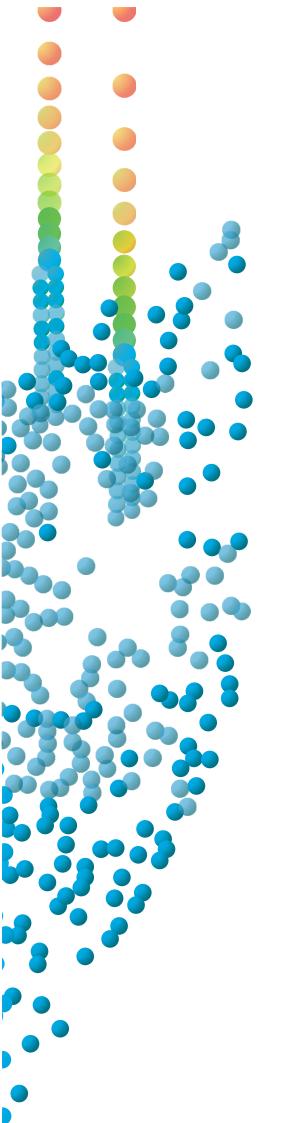


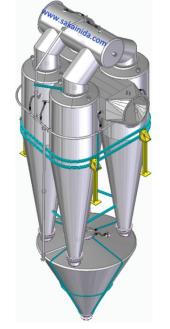
Leading today, shaping tomorrow with cutting-edge technology and innovation ISO 9001 - 2015 CERTIFIED COMPANY





**APPLICATIONS STARCH AGROCHEMICALS DYES & PIGMENTS** FRUIT COLORS **FLAVORSCERAMICS PHARMACEUTICALS** PAPER INDUSTRY HERBAL **FOOD EXTRACTS** MILK POWDER STEARIC ACID **BIO-EXTRACTS** ZERO DISCHARGE PLANTS **POLLUTION CONTROL EQUIPMENT** AND MANY MORE....

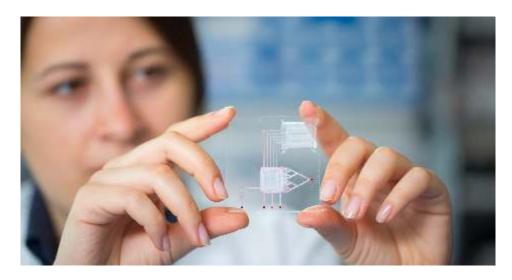
> QUADRUPLE CYCLONE





# TO THE NEXT LEVEL WITH SAKA ENGINEERING

By challenging the conventional norms, SAKA RETHINKS, REINVENTS & REDEFINES the technology to create new benchmarks for your process reliability, efficiency & quality. Our vision is to deliver the next level of performance in drying technology for our customers.



#### DELIVERING THE NEXT GENERATION INDUSTRIAL DRYING TECHNOLOGY WITH

#### PROCESS EXPERTISE

SAKA has a deep know-how in an exhaustive range of drying applications. The deep application expertise means our products are embedded with an inherent vision to adapt to future needs of your business, thus ensuring an enduring technology for processes.

#### INTELLIGENT AUTOMATION

SAKA's focus in automation is to leverage advanced PLC/SCADA technology to build intelligent drying processes that ensure highest efficiency in operations and best quality in output. SAKA builds and implements easy to use automation as per your process needs and budgets.

#### **CERTIFIED PROJECTS**

As a manufacturer of machineries, we are proud to follow various certifications to ensure the quality and safety of our products. Our certifications include CE CERTIFICATION
ATEX CERTIFICATION
UL CERTIFICATION
U - STAMP CERTIFICATION

These certifications demonstrate our commitment to meeting industry standards and regulations, providing our customers with peace of mind and confidence in the reliability of our machineries

#### ADVANCED CFD ANALYSIS

Using next generation Computational Fluid Dynamics (CFD) techniques SAKA is able to simulate and analyse the material behaviour and properties in the process. The deep insights from analysis ensures highest level of performance optimization & equipment reliability, when in operation.

