CONTENTS

SPIS TREŚCI

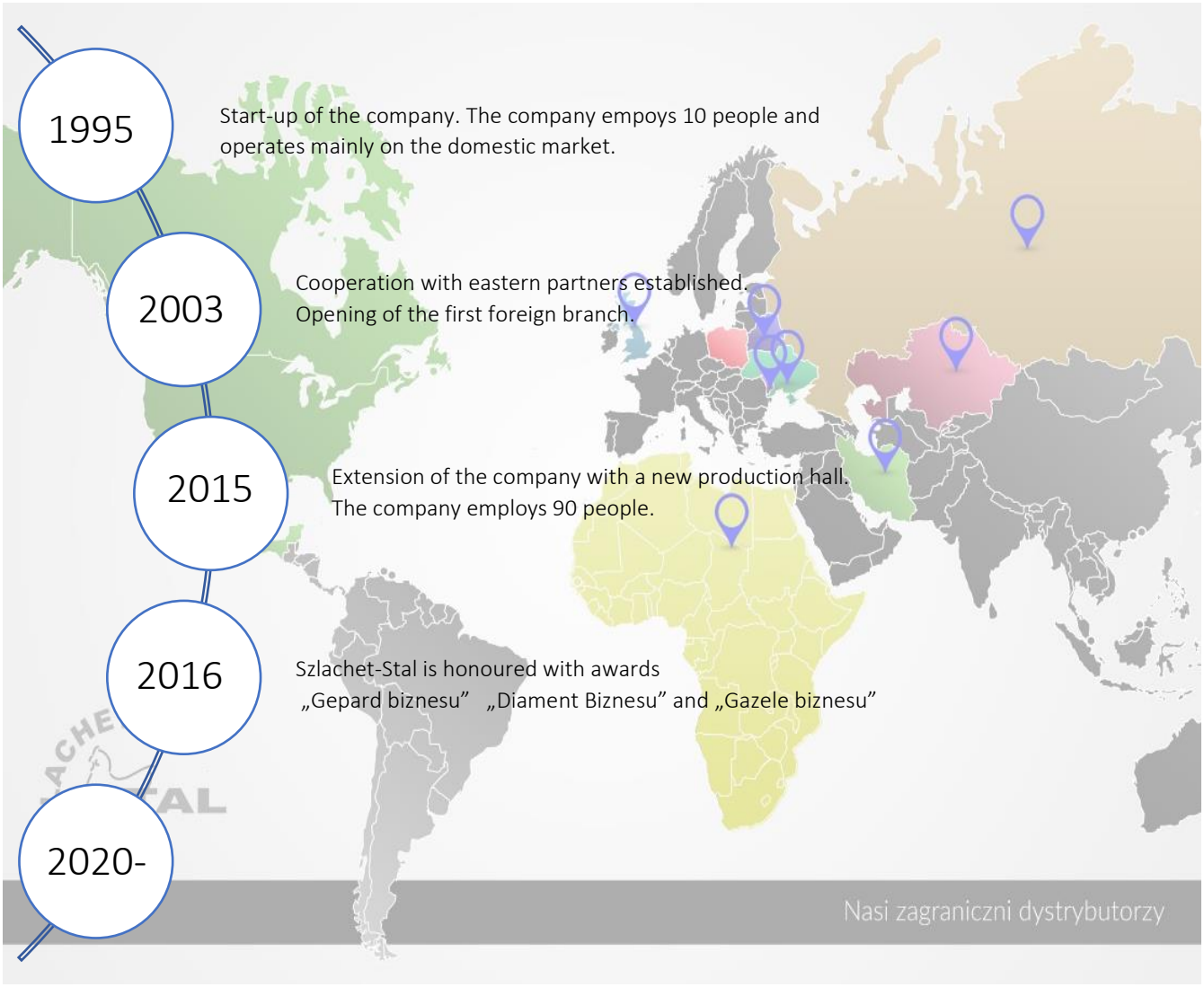
ABOUT US

The company was established in 1995 and since then it has not only increased its production, but also extended the range of manufactured devices and improved standard products. Striving for the best possible production of a device - with appropriate durability, functionality and good price is still the priority task of our company.

At present the company employs almost 100 people. The majority of "Szlachet - Stal" employees are young people with high qualifications. They willingly take part in additional courses, trainings in order to broaden or increase their qualifications, get to know the technical novelties and improve the production. All this makes the poultry slaughtering machines and equipment manufactured by our company able to compete on the market with products of the most renowned European companies dealing with the same production.

The best proof of the high quality of our products is the fact that our equipment is exported to countries all over the world, mainly to Germany, The Netherlands, Lithuania, Belarus, Russia and Ukraine. Moreover, the poultry slaughterhouse equipped with our devices won the title of "Champion of AGROLIGA 2004". Our company is also the winner of the following awards: "FORBES DIAMONDS" in 2016, "GEPARD BIZNESU" in 2016, “Worldwide Company” in 2016.

COMPANY HISTORY




CHICKEN


DUCK


TURKEY


GOOSE

SAMPLE IMPLEMENTATIONS

Our main objective during design and implementation is the full optimisation of technological processes in relation to the investor's expectations and resources.

We propose solutions ideally suited to the individual requirements of the client.

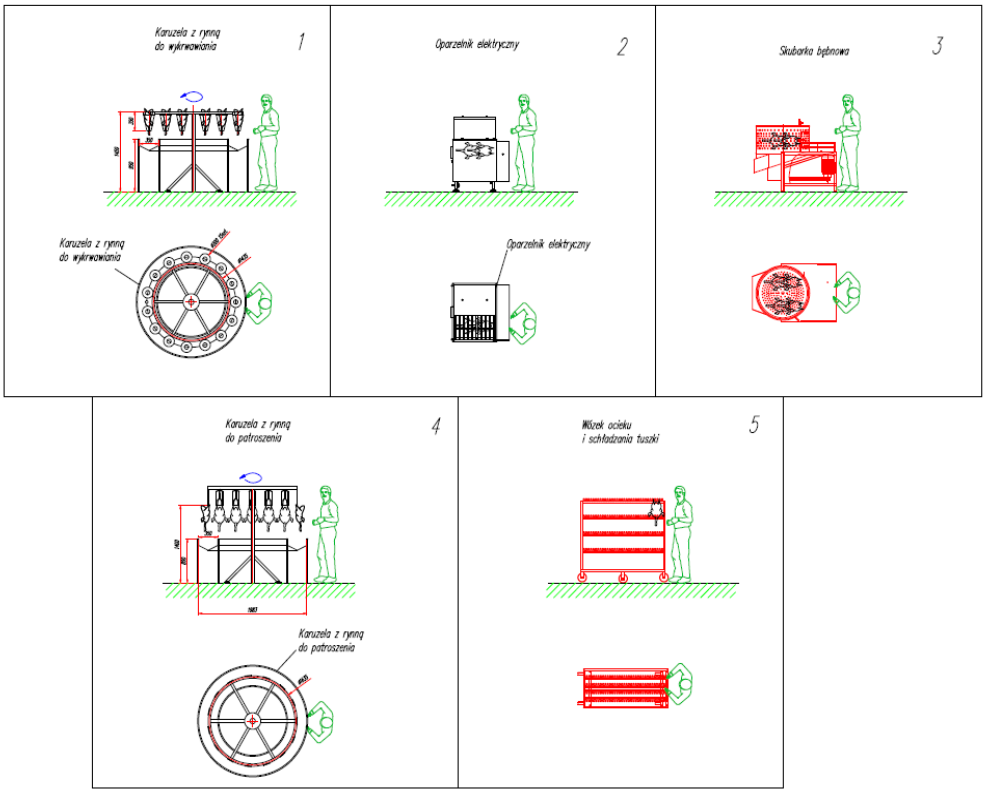
We carry out turnkey projects and the scope of our activities extends even beyond the poultry slaughterhouse. We create modern and technologically advanced waste processing and sewage treatment systems, which guarantee the reduction of resource consumption.

In addition, we offer the construction of horizontal, suspended and elevating conveying systems.

FARMSTEAD SLAUGHTERHOUSE WITH CAPACITY UP TO 70 pcs/h

The system contains following devices:

Carosuel with the bleeding trough, rotary scalder, drum plucker, carosuel with the evisceration trough, chilling trolley.

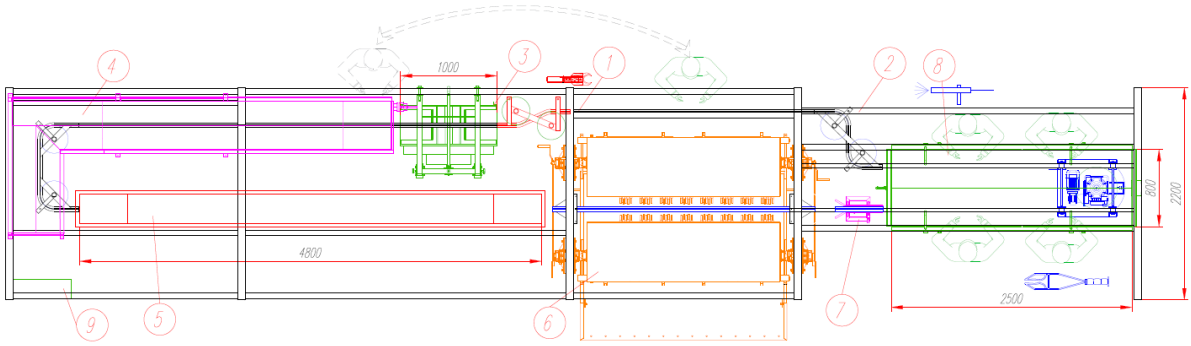


COMPACT CONTAINER SLAUGHTERHOUSE

Type of bird	**Chicken**
Shackle distance	6”
Capacity	**500 BPH**

SPECIFICATION:

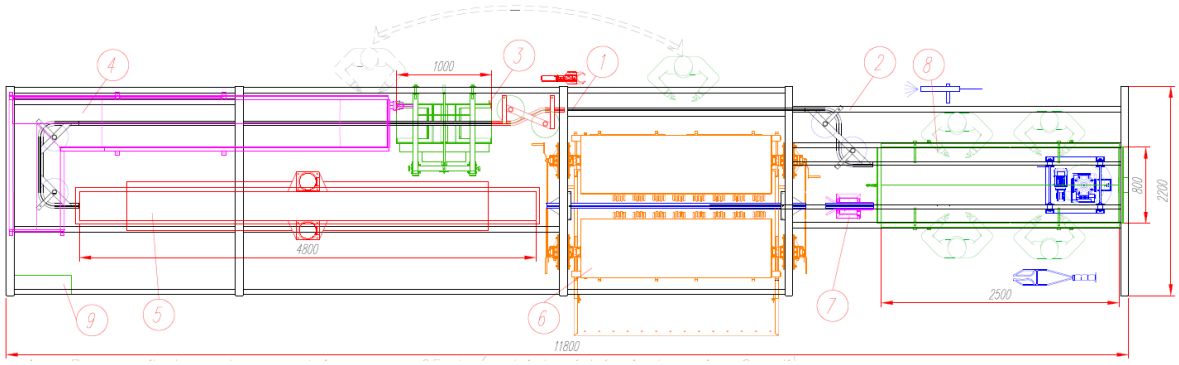
1. Overhead chain conveyor L=25 mb
2. Frame L=11800, W=2200
3. Water-electric bath stunner L=1000
4. Bleeding trough, L=4600, W=500
5. Scalder L=4800
6. In-line plucker SL-2/32
7. Head puller
8. Evisceration trough L=2500, W=800
9. Control cabinet



Type of bird	**Duck**
Shackle distance	8”
Capacity	**300 BPH**

SPECIFICATION:

1. Overhead chain conveyor L=25 mb
2. Frame L=11800, W=2200
3. Water-electric bath stunner L=1000
4. Bleeding trough, L=4600, W=500
5. Scalder L=4800 for duck
6. In-line plucker SL-2/32
7. Head puller
8. Evisceration trough L=2500, W=800
9. Control cabinet

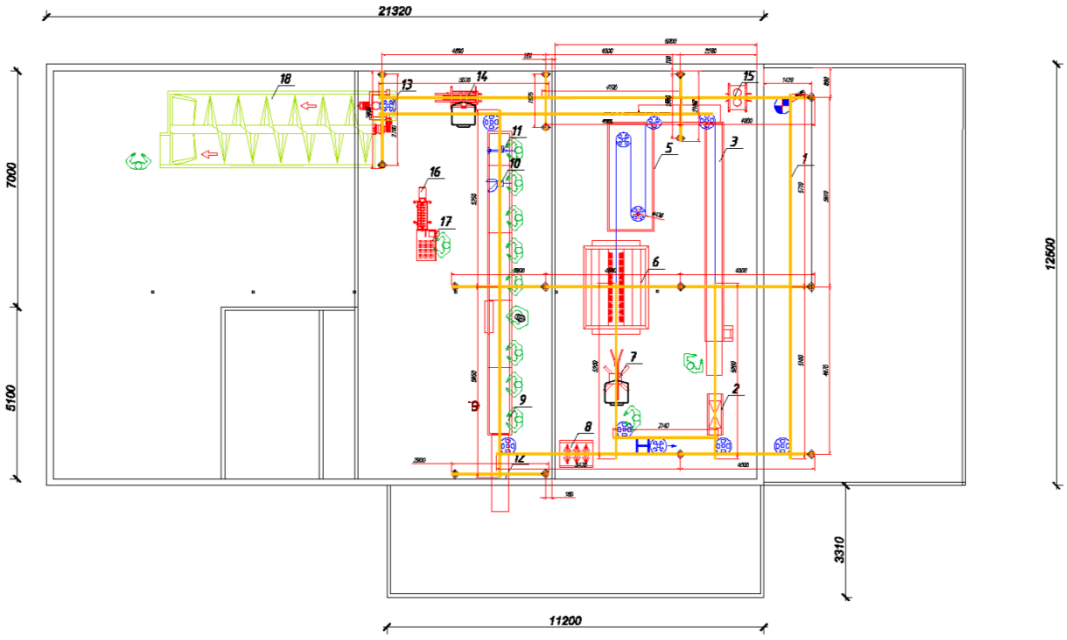


COMPACT CONTAINER SLAUGHETHOUSES CAN BE ALSO EXECUTED IN VERSION SUITABLE FOR TURKEY

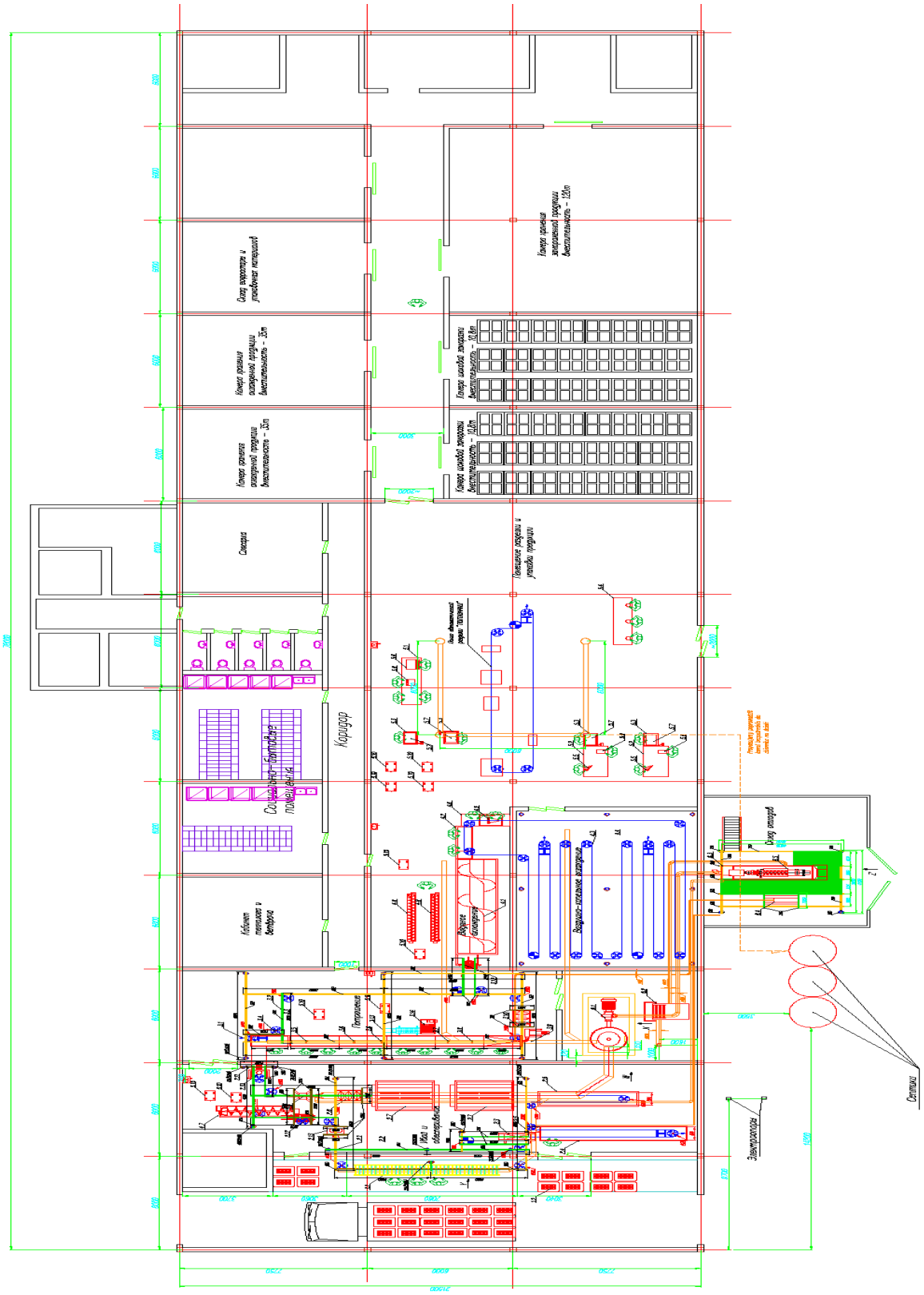
CHICKEN SLAUGHTERHOUSE WITH CAPACITY 1000 pcs/h

