## STRENGTH AND SUCCESS TOGETHER WITH POLICON JSCo

Policon JSCo-designs and manufactures of equipment for food industry.

Over the course of 30 years, we have developed into a unique full-cycle engineering company. Our engineers and specialists can turn any idea into steel from a simple part to a multifunctional automated production line.

Our technical solutions are distinguished by reliability, high quality and duration of operation, modern element base.

## OUR SERVICES:

- Complex projects for automation and mechanization of production, exclusion of manual labor from the technological process.
- Implementation of innovations, design and manufacture of non-standard equipment, tooling, transport systems for lean production, stacking and movement of the product.
- Manufacturing of analogues of foreign equipment, adapted for the production of the customer.
- Modernization and mechanization of sections, workshops and factories.
- Warranty and service.
- Training of the customer's personnel to work on the supplied and commissioned equipment.

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Production of ice cream with alternate dosing at two positions with the ability to enter viscous fillers and decorate.

Installed after continuous freezers.


## SPIDER 2C filler

- Serving of ice cream from one or two continuous freezers for one, two-color ice cream (ice cream cakes).
- A set of quick-detachable nozzles for a wide range of products.
- The ability to simultaneously produce two different types of products.
- Possibility of packing from wafer cup to cake.


- Serving ice cream from one, two or three continuous freezers for one-, two- or three-color ice cream (ice cream cakes).
Introduction of viscous fillers and decoration.


## SPIDER 360 filler

The filler is designed for alternating dosing of ice cream in two / four positions.

Dose adjustment is carried out for each position separately by measuring the dosing time.


All attachments are quick-detachable and using unifed connections to any production line (GRAM, TEKNOICE, TETRA PAK, VOJTA, etc.).

Material: high-quality food-grade stainless steel.


This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.

The LILLIPUTION 1500 is designed for the production of extrusion ice cream.


- Manual feeding and removal of plates.

- An UP-AND-DOWN line with conveyor plate with holes for the product (ice cream) can be used as a freezing chamber.
- Many kinds of extruders.

- Possibility of completing with extruders of various configurations.



Designed to produce 1-, 2- and 3-color ice cream in individual containers (wafer cups and cones, family tubes, etc.) with the possibility of decoration.


## FEATURES:

- quick changeover for different tube format;
- high accuracy and the possibility of dose correction;
- $100 \%$ filling of tubes;
- Maximum productivity - 8000 pcs / hour.


## INSTALLATION

 OF OPTIONS IS POSSIBLE:(1) Cups loading station.
(2) One of three servo-driven dosing station.
(3) Vibration unit for dry ingredients.
(4) Dusting station.
(5) Topping station.
(6) Sealing stations for plastic film unrolled from the reel.
(7) Transfer robot with outfeed conveyor.


## TECHNICAL SPECIFICATIONS



This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.


THE EQUIPMENT INCLUDES:
(1) Cups destacking.
(2) Pre-dosing.
(3) Main-dosing.
(4) Sauce or syrup topping.
(5) Dry topping.
(6) Lid closing.
(7) Ready product ejection.



Filling ice cream in plastic containers, family tubes, cups. Full automatic CAROUSEL line.



Designed for the production of Briquet ice cream:

- size: $150 \times 75 \times 40$;
- weight: 180-200 g in foil.
and a Briquet on waffeles:
- weight: 80 g .

Possibility of producing one-, two- of three-color ice cream.
The possibility of introdoucing ingredients (nuts, dried fruits, prunes, etc.)
or chocolate chips.

## EQUIPMENT OF THE MACHINE:

(1) Carrier frame.
(2) Packing paper forming unit.
(3) Packing paper feed unit.
(4) One- or two line conveyor.
(5) Upper wafer feed unit.
(6) Dispenser with the ability to enter ingredients.
(7) Cabinet with PLC.

(8) HMI operator panel.
(9) Transfer robot for ice cream from ESKIMOS to UP-AND-DOWN line.

The UP-AND-DOWN line with a universal plate can be used as a hardening tunel.



Filling one-color ice cream with or without ingredients in packshots weighing up to 1000 grams.

This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.

## ROBOTIC CAPTURE, TRANSFER AND STACKING OF ICE CREAM



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The transfer unit is designed to automatically capture, transfer and stack the product to conveyors of hardening tunel.



Spray nozzles for chocolate with adjustable dose of and spray angle. The spray pattern can be adjusted from full cone to flat spray.


