

ABOUT US :

Incorporated in 2000, ACMEFIL ENGINEERING SYSTEMS Pvt. Ltd. is an Engineers and Process Designers, Supplier, Manufacturer and Exporter of Drying and Concentrating Equipment.

An ISO 9001:2015 Certified Company with expertise in designing equipment as per customer's requirement.

The manufacturing facilities of the company are based on the latest and the most advanced technology available today for plant and machinery manufacturing.

The continuous innovations and updates of our technical skills keep us growing along with our customers.

GLOBAL PRESENCE



ACMEFIL ENGINEERING SYSTEMS PVT. LTD.

ENGINEERS & PROCESS DESIGNERS

OFFICE & WORKS : Plot No. 535, Phase II, G.I.D.C., Vatva, Ahmedabad-382 445. India.

TELE. : + 91-79- 4008 4502, 4008 4503

Email : info@acmefil.com • acmefilespl@gmail.com • Website : www.acmefil.com

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ACMEFIL ENGINEERING SYSTEMS PVT. LTD.



An ISO 9001 : 2015 Certified Company

Innovative Drying Solutions...



ENGINEERS & PROCESS DESIGNERS

OUR PRODUCT RANGE

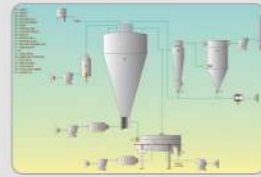
SPRAY DRYER



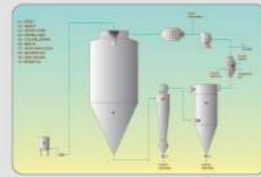
Rotary Atomizer



Nozzle Atomizer



Fluidized Spray Dryer



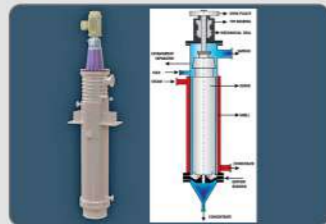
Closed Loop Spray Dryer



Lab Scale Pilot Spray Dryer



Spin Flash Dryer



ATFD



Flash Dryer



Fluidized Bed Dryer

EVAPORATORS



TYPES OF EVAPORATORS

- Falling Film Type
- Forced Circulation Type
- Natural Circulation Type
- Hybrid Type

ZERO LIQUID DISCHARGE



EFFLUENT EVAPORATOR



EFFLUENT SPRAY DRYER

Membrane Technology



TYPES OF MEMBRANE SYSTEM

- Micro Filtration
- Ultra Filtration
- Nano Filtration
- Reverse Osmosis



FLUE GAS DESULFURIZATION



SPRAY COOLING



SPRAY CALCINER

OTHER PRODUCTS



Hot Air Generator
Types : Direct Fired InDirect Fired
with Fuel Type : Coal, Lignite,
Wood, LDO & Gas Fired



Bag Filter



Air Lock Rotary Valve



Online Blender

MANAGEMENT & QUALITY CONTROL :

We are maintaining strict quality control throughout the manufacturing process right from raw material purchase to testing to manufacturing and erection and commissioning of the equipment.

We have better workmanship and a good customer relationship through out the nation. We have supplied over 500 plants all over India for a variety of applications, as reflected in our clientele. We have a well experienced erection team to do the erection of equipments.

ACME - as the meaning is - '*THE HIGHEST POINT OF PERFECTION*' and AcmeFil today strives to fill in the gap between the **PRESENT & ACME**.



R & D CENTRE

AcmeFil Engineering Systems have Pilot Plant facilities for conducting trials for products and for development of new procedures of drying.

