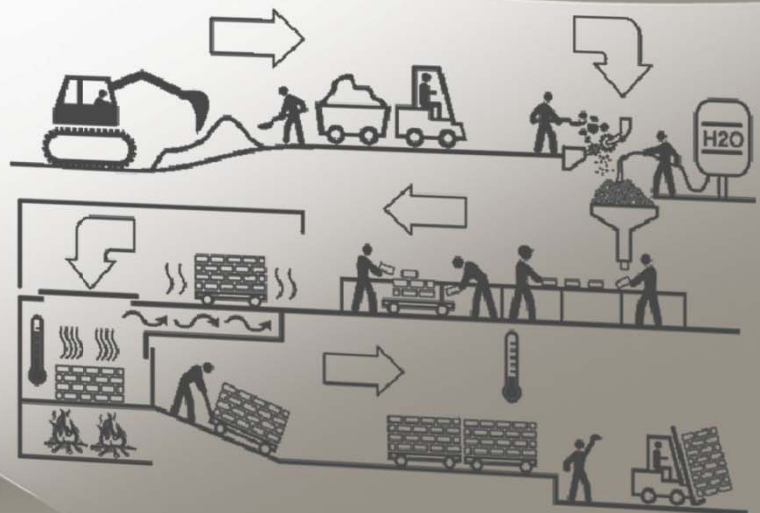


# technos

CLAY BRICK PRODUCTION PLANT



# COMPANY INTRODUCTION AND MARKETING'S OF TECHNOS

*General Information of Manufacturing and Best Opportunity to Marketing Plan for Industrial Equipments and Plants*

## How to make this project

TECHNOS is one of the most reputed machinery manufacturers in Korea with many experienced years in the production of product for heavy clay bricks and tiles field.

TECHNOS delivery and planning programs contains from raw material preparation, through forming machines and handling, line system equipments. Also supplies all addition items essential for the smooth operation of the plant.

TECHNOS, as an innovative, technology-orientated company, plans, set-up and commissions turn key plants that represent the very latest technology. We make every effort through collaborative engineering with our customers' planning experts to achieve optimum solutions both in technical and economic terms.

## Company introduction

### **GENERAL INFORMATION OF TECHNOS IND CORP.**

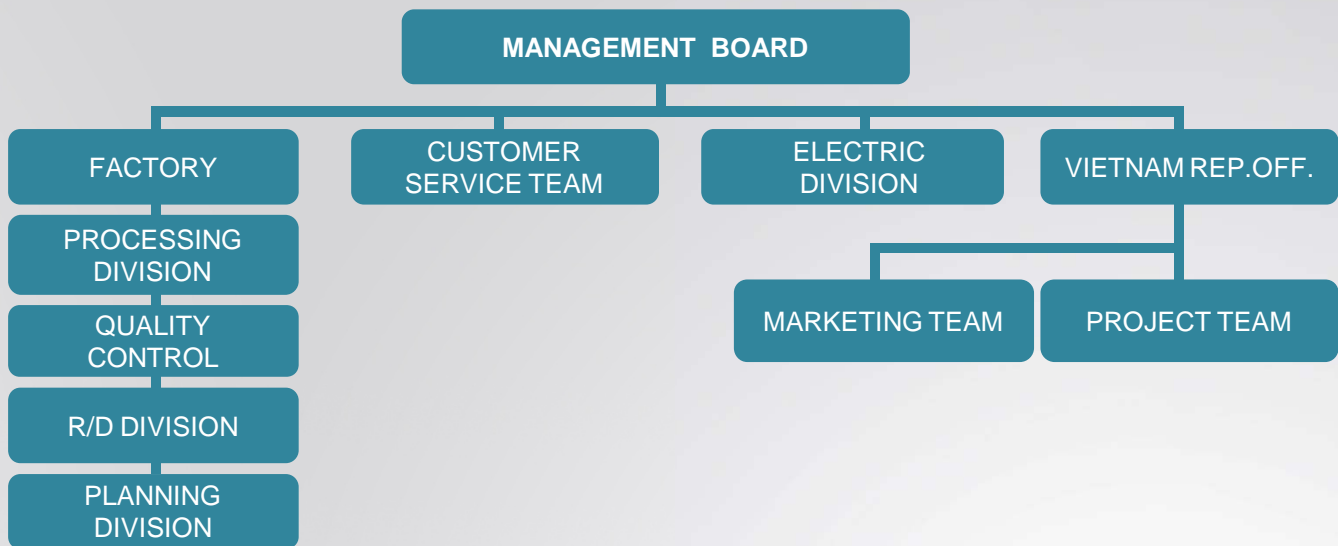
Since the establishment in 1984, we has manufactured and supplied many automatic and semi-automatic plants for clay bricks products factory in Korea and around the oversea countries.