TECHNICAL DETAILS OF THE PLANT

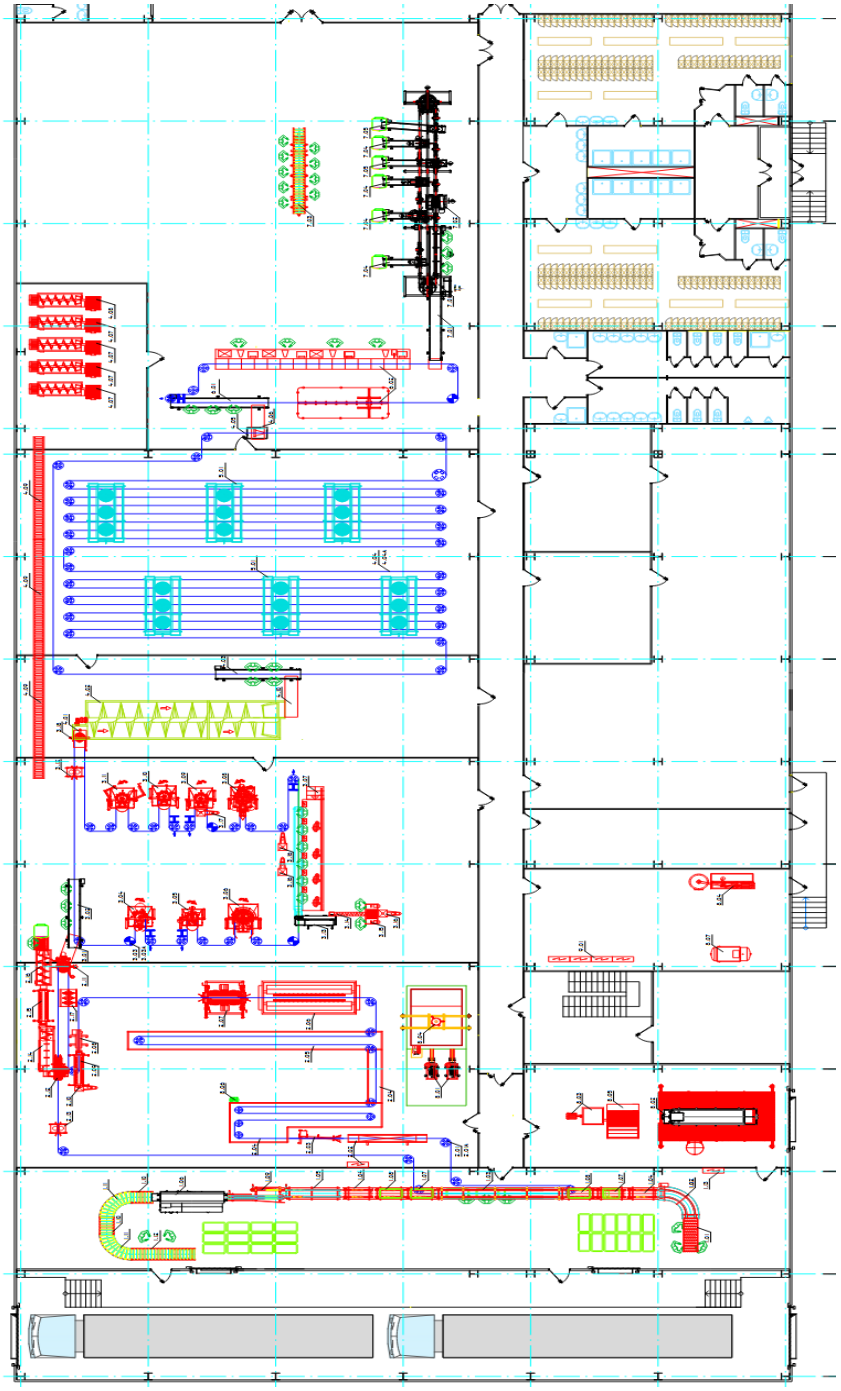
Type of bird	Broiler
Average live bird weight	2,5 kg
Plant type	Semi automatic
Bleeding time	3 min
Scalding time and temperature	3 min, 56-58°C
Chilling time	40 min



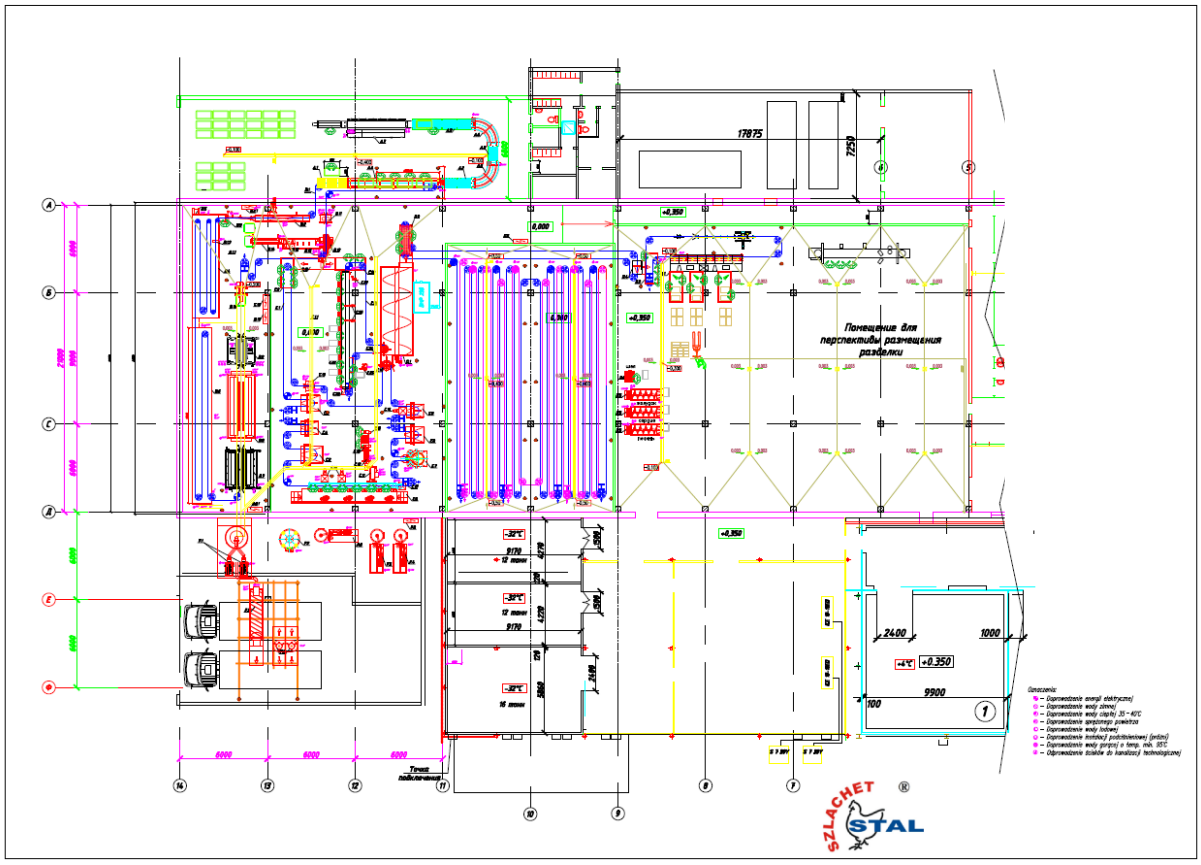
CHICKEN SLAUGHTERHOUSE WITH CAPACITY 1000 pcs/h



CHICKEN SLAUGHTERHOUSE WITH CAPACITY 3000 pcs/h

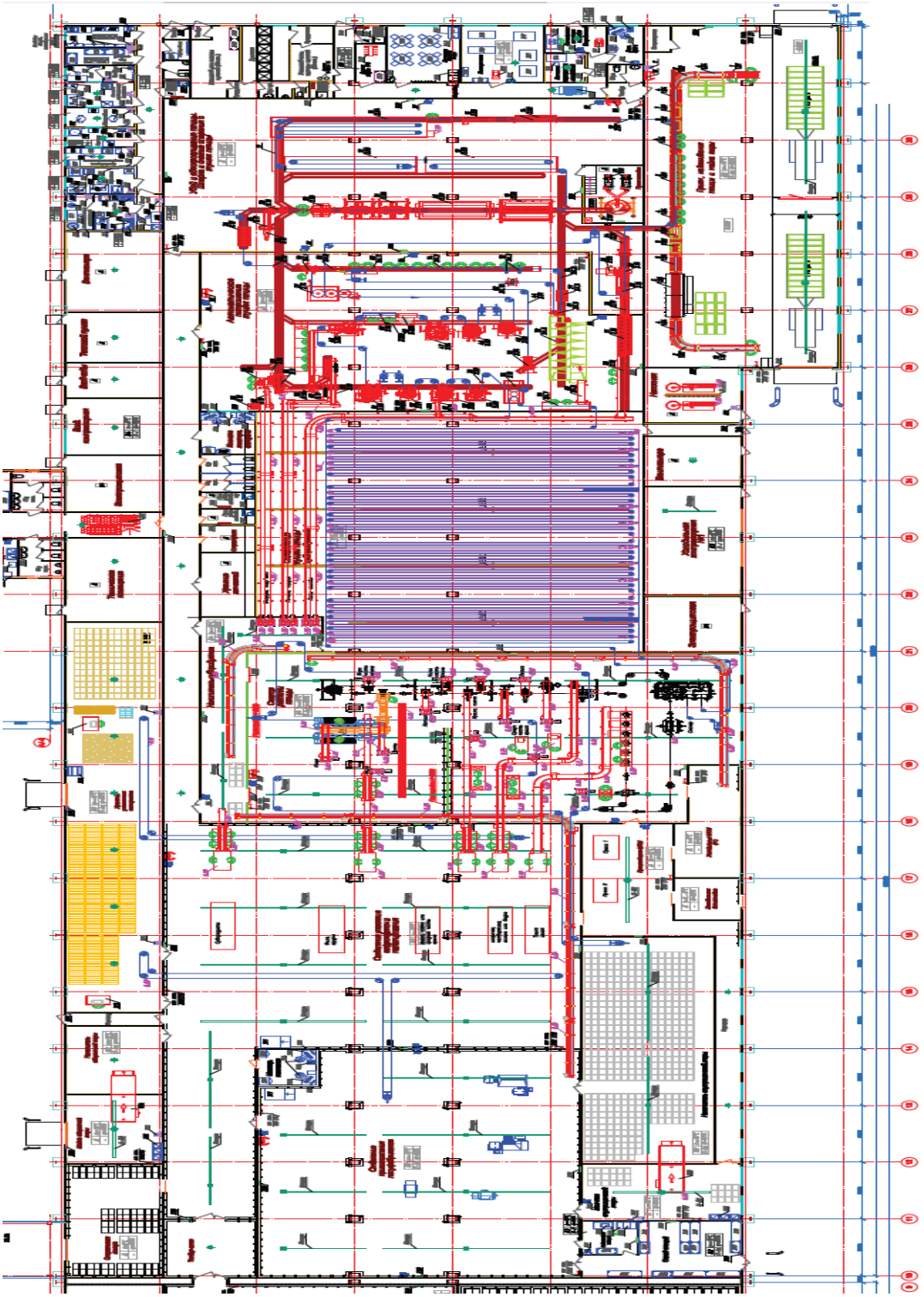


CHICKEN SLAUGHTERHOUSE WITH CAPACITY 4500 pcs/h



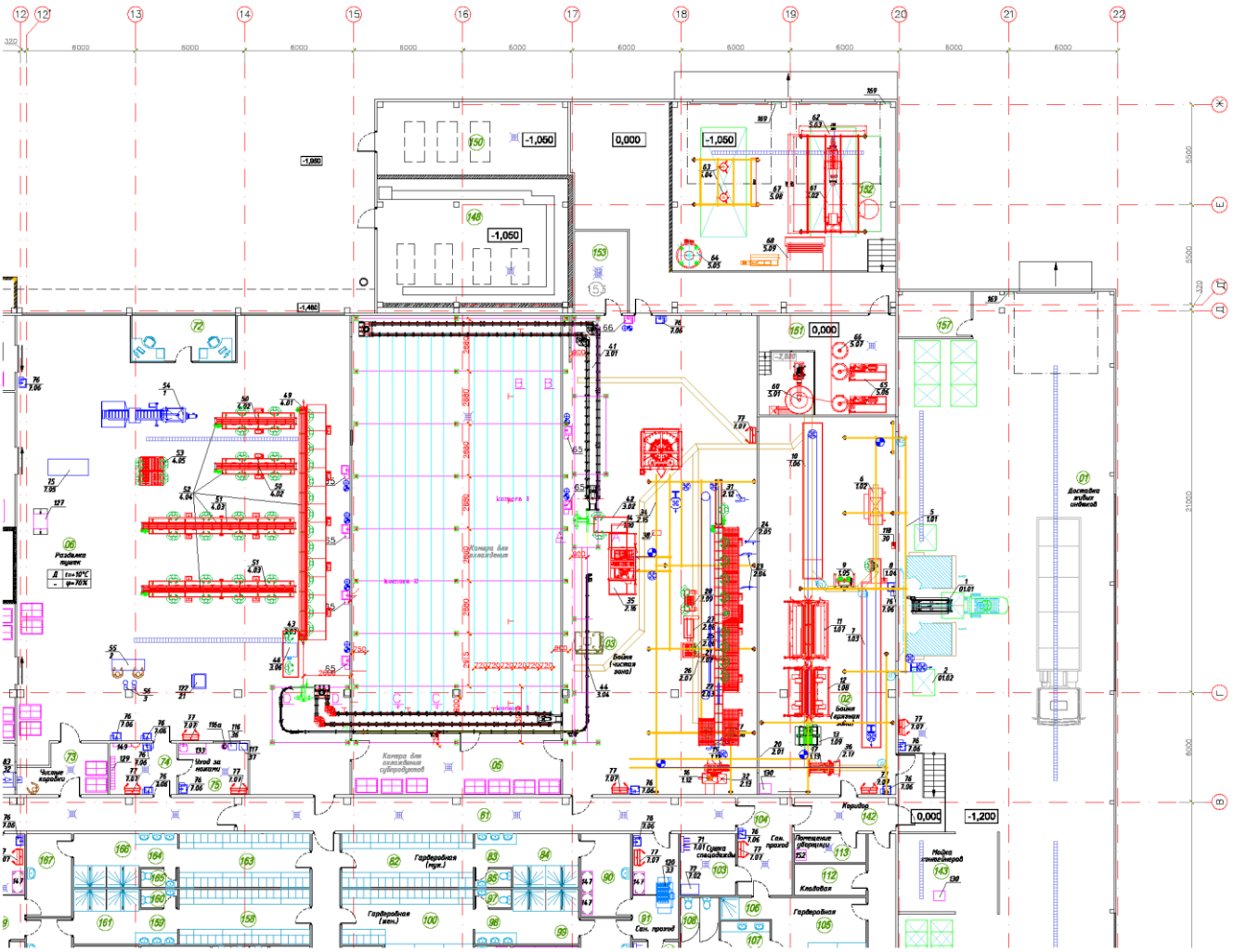
CHICKEN SLAUGHTERHOUSE WITH CAPACITY 6000 pcs/h

A FRAGMENT OF TECHNOLOGICAL SLAUGHTERING LINE



TURKEY SLAUGHTERHOUSE WITH CAPACITY 500 pcs/h of male and 1000 pcs/h of female.

A FRAGMENT OF TECHNOLOGICAL SLAUGHTERING LINE



CHICKEN

DUCK

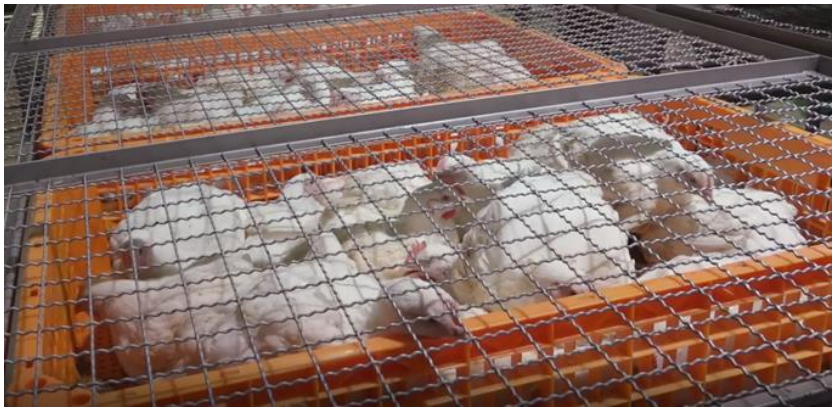
TURKEY

GOOSE

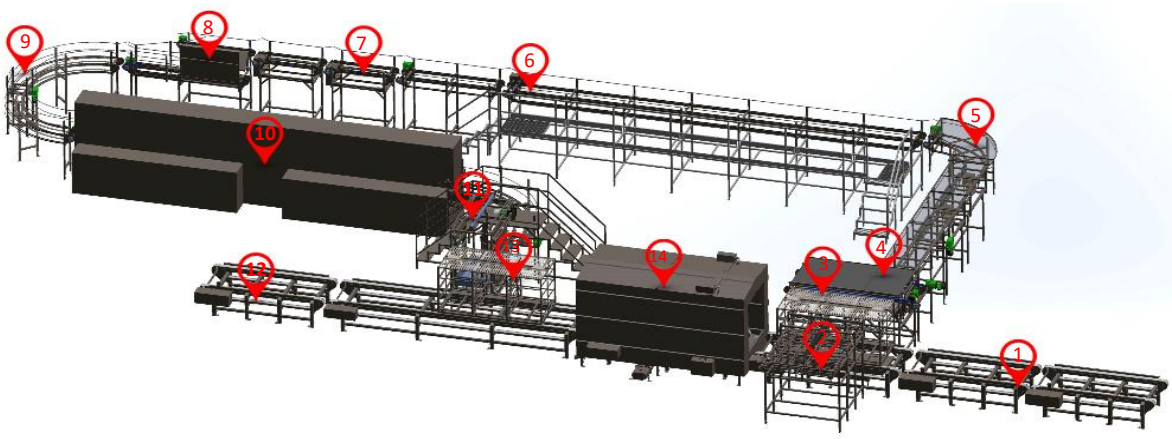
LIVE BIRD RECEPTION

Our main objective is to fully optimise the processing technology at the investor's plant in a way that allows for maximum reduction of resource consumption while achieving high production capacity. We are faced with challenges that influence each other and ultimately allow us to achieve the expected result.

One of the most important aspects is ensuring the welfare of live poultry, during reception and unloading at the slaughterhouse. Our solution is a modern, automatic container unloading system, which considerably improves unloading and slaughterhouse operations. We offer individual solutions tailored to the needs and capabilities of the Investor.



CONTAINER UNLOADING SYSTEM



1 Container conveyor
2 De-stacker
3 Scissor-lift
4 Unloading table
5 Chain conveyor for transport of crates
6 Platform for hanging poultry
7 Chain conveyor for transport of crates
8 Crate rotating system
9 Chain conveyor for transport of crates
10 Crate washer
11 Stacker
12 Container conveyor
13 4-level container
14 Container washer

OPERATION

4-level metal container with dimensions **2480 x 1165 x 1280**, 3 crates on each levels, in each crate 17 – 20 chickens (depending on the weight of the chickens). On a 13 metre truck a total of 22 containers can be loaded on two levels which gives about 5000 chickens per one truck. Loading on farm is carried out by a forklift which can be transported on the truck as well (reducing the amount of transported poultry). Unloading in the slaughterhouse is also done by a forklift. After taking off the container from the truck it is placed on a heavy chain conveyor **No 1** and then it is automatically transported onto conveyor **No 2**, which allows for the next container to be put on the conveyor **No 1**. The container is further transported onto conveyor **No 3** where after stopping automatic unloading of crates with chickens is performed by a pusher **No 8**. Three crates at once are pushed out onto an unloading table **No 9**, after which they are individually transported by conveyors **No 10**, **No 11** and **No 12** in the direction of the hanging area where the chickens are hanged on the shackles by workers. The emptied crate is transported by an ascending conveyor onto a rotating conveyor **No 13** where the crate is rotated by 90^0 in order to insert it in a crate washer (in high-capacity systems the crates are washed with up-side down). After passing through the washer the crates are returned to original position on an arched conveyor **No 14**. The crates are further transported on a slide **No 15** and by a conveyor **No 16** in the direction of a crate- stacking device **No 17** where they are put in stacks of 4 or 5.

