



AKYUREK

Group
Technology

TOBACCO PROCESSING *PMD & SMD SOLUTIONS*





SERVICES

PROJECT CONSULTANCY | AFTER SALES SUPPORT | AUTOMATIZATION

Akyurek Group specialises in designing state of the art project solutions that fulfil customer specific requirements. We combine more than 40 years of practical experience, worldwide accumulated knowledge, global engineering resources, custom designed solutions and new technology into creating the optimum solution for each project. On top of this we take local conditions, budget requirements and best practices into consideration to ensure full customer satisfaction. We offer project services, from small sized upgrades to full turnkey plants. Our services range from pre-engineering to full project responsibility integrating all partners. Our project management team ensures that the project stays on track and is delivered on time, on budget and according to agreed specifications.

Process Control

A plant's machinery and equipment are controlled by PLC systems adapted to the size and organisation of the system. A SCADA system is used for operating and monitoring the plant. Such SCADA system makes it possible to program special functions for operating, monitoring and alerting, but also makes it possible to store and present empirical data.

Providing Long Time Operation

When a "Take over Certificate" has been signed, the responsibility of running the plant is in the hands of the customer. Internally at Akyurek we make a hand over from our project department to our service department offering continuous day-to-day service, spare part packages and yearly maintenance programmes. An extensive knowledge of operation and maintenance enables Akyurek to deliver the best after sales service available.

Akyurek Group experience and know-how

Process control is nothing less than the 'central nerve system' which controls the processes during operation. Since 1973, Akyurek Group has developed and integrated these control systems into projects. The highest capacity and most efficient way of operating plants are achieved by the use of automation systems. As a result of many years of experience Akyurek Group can advise the best automation level for controlling the processes. In this respect, Akyurek Group's obvious strength is that we have gathered our knowledge of processes, systems and automation into one organisation and, by choosing Akyurek Group as an automation partner our customers get a properly dimensioned system based on modern technology and optimised functionality.





- ◆ Since 1973, we have been delivering products that make life easier with technology from Mersin, Turkey to more than 90 countries.
- ◆ We continue our satisfaction-based service with 550 staff in our 65 thousand square meter production center.
- ◆ We will continue to compete with ourselves for you in our 150 thousand Square Meter production center in the seventh Specialized Organized Industrial Zone.





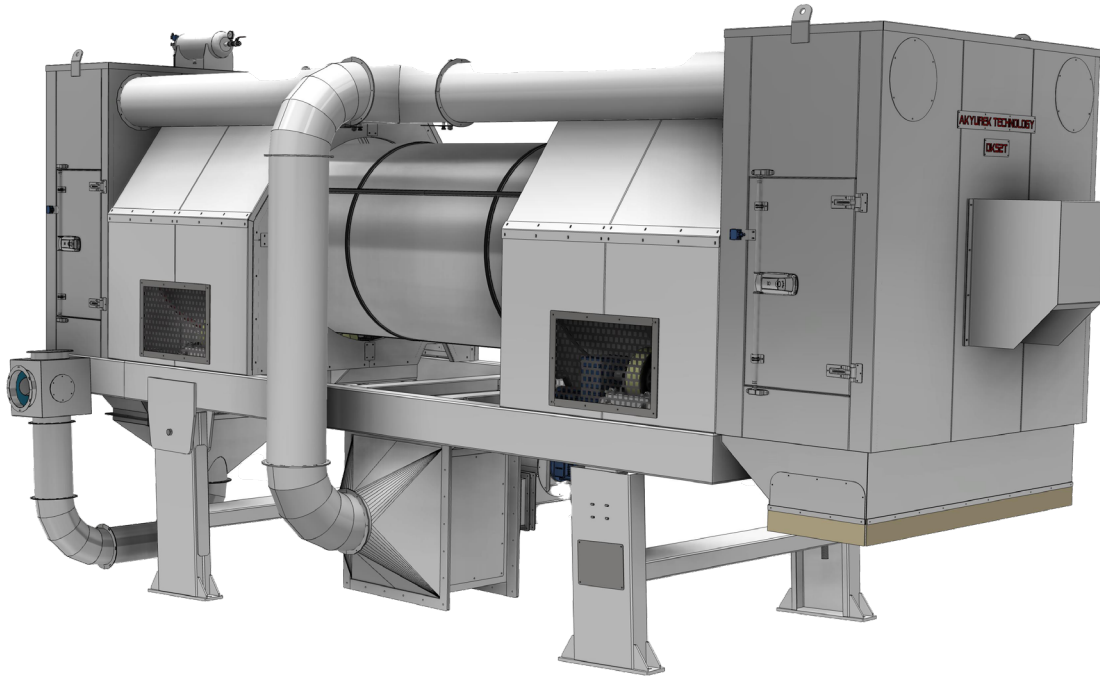
AKYUREK Group
Technology

**TOBACCO PROCESSING
PMD & SMD SOLUTIONS**

INTERNATIONAL SALES DEPARTMENT







DRYING CYCLINDER

It provides to dry the tobacco to requested moisture level up to %12. Drying Cylinder is manufactured by AISI 304L 1st Class Chrome, covered by 25 mm polyurethane for Heat Isolation in the Cyclinder 9 Conveyor Wings helps to push forward the tobacco leaves to the exit of the Cylinder. The steam in the conveyor wings provides high temperature for the wings (Up to 100 °C).

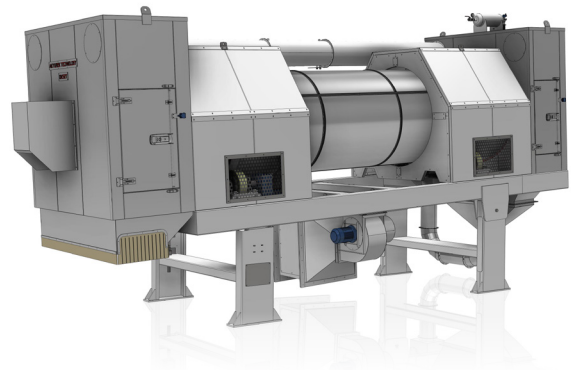
There are 2 positions of the cylinder;

1. Steady Position: In this position, Cylinder starts to whirl around on it's axis; at the same time cylinder's inner heat starts to be increased by the heat changer until it gets ready for the drying process.

2. Running Position: In this position, lift motors lift up the Cylinder up to 4 Degrees (This value may change according to tobacco moisture) for drying process.