We are always trying to innovate our machines for better quality and durability in order to fulfill the various and strictly technical requirements from all our clients. As the leading Manufacturer and Exporter of automatic machines for hard clay plant, we have always tried our best to develop the best automatic machines during the past years.

Our machines processes a creative design, precise engineering, correct manufacturing and limitless after services. This helps us obtain a good reputation from all of our customers.

We have also studied to provide our customers with economical plant so that they can compete with other competitor in the markets.

# Organization



## PRODUCTION

*TECHNOS is equipped with advanced & modern facilities to manufacture clay brick forming machines focused on the usage of brick products. To meet the requirements of the customers, TECHNOS continue to apply the most advanced technologies from the earliest stage to the last stage of production.*

## Main Product

- Raw materials preparation machines for hard clay field
- Clay brick forming machines
- Handling system
- Automatic line system
- PLC type of electric equipments
- ROCK WOOL PRODUCTION PLANT
- DUSTLESS CHALK PRODUCING EQUIPMENTS

## Capability of Manufacturing

About 3-production lines/monthly when the factory is running 01 shift a working day

# QUALITY ASSURANCE

## Quality Control

Since the establishing year 1984 we rename up to now, we are always improving our quality. We consider quality is a system in which human is the most important factor. In order to maintain high quality products with low production cost and high competition, we control quality base on the Korean main through; Total Quality Control system (TQC) with the below main factors.

- Set up the quality policy
- Set up quality and administration management plan
- Design and control the changing in designation
- Control the import materials
- Control the producing quality
- Set up the contract points of users and efficiency in each fields
- Employees recruiting, training and maintaining

The quality control team consists of key men in quality related sectors such as product, technical a service, marketing, continuously studies the customer needs, demands and satisfaction.

## After Sales Service

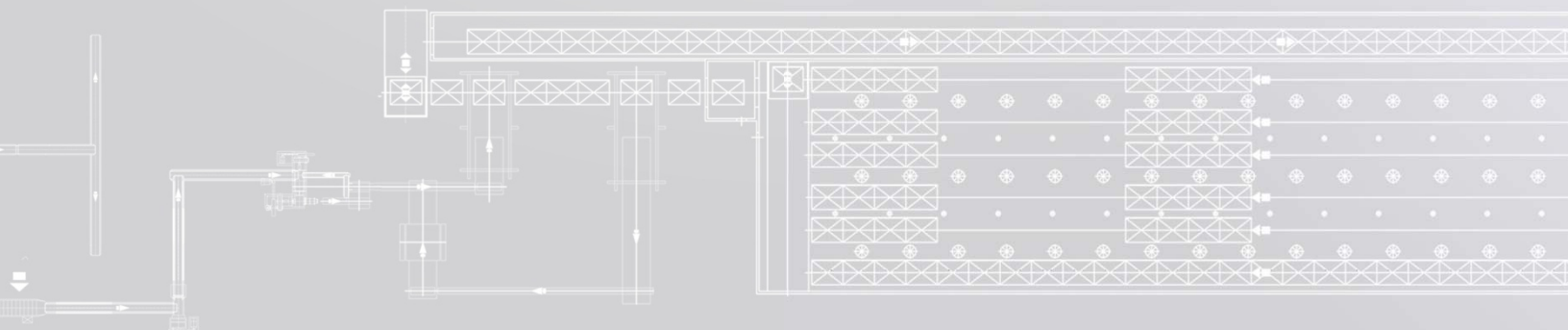
TECHNOS's Customer Services included special consulting services regarding to production, research, sales activities or any other problems that might be encountered by our customers.

## Warranty

We guaranteed our equipment is against manufacturing defects for one (01) year from the date shipments.