Pilot Plant capacities available are :

1. Spray Dryer Capacity : 3 kg/hr Water Evaporation
2. Spin Flash Dryer Capacity : 10 kg/hr Water Evaporation
3. Vibratory Fluid Bed Dryer Capacity : 10 kg/hr Water Evaporation
4. Flash Dryer Capacity : 10 kg/hr Water Evaporation

These facilities are available to End Users and Research Institutes at nominal charges for development applications at

SERVICES :

Our clients truly benefit from our innovative and proven solutions. Our services include :

- Selection of equipments as per the product properties
- Design, Engineering, Supply and Support Solution
- Installation, Commissioning and Training
- Complete Turnkey Solutions with User Friendly Designs
- Complete Solution for Zero Liquid Discharge
- Efficient Systems for Air Pollution Control
- Free Technical Supports for Trouble Shooting
- Plant Upgrade and Rebuild
- Plant Automation and Control
- Pilot Plant Facility Available for Process Development
- Spares and Maintenance
- After Sale Services



EVAPORATOR & AGITATED THIN FILM DRYER

Evaporator:

Evaporators, particularly Multi-Effect Evaporators (MEE), are specialized equipment designed to concentrate liquids that have a low solid content to a higher level of solid content. They do this under a vacuum to enable low-temperature operation.

In a multi-stage evaporator system, the process becomes even more efficient. Here's how it works:

1. In the first stage, the initial liquid is heated using an external heat source, usually steam.
2. The heated liquid starts evaporating, and the vapor produced is captured.

3. This vapor is then used as the heat source for the second stage of the evaporator, which has its own set of liquids to concentrate.

4. The process continues like this from the second stage to the third, and so on, depending on how many stages are in the system.

The benefit of this multi-stage approach is that it allows for a more efficient use of energy. You can evaporate up to 0.9 to 4 kg of water using just 1 kg of steam, depending on the number of stages employed in the system. This design not only saves energy but also makes the entire process more cost-effective.

Agitated Thin Film Dryers (ATFD):

An Agitated Thin Film Dryer (ATFD) is a specialized machine used for drying concentrated liquids that come from an evaporator. The heat source for this drying process can either be steam or thermic fluid from a heater.

How it Works:

Introduction of Liquid: The concentrated liquid from the evaporator is introduced into the ATFD.

Formation of Thin Film: The liquid is splashed onto the inner surface of the dryer, forming a thin film. This increases the surface area for quicker and more effective drying.

Heat Source: Steam or thermic fluid is passed through a jacket that surrounds the dryer. This provides the heat necessary for drying the liquid.

Agitation and Scraping: The dryer has agitating scrapers inside it. These scrapers move continuously to scrape off the dried solids from the inner surface of the dryer.

Discharge: The scraped-off dried solids are then discharged through the bottom of the dryer.

Advantages:

Efficiency: The design of the ATFD allows for efficient heat transfer, making the drying process faster.

Versatility: It can work with different heat sources, either steam or thermic fluid, depending on the requirements.

Low Energy Cost: By using heat from steam or thermic fluid effectively, the ATFD is a cost-effective solution for drying concentrated liquids.

By employing this sequence of steps, the Agitated Thin Film Dryer is capable of drying liquids in a highly efficient manner, making it an important part of various industrial processes.