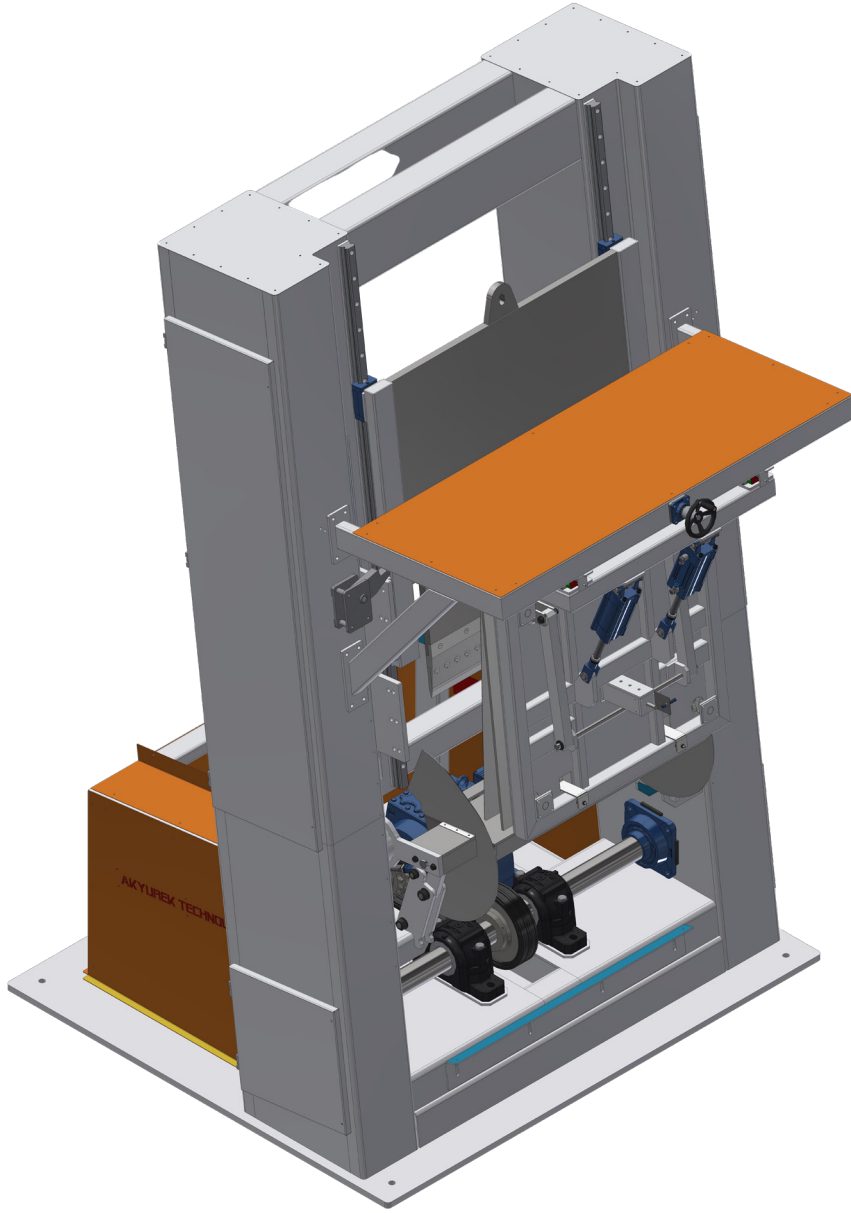
There is recirculation of the heated air for energy conservation. This recirculation is provided by the help of vacuum pump, dust filter and pulse valve.

Vacuum pump suck the air in the cylinder, dust filter collect the dust in the sucked air and pulse valve helps to clean the filter for prevent the clogging of the filter. The air comes from the cylinder is dried by dehumidification unit. Then dried air is transferred to heat changer. According to your capacity requirement, we can offer you different capacities.



| | |
|---------------|---|
| Width | 2800 mm |
| Length | 10250 mm |
| Height | 4750 mm |
| Transfer | Rotary Cylinder with Wheel from Motor |
| Body Material | ST 37- Places in Contact with Oven Paint Tobacco AISI 304 |
| Cylinder | 5mm - Chrome |





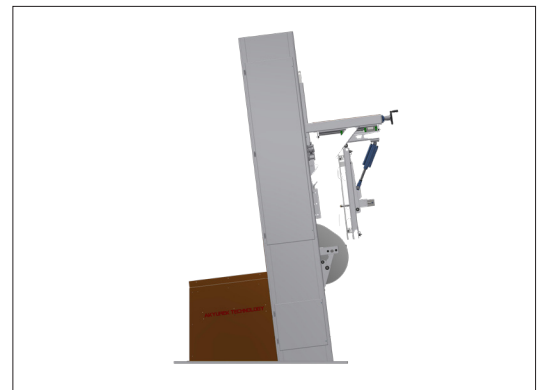
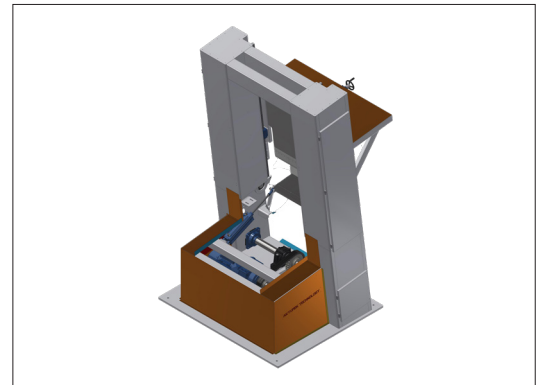
SLICER

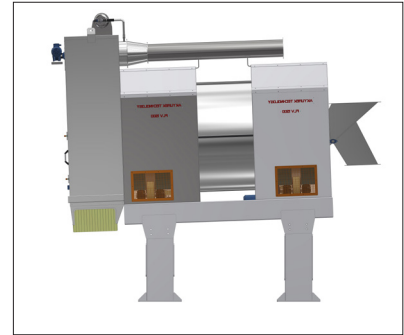
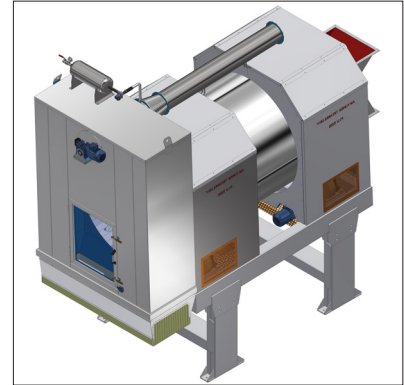
Slicer is used for fine separation of tobacco leaves which is coming in C48 boxes in bale in order not to break leaves and prevent dust. This helps to avoid product loss and increase the efficiency of process and quality of the product. AKYÜREK offers you the best slicing solution for your PMD lines.