## Co-Partner Business Items

- Dustless school chalk production technology and equipments
- Drinking yoghurt filling and sealing plant
- Stick yoghurt filling and sealing plant
- Automatic Ice-cream production plant
- Distribution and assembly of water faucet products
- CNG Filling Station
- Industrial materials and chemicals



# MANAGEMENT PHILOSOPHY

## DIRECTION

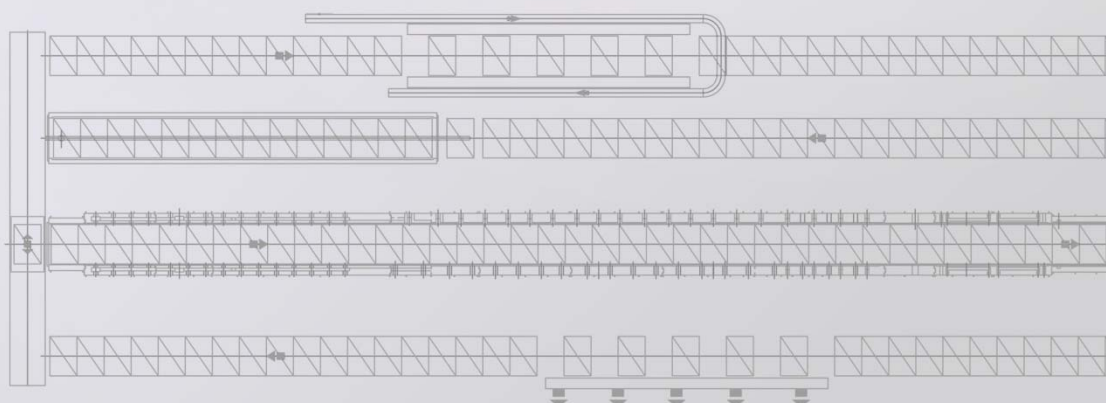
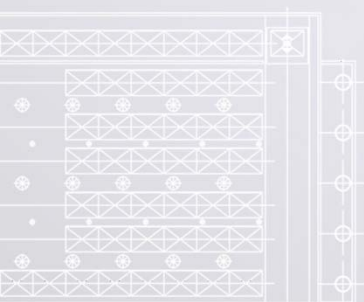
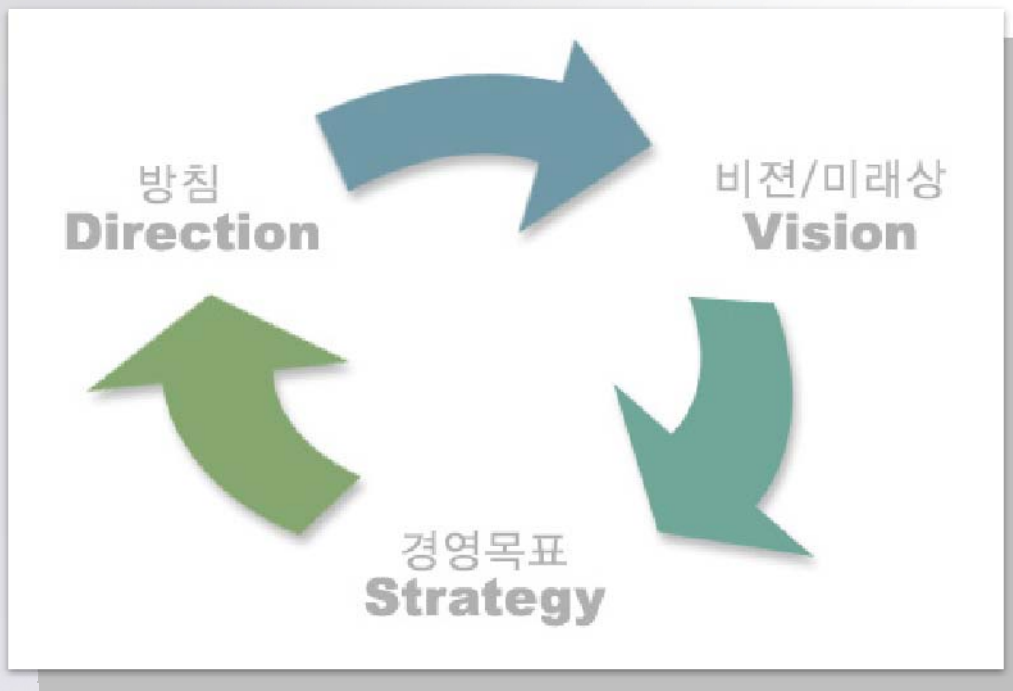
- Strong responsibility and positive thinking
- Global standardization
- Present decides future
- Future is to be at present

## VISION

- Customer Oriented Management : our mission is to ensure
- Customers happiness and satisfaction

## STRATEGY

- Contribution to people's lives and the development of civilization



# BRICK MAKING INFORMATION

## ● Mining (Clay Storage)

Various mining types are used for moving clay from the clay yard to transporting it to the preparation area. These include:

- Elevator scrapers
- Excavators
- Bulldozers
- Conveyor system



## ● Clay Preparation and Equipment

The equipment required for preparation of the clay is dependant on the type of clay being mined in a particular area.