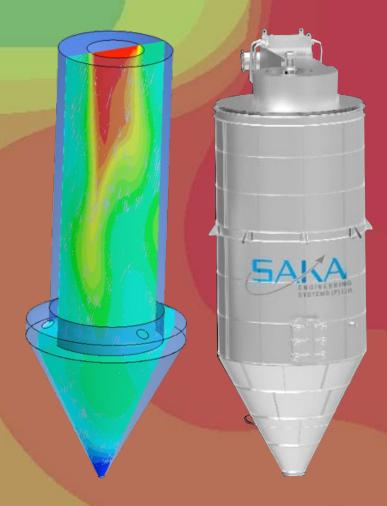
#### **WORLD-CLASS QUALITY**

Being world-class is core to our strategy. We have established an extensive system of checks to ensure only the highest quality in our sourcing, manufacturing and site work. With SAKA, you are assured of the best quality that performs as promised for years together.

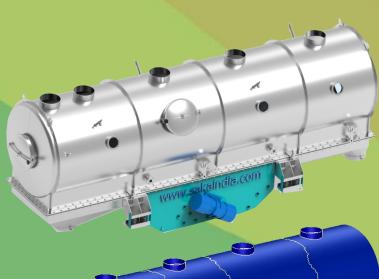
## SPRAY DRYER CFD ANALYSIS

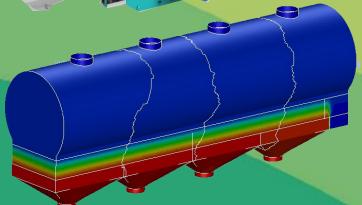
#### **RETHINK ANALYSIS**

BY RETHINKING THE
CONVENTIONAL
APPROACHES TO
DRYING PROCESS
DESIGN AND
ENGINEERING, WE ARE
ABLE TO PROVIDE
BETTER TECHNOLOGY
THAT DELIVERS
CERTAINTY IN RESULTS.

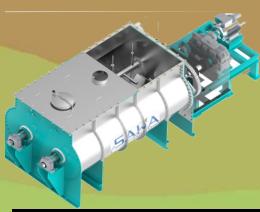


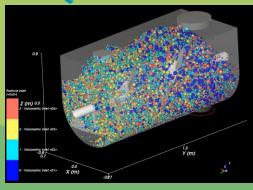
# FLUID BED DRYER CFD ANALYSIS





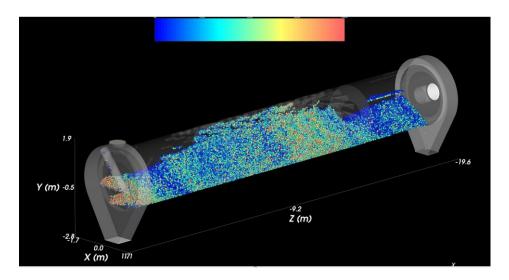
# BLENDER CFD ANALYSIS





# DESIGN AND ANALYSIS FOR CERTAINTY IN RESULTS

SAKA employs highly advanced methodology, such as CFD analysis, using cutting-edge tools to deliver guaranteed results for your business. Process efficiency, reliability and system performance are at the core of our design and analysis philosophy.



#### **CFD SIMULATION & MODELLING**

Computational Fluid Dynamics (CFD) uses applied mathematics, physics and computational software to visualize how the elements of a process (gas or liquid) flows or affects objects as it flows past.

SAKA's state-of-the-art CFD analysis center uses advanced simulation and modelling techniques to accurately map the relation between velocity, pressure, temperature, and density of a moving fluid, thereby ensuring complete control over process parameters and performance.

The result is a first time right process providing certainty in output & efficiency throughout the equipment's life-cycle.

#### **UNPARALLELED BENEFITS**

- > CFD simulation helps to foresee performance before adapting or execution in systems
- Without installing real system or a pilot, CFD simulation helps understand the most vital parameters for improving performance
- > CFD modelling saves cost and turnaround time and brings reliable results

65+
YEARS OF DESIGN EXPERTISE

20% OF WORKFORCE IN DESIGN 200+
PROCESSES
ANALYZED



## **REDEFINE QUALITY**

BY INTRODUCING
NEW, INNOVATIVE
WAYS AND SYSTEMS IN
MANUFACTURING,
SAKA REDEFINES THE
POSSIBILITIES IN
QUALITY OF YOUR
PROCESS PLANTS AND
EQUIPMENT.



