

# AIR POLLUTION CONTROL EQUIPMENT

Towards a cleaner environment



PULSE JET BAG  
FILTER



**aswathi**  
industries limited

DESIGNERS, MANUFACTURERS &  
MECHANICAL ENGINEERS

An ISO 9001 : 2008 Certified Company

Website : [www.aswathiindustries.com](http://www.aswathiindustries.com)



## INTRODUCTION

High efficiency, availability and dependability are the driving forces for Aswathi Industries Limited's (AIL) relentless pursuit of providing the best proven technology for our customers.

We focus on individual solutions of individual customer's need.

AIL offer its products and services with a commitment to continue to solve Industrial Air Pollution problems.

Modifying and improving existing equipment allow our customers to take advantage of the latest technology.

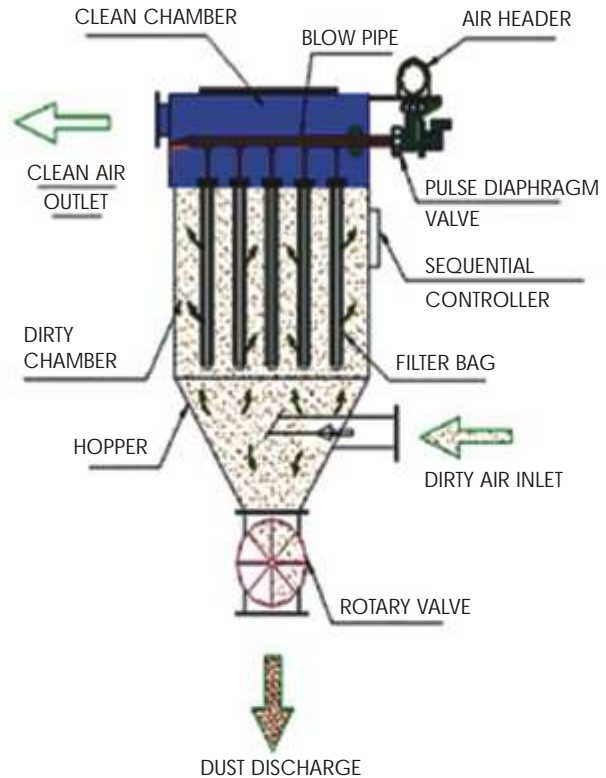
AIL products and systems are designed to achieve the highest performance. Each installation is backed by our team with years of successful experience on a wide variety of difficult applications, worldwide.

## ASWATHI BAG FILTER

Generating solutions requires a strong knowledge base, creativity, perseverance & ingenuity. Building upon our successful experience Aswathi Industries continues to provide industry's advanced Bag House Modules.

Aswathi bag filter is a wholly new design in pulse jet dust collectors, offering high collection efficiencies required by increasing stringent environmental regulation, plus true economy for the plant owner.

Economy is achieved by a new state of the art system designed to reduce maintenance, labour, parts and energy.