- Stone separating mill
- Primary roll crusher
- Fine roll crusher
- High speed mill



## ● Silo and Mixing

There are control of raw materials conditions.

- Silo
- Filter pug mill



## ● Forming

Perfectly mixed raw material is pressed in the vacuum chamber to expel air within the mix, and kneaded/shaped to produce clay bricks, yellow bricks, paving blocks in various shapes and sizes. This is the determining process that dictates product's strength, quality, and surface finish.

- De-Airing Extrusion



## ● Cutting

After kneading/shaping, shaped mix is cut in accordance with required product measurements. This is therefore a crucial process that determines product's size/shape and flexibility. The common methods of cutting the bricks to size are:

- Slug Cutter
- Automatic multi cutter
- Push Through Cutter

The reel cutter would cut the column into brick units as the column leaves the extruder.

The push through cutter would first cut a slug the length of the cutter, which would be sent into the cutter by conveyor.

The push through would then push the column through the cutter wires and return ready for the next column. The cut bricks in the meantime would be removed by another conveyor to the offset belt.



## ● Handling (Loading & Unloading)

The handling green brick after cutting machine that move to next section for drying and firing are:

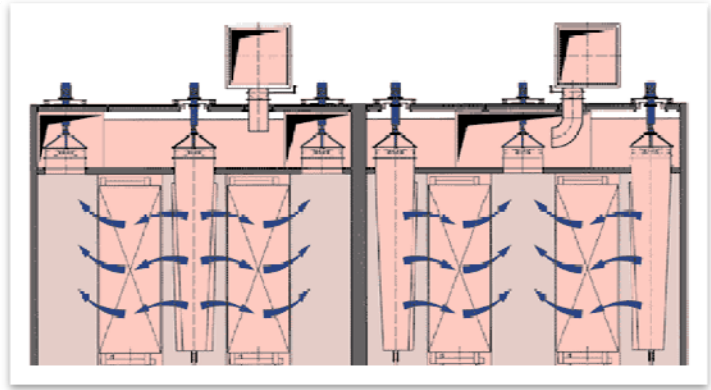
- Automatic loading machine
- Automatic unloading machine
- Setting machine
- Manual setting



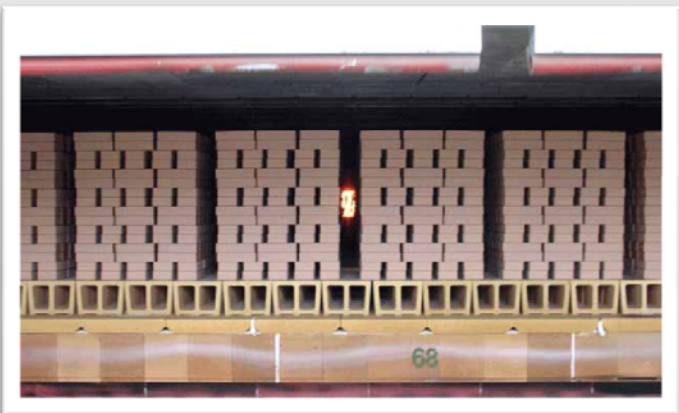
### ● Drying

Cut pieces are dried by automatically controlled hot and cold air-cooling system to remove moisture. To maintain optimum level of drying, all the sensitive working elements such as drying chamber temperature, rotation of hot and cold air, air blowing pressure and speed, etc are controlled automatically that Drying temperature average 75~85°C, drying time about 72 hours and moisture retention are 1.5~3%

Continuous tunnel dryers, would run in tandem with a tunnel kiln. The wet bricks would be packed onto kiln cars which would automatically move through a tunnel dryer utilizing heat from the cooling zone of the tunnel kiln before actually moving into the kiln for firing.