# INTEGRATED PROCESS ENGINEERING CAPABILITIES

SAKA's integrated approach to manufacturing, project management and installation, delivers an unparalleled quality for your processes. The integrated approach means thinking from efficiency, reliability and product quality point of view at every stage of project planning and execution, to ensure the next level of performance.







#### **MANUFACTURING**

SAKA's manufacturing capability includes 2 manufacturing plants all located in the heart of industrial hubs in Pune, India.

- > Team of 40+ engineers, technicians and managers
- Manufacturing standardization and value engineering programs
- In-house manufacturing for basic as well as advanced and heavy engineering
- ➤ Advanced quality control processes for materials, components, manufacturing and vendors to ensure highest system reliability

#### PROJECT MANAGEMENT

SAKA's excellence in project management brings in several intangible benefits, reduces the risks and ensures smooth execution of projects for its customers.

- > ERP system for seamless communication between design and manufacturing
- > Complete visibility on project progress for the customers
- > On-time, on-budget completion of projects

#### INSTALLATION & COMMISSIONING

SAKA has extensive experience of commissioning large scale projects and entire plants in India and around the world.

- Dedicated team of highly experienced engineers for installation, well versed in Safety Health and Environment (SHE) Compliance
- > Commissioning with a focus on best performance of the entire process, in addition to SAKA's equipment

250+

150 TPD +
CAPACITY PLANTS INSTALLED

300+
LOCATIONS ACROSS WORLD

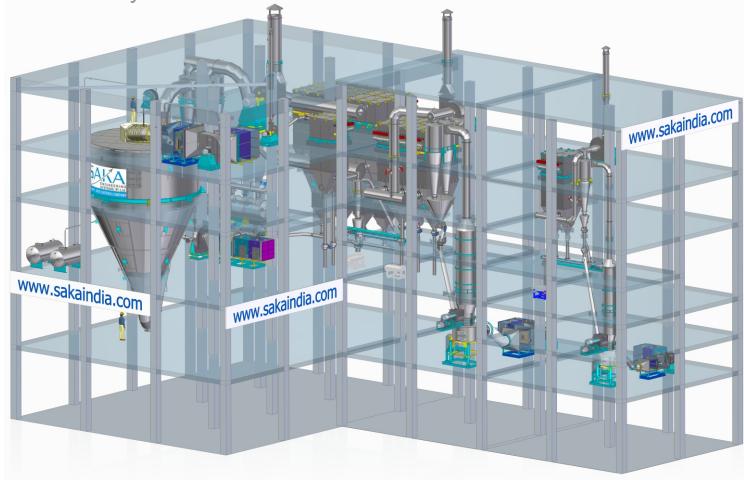
#### REINVENT EFFICIENCY

BY CHALLENGING
THE 'SO CALLED'
OPERATIONAL NORMS,
SAKA REINVENTS
A NEW BENCHMARK
FOR YOUR PROCESS
EFFICIENCY
AND PERFORMANCE.

www.sakaindia.com

THREE STAGE SPRAY DRYER





# QUICK PAY-BACK ON YOUR INVESTMENTS, GUARANTEED.

From simple, value added equipment such as Heat Exchanger to end-to-end Granulation plants, SAKA's technology delivers the next level of efficiency for your processes. SAKA's team is recognized for innovative ideas and methods that unfold previously unavailable avenues for higher equipment efficiency and lowered production costs to drive greater profitability.

SAKA's equipment and plants are characterised by several features that reinvent the efficiency of your operations

#### **ENGINEERING**

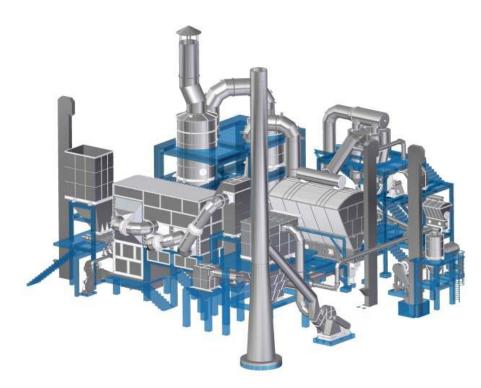


- > Process design with highest energy efficiency
- > Flexible designs to accommodate changes in feed or end product quality
- > Equipment design for easy operations and maintenance

#### **OPERATIONS**



- > Low maintenance systems that need lesser cleaning
- > Least loss, lower cycle time in processes
- > Advanced, automated systems with intelligent process controls



#### **QUALITY STANDARDS:**

#### SAKA Quality Standards whenever applicable as per Design Qualification:

In our manufacturing unit, we adhere to a range of applicable quality standards to ensure excellence in our products. These standards include ISO 9001: 2015 for quality management systems. Maintaining adherence to these standards not only guarantees the quality and safety of our products but also demonstrates our commitment to environmental sustainability and the well -being of our workforce.