Specifications:

- All surfaces which is contaminated with tobacco leaves are manufactured by AISI 304L 1st Class Chrome
- Knife of the Slicer manufactured by 402H & Stainless Steel 1st Class Chrome Material
- Frequency of the belt under knife can be changed by the help of Slicer's self control unit. This helps to cut the tobacco bales into different sizes.
- Slicing area is covered by safety door which is controlled by sensors.

| | |
|-----------------|---|
| Width | 2340 mm |
| Length | 5000 mm |
| Height | 3700 mm |
| Drive | 7,5 kW 28 D/Dk 400 V 50 Hz (MR673_2E132M_M1) Frenli Motorlu Redüktör |
| Transfer | Motor Driven Chain Vertical Cutting |
| Roller Bearings | SKF Brand Flanged Deep Groove Ball Bearing |
| Body Material | ST 37-Oven Paint-Tobacco Contact Areas AISI 304 |
| Cutter Knife | AISI 304 |
| Bale Support | Festo Brand Double Pneumatic Cylinder |





FLAVORING CYCLINDER

As AKYÜREK, we are offering you the best solution for Flavouring Process which is designed by highest quality R&D and produced by highest quality manufacturing.

Cylinder is manufactured by AISI 304L 1st Class Chrome, covered by 25 mm polyurethane for Heat Isolation in the Cyclinder 16 Conveyor Wings helps to push forward the tobacco leaves to the exit of the Cylinder.

There are 3 positions of the cylinder;

1. Steady Position: In this position, Cylinder starts to whirl around on it's axis; at the same time cylinder's inner heat starts to be increased by the heat changer until it gets ready for the moisturizing process.
2. Running Position: In this position, lift motors lift up the Cylinder to 2 Degrees for processing.
3. Cleaning Position: In this position, lift motors lift up the Cylinder to 4 Degrees to clean the inside of the cylinder from tobacco leaves. Inside of the Cylinder can be cleaned up with 2 nozzles easily.

There is recirculation of the heated air for energy conservation. This recirculation is provided by the help of vacuum pump, dust filter and pulse valve. Vacuum pump suck the air in the cylinder, dust filter collect the dust in the sucked air and pulse valve helps to clean the filter for prevent the clogging of the filter.

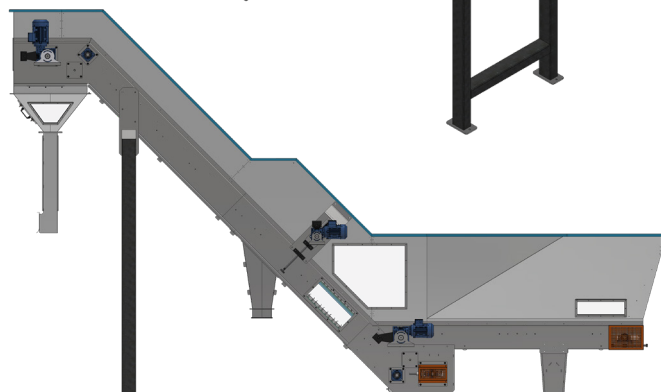
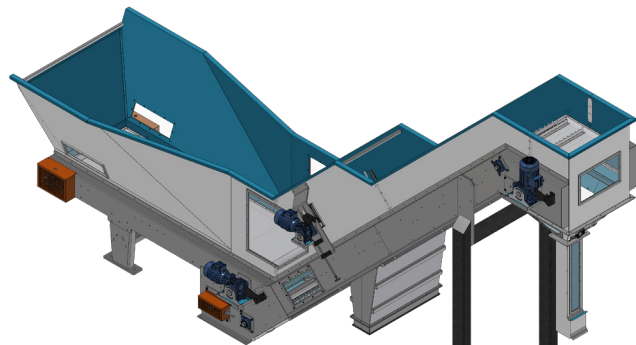
| | |
|-----------------|---|
| Width | 1916 mm |
| Length | 4000 mm |
| Height | 3500 mm |
| Drive | 1,5 kW 64 D/Dak 400 V 50 Hz (EV_DR272_2E90L_M6) with brake (380V 10N.m) |
| Roller Bearings | 0,55 kW 37 D/Dak 400 V 50 Hz (EV_063_2E80M_M1) |
| Transfer | Rotary Cylinder with Wheel from Motor |
| Body Material | ST 37-Oven Paint-Tobacco Contact Areas AISI 304 |
| Cylinder | 4 mm-Chrome |
| Nozzle | 4 |





ADD BACK & LAMINA FEEDER

Feeder consists of 2 sections, feeding pool and dredging belt. Feeding pool loading levels are controlled from 5 different points. Belt speed and working range is synchronized according to these loading levels. Proper spreading and drying is achieved by the help of crosswise placed harrows.