Container after emptying from full crates by the pusher **No 8** and by a scissor lift placed on a conveyor **No 3** is transported further by a chain conveyor **No 4** in the direction of a container washer **No 7**. Container then by means of conveyor **No 4** enters the container washer **No 7** where it stops for some time for washing. The washer is equipped with washing nozzles and pressure rising pump and dirty water pump transporting water to a slotted sieve where it is initially cleaned of debris. This system allows for high savings of water as it works in a closed circuit. Clean container after washing is moved by conveyor **No 4** onto conveyor **No 5** where it is automatically loaded with crates. Container loaded with crates moves onto container **No 6** where it awaits to be loaded onto truck. This system is equipped with electronical control and synchronisation system. The system depicted on a sample drawing can deliver chickens to an 8000 per hour slaughterhouse but can easily be upgraded to higher capacities. The system can also include weigh for empty and full containers thus allowing to know how many kilograms of birds enter the slaughterhouse. Containers are made of galvanised steel sheets and profiles. Containers are suitable to work with crates with dimensions **1140 x 750 x 255,** of which 12 or 15 pcs can be loaded into it.

ADVANTAGES

- ✓ Excluding the live poultry hanging stage, the live unloading process is fully automated. The conventional unloading stage is physically demanding for the workers and the system is able to fully fulfil this task.
- ✓ System for transporting live birds that ensures their safety and greatly improves slaughterhouse operations.
- ✓ Full adjustment of the system to the Investor's needs and expectations, such as slaughter capacity and available space.



BASIC INFORMATION:

CRATES FOR TRANSPORT OF POULTRY IN CONTAINERS SYSTEM ULOADING:

Open-ton poultry crate - standard

- Made of durable plastic with high load bearing capacity
- Overall demensions: 1160x770x255 mm or 1160x770x225 mm or 1160x770x355 mm **(turkey)**
- Loading capacity ok 50kg
- Houses about 18-22 pcs. Chickens depeding on their weight
- This type of crates can be used to the transport of **ducks** and **gooses**

Open-ton poultry crate – large size

- Made of durable plastic with high load bearing capacity
- Overall dimensions: 1160x1160x250 mm
- Loading capacity ok 80kg
- Houses about 26-36 pcs.chickens depending on their weight

CONTAINER FOR TRANSPORT OF POULTRY:

Container for transport of poultry in creates – standard

- Made of structural steel with high mechanical strength.
  Container protected against corrosion by hot-dip galvanising
- Overall dimensions: 2480 x 1170 x 1800 (or xxx in 5 level container)
- Weight: ~220 kg (4 levels) or 240 kg (5 levels)
- Amount of crates in a container: 12 or 15 pcs depending on the type of system/container (4 or 5 levels

Container for transport of poultry in creates – large size

- Made of structural steel with high mechanical strength.
  Container protected against corrosion by hot-dip galvanising
- Overall dimensions: 2,48 m x 1,17 m x 1,8 m
- Weight: ~312 kg (4 levels) lub 345 kg (5 levels)
  Amount of crates in a container: 8 or 10 pcs. depending on the type of system/container (4 or 5 levels

Container transport with live bird

- Standard semitrailer with dimensions 13,6m length, 2,48 m width, 2,8 m heigth houses 22 containers, which is 2 levels, 11 containers on each, so one truck can transport in toatl about 5000- 6600 chickens

Type **MK-1,2**

CONTAINER WASHER WITH SIEVE

The device is designed for automatic washing of containers in the container poultry unloading system. The picture shows a container washer and a cooperating arc sieve.

OPERATION

After starting the system, the chain conveyor feeds the container emptied of containers into the washing chamber. In order to thoroughly wash the container, a kinematic system is installed in the washer with special nozzles with high flux energy installed. Water spraying is from above, below and from both sides of the container. Clean containers are transported to another chain conveyor located outside the washer. The water pumped by the pump from the tank, after the washing process, is directed to a slotted sieve by means of a special pump. The filtered water returns to the tank for reuse.

ADVANTAGES

- ✓ Thorough cleaning of containers by using a movable nozzle system
- ✓ Closed-loop cleaning – saving on water consumption

TECHNICAL SPECIFICATION

Power supplier	400 V; 50 Hz
Water tank capacity	700 l
Spray pressure of washing manifolds	6 bar
Total power	25 kW
Power of the Chain Conveyor Drive	1,5 kW
Ilość dysz myjących	96

Power of the pump supplying water to the washer	15 kW
Pump power supplying water to the sieve	7,5 kW
Dimensions of the device	
Length	4 300 mm
Width	2 300 mm
Height	2 600 mm

Type **DP-4**

MECHANICAL CRATE DE-STACKER

The device is designed for pushing containers out of the container in the container system of unloading poultry

OPERATION

The de-stacker is used to push live cages out of the container and feed them to double-row chain conveyors. The device pushes the frames in rows from each level of the container, starting from the lowest level. After pushing out the entire row of containers, the elevator or scissor lift, drops the container to the lower level and the next row is mechanically pushed out. It is assembled in the technological line of container livestock reception.

ADVANTAGES

- ✓ Reliability through mechanical gear ratio on toothed bar
- ✓ Simple design for easy servicing
- ✓ Additional control panel for manual control in case of jamming

TECHNICAL SPECIFICATION

Power	400 V/50 Hz
Drive power	2,2 kW
Weight	800 kg

Type **SZP-1**Typ **MK-1,2**

CRATE STACKER

The device is designed for pushing a column of containers (4 or 5 levels) into a container in the container system for unloading poultry

OPERATION

The stacker is designed to set the containers in posts of 4 or 5 pieces and then load them into the container. After washing in a washer, the containers are transported to the stacker by a chain conveyor. The container for the stacker must enter in a horizontal position, therefore, after leaving the washer, it must be rotated. After entering the stacker, the container is lifted by means of carriers to such a height that it can accept another one. After obtaining the desired number of containers (4 or 5 pcs.), the pneumatic actuator pushes the entire post into the container.

ADVANTAGES

- ✓ Replacing the heavy operation of manually pushing containers through an automaton
- ✓ Simple design for easy servicing
- ✓ Additional control panel for manual control in case of jamming

TECHNICAL SPECIFICATION

Power	400 V; 50 Hz
Drive of the carrier mechanism	0,75 kW
Conveyor drive	0,37 kW
Ejection cylinder	rodless D40
Dimensions of the device: L x W x H	1 900 x 1400 x 2400 mm

Type **SOP-1**

RECEIVING TABLE FOR MOTORIZED CONTAINER

The device is designed to collect containers immediately after pushing them out by the de-stacker in the container unloading system

OPERATION

The receiving table is a conveyor that receives a whole row of containers as soon as they are pushed out by the depalletizer. It is constructed from gravity roller conveyors and a chain conveyor installed on a pneumatic actuator.

ADVANTAGES

- ✓ The use of stainless steel rollers significantly extends their service life
- ✓ Simple design for easy servicing

TECHNICAL SPECIFICATION

Power	400 V/50 Hz
Drive power	0,75 kW
Dimensions	
Length	3 200 mm
Width	1 500 mm
Height	720 mm

Type **DSZK-1/SZK-1**

MECHANICAL CONTAINER DE-STACKER/STACKER

The device is designed for de-stacking/stacking containers in a container unloading system

OPERATION

Two container posts stack on top of each other enter the de-stacker. Paws placed on the sides of the de-stacker grab the container located at the top and then raise it to a height that allows the lower container transported by chain conveyor to leave. Then, when the lower container completely leaves the working space of the device, the optical sensor gives information to the system to lower the previously raised container to the lower level. After the next container leaves, the operation is completed and the next posts enter the device. In the case of container stacker, the device used is the same - the difference is that all operations happen in reverse to the above described.

ADVANTAGES

- ✓ Accelerates the process of container de-stacking/stacking
- ✓ Reduces the risk of container damage to the forklift operator

TECHNICAL SPECIFICATION

Lifting capacity	1500 kg
Max. lifting range	1200 mm
Drive	5,5kW + 2,2kW
Gripper cylinder type	D80 skok 100
Supply voltage	3 x 400 V 50 Hz
Dimensions [L-W-H]	3360 mm x 2780 mm x 3950 mm
Weight	1500 kg

Type **WPD-1**

MECHANICAL CONTAINER LIFT

The device is designed for lifting containers in a container unloading system

OPERATION

A single container with drawers enters the mechanical elevator. After reaching the appropriate position, special gripping arms slide into the side openings of the container and then raise it to a height that allows you to push the containers out of the lower level of the container using a de-stacker. After the depalletizer empties a whole row of containers, the elevator leaves the container one level lower. The operation is repeated until the entire container is emptied of the containers. After completing all operations, the container leaves the window using a chain conveyor.

ADVANTAGES

- ✓ Designed for high performance
- ✓ Faster than a scissor conveyor
- ✓ Simple design for easy servicing

DANE TECHNICZNE

Lifting capacity	1500 kg
Max. lifting range	1200 mm
Drive	5,5kW + 2,2kW
Gripper cylinder type	D80 skok 100
Supply voltage	3 x 400 V 50 Hz
Dimensions [L-W-H]	3360 mm x 2780 mm x 3950 mm

Type **PN-09/2,5**

CONTAINER SCISSOR LIFT

The device is designed for lifting containers in a container unloading system

OPERATION

A single container with drawers drives onto a hydraulic lift. After reaching the appropriate position, the lift starts and begins to raise it to a height that allows pushing the containers out of the lower level of the container using a de-stacker. After the de-stacker empties the entire row of containers, the lift leaves the container one level lower. The operation is repeated until the entire container is emptied of the containers. After completing all operations, the container leaves the device using a chain conveyor.

ADVANTAGES

- ✓ Steel galvanized construction with increased strength
- ✓ Simple design for easy servicing

TECHNICAL SPECIFICATION

Lifting capacity	2000 kg
Max. lifting height	1600 mm
Table dimensions	2500 x 900
Power supply type	mini supplier 8,3 l/min
Oil tank capacity	10 l
Motor supply voltage	3 x 400 V 50 Hz
Engine power	3 kW
Type of working medium	Viscosity hydraulic oil 20÷400 mm2/s

Type **TP-1**

HORIZONTAL CHAIN CONVEYOR FOR CRATES

The horizontal chain conveyor is used to transport the containers in which the poultry is delivered to the slaughterhouse.

OPERATION

The conveyor consists of a driving segment, a tensioning segment and a straight element. The conveying element is a special double-row chain made of pl. The conveyor system is designed individually depending on the customer's needs. It is possible to create many configurations, i.e. elevating conveyors, straight sections or curves

ADVANTAGES

- ✓ High load-bearing capacity
- ✓ Long service life of conveyor components
- ✓ Adjustable conveyor height
- ✓ Individual design and execution

TECHNICAL SPECIFICATION

Lenght L	2-10 m
Wigth	700 mm customizable
Height	400 mm - 700 mm
Installed power	Depending on conveyor lenght from 0,12 kW to 1,5 kW

Type **TPK**

CONTAINER CONVEYOR

The container conveyor is used for horizontal transport of containers in a container unloading system.

OPERATION

The conveyor consists of a drive segment, a tensioning segment and a straight element. The conveying element is a special double-row chain made of plastic. The conveyor system is designed individually depending on the customer's needs. It is possible to create many configurations, i.e. straight, transverse, rotary and mounted on air cushions or actuators.

ADVANTAGES

- ✓ Easy to wash and maintain
- ✓ Simple construction made of closed profile
- ✓ Many possibilities to configure the length and width of the device

TECHNICAL SPECIFICATION

The installed capacity depends on the slaughter capacity and the type of live poultry containers

Lenght L	3-5 m
Wight	1200 mm or 2100
Height	400 mm - 700 mm
Installed power	Depending on conveyor type from 1,5 kW to 2,2 kW
Power	400 V 50 Hz
Chain type	UNI 2700

Type **DP-1**

CRATE DE-STACKER

The device is used to de-stack a column of crates with live birds consisting of 7 or 8 containers and feed them individually to the chain conveyor .

OPERATION

The stacks of containers are introduced into the machine by means of a scissor conveyor, placed directly in front of the de-stacker, and a two-row chain conveyor before the de-stacker. Once the two stacks of containers are in position, the conveyor stops and the lifting table raises the stacks to such a height that the gripper holds the second lowest row of containers. The table with the lowest crates is lowered and the chain conveyor takes the two crates out of the de-stacking machine. After the crates have been brought out, the table rises to its highest point, the gripper lets go of the crates, then the table lowers to a level so that the gripper can hold the second lowest row of crates. The table is lowered and so on until all the crates have been removed from the de-stacking machine

ADVANTAGES

- ✓ Maintenance-free
- ✓ Easy cleaning and maintenance

TECHNICAL SPECIFICATION

The installed power depends on the slaughter capacity and the type of live poultry crates

Type **TPO**

BIRD CRATE INVERTER

The crate inverter places the empty crates in the desired position.

OPERATION

The system for rotating live poultry crates works in such a way that the empty crate which is automatically moved by the power of the chain conveyor, is delivered to the interior of the automatic dirty crate washer. This system is used exclusively with the live poultry crate washer. The transport element for the crates is a special double-row plastic link chain.

The set of chain conveyors included in the system are:

- rising inclined conveyor - with one drive

- a flat, double-row conveyor with two drives

The system is mounted behind a double-row horizontal chain conveyor (construction and design are very similar) on which the containers are moved. Empty crates are transported to the inclined conveyor, then they move to the horizontal double-row conveyor. The chain levels in the conveyor are designed in such a way that the crate rotates by gravity by 90o and gets into a position allowing its free entrance into the washer.

ADVANTAGES

- ✓ Maintenance free
- ✓ Simple design for easy cleaning and maintenance

TECHNICAL SPECIFICATION

Power of the inclined conveyor	0,37 kW
Power of the flat conveyor	2 x 0,37 kW
Power supply	400 V/ 50 Hz

Type **MP-1/2; MPL-1/2**

od 100 - 850 pojemników/h

LIVE BIRD CRATE WASHER

The crate washer is used to clean the crates in which the poultry is delivered to the slaughterhouse. In the picture from the left - vertical container washer and horizon container washer on the right.

OPERATION

Dirty crates enter the washer directly on the chain conveyor which transports them along the washing nozzles. Spraying and water circulation inside the washer is caused by appropriate pressure pumps selected according to the size and capacity of the washer. The washer includes a rotary screen whose task is to separate waste from water. There is also a washing liquid dispenser installed in the washer - the application of a suitable chemical agent increases the washing effectiveness.

ADVANTAGES

- ✓ High effectiveness of cleaning
- ✓ The use of a screen allows for continuous recirculation of water

TECHNICAL SPECIFICATION

Washer type	MP-1	MP-2	MPL-1	MPL-2
Length	3000 mm	4100 mm	3500 mm	4500 mm
Width	1250 mm		1730 mm	
Power supply	400 V; 50 Hz		400 V; 50 Hz	
Water consumption	Od 200-400 l/h (depending on washer size and capacity)		Od 200-400 l/h (depending on washer size and capacity)	
Water connection	¾" cold water		¾" cold water	
Pump power	1 x 6 kW	2 x 6 kW	2 x 6 kW	3 x 6 kW
Weight	630 kg	850 kg	970 kg	1250 kg

In addition to the above, we can make a washer of a different length, tailored to the customer's needs.

KILLING AND DEFEATHERING

CHICKEN

CHICKEN

TURKEY

GOOSE

Modern methods and machines to guarantee a humane slaughter process.

Fully optimised equipment, adapted to the investor's resources and expectations. Wide range of plucking machines and carcass scalders made to customer specifications.

COMPACT SLAUGHTERHOUSE

500 pcs/h do 1000 pcs/h

300 pcs/h

125 pcs/h female turkey,
75 pcs/h male turkey

COMPACT CONTAINER SLAUGHTERHOUSE

Sample specification for equipment with a capacity of 500 chickens per hour

1. Overhead chain conveyor
2. Water-bath stunner
3. Bleeding trough B=500, L=4600
4. Poultry scalder B=400, L=4800
5. Inline plucker SL-2/32
6. Head puller
7. Evisceration trough B=800 L=2500
8. Foot cutter SEK-1
9. Inside carcass washer
10. Manual evisceration fork, stainless steel
11. Control cabinet

OPERATION

The compact container slaughterhouse includes all necessary equipment used in poultry slaughterhouses. The base of the system is a stainless steel frame on which the equipment is installed and an overhead conveyor with shackles adapted to the poultry being slaughtered. The system fits into a standard 40-foot container and in order to start it up, it is only necessary to supply the necessary utilities, i.e. water, electricity and, in the case of the system version with the scalding tank supplied through a pipe exchanger, to provide the system with an external heat source. A control cabinet integrated with the system allows for easy control and making changes in the slaughter process parameters.

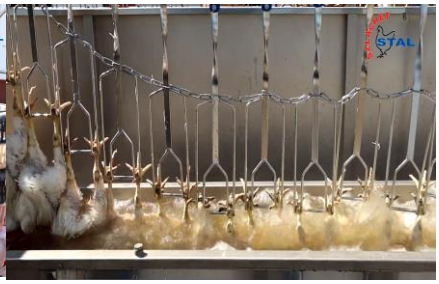
ADVANTAGES

- ✓ Compact structure
- ✓ Easy to installing and launching

TECHNICAL SPECIFICATION

	Slaughter of chickens 500 pcs/h	Slaughter of ducks 300 pcs/h
Process parameters	Scalding temperature: 57-59°C Scalding time: 3 minutes	Scalding temperature: 57-59°C Scalding time: 3 minutes
Overhead chain conveyor length	25 m	25 m
Water-bath stunner	Width 400 mm Length 1000 mm	Width 400 mm Length 1000 mm
Bleeding trough	Width 500 mm Length 4600 mm	Width 500 mm Length 4600 mm
Poultry scalder	Width: 400 mm Length: 4800 mm Length ofn scalding track: 3600 mm	Width: 400 mm Length: 4800 mm Length ofn scalding track: 3600 mm
Plucker	Inline plucker SL-2/32	Inline plucker SLB-P /56
Evisceration trough	Width 800 mm Length 2500 mm	Width 800 mm Length 2500 mm





Type **GWE-K/I**

ELECTRIC WATER BATH STUNNER

The device is used to stun poultry intended for slaughter by means of electric current. It guarantees a humane poultry slaughter process.

OPERATION

Poultry destined for stunning are transported directly to the machine on the slaughter conveyor's shackles.

Control cabinet - according to current requirements:

- voltage adjustment in the range from 0 to 230 V
- Frequency adjustment up to 800 Hz

The aforementioned parameters allow for a current of 0,125 A per bird in the device (0,15 A for turkey, 0,13 A for duck and goose).

ADVANTAGES

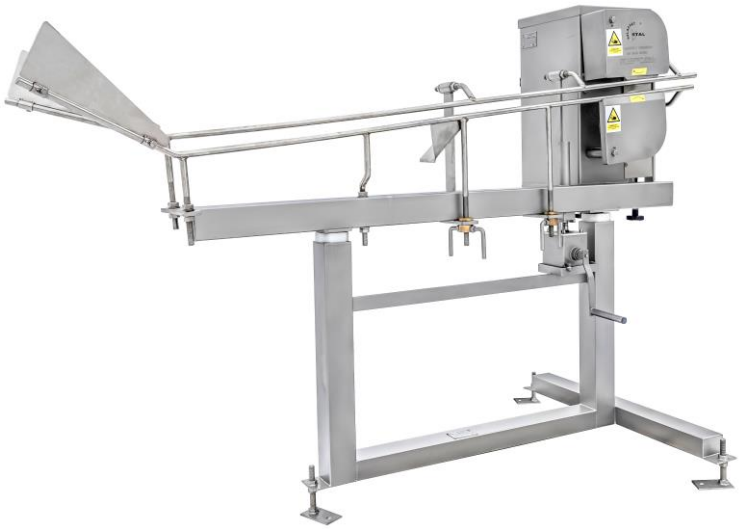
- ✓ Records stunning parameters
- ✓ Guarantee of humane slaughter of poultry in compliance with veterinary requirements
- ✓ Simple design, easy maintenance
- ✓ Possibility of adapting the stunner to any slaughter line, thanks to the height-adjustable device

TECHNICAL SPECIFICATION

Dimensions	Length= depends on capacity and poultry size Width= 400 (chicken), W=650 (turkey) Height= adapted to the height of the shackles and the size of the poultry

Type **PG-2**

AUTOMATIC POULTRY KILLING MACHINE



The head cutter is designed to automatically cut the arteries in necks of poultry suspended on conveyor shackles, immediately after stunning with an electric stunner.

