

PADDLE DRYER



AS Engineers' Paddle Dryer delivers fast, uniform drying for wet, sticky, and heat-sensitive materials, making it the ultimate solution for industrial sludge and beyond. Below are the key industrial applications:



SLUDGE & WASTE MANAGEMENT

ETP/STP sludge, Bio-sludge,
Oil sludge, Chemical sludge



MINING & METALLURGICAL

Gypsum, manganese dioxide,
Copper concentrate, Coal/lignite,
Lithium hydroxide



FOOD, PHARMA & STARCH

Spent grain, Calcium carbonate,
Starch, API intermediates



PIGMENTS, DYES, AND POLYMERS

Pigments, TiO₂, PET chips,
Polymer resins



CHEMICAL & PETROCHEMICAL

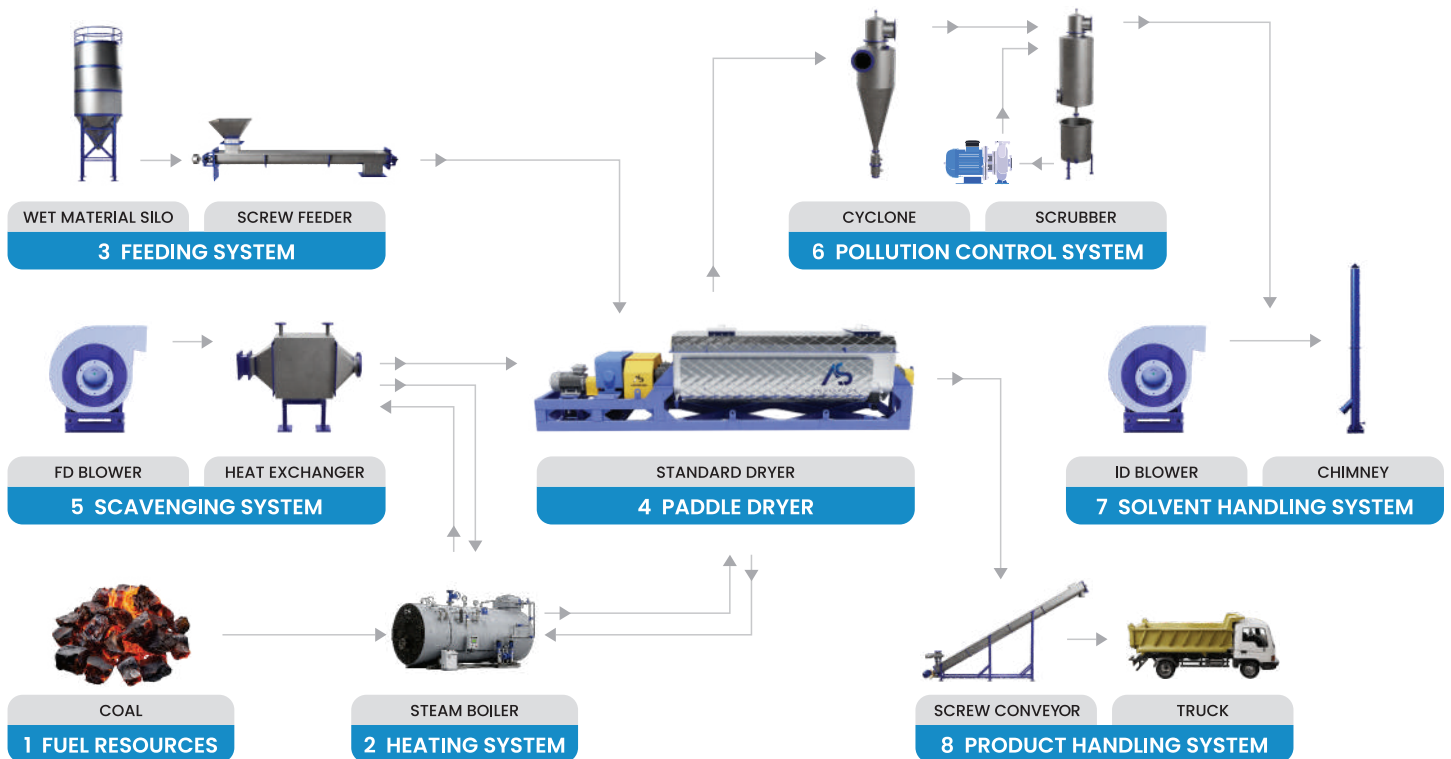
Sodium chloride, Ammonium nitrate,
Aluminum hydroxide, Sodium cyanide,
PTBBA powder, Sodium Sulphate



AGRO & FEED INDUSTRY

DDGS, Rice bran, Fish meal

PROCESS FLOW DIAGRAM



1 FUEL RESOURCES:

Working Process: Various fuel options support the heating system

Configuration Options: Natural Gas, Wood, Coal, LDO, Electricity, Briquette and more

2 HEATING SYSTEM

Working Process: The heating medium is then used for the drying process

Configuration Options: Steam Boiler, Thermic Fluid, Hot Water Generator

3 FEEDING SYSTEM

Working Process: Moist feed from the wet silo is evenly fed into the paddle dryer via screw feeder

