

## **EQUIPMENTS LIST AND CHARACTERISTICS.**

### **1.WINDMILL**

The specific design of the rollers of this mill allows a perfect grinding of the malt.

Unit with two milled rollers with:

- Hopper for malt loading at the entrance
- Grain ramp with knife valve
- Magnets to prevent the entry of metal objects
- Metal entrance protection net
- Electrical panel with switch and remote control and microswitch in the motor
- Possibility to adjust the distance of the rollers
- Possibility to block the selected distance of the rollers
- 380 V electric motor, 3 phases, 3 hp (2.2 kW)
- Capacity: 400 kg / hour
- Dimensions: mm. 1280 x 950 x 550

### **2.COOKING ROOM - 2 CUBE SYSTEM (BREWTECH/ ITALY)**

#### **MIXING / FILTERED CUBE**

General characteristics:

- Capacity: 951 liters
- Made of AISI 304 stainless steel
- Pickled, sanded and satin welds
- Lateral isolation in high density rock wool
- 4 tubular support legs in AISI 304 stainless steel with adjustable feet
- AISI 304 stainless steel side heating jacket
- Top inspection hatch with airtight seal
- Thermometer for measuring the temperature of the water inlet
- Counter for measuring the liters of water in the inlet
- 1" 1/2 Clamp water inlet
- General drain 3" Clamp
- 3 must drains

- Malt entrance
- Vapor exhaust 2 "
- Stainless steel bathtub with temperature probe PT 100
- Lateral grain discharge
- Stainless steel filtering screen with trapezoidal section openings and passage 0.73 mm, formed by 4 elements, easy to disassemble and with a total vacuum percentage of 12-15%.
- Lower total discharge valve
- Return with "vorlauf" recirculation cap
- Goose neck and "grant" deposit for the control of filtering speed and taking samples of must
- Control probe in the grant tank for automatic recirculation and transfer
- Double sphere of washing and "sparging" with internal pipe
- Under-grid washing system
- Electrical rake of 1.5 hp (1.1 kW) with variable speed and double directionality, with exclusive "Flaptech" system for perfect mixing and extraction of the husk.

## **BREW CUBE / WHIRLPOOL**

General characteristics:

- Capacity: 1150 total liters to finish generally with 6-6.5 HL of finished wort.
- Made of AISI 304 stainless steel
- Pickled, sanded and satin welds.
- Side insulation in high density rock wool.
- 4 tubular support legs in AISI 304 stainless steel with adjustable legs
- AISI 304 stainless steel thermal jacket.
- Vapor heating jacket in stainless steel AISI 304 at the bottom.
- Tangent entry by swirling effect.
- Sampling for analysis in whirlpool tubes.
- Water inlet of 1" 1/2 Clamp
- Total Drain 3" Clamp
- Partial drain 1" 1/2 clamp
- Crushing barrier of the crust located at the height of the partial drainage outlet
- Inspection hatch with airtight seal

- Stainless steel bathtub with temperature probe PT 100.
- Double washing sphere with inner tube.
- Lateral discharge (anti-drip) of the condensation liquid generated during boiling.
- Side level view and control.

Cooking room is composed by the following elements:

#### **A- Union system**

- Stainless steel work surface with:
  - protection railing
  - ladder and non-slip work surface
  - anti-slip stop on the ladder and platform
  - adjustable feet

#### **B- Wort pumps**

##### *B.1. Cold must pump*

- Sanitary type
- Clamp connections
- AISI 316 stainless steel open rotor with three inverted 2 kW blades
- Made of polished AISI 316 stainless steel, no stagnation points
- Rotating type internal mechanical sealing device

##### *B.2. Hot wort pump*

- Sanitary type
- Clamp connections
- AISI 316 stainless steel open rotor with three 3 kW inverted blades
- Made of polished AISI 316 stainless steel, no stagnation points
- Internal mechanical sealing device with circulation, ideal for liquids with temperatures that reach or exceed the boiling point

#### **C- Joints:**

- Pipes: stainless steel AISI 304 L dimensions from 1" to 3" clamp as needed.

- Valves: manual butterfly valves. Butterfly valves are used in the food industry to facilitate sterilization thanks to the absence of dangerous stagnation points which promote microbial proliferation.

- Connections: Clamp (with sanitary terminal) for easy and quick disassembling of pipes, valves and accessories and, above all, for cleaning and sterilizing the whole installation. The advantages of this type of splices, increasingly used in the food sector, are its easy drive and perfect connection of its parts, without dangerous threads or empty points from the bacteriological point of view.

- Pickled, polished and satin welds for the tubes for a perfect hygiene of the product.

#### **D- Mixing station with water:**

- Water line of the supply network and hot water line with interception valves Clamp 1" 1/2

- Counter with screen on the board for measuring the liters of water mixed

- Online thermometer

- Mixed water line in the cooking room with interception valves in all tanks

- Mixed water outlet connectable to the rest of the installation

- Auxiliary input with Clamp valve 1 "1/2 for C.I.P. cooking room

#### **E- Heat exchanger**

- Heat exchanger with monophase plates.