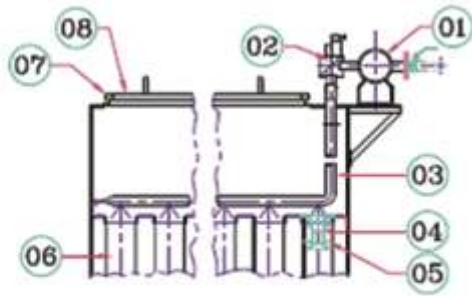


Bag Filter Construction

## Advantages :

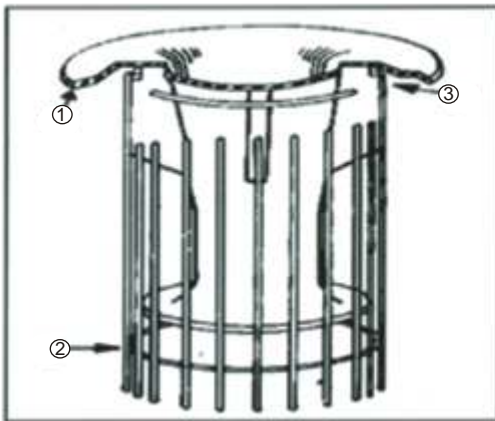
- Optimal design with better aesthetics.
- Fast and complete cleaning of the filter bags.
- Economical operation.
- Better efficiency.
- Easy to operate and change filter bags.
- High flow rates.
- High collection efficiency.
- Low pressure drop.
- Low noise level.
- Custom design services.
- Single/Multiple compartment bag filter design.
- High temperature & High pressure design.
- Less space requirement.

## PULSING ARRANGEMENT SYSTEM :

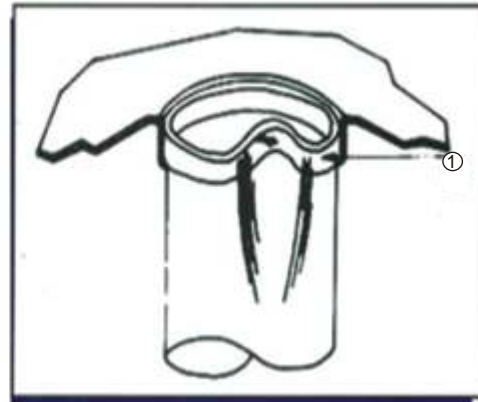


TYP. ASSEMBLY OF VENTURI CAGE  
FILTER BAG & TYP. PULSE ARRANGEMENT

1. Header Assembly.
2. Pulse Valve.
3. Manifold Assembly.
4. Wire Cage.
5. Venturi.
6. Filter Bag.
7. Rubber bending air tight seal.
8. Access Door.



1. Venturi
2. Heavy-duty Bag support Cage
3. Snap in Cage on Venturi



1. Snap Ring Bag Installation

## INDUSTRIES SERVED :





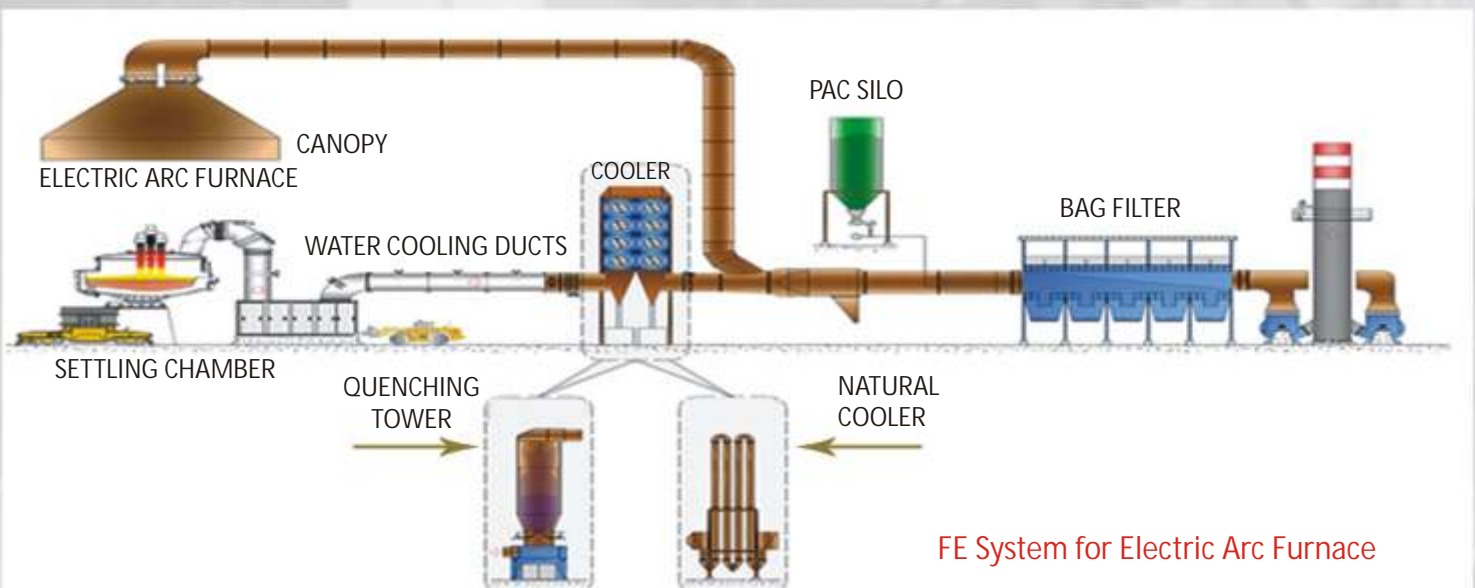
## APPLICATIONS :