### ● Firing (different types of kilns)



The most commonly used methods of firing are:

- Transverse Arch Kilns
- Continuous Tunnel Kilns

Clamp Kilns date back to ancient times but are still widely used in Africa. In this case bricks are packed into a block formation with coal placed in specific areas to assist with firing. This method depends on good weather very much .

Transverse Arch Kiln consists of a number of chambers on either side of a building. The dry bricks are placed in the chambers which are then bricked up. The fire is pulled through the chamber using an exhaust.

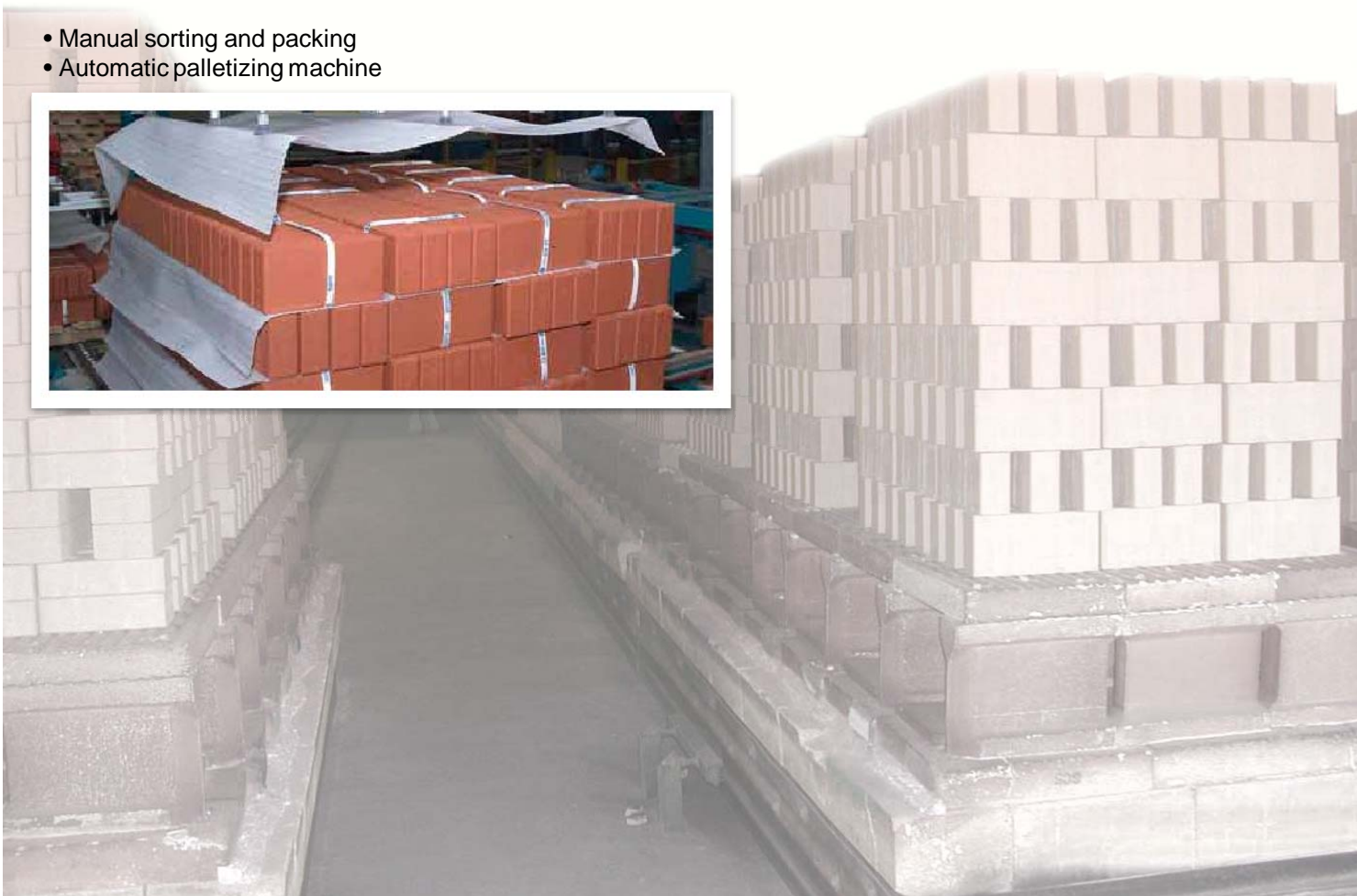
Fan. Coal is fed through burners on top of the chambers, and these are moved with the fire. Hot air from the rear of the fire is circulated through the dryer.