The design provides opportunities for solving the most difficult tasks in the spraying of viscous liquids (chocolate, syrup).



TECHNICAL SPECIFICATIONS


## HAVANA wafer tube filler

Station is designed for filling wafer tubes with ice cream.

## FEATURES:

Automatic loading of tubes by rotary drum from the hopper.


TECHNICAL SPECIFICATIONS

| Dosing method | temporary |
| :--- | :--- |
| Dosing | from 2 sides at |
| Operating mode | the same time |
| Productivity, pcs / hour | automatic / |
| Electric power supply, V / Hz | to 4000 |
| Compressed air pressure, Mpa | 24 or 220/50 |
| Installation location | $0,4-0,6$ |
| Length, width, height | on the table |
| (without flow distributor and hopper) | $571 / 470 / 700$ |
| Length, width, height | $930 / 470 / 1300$ |
| (with flow distributor and hopper) |  |
| Weight, kg, no more |  |

## 4P.

The extrusion line is designed for the production of various types of ice cream: cone and stick products, wafer cups, sandwiches.

Extrusion method - vertical or horizontal.


## EXTRUSION LINE SET:

(1) Hardening tunel.
(2) Air cooler.
(3) Conveyor.
(4) Extrusion unit.
(5) Dosinf station.
(6) Cutting unit.
(7) Stick-picker for ice cream.
(8) Capture node.
(9) Glazing unit.
(10) Transfer unit.

The line is flexible and able to implement almost any production task. The transition of the line to different family tubes and product format occurs in the shortest possible time due to the avilability of modular equipment.

## TECHNICAL SPECIFICATIONS

| Model | LS | LM | LL |
| :--- | :--- | :--- | :--- |
| Productivity, min, pCS/hour | 2500 | 4000 | 6000 |
| Productivity, max, pcs/hour | $\boxed{0}$ | 400 | 6500 |

## CONTINUOUS FREEZERS

Continuous Freezers are designed for the production of ice cream with overrun from 30 to 120\%.
Productivity depends on a standard size and varies from 50 to $12001 /$ hour.
Freezers are made in the USA, Turkey, Taiwan.

## FEATURES:

- Frame, body and parts in contact with the product are made of AISI 316 stainless steel.
- The freezing cylinder has a hard, mirror polished finish and provides highly efficient heat exchange between the mixture and the refrigerant.
- Freon cooling system, autonomous with built-in compressor and necessary components.
- Mix and ice cream pumps of gear type with variable capacity.


TECHNICAL SPECIFICATIONS

| Model | FR50 | FR150 | FR300 | FR600 | FR1200 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Productivity, max, I/h | 50 | 150 | 300 | 600 | 1200 |  |

## UP-AND-DOWN line

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Designed for production
one- and two-color
ice cream in:

- round wafer cup;
- flat wafer cup;
- sugar cone (from 100 to 185 mm );
- plastic or paper cup.

The control system is based on
 PLC and HMI operator panel.


Possibility of completing UP-AND-DOWN line with conveyor plate with holes for the product (ice cream) for freezing briquettes, packshots, family tubes, etc.


UP-AND-DOWN line in typical configuration:
(1) Hardening tunel.
(2) Conveyor with plates.
(3) Automatic container installation unit.
(4) The chocolate injection unit.
(5) Servo-driven dosing station.
(6) Syrup topping station.
(7) Dry topping station.
(8) Lid closing station.
(9) Robotited transfer system.


The movement of the conveyor is intermittent, provided by a step drive of the cycloid type.


## GULLIVER line

Automatic type of stick ice cream generator provides high productivity flexibility and efficiency for contimous production of sticky products such as fruit ice (juice) and smoothie ice cream.


The semi-automatic eskimogenerator provides flexibility and efficiency for the continuous production of stick ice cream, fruit ice (juice) and smoothie ice cream.

## MAIN STAGES OF PRODUCTION:

(1) Dosing into ice cream molds.
(2) Clogging sticks.
(3) Freezing products in a cold brine bath.
(4) Thaw the thin outer layer of the product with a warm water spray for demoulding.
(5) Removing the frozen product from the mold.



GULLIVER LINE IN SEMI-AUTOMATIC TYPE CONFIGURATION:
(1) Conveyor with stepper drive and cooling tanks.
(2) Heating capacity.
(3) Mix dosing station.
(4) Stick station.
(5) Refrigeneration unit.
(6) HMI operator panel.