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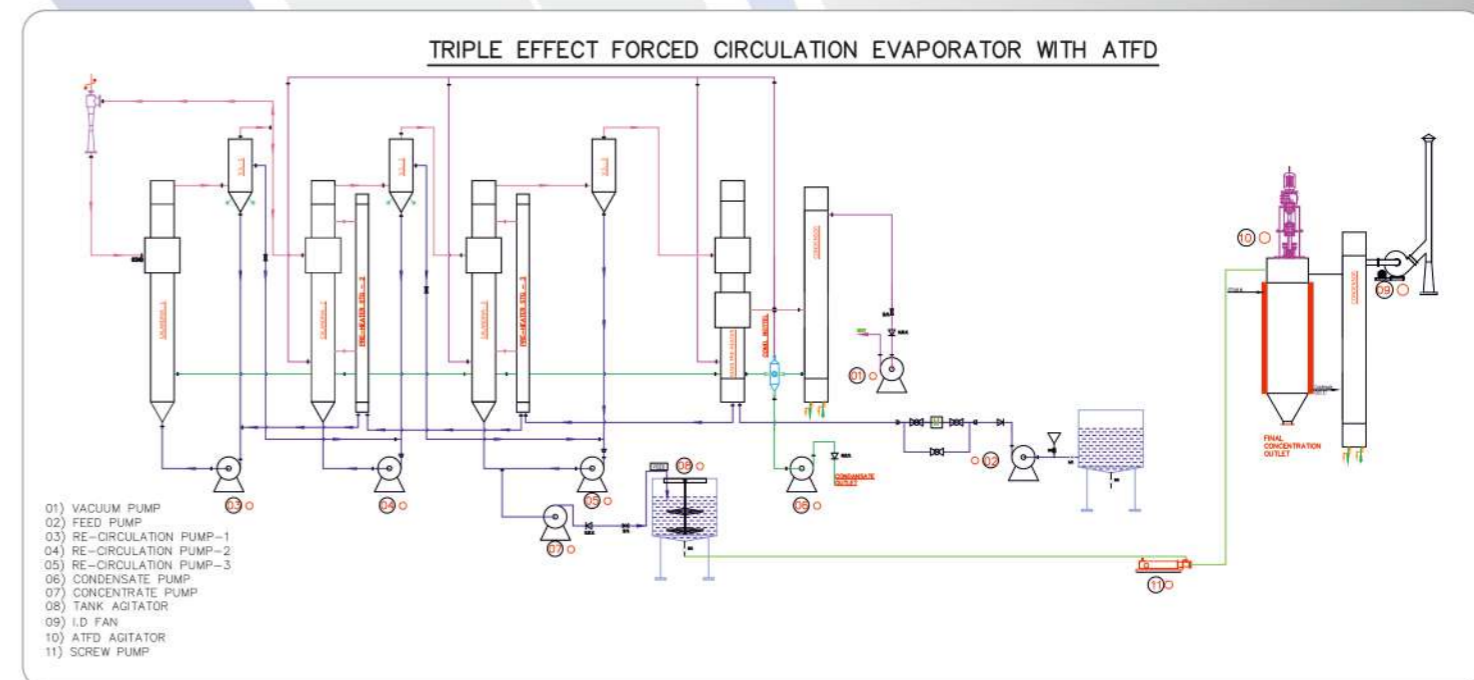
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EVAPORATOR & AGITATED THIN FILM DRYER



Zero Liquid Discharge system

Industries often produce a variety of emissions, including liquid, solid, and airborne pollutants. Meeting environmental regulations and ensuring pollution control are significant challenges. AcmeFIL has developed a comprehensive solution to tackle these issues effectively.

Zero Liquid Discharge System:

AcmeFIL's Zero Liquid Discharge (ZLD) System is designed to manage industrial effluent treatment economically. This system uses a combination of advanced technologies to ensure that no liquid waste is discharged into the environment.

How It Works:

Evaporation: Initially, the liquid waste is subjected to an evaporation process to separate the water from the pollutants.

Concentration: The remaining content is further concentrated to minimize the volume of waste.

Salt Separation: This step isolates the salts and minerals from the concentrated liquid.

Optional High-Temperature Spray Drying: If needed, the concentrated liquid can undergo high-temperature spray drying to convert it into a solid form, making disposal even easier.

Air Pollution Control Equipments:

In addition to the ZLD System, AcmeFIL offers a range of Air Pollution Control Equipment to manage airborne emissions.

Bag Filter: This equipment captures dust and particulate matter from the air, storing it in a bag for easy disposal.

Wet Scrubber: It uses water or other liquids to remove pollutants like fumes, gases, and dust from the air.

Benefits:

Compliance: Both the ZLD System and the Air Pollution Control Equipments help industries to meet environmental regulations and pollution control norms.

Economic Efficiency: The systems are designed to be cost-effective, minimizing both waste and operational costs.

Technological Innovation: By employing cutting-edge technology, AcmeFIL ensures effective waste management solutions that are also eco-friendly.

In summary, AcmeFIL's Zero Liquid Discharge System and Air Pollution Control Equipments provide a robust and integrated solution for industries looking to manage their emissions responsibly and economically.