OPERATION

The poultry heads, suspended on slaughter conveyor shackles, are placed on guides which guide the bird's head onto the cutting knives. The incisions are made with rotary knives whose positioning (and depth of the cut) can be easily adjusted. Due to the varying sizes of poultry being slaughtered, constant monitoring of the machine is necessary.

ADVANTAGES

- ✓ Adjustable positioning of blades

TECHNICAL SPECIFICATION

Capacity	Up to 9000 pcs/h
Type of work	Continuous
Blade revolutions	1400 rpm
Dimensions:	Length= 2065 mm Width= 800 mm Hmin.=1355 mm, Hmax= 1655 mm Weight= 112 kg
Blade dimensions	Ø 200 x 2,8

Type **UG-1**

HEAD PULLER

The head remover is used to tear off the previously cut heads of birds in technological poultry slaughter lines.

OPERATION

The carcasses are delivered to the puller on overhead conveyor shackles. The capacity of the machine is limited by the speed of the conveyor. The height and position of the puller are also adapted to the conveyor height. The head puller is a free-standing device. To ensure stability it must be fixed to the floor.
Upon request the head puller can be susended from the conveyor.

ADVANTAGES

- ✓ Simple design for easy cleaning and maintenance
- ✓ High mechanical strength of the device

Type **UG-2**

HEAD PULLER WITH DRIVE UNIT

The head puller is used to tear off the heads of poultry after the neck has been cut. It is designed for continuous operation in typical poultry slaughter lines (usually installed after the plucking operation).

OPERATION

The device has its own drive consisting of a geared motor, which is selected appropriately to the line's capacity and the Investor's needs. The construction of the machine allows for angle adjustment of the tearing guides and also height adjustment by means of a screw jack, which makes it possible to adjust the puller to the size of the poultry being slaughtered. The plate conveyor fitted in the puller with special scrapers ensures fast delivery of the broken heads to the point of dispatch (containers, pneumatic transport hoppers, etc.). Speed adjustment to slaughter capacity is carried out by means of a control box with frequency inverter.

ADVANTAGES

- ✓ Angle adjustment of pulling guides
- ✓ Adjustable unit height
- ✓ Adjustable speed to slaughter capacity

TECHNICAL SPECIFICATION

Capacity	9000pcs/h
Type of work	Continuous
Installed power	From 0,37 kW to 0,75 kW
Weight	104 kg
Dimensions:	L=1345, W=815, Hmin=1000, Hmax=1250

Type **RW**

BLEEDING TROUGH

The trough is designed for the collection and transport of blood in the slaughter line.

OPERATION

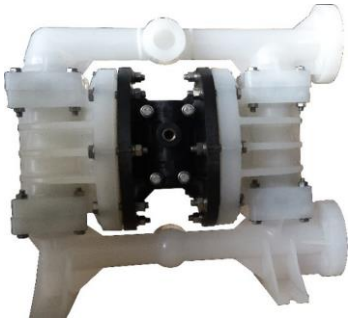
The bleeding trough is entirely made of non-corrosive stainless materials. After cutting the necks, poultry carcasses are transported over the trough suspended on overhead conveyor shackles, thanks to which the blood flows freely to the open trough tank. On the sides of the trough there are mounted guards protecting the surroundings against contamination. The dimensions, i.e. length, width, height as well as the shape of the bleeding chute are customised according to the size of the poultry, the capacity of the slaughter line and the available space.

ADVANTAGES

- ✓ Non-corrosive materials used in production guarantee a long life of the trough
- ✓ Possibility to fully design a trough according to customer requirements
- ✓ Easy cleaning

Type **PE-10**

BLOOD PUMP



The blood pump is used to transport blood from the bleeding trough to its destination.

OPERATION

The plastic pump is installed inside the bleeding chute. The purpose of the diaphragm pump is to collect and transport blood through a system of stainless steel tubes to any destination. The device is equipped with special valves of the Max-Pass system, enabling transport of particles up to 19 mm in size. For proper pump operation, only a compressed air connection is required.

ADVANTAGES

- ✓ Ability to transport larger particles
- ✓ High mechanical strength of the pump material.

TECHNICAL SPECIFICATION

Weight	9 kg
Maximum capacity	155 l/min
Maximum air pressure	8,2 bar
Maximum size of particles	∅19 mm

Type **OD-1/2/3**

200 pcs/h up to 12000 pcs/h

80 pcs/h up to 3000 pcs/h

POULTRY SCALDER

The device is used for scalding all types of poultry carcasses in hot water, in order to prepare them properly for plucking.

OPERATION

The slaughtered and bled birds are transported to the scalding tank on the shackles of the slaughter conveyor. In the scalding tank the bird is immersed in hot water for an appropriate period of time. When the scalding process is carried out correctly, the bird is satisfactorily plucked of its feathers. Penetration of water between the feathers is facilitated by pumps installed in the scalding tank or special air turbines, which force the water to move in the scalding tank. Moreover, the turbines stop the hot steam escaping from the scalding tank and inject it back into the water, causing its continuous mixing. Depending on the location and course of the production line, the scalding tank may be single, double, triple or even quadruple lane.

ADVANTAGES

- ✓ Each scalding design is made individually, taking into account the real needs of the Investor.

TECHNICAL SPECIFICATION

Overall dimensions:	L= depends on capacity and poultry size
Heating system	Hot water or steam heat exchanger
Temperature control	Adjustable, automatic
Water stirring	Landfowl – side-channel blower Waterfowl - water pumps

Type **USB**

700 pcs/ with drum ∅800,
1500 pcs/h with drum ∅950

150 pcs/h

DRUM PLUCKER

The device is used to remove feathers from birds and can be used for plucking all types of poultry.

OPERATION

The correct size of the drum, the hardness of the rubber fingers fixed in the drum and a correctly adjusted speed ensure excellent quality of the plucked carcasses. The diameter of the drum is adjusted according to the size of the carcasses to be plucked. Both the materials used and easy access to those parts of the plucking machine which come into contact with poultry during operation and require frequent cleaning ensure that the machine can be kept appropriately clean. Plucking machines can be used for all types of poultry. For smaller carcasses (e.g. chicken, a plucking machine with drum diameter of 800 mm is sufficient, whereas for large carcasses, e.g. turkey, a plucking machine with drum diameter of 950 mm should be used).

ADVANTAGES

- ✓ Thorough feather removal
- ✓ Easy to operate and maintain

TECHNICAL SPECIFICATION

Diameter of the drum	∅800, ∅950
Length	1450 mm
Width	850 with drum ∅ 800 1000 with drum ∅950
Installed power	∅ 800 - 2,2 kW; ∅950 - 3,0 kW
Weight	∅ 800 - 195 kg; ∅950 – 240 kg

Type **SLB**

BEAM PLUCKER

The beam plucking machine is used to remove feathers from all types of poultry.

OPERATION

Each beam, which carries a row of plucking heads, is driven by a separate electric motor, which is housed in a stainless housing. The plucking machine is equipped with mechanical jacks which make it possible to adjust the height of plucking beams. Depending on the size of the slaughtered poultry, the beams with plucking heads can be appropriately positioned in relation to the passing carcasses.

ADVANTAGES

- ✓ Plucking beam height adjustable
- ✓ Easy beams adjustment

TECHNICAL SPECIFICATION

Device type	SLB-48	SLB-72	SLB-96	SLB-144
Installed power	4 x 2,2 kW	6 x 2,2 kW	12 x 2,2 kW	12 x 2,2 kW
Plucking length	1050 mm	1600 mm	2100 mm	3200 mm
Device length	1300 mm	1800 mm	2310 mm	3900 mm
Beams qty		6		12
Power supply		400 V; 50 Hz		

Type **SLB-I 3/66**

3-AND-4-ROW TURKEY BEAM PLUCKER

Beam plucker is used for removing feathers from male and female turkey carcasses

OPERATION

The basic elements of the plucking machine are a frame with 4 posts and 3 or 4 plucking beams hung on both sides on 2 posts. Two opposite upper beams are equipped with flat heads, on which rubber fingers are mounted. The other beams are equipped with spatial heads. Horizontal adjustment of beam spreading is made with a system of levers and worm gear driven electrically or manually. Vertical adjustment of the beams fixed on the poles is done with worm gears and a vertical gear bar fixed on the poles (there are 3 or 4 gears on one bar). The poultry, suspended on shackles, is introduced by a chain conveyor between rotating plucking discs. Both the angle of the beams and the distance of the rubber fingers from the plucked poultry are adjustable.

ADVANTAGES

- ✓ Vertical adjustment of the beams
- ✓ Adjustable angle of beams and distance of fingers from the plucked bird

TECHNICAL SPECIFICATION

	SLB-I 3/66	SLB-I 4/98
Plucking length	2430 mm	2800 mm
Frame length	2800 mm	3100 mm
Frame width	2300 mm	2300 mm
Number of beams	6 pcs	8 pcs
Number of heads	66 pcs	98 pcs
Installed power	4 x 2,2 kW- top beam 4 x 3,0 kW – middle and bottom beams	16 x 2,2 kW

Type **SLB-W**

BEAM WAX PLUCKER

Linear beam wax plucking machine, used to remove wax from waterfowl poultry carcasses during the slaughter process.

OPERATION

A wax plucking machine is a free-standing device with plucking discs made of stainless steel, equipped with special rubber fingers for easy removal of wax from the carcass. Basic elements of the plucking machine are: frame with posts (4 pcs.), beams - 3 pcs. on both sides - symmetrically suspended on 2 posts. Horizontal adjustment of beam spreading is carried out with a system of levers and worm gear driven electrically or manually. Vertical adjustment of the beams mounted on the poles is done using worm gears and a vertical toothed bar, mounted on the poles (there are 3 gears on one bar). The poultry, suspended on shackles, is introduced by a chain conveyor between rotating plucking discs. Both the angle of the beams and the distance of the rubber fingers from the plucked poultry are adjustable.

ADVANTAGES

- ✓ Adjustable angle of individual beams and distance of plucking heads from passing carcasses
- ✓ Easy adjustment of the device

TECHNICAL SPECIFICATION

Installed power	12 x 1,5 kW
Power supply	380 V
Number of beams	6 pcs
Number of heads	78 pcs

Type **SLR-32/40**

IN-LINE ROTARY PLUCKER

The in-line rotary plucker is designed for defeathering of all types of poultry.

OPERATION

The rotary in-line plucker is a free-standing device. The plucking machine is equipped with mechanical lifts and a horizontal adjustment system, used to adjust the position of the plucking head housings. Depending on the size of the slaughtered poultry, the casings with picking heads can be properly positioned in relation to the passing carcasses. The great advantage of this plucking machine is its compact and simple design, which allows you to keep the device clean and easy access to parts requiring replacement.

ADVANTAGES

- ✓ Easy adjustment of the position of the picking heads in relation to passing carcasses
- ✓ Easy maintenance

TECHNICAL SPECIFICATION

	SLR-16	SLR-32	SLR-40
Power supply	4 x 2,2 kW	8 x 2,2 kW	10 x 2,2 kW
Picking heads quantity	16	32	40
Picking lenght	1100 mm	2200 mm	2750 mm
Frame lenght	1520 mm	2600 mm	3150 mm
Frame width	2200 mm	2200 mm	2200 mm
Height (customizable)	2500 mm	2500 mm	2500 mm

Type **SL-2**, **SL-3**

2 AND 3-ROWS IN-LINE PLUCKER

The in-line plucker model SL-3 is designed for defeathering all types of poultry.

OPERATION

The SL-3 picker can be equipped with 60, 72 or 96 picking heads, with each head containing 12 rubber fingers. The picking heads are driven with special endless belts, with each row of heads powered by a separate electric motor, placed in a stainless steel enclosure. The plucker is equipped with hydraulic lifts for adjusting the position of the picking head casings. The position of picking head casings towards the transported carcasses can be adjusted to match the bird size. The SL-3 picker is designed to co-operate with conveyors and shackles manufactured by Szlachet – Stal. If you have conveyors from other manufacturers, please consult our company for adapting the picker to the existing conveyor.

ADVANTAGES

- ✓ Possibility to adjust the position of the housings with heads in relation to the passing carcasses

TECHNICAL SPECIFICATION

3-rows plucker	**SL-3/48**	**SL-3/60**	**SL-3/72**	**SL-3/96**
Installed power	6 x 2,2 kW	6 x 3,0 kW	12 x 1,5 kW	12 x 2,2 kW
Water consumption	~ 500 l/h			
Weight	1500 kg	1850 kg	2100 kg	2720 kg
Lenght of the device	2 450 mm	2 850 mm	3 610 mm	4 450 mm
Dimensions of the device	Width: 1930 mm, Height: 2375 mm			
2-rows plucker	**SL-2/40**	**SL-2/64**	**SL-2/80**	
Installed power	4 x 3,0 kW	8 x 2,2 kW	8 x 3 kW	
Picking lenght	2100 mm	3360 mm	4200 mm	
Lenght L	3 450 mm	4 750 mm	5 550 mm	
Power supply	400 V, 50 Hz			

Type **SO-1**

TAIL FEATHER PLUCKER

Tail feather plucker is designed for removing feathers from the coupr of goose carcasses.

OPERATION

The basic element of the picker is the frame, to which two rollers are mounted for plucking the feathers. Height adjustment is performed by means of a screw elevator mounted in the lower part of the picker. The picking process – removal of tail feathers – should take place after carcasses have been scalded. Additionally, the picker is equipped with the following:

- a separate transport mechanism (driven by the overhead slaughtering conveyor), designed for positioning the shackles with carcasses during tail feather removal,

-a compressed air supply system from a side-channel blower, with a blade nozzle, designed for supporting, with the force of air-stream, the introduction of tail feathers between the plucking rollers.

ADVANTAGES

- ✓ High accuracy and efficiency in plucking thanks to the positioning system
- ✓ The height of the device is adjustable

TECHNICAL SPECIFICATION

Installed power	2 x 1,1 kW
Air blower power	3,0 kW

Type **SLK**

FINISHING IN-LINE PLUCKER

Finishing in-line picker, type SLK, is designed for final picking of tails or yellow skin above the chicken carcass feet (the so-called „socks")

OPERATION

The main part of the device consists of two rotating beams with cleaning rubber fingers. Each beam is driven by a separate electric motor, located in a stainless steel housing. The plucking machine is equipped with a mechanical lift, enabling the height adjustment of each of the picking bars in relation to the size of the passing carcasses.

ADVANTAGES

- ✓ Possibility to set the height of the picking beam and the distance between the beams.
- ✓ Compact housing
- ✓ Easy maintenance

TECHNICAL SPECIFICATION

Installed power	2 x 1,5 kW
Plucking beams quantity	2 pcs.
Plucking fingers quantity per beam	144 pcs.
Length of the device	1 000 mm
Width of the device	1 100 mm
Height of the device	1 300 mm
Weight	235 kg
Height	customizable

Type **MSK-1**

COMBINED WASHER AND PLUCKER

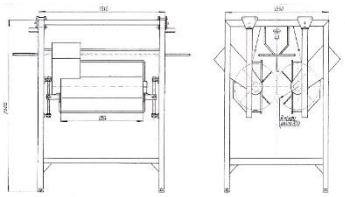
The MSK-1 combined washer and picker is designed for thorough cleaning of carcasses of loose feathers and other remainders of processing in in-line pickers.

OPERATION

Poultry carcasses are transported in shackles of the overhead conveyor between axial guides, which double as spraying collectors. The counter-rotating shafts with rubber fingers (L=265 mm) and the water spray shower from the collectors ensure thorough washing and clean the feathers left over from basic picking operations as well as other impurities. Design of the combined washer and picker allows for adjusting the spacing and height of picking shafts and water shower to match the bird size.

ADVANTAGES

- ✓ Compact design
- ✓ High cleaning efficiency of the carcass
- ✓ Possibility to adjust the height of the nibbling rollers and water spray
- ✓ The device can be adapted to the size of a passing carcass.



TECHNICAL SPECIFICATION

Dimensions:	**Length:** 2000 mm **Width:** 1600 mm **Height:** 2400 mm **Weight:** 350 kg

Type **MTP,MTW**

SPRAY CARCASS WASHER

The device is designed for washing all types of poultry carcasses in poultry processing lines.

OPERATION

Poultry carcasses are washed by water spraying from nozzles located on both sides of the washer. For washing large carcasses (e.g. turkeys), water is sprayed from all nozzles installed in the washer. For washing smaller carcasses (e.g. chickens) it is possible to shut off water supply to lower nozzles, which ensures proper and efficient water usage. Capacity of the spray washer is adjusted to the line capacity by choosing appropriate washer length and number of nozzles. At customer's request, the washer can be constructed in a version that can be suspended from the supporting structure of the conveyor or on free-standing construction.

ADVANTAGES

- ✓ High washing efficiency
- ✓ Maintenance free

TECHNICAL SPECIFICATION

Demand	Cold water
Lenght	Standard L=900 mm
Weight	23/42 kg

Type **MS-700/900**

SHACKLE WASHER

The washer is used for thoroughly clean of the shackles during slaughtering process.

OPERATION

The shackles are transported on an overhead conveyor, they drive between the concurrently rotating brushes and, in cooperation with the spray nozzles, they are washed. The shackle washer is suspended to the supporting structure of the overhead conveyor. The washer is available in two variants, depending on the length of the washing brush.

ADVANTAGES

- ✓ Possibility of suspending in any place on the slaughtering processing line
- ✓ Possibility to wash the shackles of any shapes and size
- ✓ Maintenance-free

TECHNICAL SPECIFICATION

Machine type	MS-700	MS-900
Dimensions	L=800 W=700 H= 1400 Weight= 98kg	L=800 W=700 H= 1600 Weight= 104 kg
Water consumption	Approx. 1 m^3/h	

Type **SEK-1/2**

MANUAL NECK AND FOOT CUTTER

The manual cutter is designed for cutting feet, necks or wings of poultry carcasses.

OPERATION

The basic element of the cutter is the pneumatic mechanism, fitted with scissors made of specially hardened stainless steel. The shape and size of the scissors is adjusted to the size of processed birds, and thus to the size of cut elements (turkey, chicken, duck or goose parts).Compressed air is supplied to the cutter through a hose, from a filtering and reduction unit, to ensure proper and reliable operation of the cutter.

ADVANTAGES

- ✓ Widely applicable
- ✓ Easy operation and maintenance
- ✓ Compact size

TECHNICAL SPECIFICATION

Capacity	Up to 2000 pcs/h (elements)
Compressed air demand	90 l/min
Compressed air pressure	8-10 bar
Weight	700 g

Type **SEK-3**

MANUAL CUTTER

The manual cutter (pruner) is designed for cutting feet, necks or wings of poultry carcass. It is destined to chicken, duck, geese, turkey.