- Cooling with icy water from the cold water tank.

- Hot water recovery system already used in the hot water storage tank to reduce consumption and avoid wasting water. The water can be reused in a second cycle of cooking or washing the installation.

- Must entry with butterfly valve 1" 1/2 regulation clamp.

- Cold water inlet with butterfly valve 1" 1/2 regulation clamp.

- Hot water outlet with butterfly valve 1" 1/2 regulation clamp.

- Chilled must exit with butterfly valve 1" 1/2 regulation clamp with lockable handle.

- Removable and expandable group of AISI 316 stainless steel plates.

- NBR joints.

- Connection 1" 1/2 Clamp for backwashing and drain for emptying the exchanger.

#### **F- oxygenation system stainless steel unit connected to the heat exchanger with:**

- Oxygen valve

- Porous spark plug
- Peephole 2" Clamp
- 1" 1/2 Clamp flow control valve
- Thermometer to control the exit temperature of the cooled wort

### **G- Control board**

Electrical panel with:

- General switch on / off
- Hot water thermostat for automatic temperature programming
- Switch for steam valves of the hot water tank
- Switch for hot water pump
- Cold water thermostat for automatic temperature programming
- Valve switch for glycol water from the cold water tank
- Switch for cold water pump
- Screen for counting the liters of water entering in the cooking room
- Digital thermostat of mixing / filtering tank for automatic temperature programming
- Digital kettle thermometer / whirlpool
- Rake switch with double directionality
- Manual / automatic switch for cold wort pump
- Switch for hot wort pump
- Switches and microswitches for the motors of all electrical users

The control board has a PLC with interactive screen.

This system allows to memorize recipes and automatically manage the production phases of the must.

## **3.PRODUCTION WATER ACCUMULATION**

### **Hot water storage tank**

General characteristics:

- Capacity: 10 HL

- Made of AISI 304 stainless steel
- Pickled, sanded and satin welds
- Lateral isolation in high density rock wool
- 3 tubular support legs in AISI 304 stainless steel with adjustable feet
- AISI 304 stainless steel side heating jacket
- Recirculation pipe connected to the hot water pump with 1" 1/2 Clamp valve to achieve a homogeneous temperature
- Top inspection hatch with airtight seal
- Overflow pipe with free drain
- Removable level rod
- Thermostat bulb bath with PT 100 temperature probe equipped with thermostat of control on the board of the cooking room
- Water load 1" 1/2 Clamp
- General discharge with butterfly valve 1 "1/2 Clamp and suction pipes of hot water pump 1
- Hot water pump
- 0.75 kW stainless steel centrifuge
- Ideal sealing device for use at high temperatures (110 °C)
- With stainless steel expansion vessel mod. Idrobar
- 1 pressure switch with control gauge for automatic operation
- Pipe and butterfly valves 1" 1/2 Clamp for union with the cooking room included.

### **Cold water storage tank**

General characteristics:

- Capacity: 10 hl
- Made of AISI 304 stainless steel
- Pickled, sanded and satin welds
- Lateral isolation in high density rock wool
- 3 tubular support legs in AISI 304 stainless steel with adjustable feet
- Stainless steel AISI 304 side cooling jacket
- Top inspection hatch with airtight seal

- Overflow pipe with free drain
- Removable level rod
- Thermostat bulb bath with PT 100 temperature probe equipped with thermostat on the board of the cooking room
- Water load 1" 1/2 Clamp
- General discharge with butterfly valve 1" 1/2 regulation clamp
- Recirculation pump automatically connected to the thermostat of the control panel of the cooking room for cooling
- 1 cold water pump
- 0.75 kW stainless steel centrifuge

#### **4.TREATMENT OF FINISHED PRODUCT**

##### **Fermentation zone / Maturation**

Electrical panel of the fermentation / ripening zone

- Board with:
  - digital thermostats for deposits
  - service pilot
  - manual circuit breaker

All the fermentation / maturation tanks are connected to the electrical panel to allow both manual and automatic management of the fermentation temperatures.

- Monoblock centrifugal pump with axial suction and radial delivery
- AISI 316 stainless steel Pump and watertight support disc
- AISI 316 stainless steel open rotor with 4 cold-stamped blades
- Mechanical sealing device in Viton
- Viton o-rings
- 2 V380 engines, 3 phases, 1.5 kW, 3000 rpm
- Lifting height about 15 m at 200 l / min
- New engine due to equipment expansions:

Kosner: KCC 0191 SK2HY

SERIAL NO .: 10066397ES03140725

## **Water tank**

Mecalia energy Systems DPI / DI

750 Liters capacity

## **AISI 304 stainless steel truck, with electrical panel in the maneuvering tube and pump for various uses:**

- CIP system for washing the tanks
- transfer of beer during the filtering process
- reserve pump.

