

PLANT TECHNICAL DATA

PRODUCT RECEIVED	IN BULK OR BIG BAGS
PRODUCTION CAPACITY	MAXIMUM PRODUCTION 1,000 KG/H OF ALMONDS IN SHELL BASED ON PRODUCT QUALITY
PRODUCT TO BE PROCESSED	HUSKED ALMONDS
NATURE OF THE PRODUCT	DRIED ALMONDS IN SHELL OF DIFFERENT CALIBRE AND QUALITY
PLANT PROCESSING PROCESS	<ul style="list-style-type: none">• MATERIAL LOADING• SHELL CRACKING• SEPARATION OF FRUITS FROM SHELLS BY MEANS OF SELECTORS
TECHNICAL DATA OF THE MACHINES BETTER SPECIFIED IN THE DESCRIPTION	

SHELL CRACKING AND LOADING SECTION

5-CYLINDER ROTARY SHELLING MACHINE EQUIPPED WITH ACCESSORIES

The product to be processed will be transferred from the storage warehouse to the receiving pit by means of a Big Bag or a loading shovel (not included in the offer).

The unloading pit will have a capacity of approximately 2.5 cubic metres; from the pit an elevator model M 2 transfers the almonds into the hopper of the shell cracking machine with a capacity of about 3 cubic metres, at the base of which a five-section screw conveyor feeds the four cylinders of the shell cracking machine suitable for production and the fifth cylinder that will be used to the further shelling process of the almonds not totally broken; the cylinders' grids must have an adjustable opening.

Each cylinder is equipped with 5 bars, and they can be adjusted to move them away or bring them closer to the internal grooved roller in the case of particular almonds, the latter if necessary; moreover, a system with steel balls that slide over the grids, placed between the bars, prevent them from getting clogged. The cylinders have an external diameter of about 600 mm, and a length of 1,200 mm; the hourly production can vary from 200 to 400 kg/h for each cylinder according to the type of almond.

The machine basically consists of its own structure, which is made up as follows: four uprights with floor fixing flanges equipped with horizontal profiles that are fixed to the uprights, especially designed to house the geared motors and cylinders' supports. The screw conveyors that feed the cylinders by means of a shaft are connected to a geared motor, which is managed by the control panel located on the distribution board, to vary the number of revolutions and, consequently, the quantity of production per hour.

The outer cages of the cylinders have a single rotation speed, while the inner rollers have a variable rotation speed that can be changed by means of an electronic inverter that can be adjusted directly from the operator panel located on the distribution board.

A hopper positioned in the lower part of the shelling cylinders conveys the cracked almonds through a screw conveyor to a second - model M 2 - elevator, which transfers the products to the selector.

The cylinders are enclosed in a casing in order to prevent any release of dust or the occurrence of any accidents during processing.

Power required: approx. 12 KW.

Weight: approx. 2,500 kg.

Average production: 1000 kg/h

Maximum production: 1,600 kg/h

Finish degree: red – white CALA' – SIDER.MAN

SIFTING AND SELECTION SECTION

SELECTOR 1000

The cracked almonds from the shelling machine are conveyed down into the selector. The first processes are obtained in the sieve, where the first separations steps take place.

The first upper sieve separates any almonds that are not completely cracked, which are conveyed through a cyclonic pneumatic extractor device to the fifth cylinder of the shelling machine.

The second sieve removes the shells of larger size, which are transferred to the discharge screw conveyor. The third sieve extracts any residual powders and shell pieces, which are transferred to the discharge screw conveyor. Finally, a screw conveyor equipped with geared motor transfers the aforementioned waste to the discharge tank.

The three sieves are equipped with a mechanism that continuously cleans their surfaces, thus preventing the holes from becoming clogged.

Fruits and shells of equal size from the sieve flow under belt extractor devices connected to two cyclonic separators, which suck the lighter shells and transfers them to the discharge screw conveyor, while the fruits and shells of the same size are conveyed down into the oscillating plane for selecting the continuous-flow inclined pneumatic fluid; this plane is basically composed of a perforated and step-folded sheet that improves the product sorting and lets the air pass through above the selection plane; the rpm of the fans located under the plane can be adjusted individually by means of an electronic system.

Their revolutions can be displayed on the machine-mounted operator panel or on the man-machine panel from the electrical panel and vary the revolutions of each individual fan.

The size of the central pneumatic fluid inclined plane is as follows: width 1,000 mm, length 2,800 mm.

There are three radial fans fixed under the central inclined plane, while a fourth radial fan is located in a second inclined plane measuring 1000x650 mm.

The individual fans' projections are called "stages": as there are four fans, consequently we have four separation stages.