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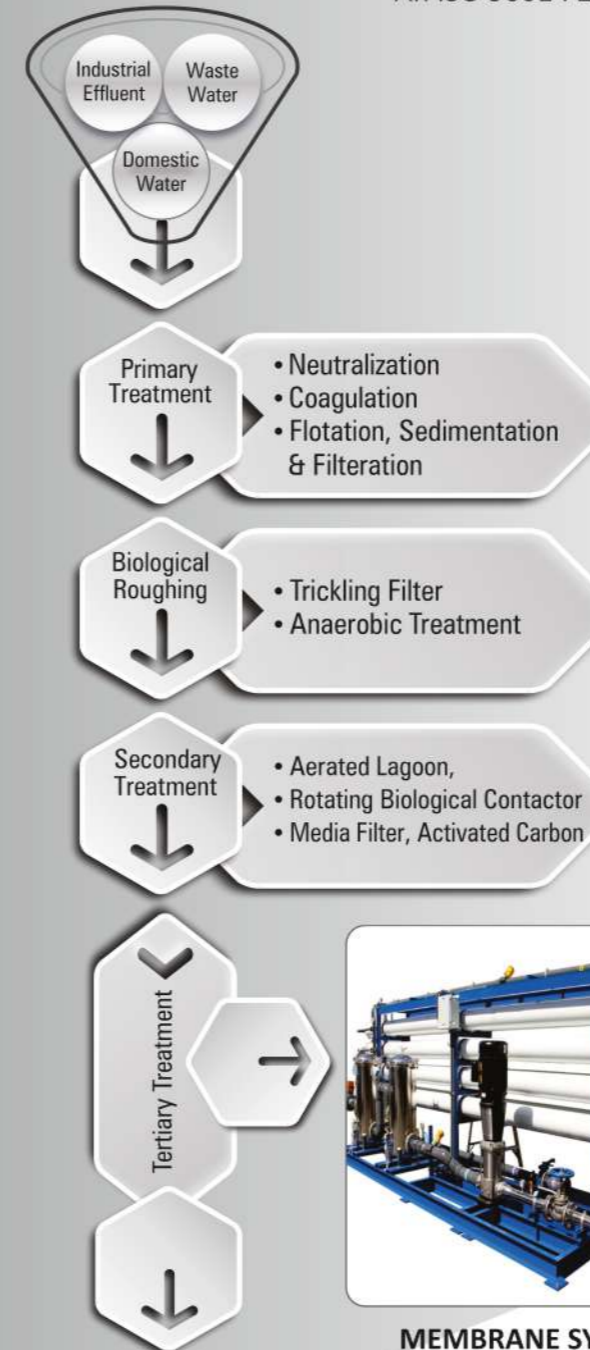
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MEMBRANE SYSTEM



MULTI EFFECT EVAPORATOR



SLUDGE DRYER



EVAPORATOR AND SPRAY DRYER



HIGH TEMPERATURE SPRAY DRYER

ZERO LIQUID DISCHARGE SYSTEM

Every industry produces both liquid-solid wastes and air emissions.

To overcome all the environmental problems and to meet the pollution control norms, AcmeFIL has developed a Zero Liquid Discharge System by which industrial effluent treatment is economically handled introducing technology of evaporation, concentration, salt separation optionally high temperature spray drying.

AcmeFIL also offers Air Pollution Control Equipments like Bag Filter, Wet Scrubber and Electrostatic Precipitator.

COUNTRY'S LARGEST EFFLUENT HANDLING SPRAY DRYERS



ANKLESHWAR - GUJARAT



DAHEJ & SACHIN - SURAT - GUJARAT

MULTI EFFECT EVAPORATORS

A device used to convert a liquid into its gaseous form using heat energy. In the shell and tube type of evaporators manufactured by us, the heat source is in the shell side and the fluid under evaporation is in the tubes. Depending upon the duty condition, different types of evaporators are offered.

