



**DEDINI**  
INDÚSTRIAS DE BASE



Complete Solutions for your **BIOENERGY** Plant  
Only Dedini can offer You!

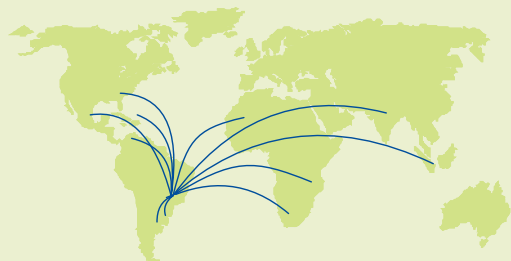
BIO - Equipment & Plants



# A global company

over 40  
countries

Dedini supplies engineering services, parts, equipment refurbishment, mechanical equipment, systems and complete plants to customers in the world.



Dedini Indústrias de Base is the consolidation of several renown companies:



M.DEDINI S.A.  
METALÚRGICA



CODISTIL  
CONSTRUTORA DE DISTILARIAS DEDINI S.A.

**DEDINI  
KAWASAKI**  
Engenharia S/A



DZ. S.A. Engenharia,  
Equipamentos e Sistemas



CODISTIL  
DEDINI

Dedini is formed by a large team of professionals with wide experience on various areas of the industrial sector, offering a full range of services from feasibility studies to plant commissioning.

## Innovation & Solutions

Through it's own developed technologies or license agreements, Dedini provides sound and proven designs, to meet most stringent customer requirements.

**YOUR COMPLETE SOLUTION PROVIDER**

### Technology & Engineering

- Research & development
- Feasibility studies
- Basic engineering
- Process and detailed engineering
- Customized process engineering solutions

### Manufacturing & Procurement

- Equipment manufacturing
- Equipment refurbishment
- Global procurement

### Package Supplies

- Greenfield/ Brownfield "Turnkeys" Plants, in partnership with EPC contractors

### Field Services

- Erection supervision
- Commissioning and startup supervision
- Assisted operation & training
- After sales service & spare parts supply
- Plant optimization





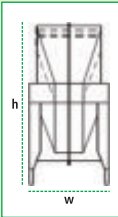
# Reception, Preparation & Extraction

MORE THAN  
**2600**  
 MILLING UNITIES  
 SUPPLIES

## • Cane Core Samplers



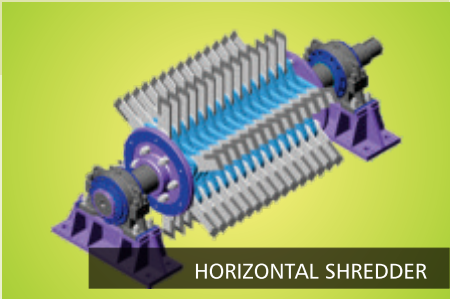
## • Cane Cleaning and Separation



Available Models	SLC 2000	SLC 3000	SLC 4000	SLC 4500	SLC 5000
Width (m)	2,0	3,0	4,0	4,5	5,0
Height (m)	9,5	10,3	11,0	11,4	11,8
Max. Rated Capacity (tc/h)	150	300	420	770	1.300
Blower (hp)	75	125	150	175	200



## • Knives & Shredders



## • Mills

Sizes	Capacities (tc/h)	Max. Capacities (tc/d)
34" x 54"	350	8,400
37" x 66"	450	10,800
42" x 78"	650	15,600
46" x 84"	750	18,000
50" x 90"	850	20,400
53" x 96"	1,050	25,200
56" x 100"	1,300	31,200



## • Chainless and Expandable Modular Diffusers

Available Models	MDB 6,0	MDB 7,5	MDB 9,0	MDB 12,0	MDB 15,0
Width (m)	6,0	7,5	9,0	12,0	15,0
Rated Capacity (tc/d)	6,000	7,500	9,000	12,000	15,000
Maximum Capacity (tc/d)	7,000	8,500	10,500	13,500	18,000



## Engineering Solutions for all types of sugar

- VHP Sugar
- Amorphous
- Refined Granulated
- Liquid Sugar
- Inverted Liquid Sugar



## Sugar Production

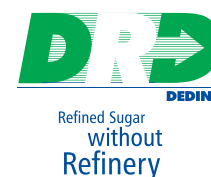
- Juice Heaters
- Clarifiers
- Rotary Vacuum Filters
- Evaporators (Robert/Falling Film)
- Condensers
- Continuous vacuum Pans, in partnership with **BOSCH ENGENHARIA**
- Batch vacuum pans
- Crystallizers (Vertical / Horizontal)
- Sugar Dryers (Vertical/Horizontal)
- Sugar Conveyors
- Ionic Exchange Columns
- Thermally Accelerated Short Time Evaporators



## DRD - Dedini Direct Refined

This new technological development enables to obtain refined sugar without requiring sugar dissolution and recrystallization stage. The process goes from sugar cane syrup on a single step mode to obtain refined sugar assuring high quality standards; only one crystallization.

- Lower investments required
- Reduction on production and maintenance costs
- Lower losses and energy consumption



## Juice Treatment

- Screens
- Heaters
- Evaporators
- Clarifiers / Decanters
- Filters
- Floaters





## Engineering Solutions for all type of Ethanol Products

- Hydrated Fuel Ethanol
- Anhydrous Fuel Ethanol

- Neutral and Fine Ethanol
- Rectified Spirits

### Fermentation

- Batch
- Continuous
- Flexible
- Yeast Propagation Plant



### High-grade Fermentation

- Fermentation with high alcohol grade content



### Distillation

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Types of Distilleries</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Types of Trays</li> </ul>                               |
| <ul style="list-style-type: none"> <li>• Atmospheric</li> <li>• Vacuum</li> <li>• Multipressure</li> </ul> | <ul style="list-style-type: none"> <li>• Caps</li> <li>• Valve</li> <li>• Sieve Trays</li> </ul> |



### Dehydration Technologies

**PM5** 5<sup>TH</sup> Generation

- Dehydration System
  - Molecular Sieve
  - Cyclohexane



### Vinasse solution



- Concentration

Concentrated vinasse system offers an attractive transport and distribution cost reduction, on its use for field irrigation. Recovered water can be used on the industrial process, saving its intake from environment.