OPERATION

The basic element of the cutter is a pneumatic cylinder equipped with scissors made of specially hardened stainless steel. The shape and size of the scissors are designed so that the cutter can be used for cutting elements of different sizes for processing during slaughtering (elements of turkey, chicken, duck, goose).Compressed air, supplied to the cutter through a pneumatic conduit, is pre-conditioned in the filtering and reduction unit, which ensures proper and reliable operation of the cutter.

ADVANTAGES

- ✓ Widely applicable
- ✓ Easy operation and maintenance
- ✓ Compact size

TECHNICAL SPECIFICATION

Capacity	Up to 2000 pcs/h (elements)
Compressed air demand	$2m^3/h$
Compressed air pressure	8-10 bar
Weight	4 kg

Type **WŁ-N**

FOOT UNLOADER WITH A DRIVE UNIT „SIMPLE”

The „simple” unloader with a drive unit is designed for unloading feet from shackles of the overhead conveyor.

OPERATION

The frame is mounted to the supporting structure of the overhead conveyor. After starting the conveyor, trolleys moving along the track cause rotation of the drive wheel. Then, drive is transferred by the chain transmission and gear wheels to the rubber cogbelts. Immobilised by the clamped belts, shackles move along the unloading strip, and feet are pushed upwards and fall into the container below.

ADVANTAGES

- ✓ High unloading effectiveness: about 96%

TECHNICAL SPECIFICATION

Compatibility	Shackles without racks
Capacity	Corresponding to the amount of processed birds
Unloading strip	Shape and size adjusted to foot type

Type **OBŁ-P**

SUSPENDED FOOT CUTTER

The suspended foot cutter is designed for cutting chicken and hen feet in a poultry slaughtering line.

OPERATION

The fixed frame of the cutter is mounted to the supporting structure of the overhead conveyor – over a 180° or 90° curve. The carrier disk of the cutter is mounted coaxially with the turning wheel of the curve. In special cases, the cutter can also be mounted at a straight section of the conveyor. Carcasses transported in shackles of the conveyor are positioned and stabilised by the carrier disk before cutting. The sliding beam, with the drive unit, fixed to the frame, can be used for adjusting the blade angle and foot cut height – depending on the size of processed birds.

ADVANTAGES

- ✓ High cutting effectiveness

TECHNICAL SPECIFICATION

Capacity	Up to 3000 pcs/h
Dimensions:	**Lenght** = 675 mm **Width** = 450 mm **Height** =450 mm **Weight** = 57 kg

Type **OBŁ-A**

AUTOMATIC FOOT CUTTER

The automatic foot cutter is designed for cutting chicken feet in a poultry slaughtering line.

OPERATION

The cutter is suspended from the supporting structure of the overhead chain conveyor. Carcasses, transported in shackles of the conveyor, are placed on the wheel, which transfers them to the blade during rotation. The blade and transferring wheel adjustment system is designed so that it allows for adjusting the cut height to match bird size without the need to stop the slaughtering process. Another benefit of the system is the possibility of adjusting the blade so that the cut is always performed precisely at the knee joint.

ADVANTAGES

- ✓ High cutting effectiveness
- ✓ A simple and reliable adjustment method allows for precise cut across the line of joint.

TECHNICAL SPECIFICATION

Capacity	Up to **9000 pcs/h**
Dimensions:	**Length** = 1100 mm **Width** = 1600 mm **Height** =1820 mm **Weight** = 195 kg

Type **APT-16**

CARCASS REHANGER

The carcass rehanger is designed for automatic cutting of feet and rehanging carcasses from the slaughtering line to the evisceration line. The chicken weight range is 800 g to 2500 g, but it must be kept in mind that for proper functioning of the rehanger the batch weight range must be balanced.

OPERATION

The slaughtering line and the evisceration line shafts are fitted with transmission and rotation generator, which are connected with the electronic control system of the machine for synchronising speeds of both lines.
The rehanger is directly connected with and powered by both the slaughtering line and the evisceration line, whose speeds are synchronised by the electronic control system.
Chickens enter the rehanger from the slaughtering line. Then the cutter automatically cuts their feet, which releases them from the slaughtering line. The central shaft transfers them to the evisceration line.

TECHNICAL SPECIFICATION

Overall dimensions	L=2900mm, W=1500 mm, H=2500 mm
Installed power	Feet cutting 1,1 kW
Weight	910 kg

CHICKEN

CHICKEN

TURKEY

GOOSE

EVISCERATION

To meet our Client's expectations we are constantly improve our technology to fully automate the evisceration process. In our assortment you can find devices for manual evisceration as well as fully automatic evisceration line. Our lines are distinguished by a reliable structure and simplicity of operation, which makes them easy to use. The minimum slaughtering capacity for automatic evisceration machines is 800 pcs /h, and the maximum is 8000 pcs / h. The automatic evisceration process is an ideal solution for entrepreneurs who want to reduce the qunatity of employees, as well as for those who struggle with the problem of frequent rotation of employees at this stage of poultry processing.

Type **WT-2**

CARCASS UNLOADER

The carcass unloader is designed for releasing carcasses from shackles of the overhead conveyor in manual or automatic evisceration lines.

OPERATION

The carcass unloader is made of stainless, acid-resistant materials. It is suspended from the supporting structure of the overhead conveyor. The main parts of the unloader include: a frame, a wheel with carriers, guides and releasing rods. Carcasses transported in shackles of the overhead conveyor (after their feet are cut) are guided between the carriers and pressure belts, where they are automatically pushed off the shackles by rotation of the carrier wheel. The unloader is driven by the chain conveyor over a 180° curve.

ADVANTAGES

- ✓ Operatorless work
- ✓ Simple design and the choice of materials, which allows for proper cleaning of the machine.

TECHNICAL SPECIFICATION

Weight	90 kg

Type **AS**

600 up to8000 pcs/h

AUTOMATIC VENT CUTTER

The device is designed for automatic vent cutting. The machine is placed as the first one in the evisceration line. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Birds enter the device with their backs towards the inside of the machine. Chicken carcass suspended on the shackle of the chain conveyor is clamped with a special grab so that the cutting knife makes a cut in the right place. The automatic vent cutter works with a vacuum pump which is destined for transporting cut steak to the tank.

ADVANTAGES

- ✓ Maintenance-free
- ✓ High opeartion effectiveness
- ✓ Non-corrosive materials used for manufacturing the device

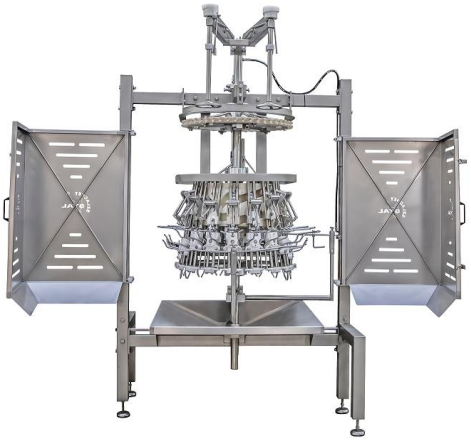
TECHNICAL SPECIFICATION

Variant	Capacity pcs/h	Vent cutting sections quantity	Shackle distance in inches	Weight kg
AS 8/8”	4000	8	8	558
AS 10/6”	4000-5000	10	6	558
AS 12/8”	6000	12	8	600
AS 16/6”	8000	16	6	530

Type **AR**

600 up to 8000 pcs./h

AUTOMATIC VENT OPENER



The device is designed for automatic cutting of skin from the vent to the breast bone, starting at the opening cut by the vent cutter. The device is placed as the second one in the evisceration line. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Birds enter the device with their backs towards the inside of the machine . The device is of carousel type, driven by the overhead conveyor. The cutter assembly, fitted with an exceptionally sharp blade, provides a uniform and clean cut. The blade holder is designed so that the viscera are pushed away from the cutline, which prevents infection. After every turn, the cutting heads are washed and cleaned.

ADVANTAGES

- ✓ High operation effectiveness
- ✓ Maintenance-free
- ✓ Non-corrosive materials used for manufacturing the device

TECHNICAL SPECIFICATION

Water consumption : about 0,45 m³/h

Variant	Capacity pcs/h	Cutting sections quantity	Shackle distance in inches	Weight kg
AR 9/8”	4000	9	8	311
AR 10/6”	4000-5000	10	6	311
AR 12/8”	6000	12	8	530
AR 16/6”	8000	16	6	530

Type **AP**

600 up to 8000 pcs./h

AUTOMATIC EVISCERATOR

The device is used for automatic removal of internal organs from chickens. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Birds enter the device with their backs towards the inside of the machine. Their position is fixed by the foot loop, wing grip and the activated breast plate. The eviscerating spoon is guided along the chicken, along the sternum up to the throat. Then it is turned towards the back part of the chicken and taken out with the viscera. On exiting the device the viscera are released from the spoon. They will hang loosely, attached to the back part of the chicken.

ADVANTAGES

- ✓ High operation effectiveness
- ✓ Maintenance-free
- ✓ Non-corrosive materials

TECHNICAL SPECIFICATION

Water consumption: about 0,9 m³/h

Variant	Capacity pcs/h	Removing sections quantity	Shackle distance in inches	Weight kg
AP 12/8”	4000	12	8	656
AP 16/6”	4000-5000	16	6	1100
AP 18/8”	6000	18	8	1150
AP 24/6”	8000	24	6	1100

Type **AW**

600 up to 8000 pcs./h

AUTOMATIC CROPPING MACHINE

The device is used for automatic cleaning of dewlap skin inside the chicken. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Carcasses enter the device with their backs towards the inside of the device. The guiding rail, placed on the lower guide inserts chickens into the leg guide, where they are fixed. The cleaning mandrel is inserted into the chicken with the help of a slider block. Rotation of the mandrel begins when it enters the chicken and continues until it reaches the throat. Under the chicken, the cropping mandrel is cleaned with a brush, while still rotating. After cleaning, the rotation stops and the cleaning mandrel is removed from the chicken.

ADVANTAGES

- ✓ High operation effectiveness
- ✓ Maintenance-free
- ✓ Non-corrosive materials

TECHNICAL SPECIFICATION

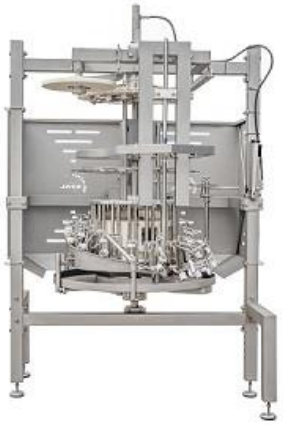
Water consumption : about 0,5 m^3/h

Variant	Capacity pcs/h	Cropping sections quantity	SHackle distance in inches	Weight kg
AW 12/8	4000	12	8	708
AW 16/6	4000-5000	16	6	708
AW 18/8	6000	18	8	700
AW 24/6	8000	24	6	780

Type **AWS**

600 up to 8000 pcs./h

AUTOMATIC NECK REMOVER



The device is designed for automatic separation and removal of necks from carcasses. The machine is placed in the evisceration line, after the automatic cropping machine. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Carcasses enter the machine with their breasts outside and their backs turned towards the centre of the machine. The machine is of carousel type, driven by the overhead conveyor. The neck separation and removal system operates on sliding blocks which move vertically along the bars mounted to the upper and lower plates of the automaton. Rollers which guide the neck separation and removal system move along a specially shaped track.

ADVANTAGES

- ✓ High operation effectiveness
- ✓ Maintenance-free
- ✓ Non-corrosive materials

TECHNICAL SPECIFICATION

Water consumption: approx. 0,6 m³/h

Variant	Capacity pcs/h	Sections quantity	Shackle distance in inches	Weight kg
AWS 9/8	4000	9	8	450
AWS 12/6	4000-5000	12	6	420
AWS 12/8	6000	12	8	510
AWS 16/6	8000	16	6	420

Type **WP**

500 up to 8000 pcs/h

AUTOMATIC LUNG REMOVER

The device is designed for automatic removal of lungs from eviscerated chicken carcasses. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Carcasses enter the device with their backs towards the inside of the device. The guiding rail, mounted to the lower guide, moves chicken legs towards the vacuum lock, and then the vacuum sliding device is shifted downwards along with the sliding block, which activates the vacuum system. It means that if there are no chickens inside the hoop, negative pressure is not applied. The sliding block introduces vacuum hose into the carcass. The vacuum system ensures that the vacuum device is not activated until the end of the suction hose is inside the carcass. Lungs are sucked out of the chicken and sent to the collecting tank through the vacuum system.

ADVANTAGES

- ✓ High operation effectiveness
- ✓ Maintenance-free
- ✓ Non-corrosive materials

TECHNICAL SPECIFICATION

Water consumption: approx. 0,6 m³/h

Variant	Capacity pcs/h	Sections quantity	Shackle distance in inches	Weight kg
WP 9/8	4000	9	8	415
WP 10/6	4000-5000	10	6	359
WP 12/8	6000	12	8	359
WP 16/6	8000	16	6	525

Type **MWZ**

600 up to 8000 pcs./h

AUTOMATIC INSIDE AND OUTSIDE WASHER

The device is designed for automatic external and internal washing of eviscerated chickens. The machine works properly with a carcass whose weight is in the range: 1.6-3.5 kg.

OPERATION

Carcasses enter the device with their breasts or backs towards the inside of the device. The guiding rail, mounted to the lower guide directs them to the rods where they are immobilised. The pressure pipe is inserted into the carcass with the help of a slider. Washing begins after the washing head is inserted into the carcass and continues throughout the lowering and elevating cycle of the head until it is removed from the inside of the carcass. The external washing unit operates continuously.

ADVANTAGES

- ✓ High operation effectiveness
- ✓ Maintenance-free
- ✓ Non-corrosive materials

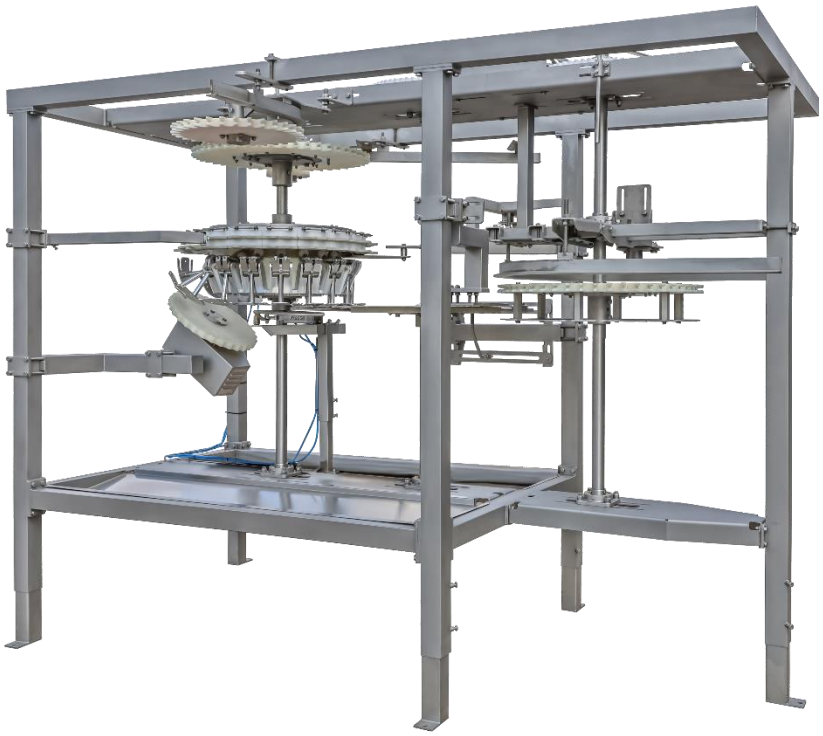
Water consumption: approx. 2m³/h
Air pressure: 6/8 bar

TECHNICAL SPECIFICATION

Variant	Capacity pcs/h	Sections quantity	Shackle distance in inches	Weight kg
MWZ 9/8	4000	9	8	351
MWZ 12/6	4000-5000	12	6	351
MWZ 12/8	6000	12	8	351
MWZ 16/6	8000	16	6	450

Type **APT-P-S**

AUTOMATIC CARCASS HANGER



The carcass hanger is used to automatically hang the carcass from the evisceration line to the chilling line. The weight range of chickens is 1200 g to 2500 g, it should be remembered that for the proper operation of the hanger, the weight of the batch of chickens should be comparable.

OPERATION

The overhanger is connected directly and driven by both the gutting line and the cooling line, whose speeds are synchronized by the electronic control system. Into the overhanger, the chickens are introduced through the evisceration line, and then with the help of the central shaft they are then led to the chilling line.

TECHNICAL SPECIFICATION

Capacity	do 9 000 szt./h
Overall dimensions	L=2900 mm, W=1500 mm, H=2500 mm
Weight	1020 kg

Type **WP-1/2**

LUNG EXTRACTOR

The lung extractor is designed for removing lungs and blood clots from the inside of a poultry carcass.

OPERATION

It is activated by switching on a vacuum pump.
After appropriate vacuum level is obtained, work with guns can begin. The stainless gun end is inserted inside the carcass, the trigger is pressed and lungs, blood clots, water and other evisceration leftovers are extracted. Offal sucked by the guns is collected in the working container, from which it must be removed from time to time.
Offal is removed from the working container manually, through a release valve mounted in the bottom of the container.
Depending on customer's needs, the extractor may be equipped with adequate number of guns and pump with appropriate capacity, which results in the required capacity of the machine.

TECHNICAL SPECIFICATION

Working tank volume	300 l
Lung removing time	2 sek.
Installed power (one lung gun)	2,2 kW

Type **SRP-1**

MANUAL VENT CUTTER

The manual vent cutter is designed for cutting and extracting vents from poultry carcasses.

OPERATION

The main part of the cutter is a two-part body, consisting of a drive unit, actuated by compressed air and a water-air collector (vacuum). A spindle with centring mandrel and blade is screwed to the spindle of the drive unit, through the water-air collector. A special valve with a lever for water supply is mounted to the side of the collector, and in its lower part, a vacuum piston is mounted, whose reciprocating movement is synchronised with the actuating button of the drive unit. The vent cutter can be equipped with one blade with diameter D=22, 25, 31 or 36 mm (according to customer's request). Pressing the release button in the handle activates the vent cutter, by causing rotation of the blade and supplying vacuum to the collector. By inserting the mandrel and blade centrally into the vent, it is cut and sucked into the cutter (by means of the negative pressure),which allows for extracting it from the carcass along with a fragment of the intestine. Releasing the button stops the blade and cuts off vacuum. Subsequent pressing of the water valve lever supplies water into the collector, which pushes the extracted vent and removes impurities from the blade and the centring mandrel.

TECHNICAL SPECIFICATION

Capacity	2100 pcs/h
Water consumption	0,1 m^3/h
Vacuum consumption	20 m^3/h
Compressed air	15-17 m^3/h
Working pressure	6 bar

Type **MW-1 and MW-2**

INSIDE CARCASS WASHER

The inside washer is designed for cleaning the inside of carcasses after the evisceration process.

OPERATION

Holes drilled in the pipe provide proper spraying after supplying water into the carcass. The washing part is finished with a handle. After inserting the pipe into the carcass, water is supplied by pressing the button on the handle. Releasing the button disconnects water. Water is delivered to the washer through a 10mm hose. The hose is available separately. At customer's request, washers with different diameters and lengths (for larger poultry) can be manufactured.