It signifies to potential partners or clients our dedication to delivering superior products and services consistently. Emphasizing the importance of quality management not only instils confidence in our capabilities but also assures stakeholders of our commitment to meeting and exceeding industry standards.

Sr. No.	Description	Quality standards
1.	Management system	ISO 9001: 2015, approved by TUV - Nord
2.	Welder Qualification	ASME Section IX, EN15614
3.	Welding procedure	ISO15614
4.	Non-Destructive test	ASME Section V
5.	Welding inspection	IS 816, IS822
6.	Stainless steel material	ASME section II part A
	acceptance	
7.	Stainless steel plates, sheet,	ASME section II part A, ASTM A240
	and strips	
8.	Stainless steel bars and	ASTM A554
	shapes	
9.	Tank Manufacturing standard	API 620 & API 650
10.	Hydro-test	ASME Section VIII Div 1, UG-99 (b)
11.	Welding Rod selection	ASME section II part C
12.	Balancing of rotary	ISO 1940, balancing grade 6.3 AND 2.5
	equipments	
13.	Blower performance test	IS4894, there are many standards that cover performance
		testing of centrifugal fans such as AMCA and
		ISO. Our blowers perform well against these standards.
14.	NDT Acceptable Criteria	ASME SECTION VIII DIV.1, B31.3 AND ASME SECTION
		IX
15.	Structural Inspection	AWS D1.1, IS12843
16.	Pipe Flanges and Fitting	ASME B16.5
17.	Painter Qualification	IS 101-3-2
18.	Surface Preparation	SIS-05-5900
	Procedure and Inspection	
19.	Painting/Coating Inspection	ISO19840
20.	Maximum Allowable Stress	ASME Code Section II, Part D, Table 1B, 2019
	Values S for Materials	

# Optional Certifications (If specifically mentioned and agreed) which can be followed for specific projects:

l.	CE certification	Entire Europe
II.	ATEX certification	Entire Europe
III.	U stamp certification	USA

# **PRODUCT RANGE**

In just few years SAKA has established itself as one of the leader in drying systems choose from our wide range of Solutions