## **5 Combitanks (SPADONNI)**

(combined fermentation and maturation)

General characteristics:

- Capacity: 30HL (2 tanks) and 15HL (3 tanks)
- Pickled, sanded and satin welds
- Side and bottom insulation
- Service pressure: 0.49 bar
- 3 tubular support legs in AISI 304 stainless steel
- Pumped lid with top inspection hatch
- Bottom cone for better sedimentation of 60° yeasts
- 2 independent side and bottom cooling jackets
- General drain with butterfly valve 2 "
- Partial drain at the end of the cone with butterfly valve 1 "1/2 Clamp
- Sampling for analysis with double nozzle
- Bathtub for thermostatic bulb with temperature probe PT 100
- Manometer
- Wash tube with quick-acting H<sub>2</sub>O and CO<sub>2</sub> connections
- Washing sphere
- Safety valve 2 bar

- Pressure / depression double effect valve adjusted to 3 bar
- Removable level rod, attached to the washing tube

### **N ° 1 Plate filter with 40 plates in noryl**

### **Water softener for steam boiler**

## **5.VAPOR GENERATOR AND REFRIGERATOR GROUP**

### **Steam generator** (does not require a license)

- Steam boiler with methane gas burner / gpl / gas oil
- Capacity: 50 kg steam / hour
- Body in pressure according to the control tests required by P.E.D. regulations
- Water feeding group
- Boiler safety devices
- Boiler regulation and control instruments
- Electric control panel of the boiler

### **Refrigerator group**

- Rotary hermetic compressor
- Helical electric fan with external rotor, internal thermal protection and protection network
- Electrical control panel with IP 54 degree of protection
- Electronic card for the management and configuration of working parameters
- Stainless steel pipes for generator connection of steam and refrigerator group with tanks

## **6.ACCESSORIES**

- 30 meters of rubber tube for high-resistance food use with 1"1/2 Clamp stainless steel pipe holder for the transfer of beer and total drainage, washing and sterilization of the tanks.
- 20 approx silicone reserve gaskets
- Approx 15 clamps reserve terminals
- 01 service tee for the transfer of beer

- Approx 10 reserve valves
- 01 reserve window
- 04 reduction cones for the total drain of the fermenters and the warehouses of the cooking room
- 02 catavino for must in stainless steel
- 01 stainless steel must cooler

## **7.STORAGE DEPOSIT**

General characteristics:

- Capacity: 11 hl
- Made of AISI 304 stainless steel
- Pickled, sanded and satin welds
- Lateral and bottom insulation in high density rock wool (50 mm)
- Service pressure: 2 bar
- Lid and bottom pumped
- Front inspection hatch
- 1 side cooling jacket
- General discharge with butterfly valve 1" 1/2 Clamp
- Certified safety valve with exhaust through a pressure gauge
- Manometer
- Valve with CO2 connection
- Washing sphere

## **8.TRIBLOC BOTTLING 9 / G12 / TC1 BEERS**

MONOBLOCO AUTOMÁTICO **BORELLI** group

EUROSYSTEM + XP9C12HDC

Ripper of 9 clamps system of filling by GRAVITY, 12 valves (BEER NATURAL) single head capper for crown cap

EQUIPPED FOR SECURITY PROTECTIONS

Accessories for:

1 format of cylindrical bottles 0.33 CL

1 crown cap format

### **Type of monoblock**

- Rinse - filling - crowned plug
- Model EUROSYSTEM + xp9c12hdc
- Production in bt / h 500/1500 bph –
- Electronic speed drive for "inverter"
- Rinse type: tecna LINE mod. xp9
- Twist clamp type
- Number of clamps 9
- Water rinsing fluids micro-filtered without recovery
- Electrical torreta lifting
- Type of filler rm LINE borelli GROUP
- Lifting pneumatic cylinders
- Filling system gravity
- Nr of fill valves 12

### **9.LABELER**

**ENOS** self-adhesive labellers are absolutely new construction machines and represent the evolutionary solution in terms of labeling. The adhesive principle simplifies the labeling of the bottle and eliminates any cleaning intervention after its use, obtaining higher production than any traditional labeling system. The ENOS labeling machines are composed of a great versatility since they can be used to:

The placement of body tag and back label.

This machine is built in stainless steel and plastic materials for easy cleaning and maintenance.

The labeling heads are floating which allow us to adjust the label on the bottle quickly and easily to regulate.

The labels can be of different sizes without the need for changes of any kind since the self-adhesive labellers place an infinite number of label sizes without the need for complex operations or changes of cassettes, extraction tongs, etc. as in the tail systems.

General characteristics:

BASE MODEL: 1665

Placement of body tag

Placement of back label.

Complete conveyor belt

Production: 600-1,800 b / h

Protections against accidents CEE

Possibility of extras (collar, DO, etc.)

Referral / gasification chamber

Of 28/29 mts. Sandwich panel 8cm

Air conditioning system Kosner KSTi-36 ST EXT

## **10.OTHERS**

- Citroen Berlingo
- Toyota electric pallet truck
- Pallet truck 2500kg