- Dedusting System for Material Handling.
- Fume Extraction System for Steel Plants.
- Dust Extraction System for Cement Plants.
- Dedusting System for Boiler Application.

## DEDUSTING SYSTEM FOR MATERIAL HANDLING :



## FUME EXTRACTION SYSTEM FOR STEEL PLANT :



## DEDUSTING SYSTEM FOR CEMENT PLANT :



## DEDUSTING SYSTEM FOR BOILER APPLICATION :





Fiber Properties							Max. Recommended Operating Temperature	
Sr. No.	Fiber	Tensile Strength	Abrasion Resistance	Chemical Acids	Resistance Alkalis	Support Combustion	Continuous	Degree C Surges
1.	Cotton	Good	Good	Poor	Good	Yes	85	90
2.	Polypropylene	Excellent	Excellent	Excellent	Excellent	Yes	90	90
3.	Nylon	Excellent	Excellent	Poor	Excellent	Yes	90	90
4.	Copolymer Acrylic	Average	Fair	Good	Fair	Yes	115	120
5.	Homopolymer Acrylic	Good	Good	Very Good	Fair	Yes	125	135
6.	Polyester	Excellent	Excellent	Fair	Fair	Yes	145	160
7.	Nomex	Very Good	Excellent	Fair	Good	No	210	225
8.	Teflon	Average	Fair	Excellent	Excellent	No	230	250
9.	Fiberglass	Excellent	Fair	Good	Fair	No	250	260
10.	Ryton	Very Good	Excellent	Excellent	Very Good	No	200	220
11.	P-84	Very Good	Excellent	Very Good	Fair	No	250	260

Information contained in these tables is generally accepted industrial data. However, results in particular applications and combinations vary and require individual and specific evaluation.

Fiber	Fiber Characteristics
Polypropylene	Strong fiber, low moisture absorption and possesses excellent chemical resistance.
Nylon	Rugged fibre with excellent resistance to abrasion and alkalies.
Acrylic	Good in acidic conditions, Possesses excellent dimensional stability, excellent at resisting hydrolysis.
Polyester	High tensile strength, good dimensional stability, heat resistant.
Nomex	Excellent heat resistance at 210°C and excellent resistance to abrasion.
Teflon	Can be used at temperature up to 250°C and possesses excellent chemical resistance.
Fiberglass	Can be used at high temperature and possesses high tensile strength.
Ryton	Excellent resistance to chemical conditions and abrasion, Excellent heat resistance at 200°C.
P-84	Stable operation to 250°C excellent efficiency characteristics.

## OUR STANDARD MODELS WITH TECHNICAL DATA

MODEL	NO. OF BAGS	CLOTH AREA / MODULE ( IN SQ. MT)					
		2500	3000	3600	4000	4250	4500
SQUARE MODULES							
AIL 0404	16	19	23	-	-	-	-
AIL 0505	25	30	36	-	-	-	-
AIL 0606	36	43	51	-	-	-	-
AIL 0707	49	58	70	-	-	-	-
AIL 0808	64	76	92	-	-	-	-
AIL 0909	81	96	116	-	-	-	-
AIL 1010	100	119	143	171	191	-	-
AIL 1111	121	144	173	207	231	-	-
AIL 1313	169	201	242	289	323	341	362
AIL 1515	225	268	322	385	430	455	482
RECTANGLE MODULES							
AIL 1715	255	-	365	436	487	515	546
AIL 1915	285	-	408	487	544	576	610
AIL 2215	330	-	472	564	630	667	706
AIL 2515	375	-	536	641	716	758	803
AIL 2815	420	-	601	718	802	848	899
AIL 3115	465	-	665	795	888	939	995
AIL 3515	525	-	751	898	1003	1061	1124
AIL 3915	585	-	837	1000	1117	1182	1252