TYPES OF EVAPORATORS

FALLING FILM EVAPORATORS



FORCE CIRCULATION EVAPORATORS



NATURAL CIRCULATION EVAPORATORS



HYBRID EVAPORATORS



OTHER PRODUCTS



FLUID BED DRYER



VIBRATORY FLUID BED DRYER



ROTARY ATOMIZER



FLUID BED GRANULATOR



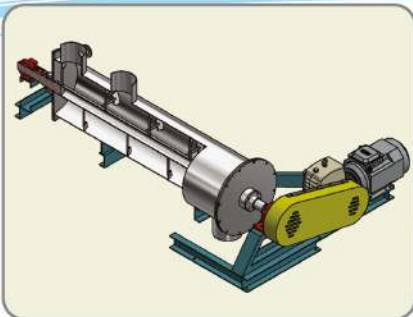
PULSE JET AIR BAG FILTER



INDIRECT FIRED HOT AIR GENERATOR
LDO / GAS FIRED



MEMBRANE SYSTEM



ONLINE BLENDER



AIR LOCK ROTARY VALVES

An ISO 9001 : 2015 Certified Company

OUR PRODUCT RANGE

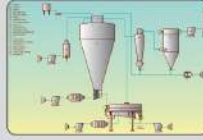
SPRAY DRYER



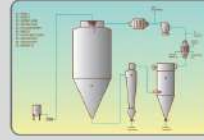
Rotary Atomizer



Nozzle Atomizer



Fluidized Spray Dryer



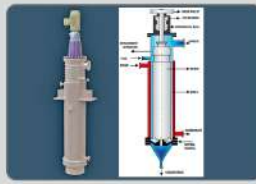
Closed Loop Spray Dryer



Lab Scale Pilot Spray Dryer



Spin Flash Dryer



ATFD



Flash Dryer



Fluidized Bed Dryer

EVAPORATORS



TYPES OF EVAPORATORS

- Falling Film Type
- Forced Circulation Type
- Natural Circulation Type
- Hybrid Type

ZERO LIQUID DISCHARGE



EFFLUENT EVAPORATOR



EFFLUENT SPRAY DRYER

MEMBRANE TECHNOLOGY



TYPES OF MEMBRANE SYSTEM

- Micro Filtration
- Ultra Filtration
- Nano Filtration
- Reverse Osmosis



FLUE GAS DESULFURIZATION



SPRAY COOLING



SPRAY CALCINER

OTHER PRODUCTS



Hot Air Generator

Types : Direct Fired InDirect Fired
with Fuel Type : Coal, Lignite,
Wood, LDO & Gas Fired



Bag Filter



Air Lock Rotary Valve



Online Blender

POLLUTION CONTROL EQUIPMENTS

BAG FILTER ■ CYCLONE SEPARATOR ■ SCRUBBER

At AcmeFil, we believe in providing top-notch air quality solutions for your industrial needs.



BAG FILTER

Our Bag Filter efficiently captures airborne dust and contaminants, ensuring a clean and safe environment. Easy to install and maintain, this equipment is your ultimate partner in pollution control.

CYCLONE & WET SCRUBBER

AcmeFil's Cyclone Separator is your answer to separating dust and other particles from air or liquids. With superior technology, we offer high efficiency and low maintenance costs. Built for performance, our Cyclone Separator is an essential addition to any industrial setup looking for reliable filtration.