LAKOMKA extruding station for ice cream in whipped chocolate


## SET OF EQUIPMENT:

(1) Dynamic distributor of ice cream.
(2) Dynamic distributor of whipped chocolate.
(3) Extruder with displacement drive (one, two, three, four or five-linear).
(4) Cutting device «String».
(5) Control cabinet based on PLC.
(6) HMI operator panel.

TECHNICAL SPECIFICATIONS

[^0]

Set of equipment can be designed and manufactured to specific customer requirements ( N - linearity of the extruder, the possibility of forming inside the ice cream rod of liquid fillers, sprinkling the surface of the roll, the stick ice cream).


Extruding station for any production line



Mobile extruding station

## ROBOT FOR AUTOMATIC PICKING, TRANSFER AND PLACEMENT IN WRAPPING MACHINE

The equipment is designed to automatically picking, transfer and stack the product from the conveyor of the processing line to the pocket conveyor of the wrapping machine.


The scope of the module for transfer automation is the technological lines for the production and packaging of ice cream or other products.

## AS PART OF THE EQUIPMENT, A REJECTION UNIT (PUSHER) IS INSTALLED, DESIGNED:

- to prevent the defective product from entering the dosing zone;
- to remove the product from the conveyor of the processing line in the event of a stop of the wrapping machine.


## TECHNICAL SPECIFICATIONS

Productivity, units / min
Work efficiency,\%

## ADVANTAGES OF THE ROBOT FOR PRODUCTION AUTOMATION:

- hygienic design of the grippers, ensuring the safety of products from damage;
- ability to work on an ellipse product;
- automatic and semi-automatic mode of operation;
- intelligent control system that provides optimal operation algorithm.




## EXTRUDING STATION CONFIGURATION:

(1) One, two or three linely extruder.
(2) Device for hammering stick ( 1,2 and 3 pices).
(3) Device for hammering sticks (3 pieces).
(4) Cutting device «String».
(5) Control cabinet based PLS with HMI operator panel.
(6) Dynamic ice cream distributor.
(7) Set of hoses for supplying a mixture of ice cream.


TECHNICAL SPECIFICATIONS

| Length, mm | $94-100$ |
| :--- | :---: |
| Diameter, mm | $27-29$ |
| Productivity, pcs/hour, up | 4500 |

POINT OF SALE. MOBILE ICE CREAM KIOSK


Stick ice cream «BULRUSH» can be used in mobile ice cream sales points, taking into account the implementation of the modern marketing trend - the individualization and personalization of the tastes of ice cream lovers.

The seller takes ice cream in individual packaging («naked») from the freezer, unpacks it and dips it into the taste of the chocolate that the chooses: white, milk of dark chocolate. Chocolate is icing quickly hardens on cold ice cream and becomes crispy. Your personalized ice cream flavor is ready!
Bon appetite!


## CONVEYOR SYSTEM

Policon JSCo designs and manufactures various types of conveyors for:

- automated stacking of the finished product;
- safe transportation of finished products to the warehouse, regardless of the distance to the destination, the difference in levels, floors, the complexity of the trajectory.


## FEATURES:

- flexible reconfigurable system;
- the ability to quickly move between workshops;
- different levels and configuration of conveyors;
- the ability to mount elements of automatic sorting, grouping and distribution of flows;
- maximum automation of packing, assembly, loading and unloading operations;
- exclusion of manual labor, intrashop transport from the technological process;
- non-standard solutions;
- adaptation for production in different industries;
- economic efficiency.

Equipment with a unified control system based on PLC and HMI operator panel allows you to set a single rhythm for the production process and regulate the speed of transportation.

The conveyor system can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.

THE INTRODUCTION OF CONVEYOR SYSTEMS IS AN IMPORTANT ASPECT OF OPTIMIZING YOUR FACTORY!


## DIGITAL MARKING SYSTEMS: VERIFICATION AND ACCOUNTING

Implementation of digital marking systems: verification and accounting for production lines of various capacities.


TECHNICAL SOLUTIONS FOR MARKING SYSTEMS:

- equipment for applying a digital marking code on the packaging material of products;
- equipment for scanning the applied code:
- integration into customer's highperformance lines;
- automatic verification and accounting.