## BAG FILTER TYPES :





## CARTRIDGE FILTER

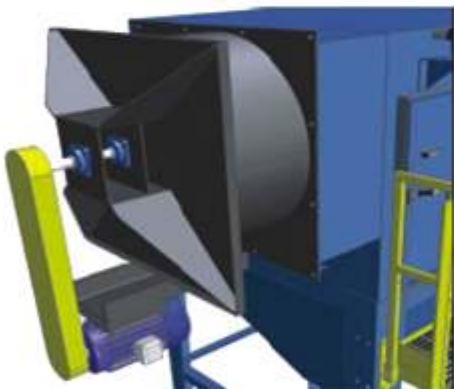
### Special Features :

- 100% effective hand operated cam lock mechanism provides positive sealing by compressing the filter gasket against the cell plate. The tool free lock allows the quick and easy filter replacement, reducing the downtime for maintenance.
- Pleated type cartridge elements provide compact design and lower capital cost.
- Light and easy to handle filter element.
- Energy efficient design ensure lower operating cost.
- Compact design saves space.
- Factory assembly to minimize the site work.



## FAN MOUNTING OPTIONS :

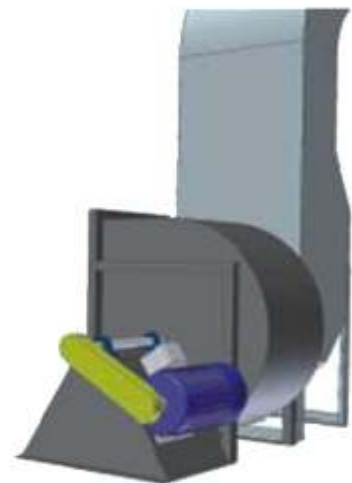
All dust collector fans are quiet, highly efficient and stable for a broad range of industrial applications.



Side mounted fans are ideal where there is a height restriction.



Roof mounted fans offer the ability to discharge air in any direction.



Floor mounted fans allow quick and easy maintenance access as well as eliminating any dynamic loads on collector with large fans.



# HIGH EFFICIENCY CYCLONE COLLECTORS:

## General Points:

Cyclones are frequently used as product receivers, as pre-cleaners to high efficiency fabric-type dust collectors or as independent collectors for coarse dust.

SINGLE, TWIN and QUAD arrangements are available as standard configurations. Special arrangements can be supplied to meet your plant layouts. Our common dust hoppers & outlet plenums are custom designed to suit each application.

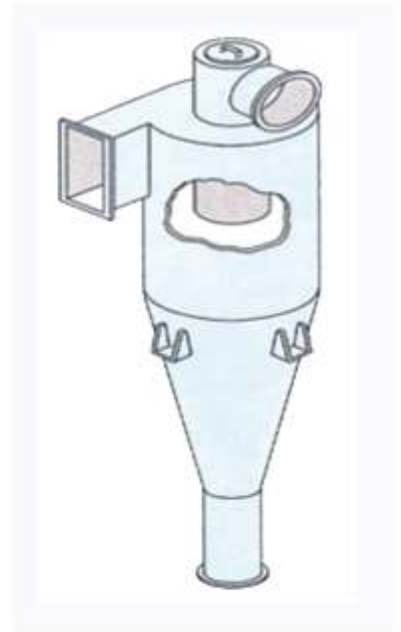
## Advantages :

- Stable pressure drop for a given gas flow.
- Constant efficiency for a given particulate condition.
- No moving parts, no replaceable filters, robust construction.
- Ability to handle extremely high dust concentration.
- High temperature and pressure capability.
- Low capital investment and maintenance costs.
- Compact (in most applications).