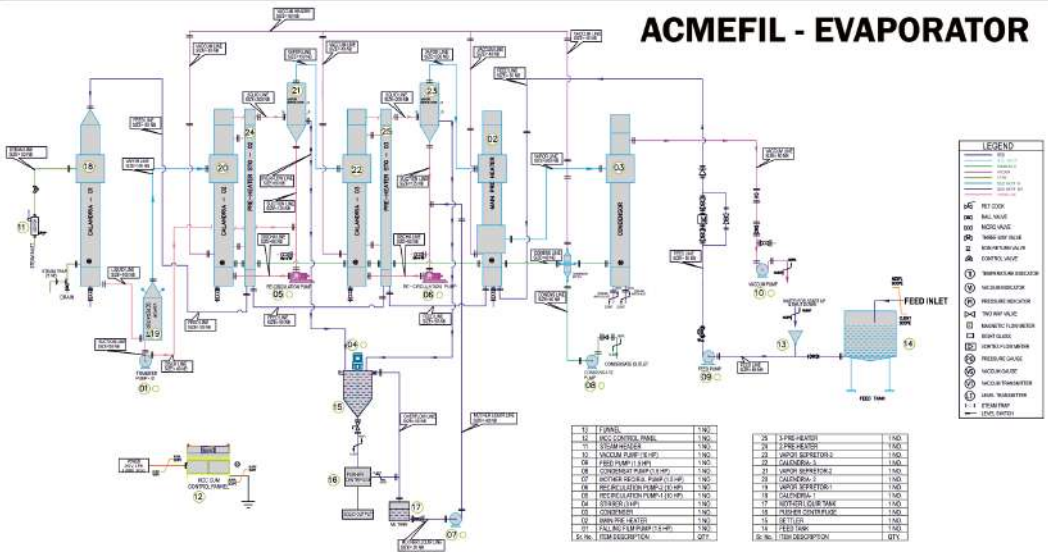


VENTURI SCRUBBER

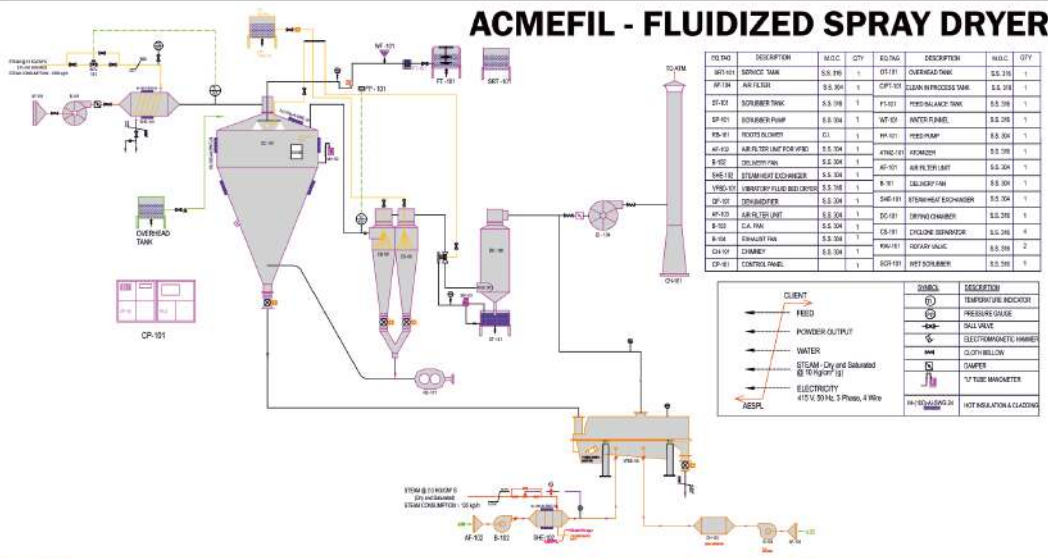
Our Scrubber is engineered to remove harmful gases and particles from emission sources. With its innovative design and robust performance, it not only helps in reducing environmental impact but also safeguards health. Choose AcmeFil's Scrubber for an eco-friendly and cost-effective pollution control solution.