After leaving the sieve, the product reaches the first stage and begins to separate thanks to the plane's oscillations and to the ventilation, which makes the product thickness fluid. Most of the fruits, together with a lesser part of the shells, are conveyed upwards onto the plane, while the shells and a minimum amount of fruits are conveyed downwards onto the inclined plane and reach the second stage, in which, by regulating the right number of revolutions of the fan, the fruits will be conveyed back to the top of the plane, while the shells and some



fruits still to be recovered flow towards the lower part of the selection plane and out of the machine.

The flow of product conveyed to the top of the pneumatic fluid plane is made up of a greater quantity of fruits than of shells. Adjusting the revolution speed of the third stage fan ensures excellent separation, thanks to the fact that the product passes through the third stage and continues towards the fourth with a small part of shell fragments. In the fourth stage, in which you can obtain the desired fluidity of the product thickness by adjusting the fan, there will be almost only fruits being conveyed to the machine exit. The waste extracted from the fourth stage flows on by means of a duct into an oscillating sieve which separates grains and shell pieces from the fruits not fully ripened, recoverable fruits and some shells, which are sucked by a bell-shaped extractor device connected to a cyclonic separator that transfers them to the first stage, feeding them back into the circuit. As the same sieve that recovers the waste from the fourth stage consists of two sections, the fruits coming out of the fourth stage are sent to one of the two sections in order to calibrate the larger fruits, the medium fruits, and separate the pieces of broken fruits and shell fragments still present amid the product.

Finally, a small inclined plane that separates by friction the broken fruits from the shell fragments completes the fruit selection process.

The shells leaving the central pneumatic fluid plane are sucked by a cyclonic separator and deposited in a second 3-stage pneumatic fluid machine. The size of the pneumatic fluid plane for further shelling process is as follows: length 2,800 mm, width 1,000 mm and no. 3 radial fans placed under the inclined plane. The shells reach the first stage so that the residual fruits flow towards the upper part of the inclined plane, while the shells pass through the second stage, recovering some more fruit residues, and are conveyed to the exit to be discharged. A screw conveyor connected to the switchboard will transfer the shells outside the building. The third stage eliminates most of the shells by sending them towards the bottom of the plane, while the recovered fruits leave the machine and, by means of a cyclonic extractor device, are sent to the first stage of the central selector to follow the fruit circuit.

Each selector has its own structure in strong electro welded carbon steel profiles.

Six uprights for each frame, rest on the floor; at the lower end of the uprights, six flanges with threaded holes and screws allow the levelling and fixing of the machines.

A steel profile structure is placed on the perimeter on the margin of the selectors where the cover doors are applied.

Electric power required: approx. 22 KW.

Weight: approx. 3,300 kg.

Finish degree: white – red painting CALA'- SIDER.MAN

ELECTRICAL AND ELECTRONIC PANEL

Electrical and electronic panel connected to the machines, consisting of two modules in a single cabinet with the following size: width 1,600 mm, height 2,000 mm, depth 400 mm.

Functions of the electronic system: control of the motors with PLC and inverter.

Program for managing the memory of records up to 10 product varieties.



Automatic or manual working system
7" machine onboard panel
10" man-machine operator panel.
Remote technical support via panel: EASY ACCESS WEINTEK

DOCUMENTS ACCOMPANYING THE SYSTEM

User, maintenance and spare parts guide.
Operator panel user manual, HMI.
Electrical panel diagram.
EC declaration.

WARRANTY

The warranty shall be deemed for the mechanical, electrical and electronic parts for a 24 months' period as of the date of commissioning, limited to the replacement ex-factory of the parts recognized as defective due to improper manufacturing.

ATEX REGULATIONS

The equipment described herein is suitable for processing products for which the implementation of ATEX Directive 94/9/EC - Presidential Decree of 23rd March 1998 № 126 is not required.

This equipment must be installed in areas classified as safe in accordance with ATEX Directive 99/92/EC.

In the event that the products you use - or the areas where the equipment is expected to be installed - require the application of the ATEX Directive, it will be your responsibility to notify us in order to make the necessary arrangements.

INTELLECTUAL PROPERTY

The technical documents transmitted constitute the intellectual property of CALA' SRL. It can neither be forwarded to any third parties nor reproduced or partially used for any other purpose without the owner's prior permission.

GENERAL TERMS OF SALE

1 - ORDERS - Each order and/or change thereto shall be confirmed in writing.

2 – DELIVERY AND PENALTIES ARISING FROM DELAYS - Delivery terms shall always be understood as approximate and refer to working days. They start as of the day on which the regular order is received by CALA' SRL.

Causes of force majeure involve a reasonable extension of the delivery terms. The Buyer expressly waives any right to claim compensation for damages or reimbursement of any kind whatsoever.

Should the Supplier Company be unable to provide special machines or processes requested by the Buyer within the agreed time frame, any delay will not result in the termination of the contract or the payment of penalties.

Should the Buyer fail to make it possible for the works to be executed within the terms of the contract, thus delaying the availability of the site, the Supplier Company may claim the resulting charges.