#### **NOZZLE TYPE SPRAY DRYER**



#### **THREE STAGE SPRAY DRYER**



#### **ATOMISER TYPE SPRAY DRYER**



# ATOMISER TYPE SPRAY DRYER FOR ZERO DISCHAGRE SYSTEM



#### **ATOMIZER TYPE SPRAY DRYER**



#### **TYPE SPRAY DRYER**



#### **SPIN FLASH DRYER**



#### **FLASH DRYER**



## **FLASH DRYER**

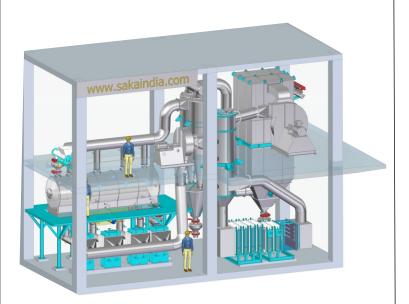








# CLOSE LOOP FLUID BED DRYER



# FLUID BED DRYER



# FLUID BED DRYER



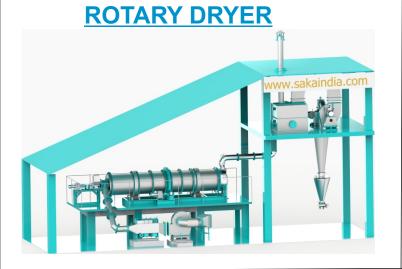
# SHUGI MIXER



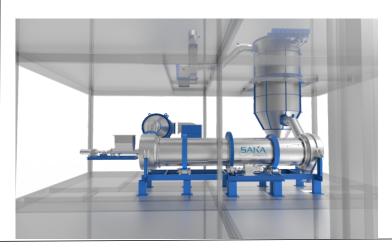
# FLUID BED DRYER

# FLUID BED DRYER WITH AGITATOR

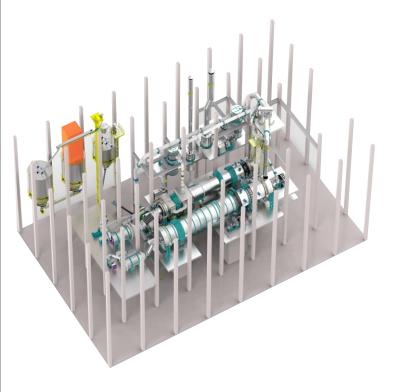




## **ROTARY DRYER**



**ROTARY DRYERS / KILNS PLANT** 



**ROTARY CALCINER** 



## **TUBE BUNDLE ROTARY DRYER**

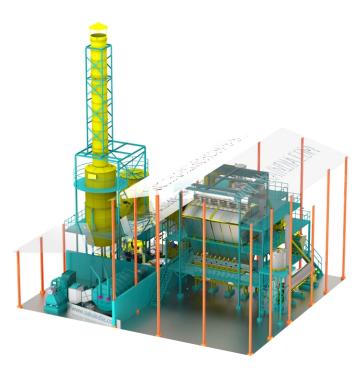


#### **ROTARY DRYER EQUIPMENT**



#### **CaCI2 GRANULATION PLANT**

#### **GRANULATION PLANT**

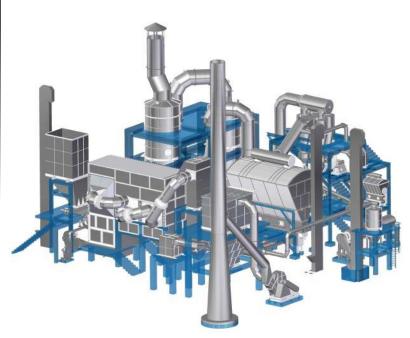




## **GRANULATION PLANT**

## **GRANULATION PLANT**





#### **ROTARY COOLER**

#### **SPRAY COOLER**



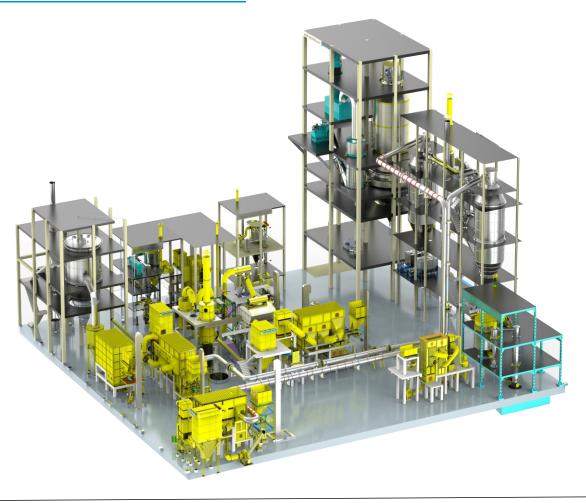


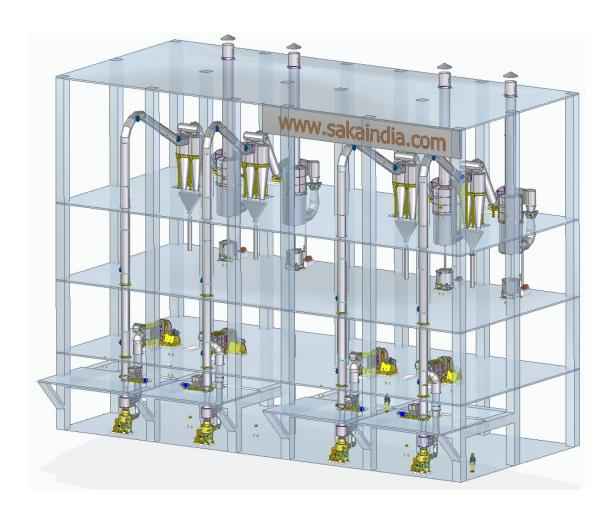
## **MATERIAL HANDELING SYSTEM MATERIAL HANDELING SYSTEM**





# **TURNKEY PROJECTS**









#### **DIRECT FIRED AIR HEATER**



## THERMIC AIR HEATING SYSTEM

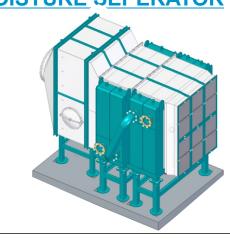


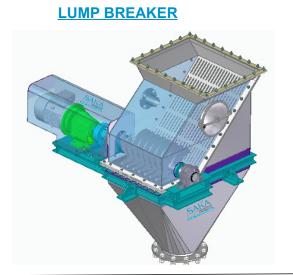




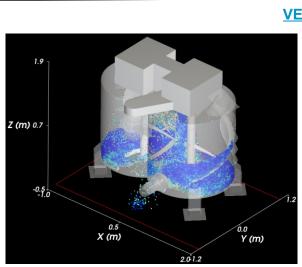


# AIR COOLER, AIR MOISTURE SEPERATOR



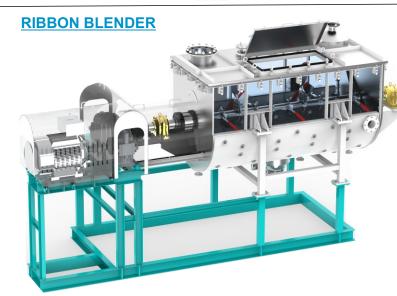








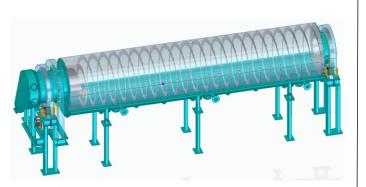








#### **ROTARY COOLER**



#### ROTARY AIR LOCK VALVE



**BAG FILTER** 



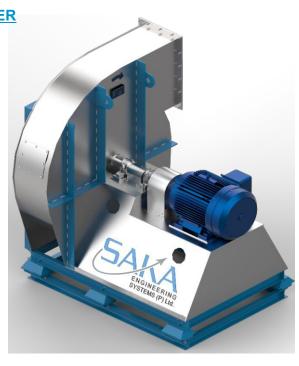