The tunnel Kiln is a continuous operation in that the wet bricks packed on the kiln cars move from the dryer into the kiln. The fire remains in one place and the cars move through the fire, increasing in temperature as they move until they get to the cooling zone where the hot air is removed and circulated to the dryer.

## ● Packing

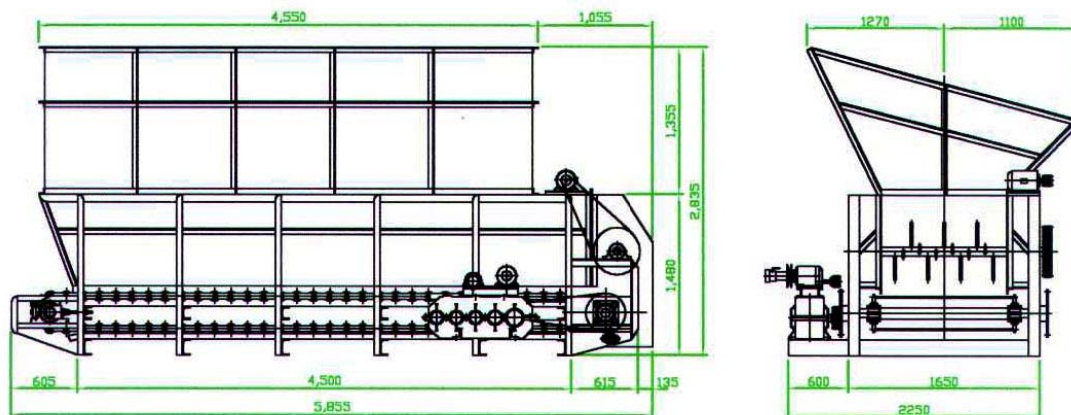
Sorting the fired product into various grades is in most cases done by hand. The more modern plants would use as system to packs are automatically strapped into blades and then wrapped and prepared for stacking.

- Manual sorting and packing
- Automatic palletizing machine



# MACHINES SPECIFICATIONS

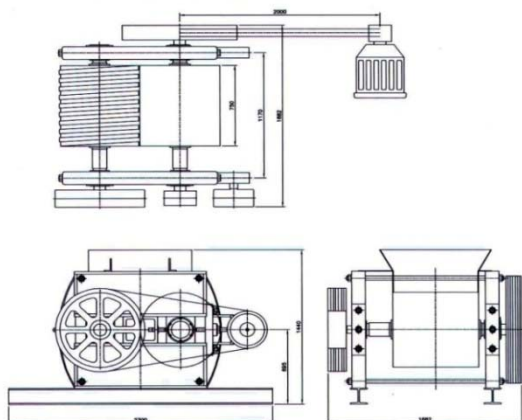
## ● Mod. BF-50N / Mod. BF-40N BOX FEEDER



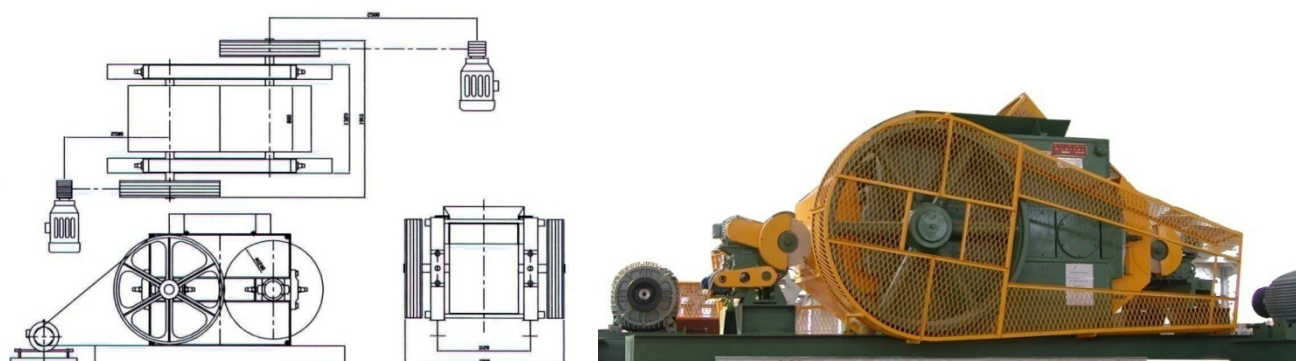
Description	BF-40N	BF-50N
Dimensions (L*H*W)	4955 x 2250 x 2800	5855 2 2250 x 2800
Installed power (kW)	Track	2.2 * 4P
	Rotary	3.75 * 4P
Capacity (ton/hr)	m <sup>3</sup> /hr from 1 up to 40	m <sup>3</sup> /hr from 1 up to 40
Weight (kg)	5000	6000
Speed of rotary (rpm)	325	325
Storage (ton)	Max. 20	Max. 20