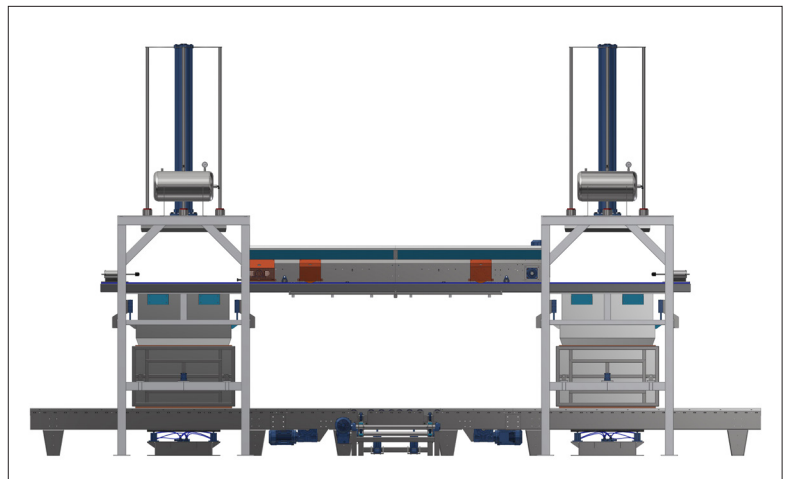
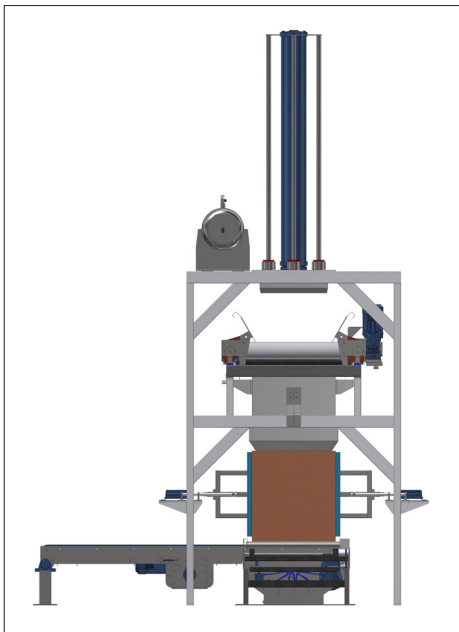
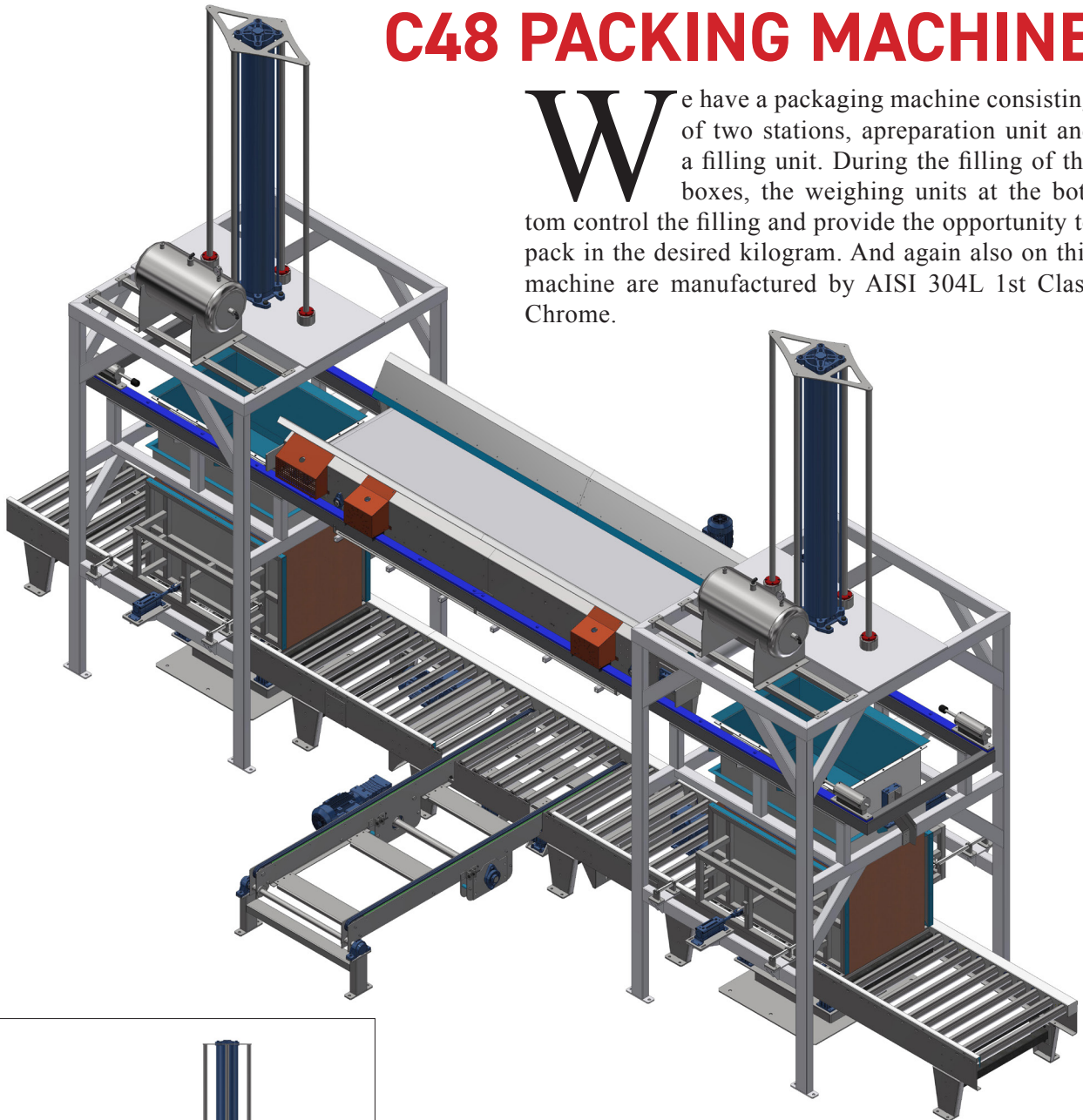
| | |
|------------------|---|
| Width Free Zone | 800 mm |
| Length Free Zone | 6000 mm |
| Height Free Zone | 750 mm |
| Width Z Band | 9000 mm |
| Length Z Band | 6000 mm |
| Height Z Band | 3300 mm |
| Transfer | Roller Front Transfer |
| Roller Bearings | SKF Brand Flanged Deep Groove Ball Bearing |
| Body Material | ST 37-Oven Paint-Tobacco Contact Areas AISI 304 |
| Description-1 | 2 Piece Intervention Windows |
| Carrier Material | Food Grade PVC Flat Tape |