- BIOFOM

BIOFOM is the result of processing the byproducts originated from the plant operation, as it converts concentrated vinasse, filter cake, boiler ashes and soot into solid and granulated fertilizer – Organo Mineral Fertilizer – that recycles those nutrients into the sugar cane fields.



### Biodiesel Plants

- Stand alone or integrated to Ethanol Mills.



## Dedini Boiler Series



### AT

SINGLE DRUM

AT Single Drum Boiler	400 t/h
Type	Top Supported
Pressure	120 kgf/cm <sup>2</sup> (g)
Temperature	540°C
Fuel	Biomass, Coal



### AT

DOUBLE DRUM

AT Boiler	250 t/h
Type	Top Supported
Pressure	85 kgf/cm <sup>2</sup> (g)
Temperature	530°C
Fuel	Biomass, Coal



### AZ-100

SINGLE DRUM

AZ-100	200 t/h
Type	Bottom Supported
Pressure	120 kgf/cm <sup>2</sup> (g)
Temperature	540°C
Fuel	Biomass, Coal



### AZ-200

DOUBLE DRUM

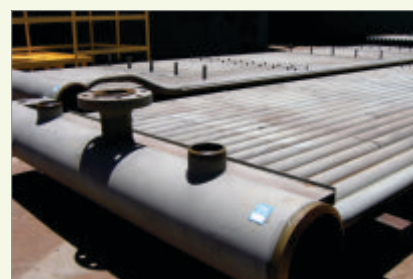
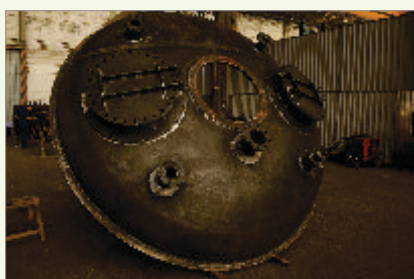
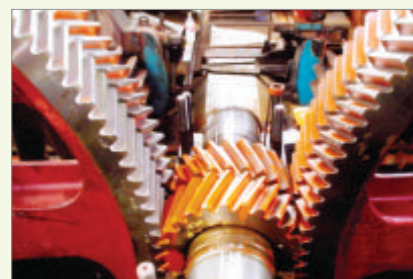
AZ-200	200 t/h
Type	Bottom Supported
Pressure	67 kgf/cm <sup>2</sup> (g)
Temperature	520°C
Fuel	Biomass, Coal

## After Sales Service

- Dedini provides yearly field assistance, parts replacement, equipment refurbishment and plant optimizations, for Sugar & Ethanol mills in Brazil and in 40 countries.



Machine Shop



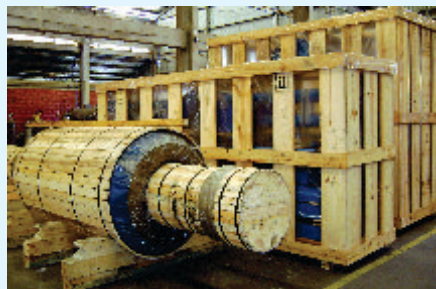


# FOR EXPORT

over 40  
countries

## Equipment Manufacturing Program

- Cane Core Samplers
- Knives
- Shredders
- Tandem Mills
- Diffusers
- Dual Smart Systems
- Rotary Screens
- Rotary Vacuum Filters
- Sugar Plants
- Fermentation Plants
- Distilleries
- Molecular Sieves
- Steam Boilers
- Tank Farms
- Complete Sugar Mills & Ethanol Plants
- Cogeneration Plants
- Biodiesel Plants
- Plant Automation
- Parts Replacement, Refurbishment & Revamping



**DEDINI**  
INDÚSTRIAS DE BASE

Your Partner for Technology Development, Integrated Systems and State of the Art Equipment and Services.

# In Brief

- Over **3000** Professionals
- Over **200** Engineers and Technicians



## MAJOR SUPPLIES

### Worldwide Largest References

+ than	2600	Milling Units
+ than	1600	Steam Boilers
+ than	900	Evaporators
+ than	870	Bioethanol Distilleries
+ than	550	Vacuum Pans
+ than	355	Cane Core Samplers
+ than	335	Dehydration Plants
+ than	115	Cogeneration Plants
+ than	105	Bioethanol Mills (Turn-key)
+ than	15	Diffusers
+ than	10	Biodiesel Plants

## Certifications



ISO 9001



ISO 14001



ASME Stamps  
S - U - U2



National Board  
Stamp R

## Manufacturing Facilities

Dedini has 6 manufacturing sites, with 10 factories installed in a total area of 1.280.000 m<sup>2</sup> and 192.000 m<sup>2</sup> of covered area, located in 4 strategic points throughout Brazil.



Dedini S.A Ind. de Base



Piracicaba-SP  
106.200 m<sup>2</sup>



Sertãozinho-SP  
67.800 m<sup>2</sup>



Recife-PE  
9.600 m<sup>2</sup>



Maceió-AL  
8.400 m<sup>2</sup>