ADVANTAGES

- ✓ Possibility to wash all types of gutted poultry carcasses
- ✓ Compact size
- ✓ Simple design

Type **SBW-1**

INSPECTION STAND

The inspection stand is located in the evisceration room and is designed for veterinary examination of poultry.

OPERATION

Shackles with birds are transported by the overhead conveyor over a stainless steel tub, mounted on a supporting structure made of stainless, acid-resistant materials. The inspection stand should be located at the correct stage of the evisceration process (after the pack has been extracted from the carcass). A mirror mounted to the supporting structure provides the veterinarian with the possibility to thoroughly inspect the bird (from both sides). The stand is also fitted with a tool sterilizer, a warm water tap with a knee-operated valve and a time-lag switch, which allows the veterinarian to perform the inspection in a hygienic way.

ADVANTAGES

- ✓ Heavy-duty design

TECHNICAL SPECIFICATION

Total lenght	1645 mm
Bathtub lenght	1120 mm
Width	650 mm
Height	1400 mm

Type **RP-1**

EVISCERATION TROUGH

Evisceration troughs are used in manual poultry evisceration lines and are designed for transporting the evisceration offal.

OPERATION

The evisceration trough is made of stainless, acid-resistant materials. The length and width of the trough is adapted to the size and quantity of processed poultry. Depending on the width, working stands can be placed on one or both sides of the trough. On the rim of the trough, there are tables for tools and water valves with 10-second time-lag switches which ensure economical water usage.

ADVANTAGES

- ✓ Maintenance-free

TECHNICAL SPECIFICATION

Section lenght	Standard L=2000 mm
Width	Standard :600 up to 900 mm
Height	Dependant on the height of the overhead conveyor and working platforms
Stands qunatity per 1 section	For 600 mm width: 2 stands For 900 mm width : 4 stands

PROCESSING OF GIBLETS

Effective, proven solutions that guarantee the highest quality product. Fully automated or semi-automated processing systems, adjusted to the investor's production capabilities




Type **RZ-1**

GIZZARD OPENER FOR CHICKEN

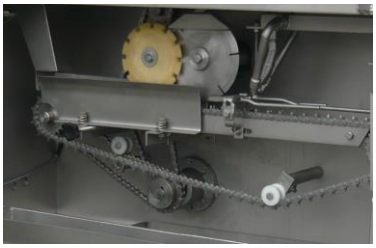
The gizzard opener is used to cut the chicken gizzards without intestines and to remove their contents.

OPERATION

Gizzard thrown through an inlet falls down between adjustable guides and then on the spikes of moving chain. The gizzards are then pushed down the spikes by a rotating wheel. The gizzard secured this way on the spikes moves further and is cut open by a rotating blade. The gizzard is then opened by steel rods placed after the blade, its sides are stabilised on the chain. A water spray washes the opened gizzard and flushes out its contents. The chain transports the gizzards further to the exit where they are unloaded from the chain and fall straight to a container or to a machine next in line - gizzard washer (degreaser).

ADVANTAGES

- ✓ Effectiveness
- ✓ Easy maintenance
- ✓ Unmanned operation



TECHNICAL SPECIFICATION

Capacity	Up to 5000 pcs/h
Water consumption	0,3 m^3/h
Installed power: blade	0,75 kW/ 2800 RPM
Motor reducer	0,55 kW

Type **ZA-02**

AUTOMATIC GIZZARD SKINNING MACHINE

Automatic gizzard skinning machine is designed to clean cut chicken gizzard from food content and any impurities accumulated on the surface.

OPERATION

Gizzard falls through the inlet to the inside of the machine, where it goes directly on the set of counter-rotating cleaning rollers. The factor supporting the cleaning of gizzard is water, supplied to the chamber by pressure pumps. Used water goes to the drainage channel. The device after setting up in the technological line is practically maintenance-free.

ADVANTAGES

- ✓ Efficiency of cleaning
- ✓ Simple design
- ✓ Easy access to inside of the device

TECHNICAL SPECIFICATION

Capacity	6000 pcs/h
Dimensions:	L= 1200 W= 600 H min. 1020 ,H max. 1320 mm. Variable gizzard inlet height. Weight= 140 kg

Type **ACZ-01**

GIZZARD HARVESTER

The gizzard harvester is a machine which performs multiple tasks. The gizzard, which goes into the machine with the intestines, leaves it as a finished product without any additional processing required.

OPERATION

The gizzards falls through the inlet opening onto rollers, which transport it to the next stages of processing: separation of the intestines, cutting of gizzards, cleaning and removal of the skin from the inside. The system of guides stabilizes the gizzards and sets them in the desired position in relation to the subsequent processing tools. Water supplied to the inside of the machine supports the movement of stomachs and thoroughly rinses out the accumulated impurities.

ADVANTAGES

- ✓ Easy maintenance
- ✓ Performing multiple operations

TECHNICAL SPECIFICATION

Capacity	up to 6000 pieces per hour
Installed blade power:	1,1 kW / 2800 RPM
Drive transmission	1,5 kW/ 1400 RPM
Power supply	400 V, 50 Hz
Water consumption	0.5 m^3/h

Type **MC-2**

GIZZARD WASHER AND CLEANER (DEGREASER)

The washer and cleaner is used to remove gut contents and fat from the surface of previously cut gizzards.

OPERATION

The gizzards are fed into the device, where they get between rubber fingers. There, the stomachs are cleaned of fat and food content and rinsed with warm water. After these operations, the stomachs are moved outside the machine. The quality of cleaning and efficiency of the device depends on the size of the gizzards, the amount of fat and the amount of water supplied. The washer is adapted to work with a gizzard cleaner. The gizzards can be directed to the cleaning table, where the next operation takes place - removing the yellow skin from inside the stomach.

ADVANTAGES

- ✓ High efficiency of cleaning
- ✓ Possibility to adjust the height of the washer and cleaner so that it works properly with other devices, e.g. automatic gizzard processor

TECHNICAL SPECIFICATION

Capacity	Up to 4000 pcs/h
Water consumption	200 l/h
Rotational speed	900 RPM
Dimensions:	L= 1245 mm Diameter= 300 mm Weight= 63 kg

Type **CZ-1 and CZ-2**

CHICKEN

TURKEY

MANUAL GIZZARD PEELER

Manual gizzard peeler is intended for removing the yellow skin from inside the gizzards.

OPERATION

The opened gizzards are manually fed by the machine operator onto a set of counter-rotating steel cleaning rollers. It is recommended to set up the CZ-1 cleaning machine with the MC-2 gizzard washer and cleaner, due to the best results of cleaning and increased processing capacity. The use of such a combination also has an impact on the durability of the device and especially on the life of the rollers. The machine is available in two variants. They are selected according to the capacity of the slaughter line.

ADVANTAGES

- ✓ Easy operation
- ✓ High efficiency of cleaning

TECHNICAL SPECIFICATION

Variant	Single-stand	Double-stand
Machine type	CZ-1	CZ-2
Operation	1 person	2 people
Capacity	1200 pcs/h	2400 pcs/h
Overall dimensions	L=980 W=600 H= 880 Weight = 68 kg	L=1260 W=600 H= 880 Weight = 110 kg

Type **UJ-1**

INTESTINE PROCESSOR

Intestine processor is a device intended for separating intestines from gizzards

OPERATION

The intestinal packet with gizzard goes through the funnel to the rollers, which set up and then cut off the intestines from the gizzard. The intestines slide down the drainpipe directly to their destination, and the gizzard is placed on a separate slide that leads it to its destination.

ADVANTAGES

- ✓ High efficiency

TECHNICAL SPECIFICATION

Overall dimensions:	L= 2000 W= 700 H= 1200 (+250 adjustment) Weight: 350 kg
Water consumption **Capacity**	Approx. 0,5 m^3/h up to 4000 pcs/h

FEET CLEANING SYSTEM

FEET CLEANING SYSTEM

1 Elevating belt conveyor
2 Spiral feet scalder
3 Cylindrical feet cleaner – single or double
4 Spiral feet chiller

OPERATION

The system includes (optionally) an elevating conveyor that transports the feet to a suitable height directly to the feet spiral scalder. The scalding device has been designed to allow free circulation of water and product inside the device, which contributes to optimal scalding results. Properly scalded feet then fall into the cylindrical feet cleaner, in which rotating cleaning shafts move the product in the direction of the feet chiller.

ADVANTAGES

- ✓ Compatible devices
- ✓ Best cleaning effect
- ✓ Economical solution
- ✓ The possibility of adjusting the system to the investor's expectations

TECHNICAL SPECIFICATION

Capacity in chickens /h	Scalder	Cylindrical cleaner	Giblet chiller
Up to 4000	∅ 600 x 2,5 m	Single L=1,8 m	∅ 600 x 3 m
Up to 6000	∅ 600 x 2,5m	Single L=1,8 m	∅ 600 x 4 m
Up to 9000	∅ 600 x 3,5 m	Double L=1,8 m	∅ 600 x 6 m
Up to 12000	∅ 600 x 4,5 m	Double L=1,8 m	∅ 800 x 5 m
Up to 13500	∅ 600 x 5 m	Double L=1,8 m	∅ 800 x 6 m

Type **Oł-1**

SPIRAL FOOT SCALDER

The device is used to scald the feet of landfowl poultry in order to clean them properly in the subsequent stages of processing.

OPERATION

The feet enter the scalding device directly from the feet unloader or from the ascending conveyor. The feet are immersed in hot water and the rotating worm shaft installed inside the device moves them in the direction of the exit. The correct scalding temperature and process time guarantee high cleaning results in subsequent processing steps.

ADVANTAGES

- ✓ Possibility of constant monitoring and control of the temperature, thanks to an installed temperature sensor

TECHNICAL SPECIFICATION

Dimensions:	Length depends on capacity
Heating system	Steam or hot water heat exchanger
Scalding temperature	65-70°C

Type **CZŁ-W** and **CZ-W/D**

CYLINDRICAL FEET AND HEAD CLEANER

This device is intended for cleaning the feet from skin and can be used for cleaning heads..

OPERATION

After the scalding process, the feet fall through an inlet opening into the cleaning chamber. The rotating shaft located inside the cleaning chamber and its cover are fully covered with rubber fingers whose task is to remove the skin from the feet. The cleaning is supported by water brought into the cleaner. The movement of the shaft causes the feet to move towards the outlet of the cleaner. Water with all the dirt falls through the openwork bottom into the drain gutter.

ADVANTAGES

- ✓ Easy operation
- ✓ Efficiency of cleaning

TECHNICAL SPECIFICATION

	Single	Double
Machine type	CZŁ-W	CZŁ-W/D
Capacity	Up to 6000 pcs./h	
Overall dimensions	L=2250 W=550 H= adjustable Weight= 190 kg	L=2250 W=1100 H= adjustable Weight = 375 kg

Type **TS-150**

SCREW CONVEYOR

The screw conveyor is used to move elements upwards, i.e. stomachs, hearts, necks.

OPERATION

Elements falling by gravity with water inside the rotating screw are moved towards the outlet. During this time, the water through the holes of the perforated sheet is poured into the gutter and flows down through the Ø 75 pipe to the sewer. The separated elements are then transported by the screw. The worm is driven by a gear. The optimal slope of the trough, giving the expected efficiency and separation efficiency, should be between 15° - 45°.

ADVANTAGES

- ✓ Simple design
- ✓ Efficiency
- ✓ Easy to clean
- ✓ Possibility of any location of the conveyor

TECHNICAL SPECIFICATION

Capacity	Up to 4000 pcs./h
Water consumption	0,2 m^3/h
Screw diameter	∅ 150

Type **PDP-1** and **PDP-2**

GIBLET PUMP

The giblet pump is used to transport poultry stomachs, hearts, livers and necks.

OPERATION

The elements intended for transport are thrown into the charging hopper and, through the sliding action of the piston, forced through the flap valve system into the pipe system, and then to the point of dispatch. To ensure correct operation of the pump, water must be added to the components at all times. When transporting stomachs, livers, hearts or necks, you can add ice water and with a long transport distance, the elements are also cooled. Transport from the point of shipment can be carried out on a distance of up to 80 m, using stainless steel pipes Ø 89 or PVC pipes. In the case of transporting elements intended for further consumption, they should be directed to special separation sieves to separate water, in the case of waste transport, they should be directed to a waste separator or a waste sieve.

ADVANTAGES

- ✓ Long-distance transportation of giblets
- ✓ Possibility of chilling of giblets during transport

TECHNICAL SPECIFICATION

Pump model	PDP-1	PDP-2
Capacity	Up to 9000 pcs./h of 1 type of product	Up to 9000 pcs./h of 1 type of product
Air consumption	3,6 m^3/h	4,2 m^3/h
Water consumption	0,5 m^3/h	0,7 m^3/h
Operating pressure	6 atm – 8 bar	6 atm – 8 bar

Type **SDS-1**

Hearts up to 6000 pcs./h

HEART SEPARATOR

The heart separator is designed to clean hearts from fat and venous systems.

OPERATION

Hearts along with the pericardium, fat and venous system go to the hopper filled with water, then, through the water stream from the nozzle, are directed to the cleaning rollers. Rotating rollers remove unnecessary elements (veins, fat, pericardium). Cleaned hearts fall automatically through the discharge chute onto the conveyor or container, on which they are transported to their destination. The waste generated as a result of cleaning slides down on a gutter mounted under the cleaning rollers, directly into a container or onto a conveyor.

ADVANTAGES

- ✓ High efficiency

TECHNICAL SPECIFICATION

Power supply	400 V, 50 Hz
Lenght	1800 mm
Width	500 mm
Height	1200 mm
Weight	140 kg

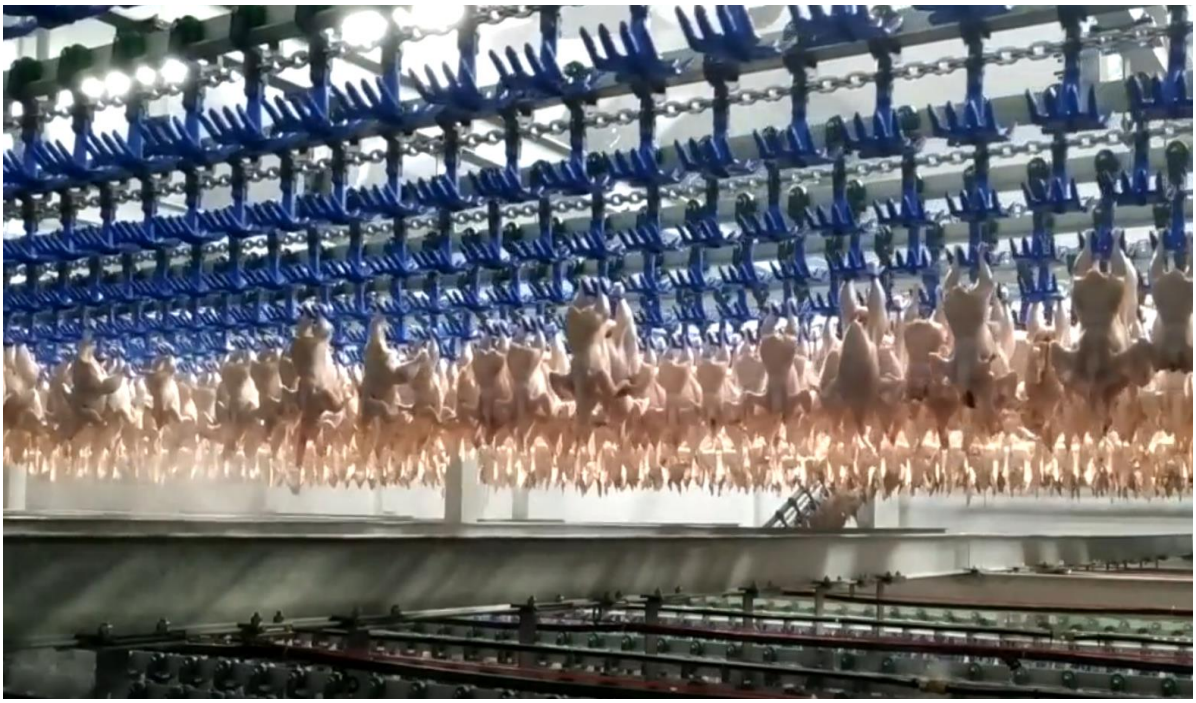
CHICKEN
DUCK
TURKEY
GOOSE
GIBLETS

CHILLING

Modern solutions for lowering the temperature of the carcass without losing its properties.

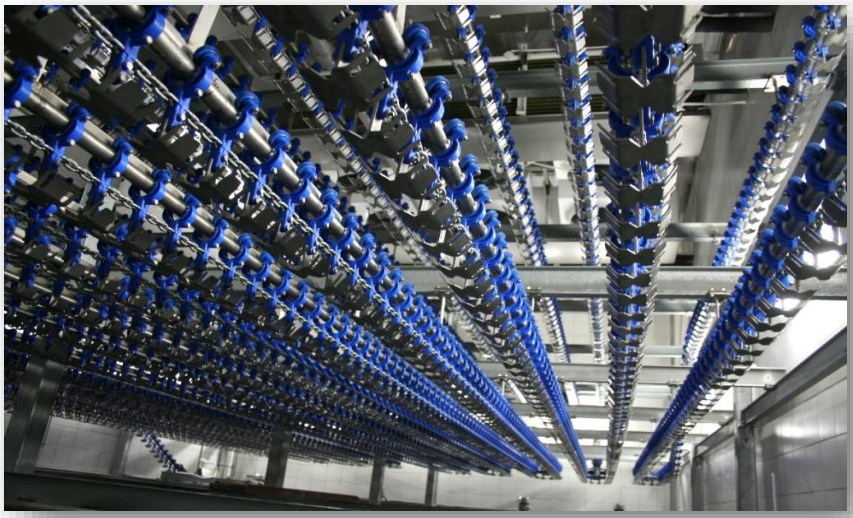
Water, air and mixed chilling.

Complex projects including a wide range of components.



AIR CHILLING LINE

AIR CHILLING LINE



In order to maintain high carcass durability, the most effective way of chilling is air chilling - in a tunnel, on an overhead chain conveyor.

OPERATION

The standard overhead conveyor is based on a galvanised carrying chain with a pitch of 1 ". The suspended conveyor consists of : drive, tensioner, straight tracks, vertical arches, chain trolleys, shackles, and horizontal-reversing arches, which depending on the size of the poultry and on the system of hanging the carcass (one, two or more on one stirrup) may have different diameters: Ø 291, 340, 388, 436, 485 mm, and in some cases even larger. The chain conveyor is suspended from a supporting structure made separately according to guidelines. Depending on its length and load, the conveyor may be equipped with one or more drives and tensioners. In order to make optimal use of the space available in the client's premises, the conveyor is usually installed on two levels.

ADVANTAGES

- ✓ The construction of the individual elements as well as the principles of their joining ensure any customised shape and course of the conveyor
- ✓ Simple design allows quick and easy replacement of components
- ✓ The construction of the conveyor based on a 1 " chain allows the use of different sizes of shackles - at a distance appropriate to the type of poultry to be transported
- ✓ The simple and clear design ensures that individual components can be easily reached, kept clean and properly maintained
- ✓ Use of high-quality materials ensures durability and reliability of the device

AIR CHILLING LINE COMPONENTS

- Stainless drip and chilling line shackle for 10 chickens

Plastic drip and chilling line shackle for one bird intended to work with automatic rehanger

- Stainless drip and chilling line shackle for male and female turkeys

- Plastic drip and chilling line shackle, for two birds

- Stainless drip and chilling line shackle, double

Type **SD-1,2/ 1,3/ 1,6/ 1,8/ 2,1**

POULTRY SPIN CHILLER

The chiler is designed to reduce the temperature of eviscerated poultry carcasses in water.