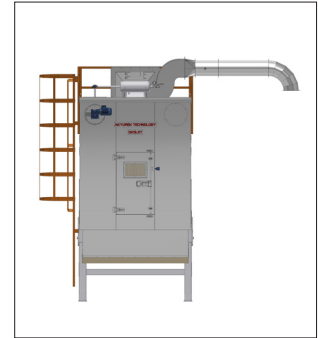
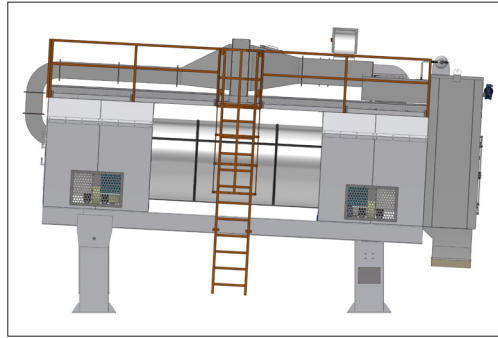
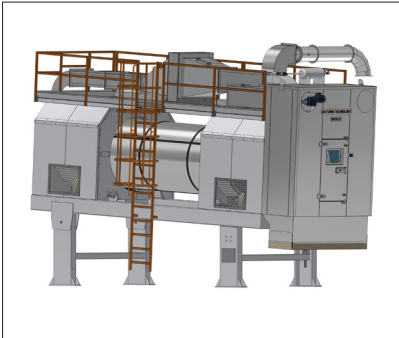
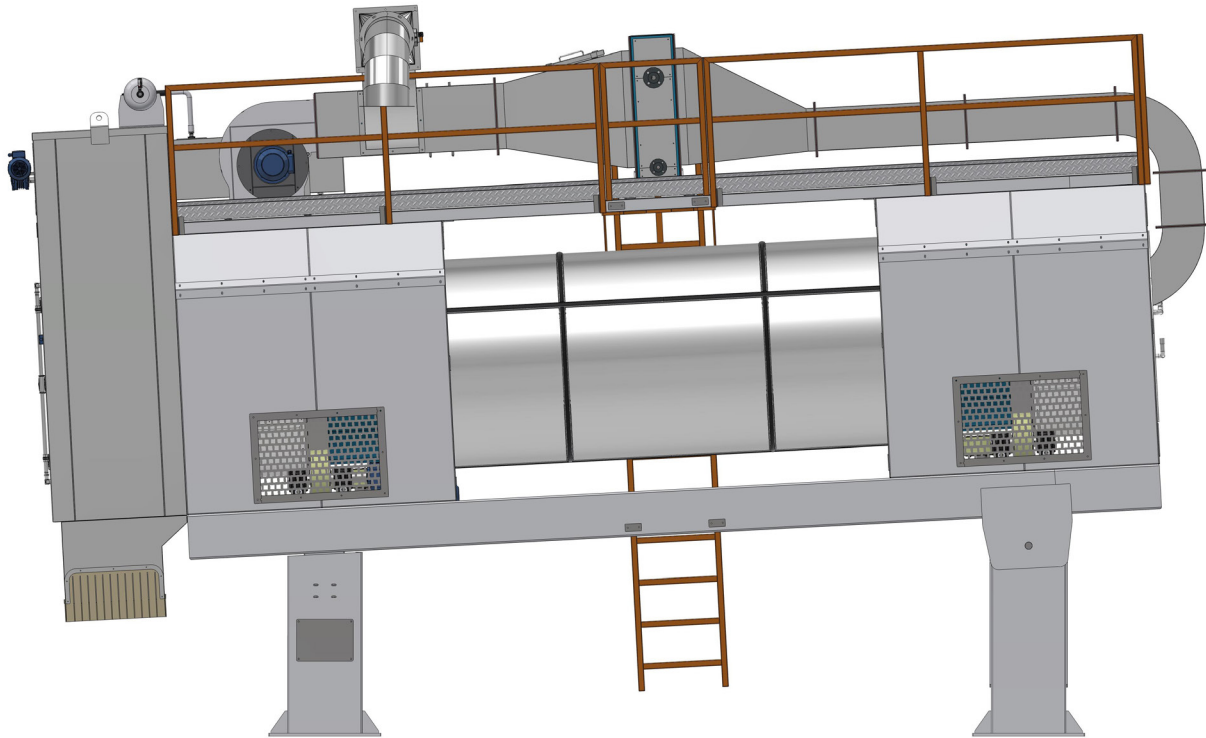




C48 PACKING MACHINE

We have a packaging machine consisting of two stations, a preparation unit and a filling unit. During the filling of the boxes, the weighing units at the bottom control the filling and provide the opportunity to pack in the desired kilogram. And again also on this machine are manufactured by AISI 304L 1st Class Chrome.





DCC / DIRECT CONDITIONING CYLINDER

As AKYÜREK, we are offering you the best solution for Direct Conditioning Cylinder which is designed by highest quality R&D and produced by highest quality manufacturing.

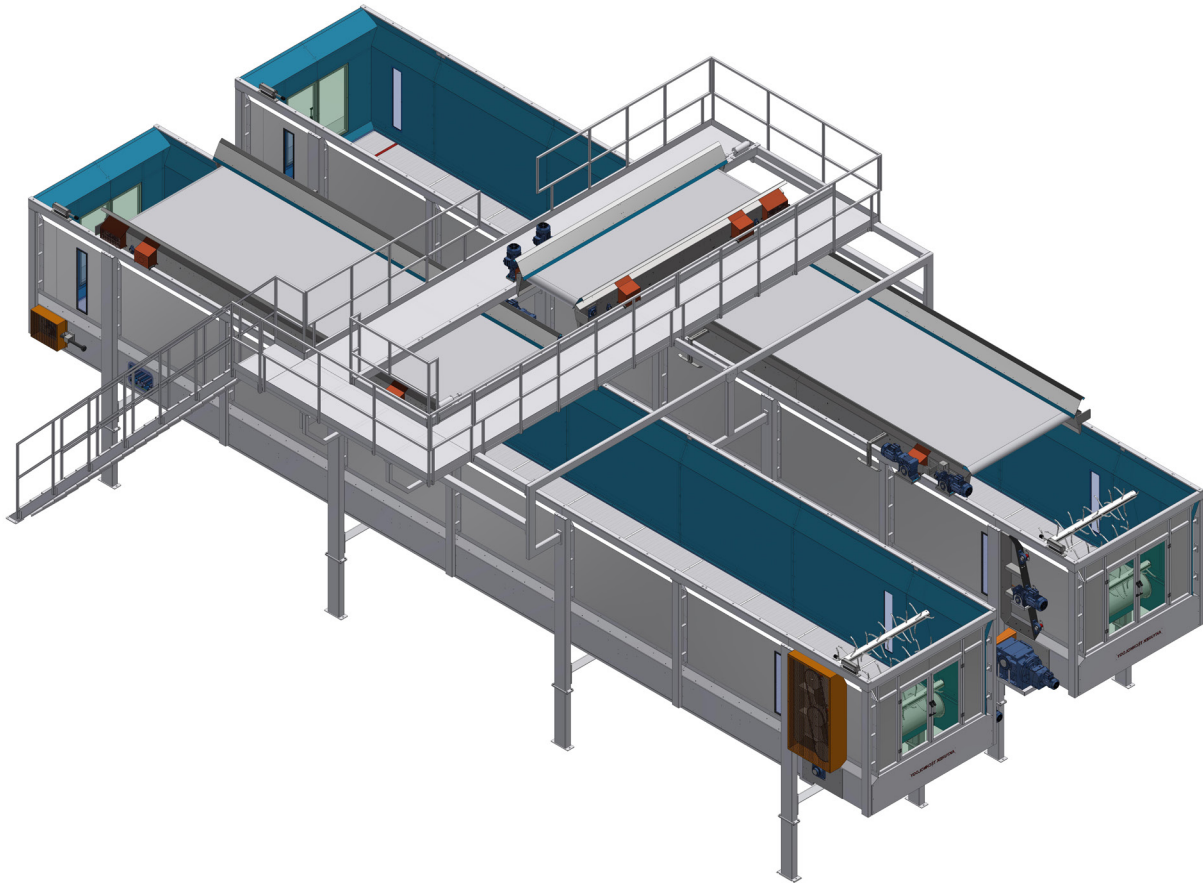
Harvested tobacco leaves have approximately %8-%10 moisture. For high quality cutting process, moisture of the tobacco leaves must be increased to %23 moisture level. In the Cylinder of the DCC, tobacco leaves' moisture level is raised to this level by the help of steam and water. This steam and water is pulverized in a nozzle before sprayed into the cylinder. Also there is free-steam in the cylinder. These steam and water provided by the service

cabin of the DCC.

