to have multiple compartments where one compartment is offline for cleaning and the remaining compartments are used for filtration.

WHAT TO CHOOSE:

PARTICULARS	ONLINE BAG FILTER	OFFLINE BAG FILTER
NO. OF COMPARTMENTS	SINGLE	MULTIPLE
PULSE JET CLEANING	SIMULTANEOUS	ISOLATED
RECOMMENDED AIR FLOW	< 60000 CMH	> 60000 CMH
HIGH DUST LOAD AIR FLOW	NOT VERY EFFECTIVE	EXCELLENT
FINE OR STICKY PARTICLES	NOT VERY EFFECTIVE	EXCELLENT
AIR PRESSURE RANGE	5.5 – 6.0 KG/CM^2	4.0 – 5.0 KG/CM^2
COMPRESSED AIR REQUIREMENT	HIGH	LOW
FILTERS LIFE	MODERATE	HIGH
MAINTENANCE	MODERATE	LOW
SYSTEM FOOT PRINT	LOW	RELATIVELY HIGHER
CAPITAL COST	LOW	RELATIVELY HIGHER

BAG FILTER CHART:

BAG TYPE	TEMP (F / C)	RESISTANCE TO ACID	RESISTANCE TO ALKALIS	RESISTANCE TO HYDROLYSIS	RESISTANCE TO OXIDATION
COTTON	180/85	POOR	GOOD	GOOD	GOOD
PVC	160/65	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
POLYPROPYLENE	190/90	EXCELLENT	EXCELLENT	EXCELLENT	POOR
NYLON	230/110	POOR	EXCELLENT	GOOD	GOOD
POLYESTER	300/150	GOOD	POOR	POOR	GOOD
PPS	375/190	EXCELLENT	EXCELLENT	EXCELLENT	FAIR
NOMEX	400/205	POOR	EXCELENT	POOR	FAIR
POLYAMIDE	450/235	FAIR	FAIR	GOOD	GOOD
PTFE	500/260	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
FIBREGLASS	550/285	GOOD	FAIR	EXCELLENT	EXCELLENT

PRE – TREATEMENT SYSTEM :

Sometimes, the dust laden air entering the bag filter has high particulate matter load or temperature which advocated to install the pre-treatment systems

HEAT EXCHANGER :

The system is used to reduce the incoming temperature entering the bag filter according to the type filters being used in the system. The heat exchange is tubular and air cooled with external cooling fans to be operated in case, the incoming temperature exceeds the preset values.

CYCLONE SEPARATOR :

The system is used to reduce dust load by removing the heavy particles and in some cases to prevent the sparks to enter the bag filter. It also marginally reduce the incoming temperature to the bag filter.

WHY TO CHOOSE OUR SYSTEM :

Our system has many advantages to the similar products available in the market :

- Works on lower pressure
- Consumes lower power
- Consumes lower compressed air
- Needs very low maintenance
- Has higher filtration area and therefore, lower air to cloth ratio
- Has higher filter life
- Has continuous pressure monitoring and early warning system
- Equipped with PLC and VFD for smooth operation
- Has safety equipment such as safety damper, high pressure alarm, high pressure automatic system shut off and explosion vent (as applicable)

INDUSTRIAL SECTORS COVERED :

- Nonferrous recycling and alloying units including aluminium, lead, copper, brass and zinc
- Chemical industries
- Material processing and separation units including vibratory and rotary sieves, ball mills, hammer mill, conveyer belts

APPLICATIONS :

- Controlling fugitive and process emissions from skelner furnace, rotary furnace, TRF, crucible and pit furnaces
- Controlling fugitive emissions from cold and hot dross processing units including DSM, IDSM, ball mill, pulveriser, vibratory and rotary sieves, conveyer belts, charging hoppers etc.
- Grinding and polishing process
- Material handling equipment

OUR TRUST NUMBERS :

CLIENT	LOCATION	BAG FILTER TYPE	BAG FILTER CAPACITY (CMH)
AFRO INDIA	DURBAN, SOUTH AFRICA	OFFLINE	2 X 1,40,000 & 1,10,000
METAL RECYCLING INDUSTRIES	IKORODU, NIGERIA	OFFLINE	2 X 80,000
NAMO ALLOYS	HARYANA, INDIA	OFFLINE	2 X 1,10,000
SUMRIDHI ALUMINIUM	HARYANA, INDIA	OFFLINE	90,000 & 1,10,000
MAXOP ENGINEERING	MANESAR, INDIA	OFFLINE	1,10,000
MANAKSIA ALUMINIUM	WEST BENGAL, INDIA	OFFLINE	90,000
ALUMELT RECYCLING	CAPETOWN, S. AFRICA	OFFLINE	1,10,000
METERENE LIMITED	GUJARAT, INDIA	OFFLINE	1,10,000
CMR GREEN TECHNOLOGIES	HARYANA, INDIA	ONLINE	75,000
CMR GREEN TECHNOLOGIES	HARIDWAR, INDIA	ONLINE	35,000
CMR GREEN TECHNOLOGIES	HARIDWAR, INDIA	ONLINE	30,000
CMR NIKKI INDIA PVT LTD	GUJARAT, INDIA	ONLINE	45,000
SUMRIDHI ALUMINIUM	HARYANA, INDIA	ONLINE	60,000
CMR GREEN TECHNOLOGIES	GURGRAM, INDIA	ONLINE	35,000
CMR GREEN TECHNOLOGIES	RAJASTHAN, INDIA	ONLINE	35,000

OUR SYSTEMS ARE,

CLEANING MORE THAN **20,00,000 CUBIC METERS** OF AIR **PER HOUR DAILY!**

A SOLUTION TO FIT YOUR NEED AND SPACE.

DR. ABBAS ADAB

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