**BLOWER** 

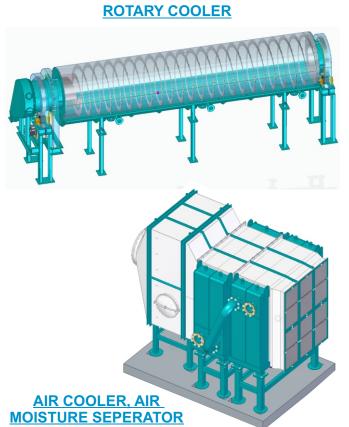


**ATOMIZER** 



**BLOWER** 













**ATOMIZER** 







# **KEY PROJECTS**

- > Largest precipitated silica plant with a capacity of 120 TPD
- > Biggest spray granulation plant with a capacity of 100 TPD
- > Designed, manufactured and commissioned India's largest plant for H Acid
- $\,>\,$  Multiple installations of ZLD plants with capacity up to 300 TPD
- > Achieved 98% solvent recovery from close loop spray drying plant with a capacity of 1 TPD

SAKA Engineering is a leading manufacturer and supplier of industrial drying and evaporation technology, Granulation plants and spray cooling systems. SAKA's technology is recognised in particular for its innovation, high efficiency, most reliable product quality and staying well within the demands of pollution control norms, in numerous drying applications, across diverse industries.

With presence in India and installations across the world, SAKA has several firsts to its credit including manufacturing of one of the largest spray dryers in India, the largest fluidised bed dryer in India and being one of the few companies to develop and deliver technology for complete Granulation plants.

#### **KEY CLIENTS**









































































#### SAKA ENGINEERING SYSTEMS PVT LTD.

Office: Plot No. W45, 'T' Block, MIDC Bhosari, Pune 411 026, Maharashtra, India. Works1: J58, 'S' Block, MIDC Bhosari, Pune 411 026, Maharashtra, India.

Works 2: Gat No. 65/1, Gaon Mouje Dhanore, Alandi-Markal Road, Tal-Khed, Dhanore, Pune- 412105 Maharashtra, India.

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<u>sales@sakaindia.com</u>