Configuration Options: Belt Conveyor System, Screw Feeder, Sludge Pump

4 PADDLE DRYER

Working Process: Heat passes through hollow shafts and jackets to evaporate solvents, while hammer paddles agitate and break down material for efficient drying

Configuration Options: Standard Dryer, Dual Zone Dryer, Vacuum Dryer

5 SCAVENGING SYSTEM

Working Process: FD blower heats filtered air via a finned tube exchanger and directs it into the paddle dryer

Configuration Options: FD Blower + Heat Exchanger, Heat Traced Cover

6 POLLUTION CONTROL EQUIPMENT

Working Process: Separation and scrubbing of fines & solvents

Configuration Options: Cyclone, Scrubber, Bag Filters

7 SOLVENT HANDLING SYSTEM

Working Process: Solvent separation: Handles evaporated solvents and ensures clean emissions.

Configuration Options: ID Blower + Chimney, Condenser + Solvent Tank

8 PRODUCT HANDLING SYSTEM

Working Process: Conveying and bagging of dried products

Configuration Options: Screw Conveyor, Silo, Bucket Elevator, Bagging System, Truck Disposal System

WHY CHOOSE PADDLE DRYER

We design high-performance Paddle Dryers known for efficiency, reliability, and cost savings. With advanced heat transfer, self-cleaning wedge paddles, and a compact, eco-friendly build, our dryers support seamless operations and low maintenance. Built for various feed materials and tailored to industry needs, they deliver long-term value and performance.



TECHNICAL SUPERIORITY

Engineered with dual counter-rotating self-cleaning paddles and customizable heating mediums like steam, thermic fluid, or hot water to ensure uniform drying, enhanced heat transfer, and optimal performance across feed types.



LOW MAINTENANCE & LONG LIFE

Heavy-duty shafts, no metal-to-metal contact, and an inbuilt self-cleaning mechanism reduce wear, minimize downtime, and extend equipment lifespan for reliable, long-term operation.



LOW OPERATING COST

Energy-efficient indirect heating, low off-gas volume, and readiness for VFDs and automated controls significantly reduce power consumption and manpower requirements.



COMPACT & MODULAR

Space-saving, modular construction allows flexible integration into new or existing plants with minimal civil work and easy installation.

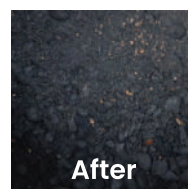
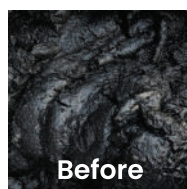


ENVIRONMENTALLY RESPONSIBLE

A fully enclosed system with solvent recovery options and sludge-to-value capabilities ensure odourless, emission-free operation that aligns with environmental regulations and circular economy goals.



WHY CHOOSE PADDLE DRYER FOR SLUDGE DRYING



Dried sludge can be used in many ways:

- Alternative Fuel
- Cement Production
- Bricks Production
- Agriculture

TRADITIONAL SLUDGE PROBLEMS (Before)	PADDLE DRYER BENEFITS (After)
High labour & handling effort	Less manpower – automated process
Heavy sludge, high transport	Dried sludge – lighter, cheaper to move
Messy & smelly sludge	Easy to handle, clean, odor-free
Tough regulations	Easy compliance – simple disposal
Storage takes space	Saves space – compact dry sludge
Waste keeps costing more	Turns waste into value – sell or reuse

DESIGN TO EXECUTION

EXPERIENCE THE JOURNEY WITH AS ENGINEERS



1500+ Projects
Expertise



500+
Clients



25+ Years of Deep
Industry Experience

FREQUENTLY ASKED QUESTIONS

- 1 What is your Paddle Dryer used for other than Sludge Drying?**
We can design the paddle dryer for other process like Heating, Calcining, Solvent, Stripping, Crystallizing, Reacting, Cooling, etc.

- 2 Do you offer Paddle Dryer for rent?**
Yes, our company offers paddle dryer on rent, Please contact our sales team to know more about our services in detail.

- 3 Do you offer paddle dryer repair services and OEM spare parts?**
Yes, we provide all kinds of repair services and spare parts, and we have successfully resolved various spare parts-related issues like shaft retrofitting.

- 4 How much does it cost approximately to dry sludge?**
Approximate cost of drying sludge with 80% wt/wt basis initial moisture to 20% final moisture generally consumes fuel as mentioned below.

1 kg Wood = 5 kg Sludge
1 kg Coal = 8.25 kg Sludge
1 Nm Gas = 22.5 kg Sludge
1 kg LDO = 21 kg Sludge

- 5 Does AS Engineers offer a pilot trial?**
Yes, we offer pilot trial at our works & on site both, with minimal cost to check your product viability and project feasibility.

 (+91) 990 903 3851
(+91) 823 867 7554

 info@theasengineers.com
asengineers97@gmail.com

 www.theasengineers.com

Unit 1:

Plot No-514, Phase-II, Near Vatva Railway Station,
GIDC, Vatva, Ahmedabad, Gujarat, India – 382445

Unit 2:

Plot No – CIB-160, Phase-II, GIDC, Vatva,
Ahmedabad, Gujarat, India – 382445