Product recognition bylbarcode, date, QR-code


Reading a digital Data Matrix code


Transfer and processing of information to the accounting system and server


Transfer of information to the accounting system

> [3 З знак

Rejection of products without a digital code by a broker




The Ingredient feeder is designed for continuous feeding of ingredients (nuts, raisins, fresh fruit, chocolate and other liquid and solid fillings) in ice cream


The ingredient feeder is installed between a continuous freezer and a filling machine that dispenses ice cream into cups, cones, tubs, etc.

## FEATURES:

- Accurate dosing of the filler.
- Changing the degree of fruit saturation.
- Evenly distribution of filler.
- High reliability and long-term operation.
- HMI operator panel.
- Production of ice cream with chocolate chips using conventional popsicle stick ice cream.
- Injection of 5 to $20 \%$ of the ingredient.



PADDLE-TYPE MIXING PUMP OF INGREDIENTS FEEDER:

- Easy to disassemble and maintain.
- 6 equal portions of filler are supplied from six cavities in one rotation of the rotor.
- The adjustable rotor speed ensures reliable synchronization of the work of the ingredient feeder with the freezer.


## JAMKA filler station

Input of jam and similar ingredients on filling station. Compatible with pencil fillers devices. The station provides to work with all types of filling stations.

## FEATURES:



- High accuracy of dosing with the possibility of smooth correction of the dose simultaneously in all streams.
- The possibility of dosing a choice of 2 to 8 streams of filler.
- Decorating portions.
- The use of a timer allows you to adjust the location of the filler in the ice cream and dose the topping.
- The design includes a mixer that provides homogeneity of the product.
- Quick-dissolving and easy-to-clean product lines.


## TECHNICAL SPECIFICATIONS

| The method of dispensing | volumetric |
| :--- | :---: |
| Volume of the reserve tank, | 70 |
| Electric power, V / Hz | $380 / 50$ |
| Adjustable dose volume, ml per serving | $4 . .20$ |
| Productivity, max: cycles / hour | 1500 |
| Productivity, max: number of doses / cycle | $2,4,6,8$ |
| Installed capacity of electric motors, kW | 0,25 |
| Weight, kg | 80 |
| Number of operators |  |



This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.

## JAM PENCIL FILLER

Pencil filler can be used as a stand - alone device, or installed on filling machines such as «CAROUSEL》, «RIO» or analogues.

## FEATURES:

- High accuracy of dosing with the possibility of smooth correction of the dose.
- Dosing while the needle is moving up.
- Feeding jam by gravity or pump (depending on the filling machine).


## TECHNICAL SPECIFICATIONS

| Air pressure, Mpa | $0,4-0,6$ |
| :--- | :--- | :--- |
| Needle stroke, max, mm | 100 |
| Weight, kg, no more | 18 |

## GOLF chocolate and ice cream mixer

Mixer ice cream and chocolate is designed for mixing ice cream with liquid chocolate.

## FEATURES:



- High accuracy and possibility of dose correction.
- Supply of chocolate by the customer's pump.
- Possibility to change the speed of rotation of the agitator.



## TECHNICAL SPECIFICATIONS

| Length/Width/Height | $352 / 310 / 976$ |
| :--- | :--- |
| Motor power, kW | 0,37 |
| Speed of rotation of an output shaft <br> of a reducer, rpm | $40-100$ |
| Weight, kg, not more than | 18 |
| Electric power, $\mathrm{V} / \mathrm{Hz}$ |  |

This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.


СТАНЦИЯ ДЛЯ ПЕРЕМЕШИВАНИЯ вязКИХ ПРОДУКТОВ



## SPECIAL TECHNOLOGICAL MACHINES

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## SUPERJET mixing station

The station is designed for uniform mixing of ingredients coming in barrels during the production of ice cream and confectionery, also for further decoration and introduction into the product.




TECHNICAL SPECIFICATIONS

The container with the product is transported on a Euro-pallet to the mixing station and back.
 mixing

| Mixer drive power, kW mm | 4 | This product can be manufactured according to the technical specifications of the customer, taking into account its |
| :---: | :---: | :---: |
| Mixer speed range, rom | 15-60 |  |
| Mixer blade diameter, mm | 520 |  |
| Mixer lifting height, mm, no more | 970 |  |
| Working volume of the tank, l, no more | 185 |  |
| Power supply parameters, $\mathrm{V} / \mathrm{Hz}$ | 380/50 |  |
| Length/width/height of the mixer, mm | 1383/1088/2253 |  |
| Weight, kg | 650 |  |
| Service | 1 operator |  |

TEMPERING TANK FOR CHOCOLATE WITH MIXER

The tempering tank is designed for tempering and automatically maintaining the set temperature of the chocolate. The tank is a cylindrical welded structure mounted on a frame and closed with two lids.
The tank has the system for automatically maintaining the set temperature. A mixer shaft with horizontal plates is installed inside the tank.