Cylinder is manufactured by AISI 304L 1st Class Chrome, covered by 25 mm polyurethane for Heat Isolation in the Cylinder 16 Conveyor Wings helps to push forward the tobacco leaves to the exit of the Cylinder.

In AKYÜREK DCC, there is recirculation of the heated air for energy conservation. This recirculation is provided by the help of vacuum pump, dust filter and pulse valve. Vacuum pump suck the air in the cylinder, dust filter collects the dust in the sucked air and pulse valve helps to clean the filter for prevent the clogging of the filter.

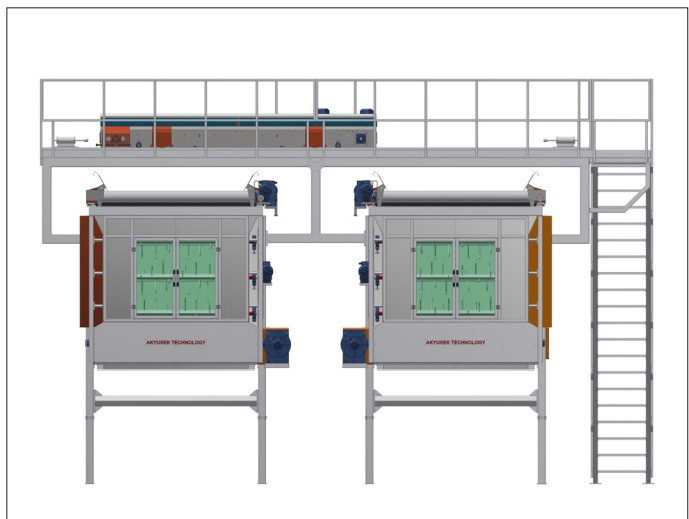
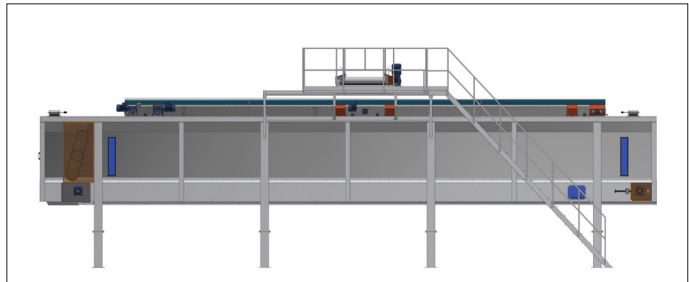




BLENDING SILOS

System consists of feeding belt, active conveyor (vertical trolley), spreading conveyor, main silo and discharge belt units. Active conveyor (vertical trolley) can be designed to feed single or double silo by demand. It is manufactured from first/high quality material as AISI 304L chrome. It provides to spread the product homogeneous and smooth into the silo.

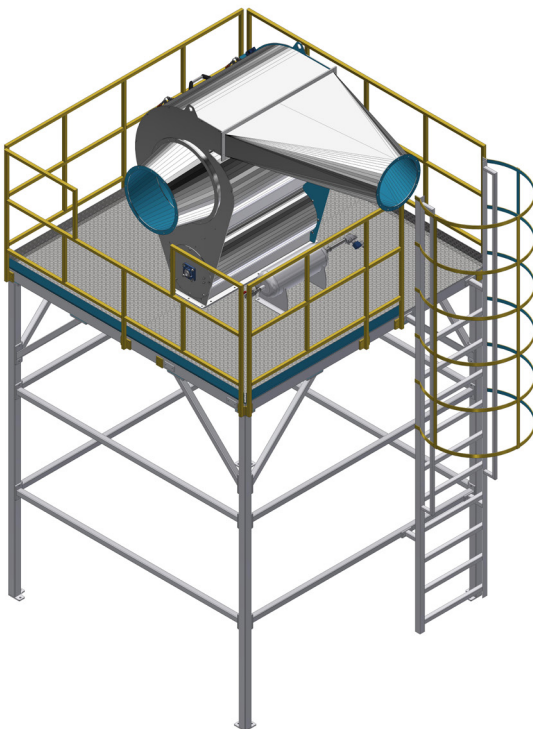
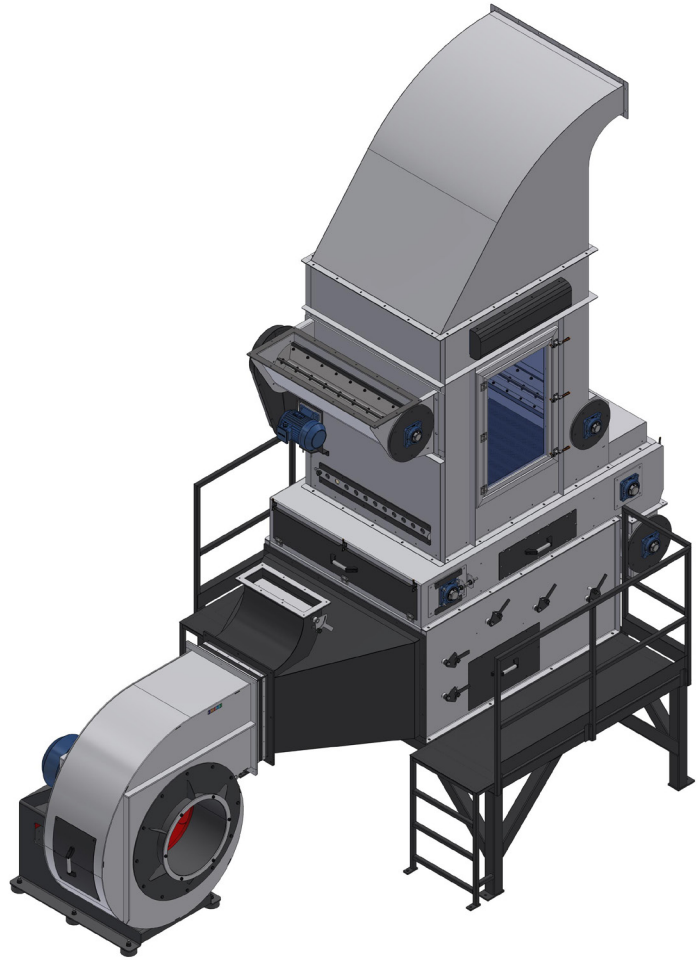
| | |
|---------------|----------------|
| Width | 2350 mm |
| Length | 18000 mm |
| Height | 1630 mm |
| Raw Materials | ST 37 AISI 304 |





TRESHER AIR SEPARATOR CLASSIFIER

Tresher provides to separate lamina and stem on the tobacco leaves. Separated lamina can be conveyed to DCC machine or Silo according to customer request. The air evacuated to outside by the help of suction fan through the dust collection system. All surfaces which is contaminated with tobacco leaves are manufactured by AISI 304L 1st Class Chrome.