## ● Mod. SS-7075 STONE SEPARATING MILL

Description	SS-7075	SS-6065
Dimensions (L*H*W)	2300*1682*1420	2100*1500*1350
Installed power (kW)	30 * 6P	30 * 6P
Capacity (ton/hr)	35	35
Weight (kg)	5000	4000
Roll diameter (mm)	700	600
Roll length (mm)	750	650
Speed of flat roll (rpm)	265	265
Speed of screw roll (rpm)	95	95
Motor pulley	5 grooves	5 grooves



## ● DIFFERENT SPEED OF PRIMARY & FINE ROLLER CRUSHER



Description	CR-7006	CR-9006	CR-1007	CR-1208
Dimensions (L*H*W)	2500*1500*1460	2500*1600*1660	2600*1700*1750	3000*1910*1840
Installed power (kW)	22 / 37 * 6 pole	22 / 37 * 6 pole	37 / 55 * 6 pole	37 / 55 * 6 pole
Capacity (ton/hr)	35	35	35	35
Weight (kg)	5000	7000	10000	12000
Roll diameter (mm)	700	900	1000	1200
Roll length (mm)	600	600	700	800
Speed of roll (rpm)	215	215	215	215
Useful roll thickness (mm)	60	60 (90)	60 (100)	60 (100)
Motor pulley	4 grooves	4 grooves	4 grooves	4 grooves

## ● Mod. FM-75P DOUBLE SHAFT FILTER PUG MILL



Description	FM-75P	Mixer-50
Dimensions (L*H*W)	4545*1735*1270	4500*1700*1550
Installed power (kW)	55	37
Capacity (ton/hr)	35	30
Weight (kg)	7000	6500
Speed of screw (rpm)	21	21
Motor pulley	6 grooves	6 grooves