PROCESS & INSTRUMENT DIAGRAMS

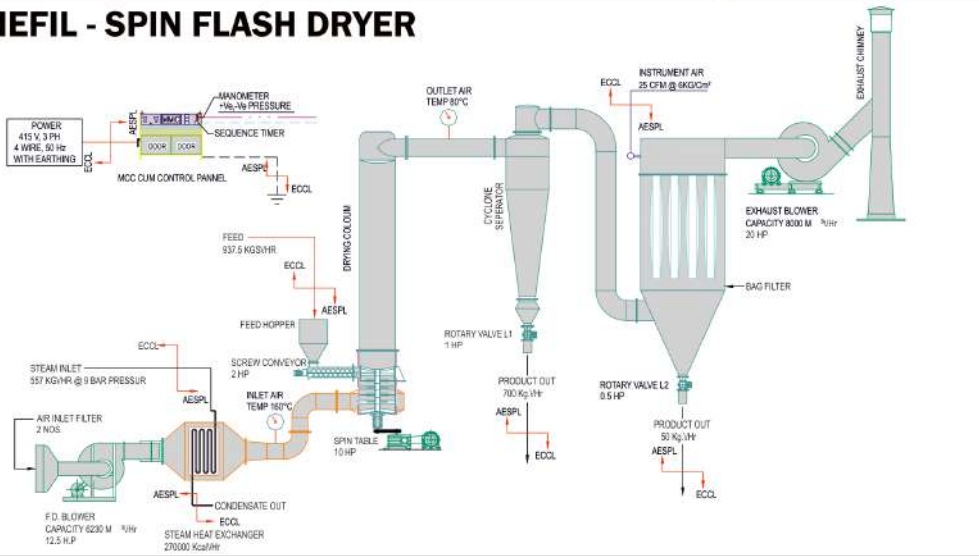
ACMEFIL - EVAPORATOR



ACMEFIL - FLUIDIZED SPRAY DRYER



ACMEFIL - SPIN FLASH DRYER



R & D CENTER - ACMEFIL



AcmeFil Engineering Systems have Pilot Plant Facilities for conducting trials for products & for development of new procedures of drying. These facilities are available to end users & Research Institutes at nominal charges for development applications at mutually agreed terms.

FLUIDIZED SPRAY DRYER FOR HERBAL EXTRACTS



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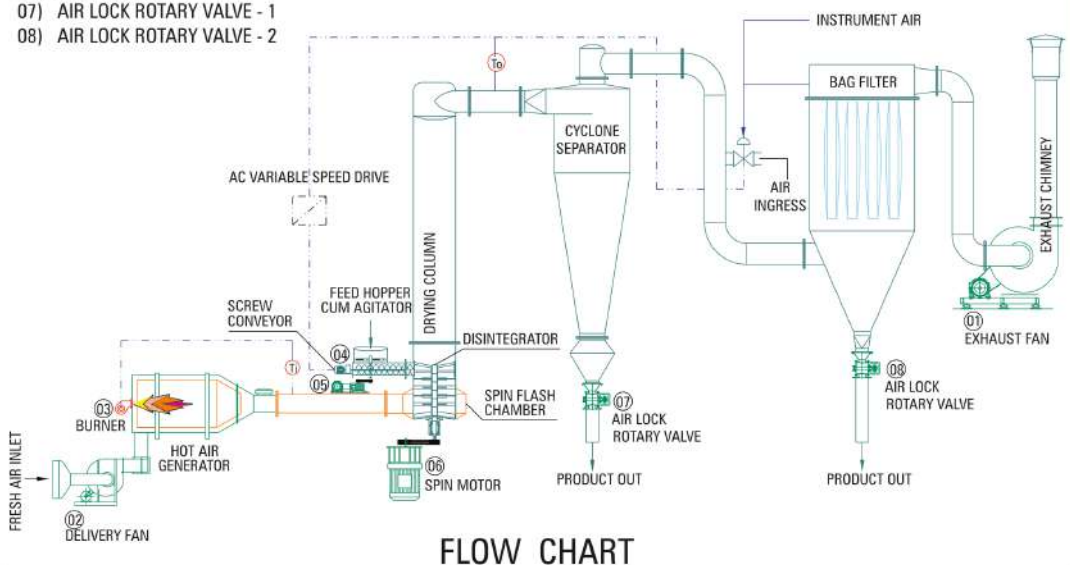
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SPIN FLASH DRYER



Simple Flash Dryer cannot handle wet cake which is a slimy paste or gelatinous in nature. For drying these type of product specially designed disintegrators are incorporated with normal flash dryers which disintegrate the product simultaneously while drying and dried product is conveyed to the separation devices by hot air. These dryers are termed as Spin Flash Dryer. Spin Flash dryer is an easy process for drying Filter Cakes, Pastes and High Viscous Sludge etc.

- 01) EXHAUST FAN
- 02) DELIVERY FAN
- 03) BURNER
- 04) FEED AGITATOR
- 05) SCREW CONVEYOR
- 06) SPIN MOTOR
- 07) AIR LOCK ROTARY VALVE - 1
- 08) AIR LOCK ROTARY VALVE - 2



FLOW CHART

An ISO 9001 : 2015 Certified Company

ZERO EFFLUENT DISCHARGE SYSTEM



MEMBRANE SYSTEM



MULTI EFFECT EVAPORATOR



SLUDGE DRYER



EVAPORATOR AND SPRAY DRYER



HIGH TEMPERATURE SPRAY DRYER

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