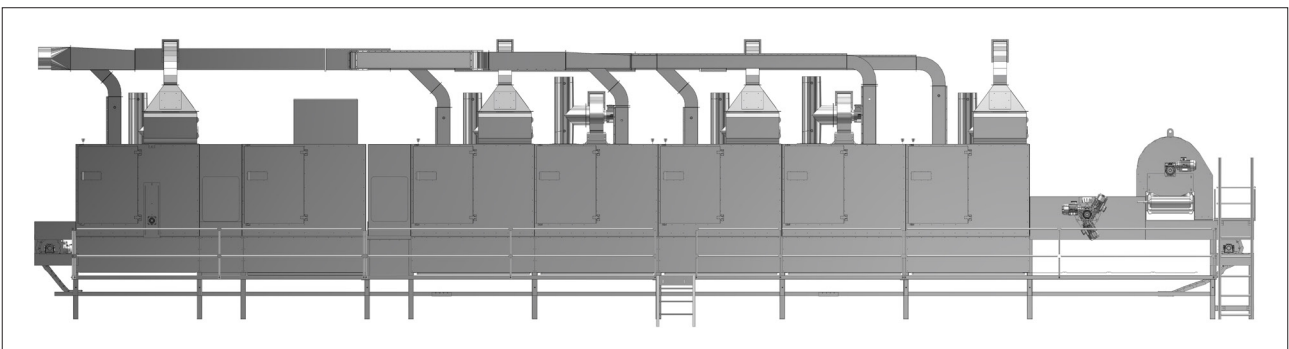
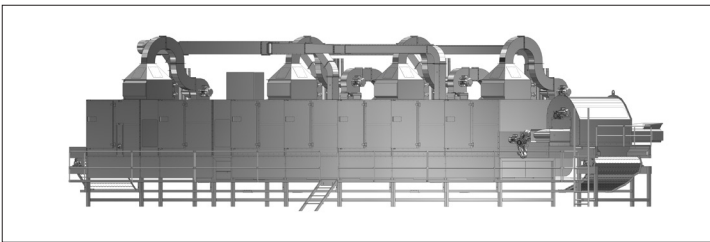
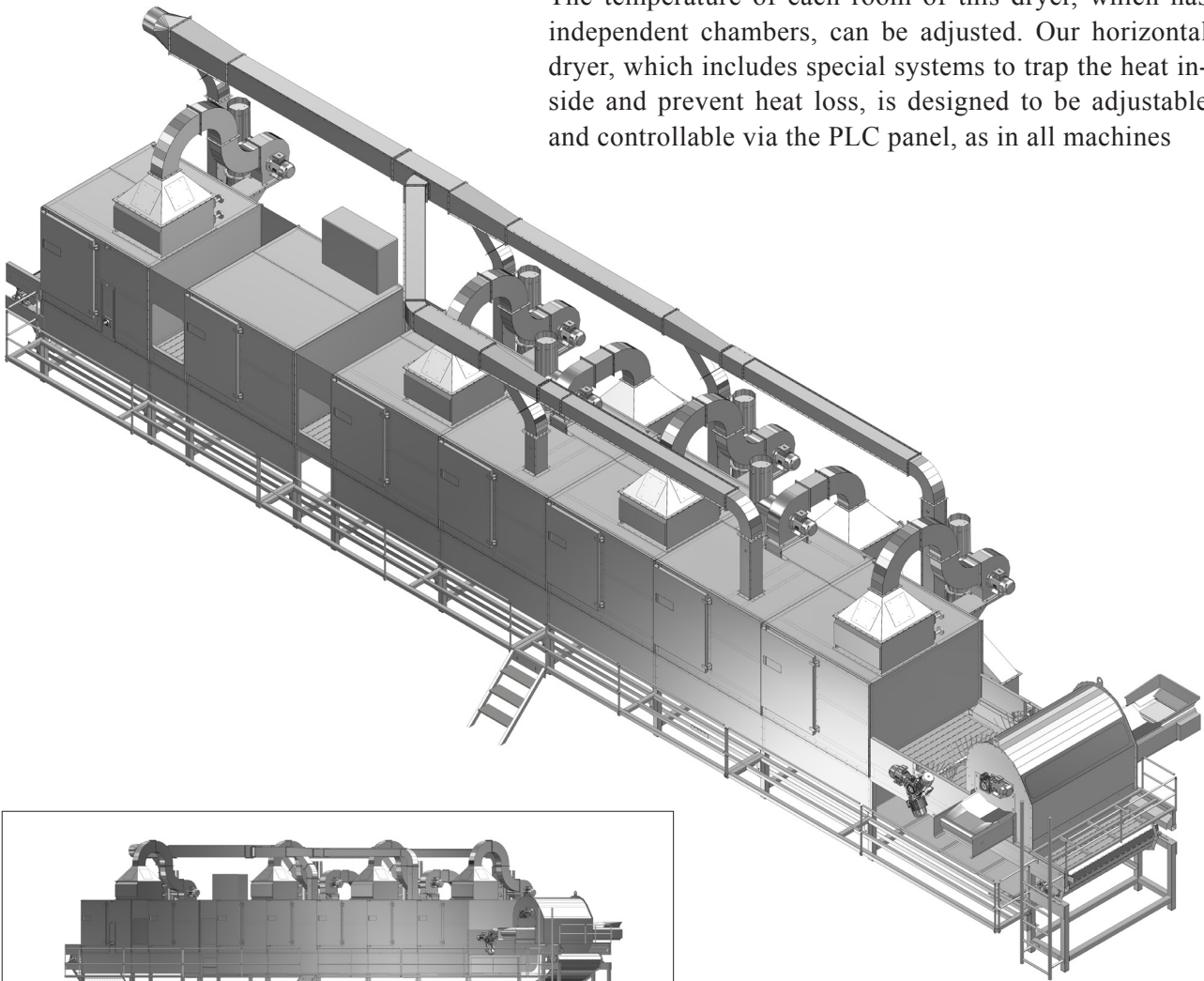