OPERATION

Poultry are either dropped into the chiller directly from the unloader or manually dropped into the water tank at the start, then moved by a screw conveyor to the end of the tank where the chilled carcasses are automatically ejected. The most recommended solution is to use a set of two chillers or one chiller with a partition dividing it into 2 chambers. The carcasses are moved automatically from one chamber to the other and each chamber is equipped with a separate water outlet and overflow.

ADVANTAGES

- ✓ The most effective method of reducing the temperature of the carcass while maintaining all the qualities of the product

TECHNICAL SPECIFICATION

Length	Multiple of 1,5 m (shortest is L=3m)
Diameter ∅ mm	1200, 1300, 1600, 1800, 2100

Type **SP-0,3/ 0,6 / 0,8**

GIBLET SPIN CHILLER

The giblet spin chiller is designed to reduce the temperature of hearts, livers, gizzards, necks and feet.

OPERATION

The parts to be chilled, depending on the location of the production line and the position of the chiller, fall directly from the line into the chiller (e.g. feet from the unloader or offal from a conveyor belt placed by the evisceration stand) or are manually fed into the chiller. Then, using a screw, they are moved to the end of the tank where they are automatically ejected to a prepared tank, a gutter, a conveyor belt or any other way of collection provided for in the technological design.

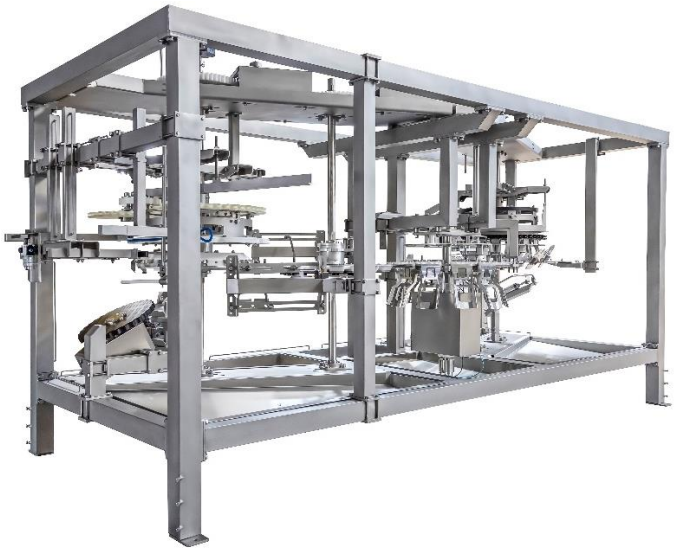
The length and width of the offal chiller is determined according to the capacity and size of the pieces to be chilled. Ice water is used for cooling. When tap water is used, crushed ice or scaly ice must be added during the chilling operation.

TECHNICAL SPECIFICATION

Length	Dependant on capacity
Diameter ∅ mm	From 300 to 800 dependant on capacity and the size of product

Type **APT-S-D**

CONVEYOR WITH WEIGHING



It is an innovative bird weighing system that ensures high precision, utilizing advanced technology to accurately measure the weight of the birds during their transport in the production process.

OPERATION

The system operates on the principle of 'static weighing,' where the birds are automatically spaced evenly on the weighing conveyor (10" or 12"). The birds are weighed in a static position relative to the measuring cell, ensuring exceptional accuracy. After weighing, the birds are automatically transferred to the next line, and the system resets the weight before each new measurement, preventing errors caused by temperature fluctuations.

ADVANTAGES

- ✓ Weighing accuracy (up to ± 3g)
- ✓ Flexibility in integration with different stages of production
- ✓ Zeroing during operation any further adjustments

TECHNICAL SPECIFICATION

Capacity	Up to 12000/h
Weight	≈2000kg

Type **APT-S-SW**

AUTOMATIC CARCASS HANGER

The overhang from the carcasses is used to automatically hang the carcass from the chilling line to the weight sorting line. The weight range of chickens is 1200 g to 2500 g, however, it should be remembered that for the proper operation of the hanger, the weight of the chicken batch should be comparablea.

OPETATION

The hanger is directly connected and driven by both a chilling line and a weight sorting line, whose speeds are synchronized by an electronic control system. Into the overhanger, the chickens are introduced through the chilling line, and then with the help of the central shaft they are then led to the weight sorting line.

TECHNICAL SPECIFICATION

Capacity	do 9 000 szt./h
Overall dimensions	L=2750 mm, W=1500 mm, H=2500 mm
Weight	1160 kg

Type **WD-1, WD-2, WD-3, WD-4**

CARCASS DRIP AND CHILLING TROLLEY

The crip and chilling trolley is used for drying poultry carcasses or storing them in the cold room.

OPERATION

The trolley is used after the water chilling process and is used to dry the carcasses. The size of the trolley and hooks for hanging are selected according to the size and type of poultry slaughtered. The construction of the trolley is solid and stable and the wheels attached allow for easy transport of the poultry carcasses.

ADVANTAGES

- ✓ Trolley can be made in many sizes
- ✓ Stable and robust construction
- ✓ Easy to keep clean

Type: **SOT-1**

CARCASS WATER SEPARATOR

The device is used to dry the carcass after the water chilling process. It removes water which is trapped inside the carcass.

OPERATION

The main assembly of the separator is a rotating drum made of rods set on rollers. In the lower part of the body there is a sewage chute. The separator is driven by a geared motor, which is mounted in the upper part of the frame. The torque is transferred to the cylindrical sieve by a 1" technical chain. The carcasses, after water separation from them, move to the outlet. The length of the separator depends on the capacity of the machine..

ADVANTAGES

- ✓ High efficiency of removig water

TECHNICAL SPECIFICATION

Installed power	1,5 kW
Power supply	400 V, 50 Hz
Diameter of drum	900 mm

CHICKEN

DUCK

TURKEY

GOOSE

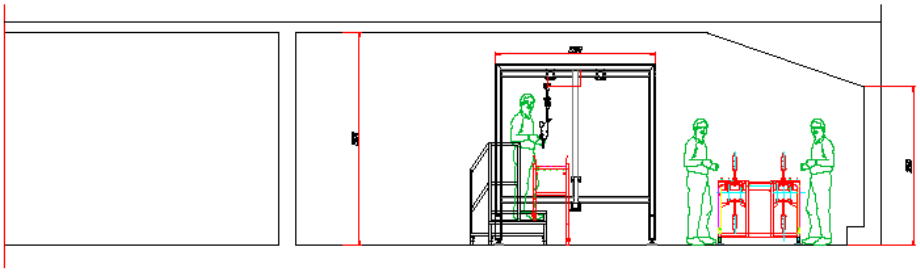
CUTTING AND PACKAGING

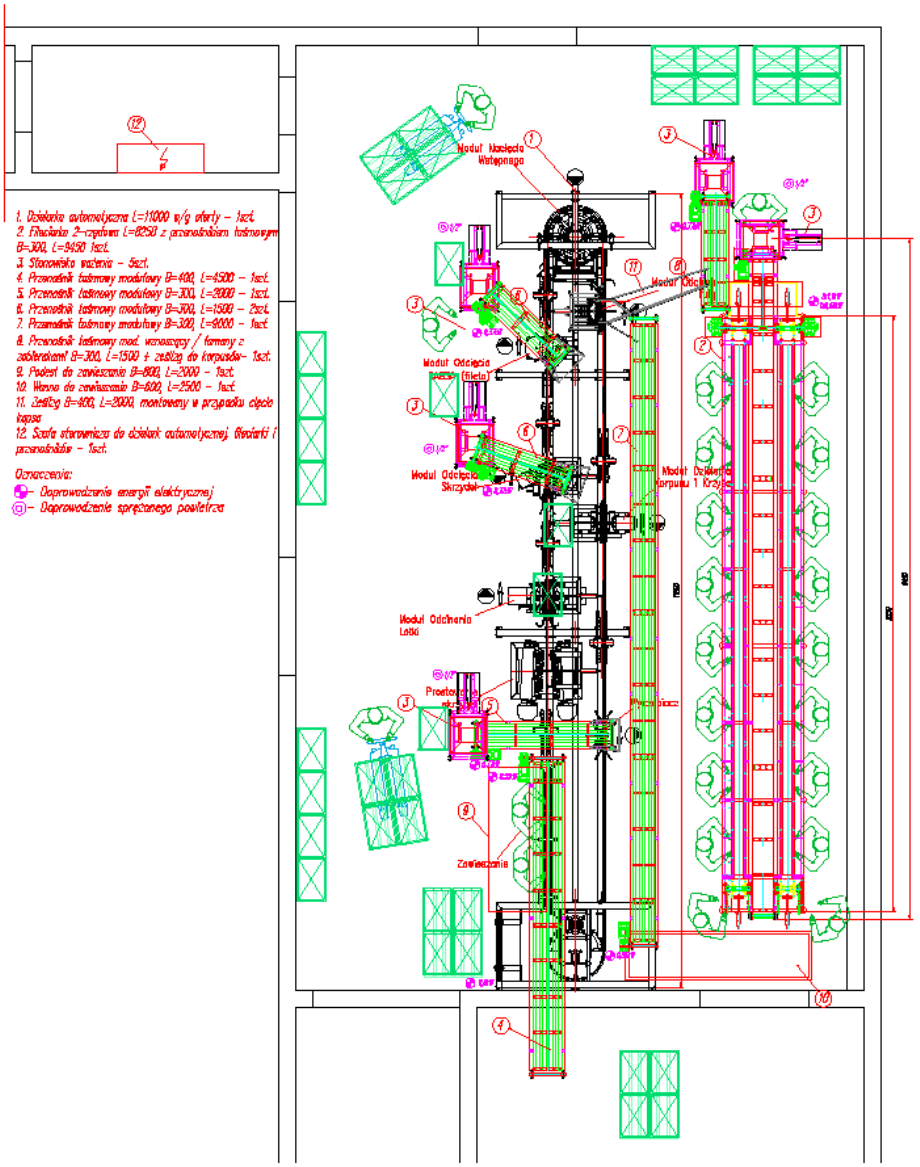
Our devices are characterized by the highest quality, careful workmanship and precision of operation, which allows us to ensure hygiene and accuracy during the poultry cutting and packing processes.

We manufacture fully automatic dividing systems, compact automatic systems, semi-automatic systems and tables with cones for planting poultry carcasses.

We produce lines for automatic weight segregation in the suspended conveyor version and in the modular belt version, which improve the processes of weighing poultry or divided elements.

A SAMPLE IMPLEMENTATION IN THE CUTTING AND PACKAGING DEPARTMENT





Type **DJ-1**

MANUAL POULTRY CUTTER

The manual poultry cutter is used to freely divide various types and sizes of poultry as well as elements (wings, thighs, drumsticks, necks, etc.)

OPERATION

The construction and functionality of the machine ensures its quick adaptation to the required cutting and dividing operations of poultry and moving the machine to any place. The design ensures quick knife replacement, easy cleaning and work safety (the movable cover prevents the knife from being started when it is open). Simple design, ergonomic cutting processes, optimal dimensions make the presented manual poultry cutter a product expected by the market.

. ADVANTAGES

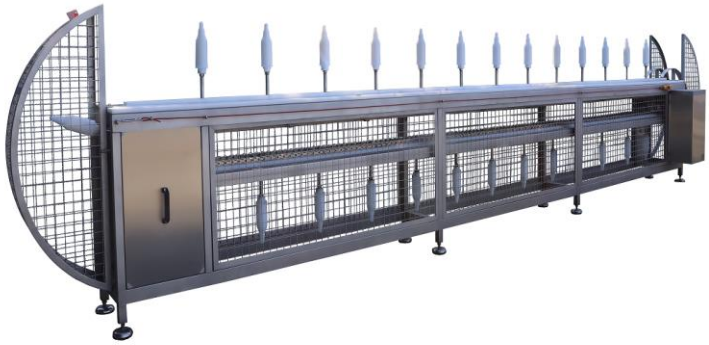
- ✓ Simple design
- ✓ Widely applicable

TECHNICAL SPECIFICATION

Blade diameter	Ø 220

Type **SDP**

CONE CUTTING LINE



The device is used for manual cutting and filleting of all types of poultry.

OPERATION

The main part of the cutting machine consists of a table with mounted poultry holders(cones) and in certain executions with a conveyor belt for transporting the cut-off pieces. The cutting machine is a device that can be fully adapted to the needs of the investor. Depending on the size of the poultry to be divided, appropriately sized poultry cones are made and fixed at suitable distances. You can choose between cones made of stainless steel or food-grade plastic. The length of the divider depends on the capacity of the dividing line and types of cuts made. The stations with the cones and working surfaces may be located on one side or a double line can be made with workstations on both sides.

ADVANTAGES

- ✓ Hygienic cutting
- ✓ Possibility of fully adapting to investor's needs

TECHNICAL SPECIFICATION

Dimensions:	Length depends on the required capacity

Type **DD-P**

SUSPENDED CONE CUTTING LINE

The machine is used for manual cutting and filleting of all types of poultry

OPERATION

The size of the plastic cones onto which the eviscerated carcasses ready for dividing are placed is adapted to the size of the poultry being divided.

Depending on the needs of the customer (on the capacity, types of cuts and type of poultry to be divided), it is possible to produce a machine of various lengths. Its design also allows for future expansion. The speed of the poultry cutting machine - conveyor is adjustable, which makes it possible to adjust it to the current needs of the user, efficiency and qualifications of the personnel. Work stations are located on both sides of the machine. The design of the conveyor enables delivery of the cut parts in different ways - on belt conveyors, in crates, in trolley tubs, etc.

ADVANTAGES

- ✓ Fully customisable
- ✓ Possibility to divide any type of poultry thanks to appropriately matched cones for carcass placement

TECHNICAL SPECIFICATION

Capacity	Unlimited
Overall dimensions:	Length (L): according to needs and capacity Minimal length: 4000 mm. Width= 860 H= 2165

Type **ADD**

up to 6000 pcs / h

up to 2000 pcs / h

AUTOMATIC POULTRY CUT-UP SYSTEM

The automatic poultry cutter is used to automatically divide an eviscerated chicken carcass into anatomical parts. The machine works properly with a carcass whose weight is in the range: 1.4-3.0 kg.

OPERATION

The automatic poultry cutter machine has a construction which enables modules of any configuration to be assembled on one frame. The machine can be equipped with a number of different modules:. The eviscerated chicken carcasses are manually hung onto the shackles of the overhead conveyor. All the dividing operations are carried out automatically and the divided parts fall through the chutes onto the conveyors or directly into the containers.

ADVANTAGES

- ✓ Possibility of fully adapting the device to customer needs and premises
- ✓ Hygienic cutting
- ✓ Practically operatorless – only laborers for hanging chickens are required and all remaining actions are performed automatically

WING STRETCHER MODULE

TYPE: MPS

The wing stretcher module serves to straighten the chicken wings in process of dividing the chicken carcasses into anatomical parts.

WING TIP CUTTER MODULE

TYPE: MOL

The wing tip cutter module is used to precisely cut the chicken wing at the first joint in the process of dividing the chicken carcasses into anatomical parts.

WING HALVER MODULE

TYPE: MOSS

Wing halver module is used to cut off the middle part of a chicken wing in the process of dividing the carcasses into anatomical parts on an automatic cut-up lines.

WHOLE WING CUTTER MODULE

TYPE: MOS

The module serves for precise cutting off chicken wings in the process of dividing the chicken carcasses into anatomical parts. The cut off of the wings is done before the cuts of the carcass.

NECK CUTTER MODULE

TYPE: MOSZ

The neck cutter module is used to pracisely cut off the neck of a chicken carcass in the process od dividing it into anatomical parts.

TAIL CUTTER MODULE

TYPE: MOK

The tail cutter module is used to precisely cut the backside from the chicken carcass into anatomical parts.

BREAST PRE-CUTTER MODULE

TYPE: MCW

Preliminary cut module is intended for making diagonal cut under the breast from abdomen to the back of carcass . It prepares the carcass for optimal cut in the further process of dividing it into anatomical parts. Preliminary cut module is used only on a carcass with wings cut off.

BREAST DESKINNER MODULE

TYPE: MZS

The MZS module is used to remove the skin from the chicken fillet in the process of dividing the chicken carcass into anatomical parts on an automatic cut-up line.

FRONT HALF (TUBE) CUTTER MODULE

TYPE: MOT

The front half cutter module removes the front half of the bird with breasts from the back half with legs in the process of dividing it into anatomical parts.

BREAST CAP WITH BONE CUTTER MODULE

TYPE: MOF

The module is intended to be used for precise cutting off the entire breast with the bone from the chicken carcass in the process od dividing the chicken carcasses into anatomical parts.

ADJUSTABLE SADDLE CUTTER

TYPE: MDKIK

The adjustable saddle cutter is intended for dividing of the chicken's body into two halves or with the backbone separated from left and right legs.

ANATOMICAL LEG CUTTER MODULE

TYPE: LG

The anatomical leg cutter module is used to precisely separate the legs from the back, leaving the hip muscle on the thigh in its entirety in the process of dividing the chicken carcass into parts.

THIGH-DRUMSTICK CUTTER MODULE

TYPE: MOP

The thigh/drumstick cutter module makes an anatomical cut through the joint and splits the thigh from the drumstick. Two legs are precisely positioned by a separating wheel before they are cut.

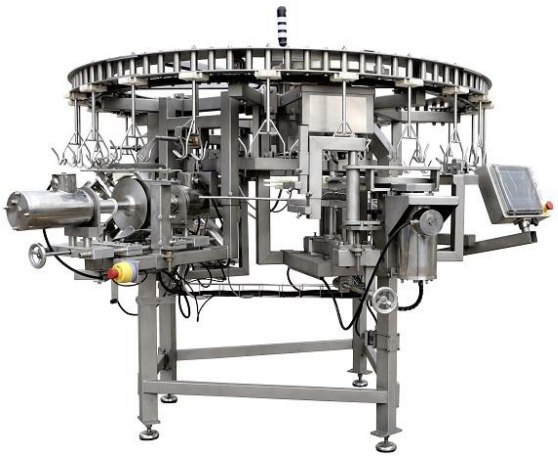
MODULES FOR THE AUTOMATIC POULTRY CUT-UP SYSTEM

Modules work properly with a carcass whose weight is in the range: 1.4-3.0 kg

Type **ADK**

up to 2500 pcs / h

AUTOMATIC CAROUSEL CUT-UP LINE



Automatic poultry cutter is designed to divide the eviscerated chicken carcass into anatomical parts. The machine works properly with a carcass whose weight is in the range: 1.4-3.0 kg

OPERATION

The automatic carousel cut-up line consists of a main frame to which the cutting modules are mounted. The control of the individual cutting modules is effected by means of an electrical cabinet integrated into the divider.

The standard design of the carousel cut-up line may include the cutting modules listed below. However, the customer may choose a limited number of modules listed, which are similar to modules for ADD cut-up line.