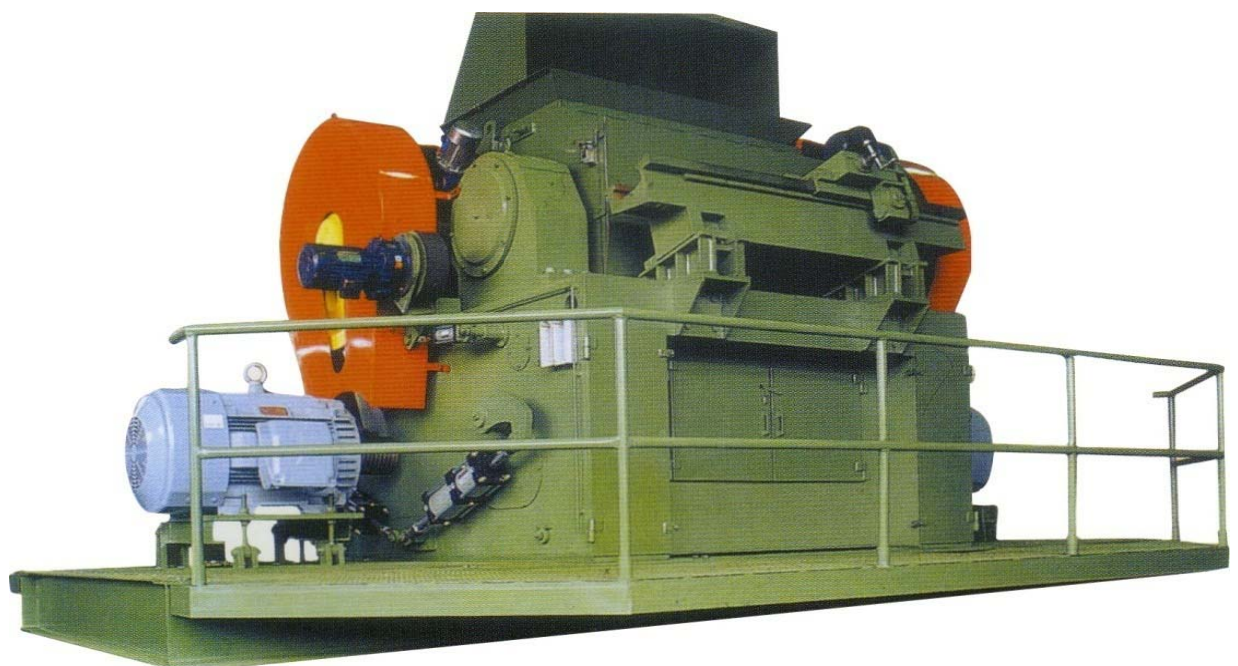


## ● Mod. HSM-8012 HIGH SPEED FINE ROLLER CRUSHER

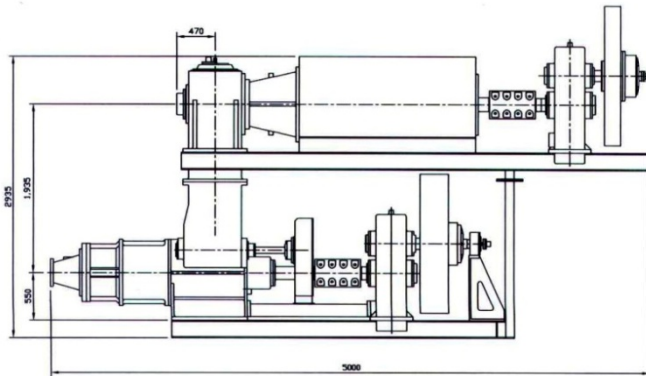
MODEL	HSM-8012	
DIMENSIONS (L*W*H)	5000*2600*5500	
INSTALLED POWER (kW)	Slow roller	90 (125HP) x 4Poles
	Fast roller	110 (150HP) x 4 Poles
ROLLER DIAMETER (mm)	800	
ROLLER LENGTH (mm)	1200	
ROLLER SPEED (rpm)	Fast roller	Max. 400
	Slow roller	350~390
CAPACITY (m <sup>3</sup> /hr)	Roll gap 0.7mm	40~45
	Roll gap 1.0mm	55~60
WEIGHT(kg)	23,000	

### ***Mechanical features***

- Simple structure and easy replacement of part.
- Every part is precision-processed at a high speed, noise and vibration in operation is minimized.
- The roller is high wear-proof by a heat-treatment process of high chrome steel.
- Two rollers reduce the load of the machine rubbing and crushing clay equally by rotating at a high & low speed.
- Available to crush up to minimize 0.5mm through high-speed revolution of the roller.
- Steel shafts mounted on double row roller bearings easily detachable. Mobile roller assembled on equalizer and controlled in its working by a couple of hydraulic cylinders under pressure.
- Each roller is moved by belts, grooves pulleys and independent motor, high resistance steel scrapers with regulation and pneumatic drive clutch.
- Hydraulic station, with a 60 liters capacity tank, to drive rolling backpressure and for oscillating roller driving. The installed pump has a capacity of 6 liters/min. and assures a working at a maximum pressure of 180 bars.
- The station is complete with two hydro-pneumatic accumulators which grant the automatic pick-up of all clearances in the oscillating roller cinematic motion. The electric plant is equipped with special devices for the immediate control of rolling pressure.
- Constant control of the roller by the hydraulic cylinder.
- Automatic control of all operation from the electrical control box. (Perfect data managements through touch screen self-diagnosis for CPU and machines.)



● Mod. TEC-50F PUG-SEALER & DE-AIRING EXTRUDER



Description	VDL-100BN	TEC-200BN	TEC-50F
Dimensions (L*H*W)	4550*1350*1550	5400*1500*1800	6100*2150*3735
Installed power (kW)	75 * 8P	150 * 8P	110 / 150 * 8P
Capacity (ton/hr)	25	35	38
Weight (kg)	7000	9000	14000
Speed of screw (rpm)	31	31	31
Screw diameter (mm)	370 ~ 400	380 ~ 460	410 ~ 500
Motor pulley	8 grooves	11 grooves	11 grooves



● Mod. ACM-20P AUTOMATIC CUTTING MACHINE (LOADING & UNLOADING)



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**technos**

Machinery+Industrial Equipment

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