3 – TESTING AND COMMISSIONING – The testing takes place at the Supplier Company's factory. The Buyer can attend the testing or delegate one of its representatives to do so in its place.

The commissioning of the supplied plant, if contractually agreed, will be carried out by the Supplier Company, in agreement with the Buyer, following the completion of the assembly of all the parts thereof.

4 – SHIPMENT - The goods always travel at the total risk and peril of the Buyer. Any claims for damage, breakage or tampering must be made by the Buyer directly to the carrier.

5 – COMPLAINTS - The goods supplied shall be deemed accepted, without reservations, after eight days of receipt thereof. Any complaints shall be notified in writing within this deadline.

Under no circumstances may CALA' SRL be held responsible for any lack, defect or non-compliance of the products after one year of delivery or testing has elapsed without the Buyer submitting a complaint.

6 - PRICES - Unless otherwise agreed in writing, prices are subject to change according to: increases in the cost of materials, labour, etc., even during the course of the supply. This clause can be applied only if the aforementioned costs vary by more than 10%.

7 – PAYMENTS - Payments shall be made only at the Credit Institution indicated by the Supplier and under the set conditions and deadlines. In the event of late payment, an interest equal to the legal discount rate plus two points will apply.

Any exception on the part of the Buyer regarding an alleged breach of contract by the Supplier Company or redhibitory defects in the goods supplied, however, does not give the Buyer the right to avoid payment, to the extent and in the manner agreed. Any exception, including regarding the warranty, cannot be proposed if the Buyer has not made the final payment of the amount due first.

It is understood that the validity of the contract will start as of the date of receipt of the deposit.

8 – WARRANTY - The Supplier Company guarantees the equipment and plants supplied against any manufacturing or material defects, for a period of twelve months as of the date of shipment. It undertakes to replace free of charge ex its workshop any such parts as may



become unusable within this period due to faulty construction. The replacement will be carried out as soon as possible with the Buyer expressly waiving any right to claim compensation for damages.

All electrical materials are excluded from the warranty. Any defects arising from failures caused during transportation (even free of carriage), user's inexperience or negligence or non-compliant use, as well as from overloads exceeding the contractual limits, unauthorized interventions, tampering carried out by the Buyer itself or by any third parties at the request of the latter, natural wear, chemical corrosion, presence of dust, abnormal temperatures, failure to use original spare parts, lack of or inadequate maintenance, unforeseeable circumstances or force majeure and acts of God are not covered thereunder.

Under no circumstances may CALA' SRL be held liable for any such indirect or consequential damages and/or loss of profits as the Buyer may possibly suffer as a result of any defects in the products.

The above-mentioned repairs or replacements shall in no way result in any alteration or extension of the warranty period.

The Supplier Company assumes no guarantee if the assembly of the goods supplied is not carried out by its own skilled workers or in the case of use of the plant - or part thereof - before the final commissioning has been completed.

9 - ASSEMBLY – The assembly will be carried out in accordance with the contractual conditions.

10 - RETENTION OF TITLE CLAUSES – The retention of title is expressly agreed, pursuant to art. 1523 of the Civil Code, in favour of the Supplier Company on all the products sold, and the sale is deemed to be made subject to conditions precedent until settlement of the full price, whereby the Buyer remains the Custodian and Trustee thereof, under obligation to refrain from selling the goods in any capacity whatsoever. It is agreed that the contract shall be deemed legally and automatically terminated if just any of the instalments of the agreed price is not paid upon the due date, in which case the payments already made shall be deemed acquired by CALA' SRL by way of indemnity, without prejudice to any rights to claim compensation for any greater damages.

11 – SUSPENSION – The Supplier Company reserves the right to suspend at any time the works and supplies provided for in the order in the event of non-fulfilment of the contractual conditions by the Buyer, and in particular, in the event of late payment of more 10 days with respect to the agreed deadline, the Supplier Company reserves the right to suspend the works and supplies of materials until payment is made.

12 – TECHNICAL DATA – The Supplier Company reserves the right to make any such changes as it may deem necessary for the proper improvement of the plant or machines, even subsequent to the order confirmation and the drafting of the final project.

13 – ACCEPTANCE OF THE GENERAL TERMS OF SALE – The placing of the order to the Supplier Company implies full acceptance of these conditions and the Buyer's waiver of its general terms of purchase.

14 – DISPUTES – Any disputes arising here from do not exempt the Buyer from complying with the agreed payment conditions and do not imply any extension of the agreed terms. All disputes shall be subject to the exclusive jurisdiction of the Court of the Supplier Company.

CALA' SRL, for acceptance

Buyer's signature, for acceptance



Pursuant to and for the purposes of art. 1341 of the Civil Code, the Buyer declares to approve the terms of sale in all their parts and clauses and specifically those provided for under numbers 1-2-3-4-6-5-7-8-9-10-11-12-13-14.

CALA' SRL, for acceptance

Buyer's signature, for acceptance