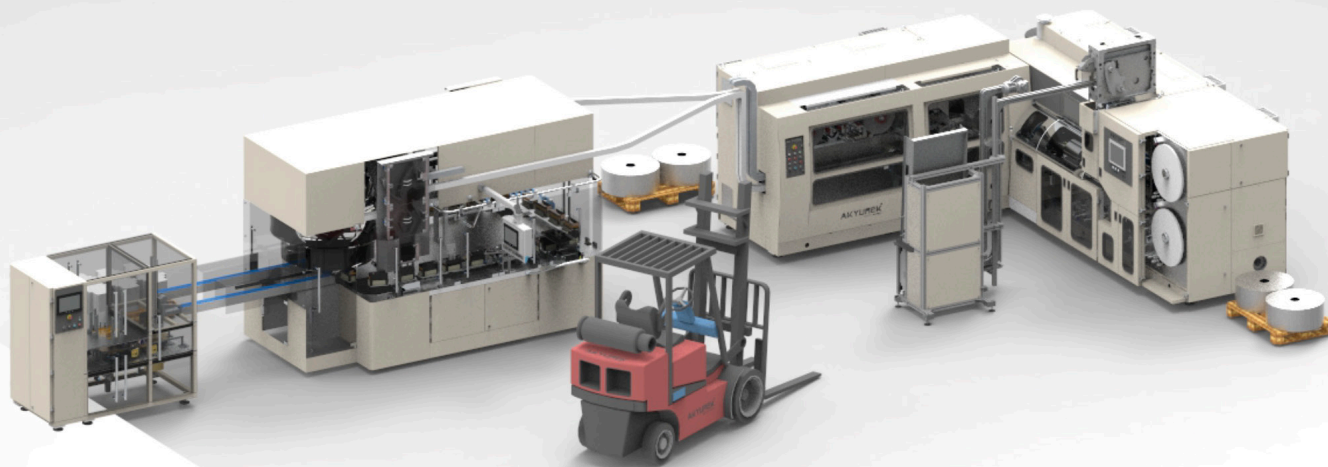


HORIZONTAL DRYER

It is one of the most important machines used in the GLT / THRESHING process.

Starting from 18 meters in size, longer production can be made according to the customer's demand. The temperature of each room of this dryer, which has independent chambers, can be adjusted. Our horizontal dryer, which includes special systems to trap the heat inside and prevent heat loss, is designed to be adjustable and controllable via the PLC panel, as in all machines





TUBE MAKER AND PACKER

Technical Specifications;

- Dimensions in ground
- 6200x5000 mm
- Electrical Input:
- 400V three-phase
- 50Hz
- 86 Kw installed

- 60 Kw consumed
- Pressurized air supply
- 6bar
- 350 l/min
- Quality of pressurized air
- Flow air
- 150 m3/h

- Sound level
- 80 dB(A) (measured at 500mm from the protections)
- Manual and display language.
- Spanish (Language of the destination of the machine within the European Union)
- Kit of tools and tools needed to operate the machine included.
- Touch screen and machine control.

| | min | max | Defined |
|-------------------------------------|----------|-------|---------|
| Inner Diameter | 7.5 | 8.4 | 8.1 |
| Macaron Length | 50 | 100 | 84 |
| Filter Diameter | 7.5 | 8.4 | 8.1 |
| Single Filter Length | 15 | 35 | 22.5 |
| Macaron White Paper Coil Inner Dia. | | | 120 |
| Macaron White Paper Coil Outer | | 700 | 600 |
| Macaron White Paper Coil Width | 25 | 30 | 28 |
| Filter Coil Inner Diameter | 63 ó 120 | | 63 |
| Filter Coil Outer Diameter | | 430 | 430 |
| Filter Coil Width | 25 | 90 | 50 |
| Filter Paper Length | | | 27.5 |
| Filter Paper Width | | | 25 |
| Exit Height of the Band | | | 850 |
| Liter Positioning | Behind | Ahead | Behind |





FILTER ROAD MAKER AND PACKER

Complete line for the production of hollow filter roads monoacetate kind The line has the following modules.

- Acetate elaboration module
- Filter road maker
- Filter control and transfer device
- Filter tray loader

Production Specifications:

- Nominal production: 500 m/min

Dimensions in Ground

- 6000x4000 mm

Electrical Input

- 400 V three-phase L1, L2, L3, N, PE

Flow Air

- 150 m³/h

Sound Level

- 80 dB(A) (measured at 500 mm from the protections)

Colour of the machine

- RAL 9001 - RAL 2009 Danger Zones

Manual and display language

- Spain, English, Turkish

| Akyurek 500 Filter Maker | min | max | Standard Format/Parameters |
|---------------------------------|-----|-----|----------------------------|
| Filter Diameter | 5.0 | 9.0 | 7,7 |
| Filter Length | 60 | 150 | 108 |
| Rolling Bobbin inner Diameter | | | 120 |
| Rolling Bobbin Outer Diameter | | 800 | 600 |
| Rolling Bobbin Width | 17 | 30 | 26 |
| Filter Length Tolerance | | | +/-0,5 |
| Filter Diameter Tolerance | | | +/-0,04 |
| Ovality | | | Less 0,3 |
| Inclined cut | | | Less 0,2 |
| Hardness | | | +/- 6% |
| Seam glue nozzle | | | Holt Melt |
| Inner glue nozzle | | | PVA |
| Inner glue nozzle | | | Holt Melt |





CIGARETTE MAKER 8000

DESCRIPTION

Complete line for the production of tobacco cigarette
whic monocetate filter

The line has the following modules.

MT1.-Tobacco automatic hopper

MT2.-Cigarettes maker-cutting module

MT3.-Tipping paper assembler module

MT4.-Cigarettes tray loader

Key points

Microwave online weight control

Laser online diameter control

Blue light optical and sensor

Servo driven technology

Electrical Input

- 400 V three-phase - 50 Hz -

70 kW Installed - 61 kW Consumed

Pressurized air supply

- 6 Bar - 55 m²/h - Quality of pressurized air supply.

* Residual dust: 0,1 um / 0,1mg/m³

* Residual water: PSD 3 / 0,1mg/m³

* Residual oil: 0,1 um / 0,1mg/m³

Sound Level

- 80 Db (A) (measured at 800 mm from the
protections)

Manual and display language

- English and (Language of the destination of
the machine within the European Union)

Colour of the machine

- RAL 9001

- RAL 2009 danger zones

Kit of tools and tools needed to operate the machine included.

Touch screen and machine control

- Servo control Omron Sysmac

- 4 Core NX7 CPU 128 Axis Control

- 15" Screen NA Sysmac

- EtherCAT, EtherNETIP communication

- Full production data visialization

- Full statistic and shifts production reports

- Omron Adept delta Robot









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**AKYUREK GROUP GIDA TEKNOLOJİLERİ
MAKİNE SANAYİ VE TİCARET A.Ş.**

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