## Efficiency :

Efficiency is a function of the physical parameters of the applications and the design parameters of the cyclone. Cyclone efficiency increases with:

- Coarse particle size distribution.
- Higher product specific gravity.
- Lower gas density.
- Smaller outlet diameter.



Single Cyclone



Twin Cyclone



Quad Cyclone



## CENTRIFUGAL FANS & BLOWERS :

We provide total solution for industrial fans from concept to commissioning. Aswathi fans suits exact duty conditions at optimum efficiency to satisfy industrial needs.



### Fans for various applications :

- Induced Draft Fan
- Forced Draft Fan
- Combustion Air Fan
- Primary Air Fan
- Secondary Air Fan
- Booster Fan
- Cooling Fan
- Exhaust Fan
- Process fans like Pre-heater Fan, Bag House Fan, Separator Fan, Coal Mill Fan, Raw Mill Fan etc.

### Type of drive :

- Impeller directly mounted on motor shaft
- Coupled drive
- Belt drive

### Arrangement of Bearings:

- Overhung (Impeller on one side of bearings)
- Simply Supported (Impeller between bearings)

## Casing:

The casing is made up of robust steel plates adequately stiffened to reduce vibrations. Large casing is divided with number of splits for easy transportation.

## Impeller:

Impellers have high efficiency backward curve design.

## Shaft:

Shaft is made of rolled steel bar with precision machining.

## Tests:

Assembly check, Mechanical Run Test, Performance Test etc.; is carried out for all fans at our workshop.

## Advantages :

- Optimum aerodynamic characteristics.
- High degree of efficiency.
- Smooth running.
- Impeller is dynamically balanced including hub and shaft.
- Robust construction.
- Low noise level.
- Design offering high operational safety.
- Capacity & Pressure tested.
- Customized solutions.



Casing



Impeller



## Our other products:

- Reverse Air Bag House
- Heat Exchanger
- Scrubber-Wet/ Dry
- ESP
- Furnace
- Rotary Kiln
- Incinerator
- Water Pollution Control Equipment
- Storage Vessels

## List of Major Overseas Clients:

- AHI Roofing's Ltd., New Zealand
- BA Industries, Fiji
- Cantrex, Port of Spain
- CMRDI, Egypt
- Danieli Corus, Australia
- KCM, Zambia
- Eiffel Aluminium Factory, Doha, Qatar
- Kenya Fluspar Ltd, Kenya
- Kalu Works, Kenya
- Mombassa Cement, Kenya
- R.K. Metal, Malaysia
- Tororo Cement, Uganda

## Corporate Office

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Email : sales@aswathiindustries.com  
Website: www.aswathiindustries.com

## List of Major Domestic Clients:

- Allied Furnaces
- Alps Environmental Engineering Ltd.
- BARC, Trombay
- Batliboi Ltd.
- Batliboi Environmental Engineering Ltd.
- Bharat Heavy Electricals Ltd.
- C.M.P. Private Ltd.
- Essar Constructions Ltd.
- F.L. Smidth
- Fives Solios
- GL & V India Pvt. Ltd.
- Hindustan Dorr-Oliver Ltd.
- KTC Ferroalloys Ltd.
- Larsen & Toubro Ltd.
- Lizer Cylinders Ltd.
- NALCO
- Philips Carbon Black Ltd.
- Rallis India Ltd.
- Rubamin Ltd.
- South India Viscose Ltd.
- Shriram Engineering Construction Company Ltd.
- Sudharshan Chemical Engg. Pvt. Ltd.
- Sud Chemi India Pvt. Ltd.
- Tata Chemicals Ltd.
- Tata Metalinks Ltd.
- Thermax India Ltd.

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## Works

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