PRINCIPLE OF OPERATION:
The tank heating system is switched on. The tank is heated to operating parametes, then the chocolate is pumped in and the mixer drive is turned on. The desired temperature is set on the remote control, which is subsequently maintained automatically. Before loading the chocolate.

The control cabinet is mounted on the side surface of the heating system body.


The heating system consists of:

- Heating tank.
- Expansion tank.
- Outlet pipeline.
- Inlet pipeline.
- Piping to the pump.
- Frame.


TECHNICAL SPECIFICATIONS

| Working capacity of the tank, 1 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Working temperature range, ${ }^{\circ} \mathrm{C}$ | 100 | 250 | 800 |  |
| Agitator drive power, kW |  | 28.80 |  |  |
| Total power of the block of electric heaters, kW | 4 | 2,75 | 1,1 | 2,2 |
| Weight, kg, no more | 100 | 6 | 18 |  |

This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.

## DYNAMIC ICE CREAM DISTRIBUTOR

Dynamic ice cream flow distributor is designed to divide the ice cream input stream into several streams.

A feature of dynamic distribution is the mixer. The mixer is designed to prevent the formation of stagnant zones of random sizes in the area of the outlet pipes. This contributes to the leveling of the outlet connections.


TECHNICAL SPECIFICATIONS

| Rotation speed control | frequency |
| :--- | :--- |
| Electric motor power, kW | 0,25 |
| Power supply, $\mathrm{V} / \mathrm{Hz}$ | $220 / 50$ |
| Number of outlets | 2.8 |




This product can be manufactured according to the technical specifications of the customer, taking into account its predetermined parameters and features.

ICE CREAM GRIPPERS


Pneumatic grippers is designed for the ice cream transfer lines and is designed to pick up, hold and move the ice cream in the wrapping machine.

Material - stainless steel, silicone, plastic


ROTATION STATION FOR ICE CREAM BUCKETS


- Product dosing with simultaneous synchronous rotation of two buckets in the same direction.
- Anti-slip rotation.
- Strong, durable material.
- Replaceable units for different sizes of buckets.



## EXTRUDERS FOR VARIOUS SHAPES AND COMPLEXITY




- Extruder «Traffic light»





CIP FOR FREEZERS AND SPECIAL TECHNOLOGICAL MACHINES


## FEATURES:

- Mobile, compact.
- Material - high quality stainless steel.
- Possibility of using alkaline and acidic solutions.

At the request of the customer, the equipment is supplemented with a temperature maintenance device.

Designed for local cleaning of freezers and machines (tanks for fillers, ingredient feeders, dispensers, extruders).

CIP uses only the required amount of solution for one wash.


## RECEPTION OF MILK. MILK METER WITH FILTERING

Pumping raw milk from dairies with measurement of its quantity.


## APPOINTMENT:

- measuring the amount and temperature of milk;
- mechanical cleaning;
- air separation and cooling.


## THE SET OF EQUIPMENT INCLUDES:

(1) Vacuum pump system.
(2) Meter for measuring the amount of milk in the flow.
(3) Centrifugal pump.
(4) Mechanical cleaning filter.
(5) Plate cooler.

## TECHNICAL SPECIFICATIONS

|  | 5000 |
| :--- | :--- |
| Productivity, l / h | 10000 |
| 15000 |  |


 CALENDAR OF THE MOST DELICIOUS HOLIDAYS $\begin{array}{ll}\text { Strawberry ice cream day } & 15 \text { January } \\ \text { International popsicle day } & 24 \text { January }\end{array}$ World milk day
Chocolate ice cream day
1 June
7 June
World ice cream day $\quad 10$ June $\quad$ 合

World chocolate day 11 July
International cake day
Vanilla Ice Cream Day
20 July

Coffee ice cream day World candy day


## Attention!

The appearance of the equipment and all technical characteristics may change in accoralance with technical improvements.


[^0]:    Length, mm
    94-104
    Diameter, mm
    up 45
    Productivity, pcs / hour UP 12000