1. Wing stretcher

The wing stretcher module is intended for preliminary positioning and stretching of the bird's wings allowing for a proper operation of the wing cutting module. Poultry is transported hanging in shackles, it's breast facing forward. Two steel guides perform the stretching while the birds are moving through the machine. The module is easy to set up and adjust as it doesn't have any moving parts.

2. Whole wing cutter

The whole wing cutter module consists of left and right cutting units symmetrically positioned in relation to the central line of the shackles. The two rotating blades are mounted on shafts and powered by electric motors. Chicken carcasses are transported to the module with their backs facing forward and are guided through the machine in flat-lying position. The wings are caught between guides and properly positioned by them. The wings cut by rotating blades fall into a container or onto a belt conveyor.

3. Front half (tube) cutter

The front half cutter module that comes next easily removes the front half of the bird with wings and breasts from the back half with legs. This cut is performed by rotating blade with the bird moving sideways through steel guides. The front half falls down into a container or onto a belt conveyor.

4. Adjustable saddle cutter

The adjustable saddle cutter module is intended for dividing of the remaining bird's body into two or three parts. The backbone is separated from the left and right legs when the twin rotating blades are moved apart. The central part then falls down into a container or onto a belt conveyor. The blades can also be adjusted so that the back is divided into two parts through the centre of the spine.

5. Thigh-drumstick cutter

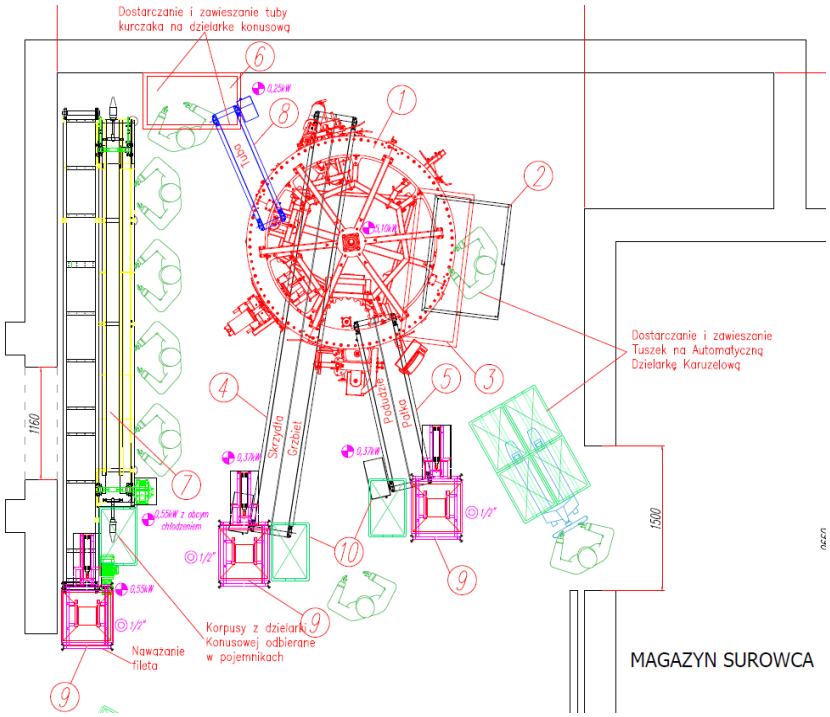
The thigh/drumstick cutter makes an anatomical cut through the joint and splits the thigh from the drumstick. The two legs are precisely positioned by a separating wheel before they are cut. The cut-off thigh falls down into a container or onto a belt conveyor while the drumsticks are transported to the next module.

6. Unloader

The unloader is a last module which unloads the remaining drumstick which in turn falls down into a container or onto a belt conveyor.

ADVANTAGES

- ✓ Compact design, small dimensions
- ✓ Practically operatorless – only laborers for hanging chickens are required and all remaining actions are performed automatically
- ✓ Characterised by a simple design and is easy to install and operate. Compact design and circular and open layout make it easily accessible for maintenance and cleaning. It can be easily integrated with other systems when needed



Type **FA-1**

AUTOMATIC BREAST CAP DEBONER

The automatic breast cap deboner is designed to separate the fillet from the caps. It is possible to obtain a fillet or half-fillet (with or without skin) with a maximum capacity of 2000 pieces per hour. The resulting product looks great and is very well suited for packaging on trays

OPERATION

All moving parts are driven by a chain that is driven centrally by a single motor. This ensures very consistent performance, as well as durability and reliability of the device. The operator manually overlays the breast on the product carriers – called the saddle. This element is shaped in such a way that the applied breast fits it exactly. The machine cuts, tears off the skin and removes bones without any human intervention.

TECHNICAL SPECIFICATION

Capacity	2000 szt./h
Installed power	1,85 kW
Diameter	L=3150 mm, W=1300 mm, H=1850 mm
Weight	850kg

Type: **TSW-1**

BELT GRADING SYSTEM

Belt weight segregation is used for sorting slaughtered poultry carcasses or divided poultry carcass parts.

OPERATION

The items to be sorted can be fed automatically (e.g. by a belt conveyor) or manually. In both cases, the sorted items must arrive at the loading conveyor. Correctly loaded elements go onto a weighing conveyor and then onto a sorting conveyor where, according to the set parameters, the catchers sort the elements. Segregated elements fall into containers via a chute basket. The computer system decides which catcher should operate by sending a signal to the appropriate catcher so that there is a proper portion of carcasses or segregated elements in each container according to the pre-set parameters. When a container is full (according to the parameters entered into the system), a lamp lights up (separate for each scraper). After replacing the container with an empty one, it is necessary to press the button located by the given chute basket in order to give a signal to the computer system that the container is free and a new batch of sorted elements can be counted into it.

ADVANTAGES

- ✓ High Accuracy
- ✓ Wide range of settings for weight ranges
- ✓ Improved packaging operations

Belt grading system can be assembled with the belt conveyors system. Examples below:

up to 6000 pcs/h

WEIGHT SORTING

The purpose of weight sorting is segregation of slaughtered birds acoording to preset weigh ranges.

OPERATION

During the sorting process, each shackle with a suspended chicken is lifted, in order to provide as accurate weighing results as possible (with proper settings and calibration, the deviation should not exceed +/- 0.3%).

The weight sorting line includes an overhead chain conveyor with special shackles, a weighing bridge, ejecting stations, computer operational system, drop chute with a roller conveyor. The design of the conveyor allows for any desired layout. The entire sorting process is controlled by the computer system.

ADVANTAGES

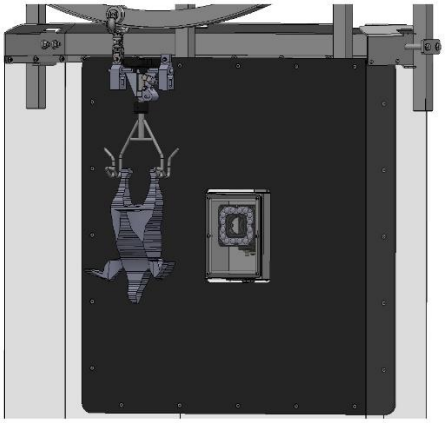
- ✓ High accuracy of measurments
- ✓ A wide range of weight ranges setting
- ✓ Ability to adjust the course of the system to the available spac

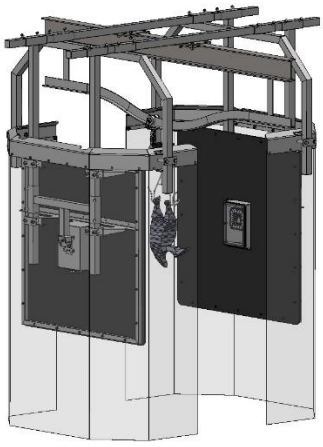
TECHNICAL SPECIFICATION

Installed power	1,1 kW 1400 RPM
Power supply	400 V, 50 Hz

Type SKO

OPTICAL CLASSIFICATION SYSTEM FOR INK





A specialized high-resolution camera recognizes colors, textures, and shapes, based on which the system classifies the ink..

OPERATION

The entire system works in conjunction with the chicken's weight sorting. After the chicken is weighed, it passes through the optical classification system. The system consists of a camera, a light source, and a shading curtain. The ultra-fast camera takes a picture of each individual chicken, capturing any imperfections and deviations from the standard set in the program. The system automatically processes the received data and then assigns the chicken to the appropriate class A/B/C.

ADVANTAGES

- ✓ Increased efficiency in assessing the chicken's grade
- ✓ Unmanned operation
- ✓ Elimination of errors in carcass classification

TECHNICAL SPECIFICATION

Efficiency	~8000 pcs/h
Power Supply	230 V
Weight	~500 kg

Type **SW-1**

WEIGHING STATION

The automatic weighing station is used to accurately weigh the required number of poultry elements or whole carcasses.

OPERATION

On the top of the rack (under the basket a weight is set, the weighing results are automatically recorded.) A 200 x 400 x 600 container is placed on the scale. Poultry elements Falling through the basket and offset slide in its bottom are collected in the container when the scale shows the required number of weighed items eg 15 kg, the electro-pneumatic control system closes the bottom of the basket. Then the filled container should be replaced with a new one. At that time, poultry elements are collected in the basket. Operation is activated by a special button of the pneumatic actuator control system and the gate valve opens, and the elements collected at that time fall into a new empty container and are further stored there to the required weight, eg 15 kg. Weighing station is equipped with a control cabinet.

To the place where weighing station is located, a compressed air system should be connected, terminated with a stub pipe ½ enabling the connection of a flexible hose.

ADVANTAGES

- ✓ High accuracy of measruments
- ✓ Easy-to-use
- ✓ The uncomplicated design facilitates maintenance and keeping the device clean

TECHNICAL SPECIFICATION

Installed power	200 W
Power supply	230 V/ 50 Hz
Operation	1 person
Compressed air demand	Około 100 L / H
Working pressure	6 atm.

Type **WK-2, WK-3**

DEBONER

The task of the deboner is to quickly remove bone from the chicken thigh or drumstick

OPERATION

A deboner is a device mounted on a stable surface, e.g. a work table. The bone is separated by pushing it through the rubber insert using a special sleeve. The sleeve moves on a slider and is driven by pneumatic actuators. The device is available in two variants: with a work table in the set, or as a standalone device without a table.

ADVANTAGES

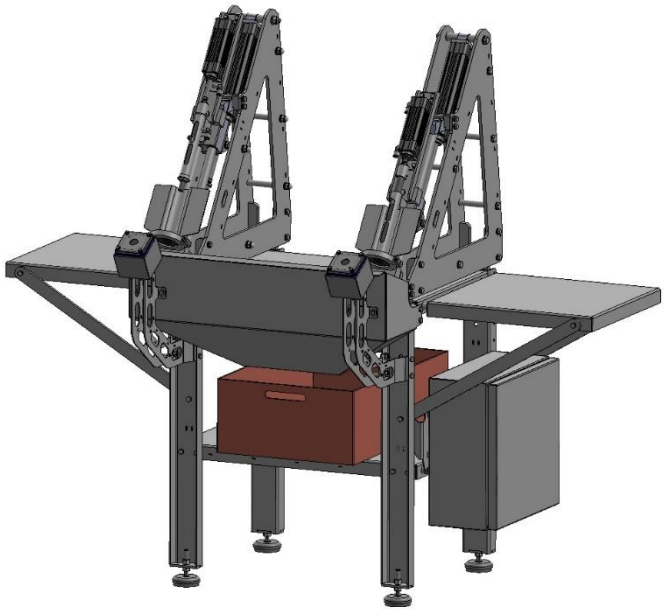
- ✓ A reliable and fast way to separate bones from meat.
- ✓ A wide range of sizes of rubber discs

TECHNICAL SPECIFICATION

Capacity	700 pcs/h thigh deboning 900 pcs/h drumstick deboning
Dimensions:	Weight: 60 kg (with a table)

Type **WK-4**

DOUBLE DEBONER



The deboning machine is used for quickly removing bones from the thigh or drumstick of a chicken.

OPERATION

The frame, primarily made of closed profiles, is equipped with two pneumatic cylinders that serve as the drive mechanism for the device. The operation is controlled via a button placed in the designated location. When the button is pressed, the sleeve along with the PE piston, mounted to the slider, is moved downward along two guides. In this manner, the bone of the drumstick or thigh, placed between the piston and the rubber insert of the table, is pushed through the hole in the insert. The deboned meat remains on the rubber insert. The pushed bone may still be attached to the meat, in which case it must be torn off or cut with a knife.

ADVANTAGES

- ✓ Increase in production by 100%
- ✓ Reliable and fast method of separating bones from meat.
- ✓ Wide selection of rubber disc sizes.

TECHNICAL SPECIFICATION

Capacity	~1100-1300 pcs./h –
Installed power	250 W
Weigth	140kg

SLAUGHTERHOUSE WASTE

High-quality devices supporting slaughter process.

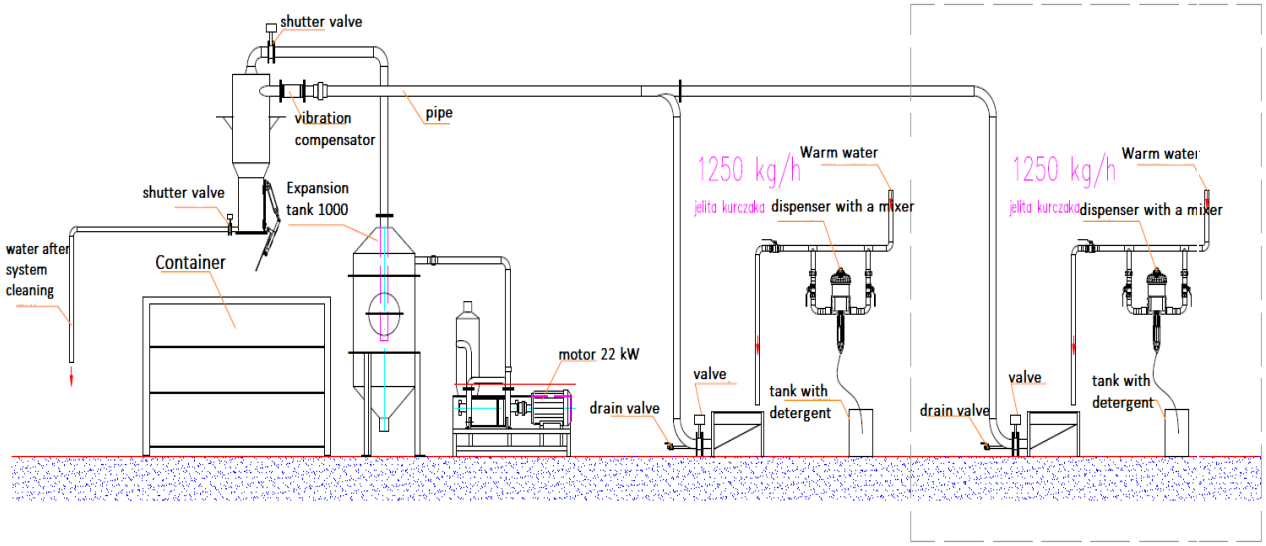
We design and manufacture efficient waste transport systems.

Devices that recover by-product, arising as a result poultry processing.

Type **TOP-1/2**

TRANSPORT OF MEAT AND BONE WASTE

Sample model: 2500 kg/h chicken intestines



The pneumatic system is used for efficient transport of slaughter waste obtained as a result of technological processes carried out at the slaughterhouse.

OPERATION

The slaughterhouse waste resulting from the technological process carried out is characterized by different physical properties and, at a later stage, has a different purpose, it is a raw material for further processing, for example: into animal feed.

They were divided into: paws, heads and intestines. This includes it determines the presence of three sequences.

As shown in the figure above, the setting of the charging hoppers (6) starts each sequence. The waste is transported through a closed conduit (stainless, acid-proof pipe) to the separating tank (3). The mass accumulated in the tanks remains in the appropriate one time removed by opening the bottom cover. The waste falls from the tanks to the container (7). Transport in each line takes place alternately in the automatic cycle. The executive system is assembled from pneumatic actuators of very high durability and operational reliability. The automation is handled by the appropriate clock unit (5), which has a time regulation. The transport of waste is based on the principle of negative pressure, which is one of its main advantages. Ease of locating and controlling each line is an equally important advantage.

Type **xp-400**

INTESTINE PUMP

The intestine pump is used to transport the slaughter packages from the evisceration hall to the place of their storage.

OPERATION

The basic element of the construction is a peristaltic pump with a drive, an inlet basket and a system of pipes for transporting waste. The pump drive mechanism causes the rotation of the impeller equipped with two alternately mounted rollers. The intestine is then compressed by rollers, causing the discharge side to be cut off from the suction side. Depressurization of the intestine to its original shape (on the suction side), just after the roller, creates a vacuum that sucks the waste collected in the inlet basket. The sucked waste, contained in the intestine between the rollers, is pushed towards the discharge pipe.

As a result of the pressure displaced by the roller on the pressure side, the waste is forced into the pipe system and transported to its destination. The effectiveness of the pump is based on the elasticity of the intestine, i.e. the intestine compressed by rollers must return to its original shape.

Type **RK-1 / RŁ-1**

up to 7000 pcs/h

up to 1000 pcs/h turkey
do 2000 pcs/h turkey hen

BONE AND FOOT GRINDER

Bone and foot grinder is used to break up bones or paws in order to adapt this waste to pneumatic transport.

OPERATION

Elements destined to crush, (paws – unhooked directly from the overhead conveyor) fall or are thrown manually (bones) into the charging hopper and are directed between the rotating gears of the breaking mechanism, and the crushed ones are transported from the collection hopper to their destination

ADVANTAGES

- ✓ Easy- to- use
- ✓ Reliable in operation

TECHNICAL SPECIFICATION

Installed power	4 kW- paws 7 kW- turkeys paws and bones
Voltage	3 x 380- 420 V
Grinder weight (without drain funnel)	185 kg
Capacity	**3000 kg/h – RK-1**

Type **SJ-1**

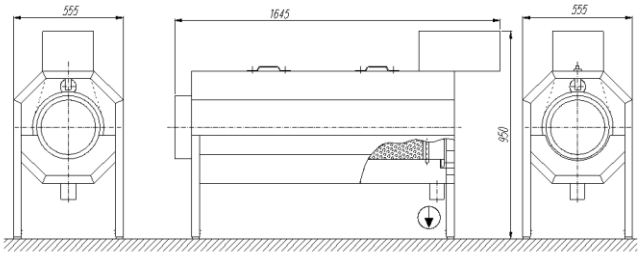
up to 7000 pcs/h

INTESTINE SEPARATOR

The separator is used to separate the water from the intestines after the gutting process.

OPERATION

The separator is installed in a place allowing the direct entry of the intestines into the inside of the rotating separating sieve. The intestines are moved by the internal spiral of the sieve towards the outlet. At the same time, the water fed to the separator along with the intestines and holes in the perforated sheet is poured into the gutter and flows down the drain pipe to the sewer. Separated intestines are pneumatically transported further to the slaughterhouse waste department. The sieve is driven by a special chain transmission.



TECHNICAL SPECIFICATION

Installed power	0,37 kW
Voltage	3 x 230 V – 420 V ; 50 Hz
Rotation of the separation sieve	13 RPM
Weight	96 kg

Type **SPO-1, SPO-2**

FEATHER AND OFFAL SEPARATOR

The separator is used to separate feathers and waste from sewage. Due to the application and the type of transfer of elements inside the screen, two separate devices must be used for separating waste and feathers.

OPERATION

The main unit of the separator is a trough-shaped body which houses a cylindrical screen in a horizontal position, mounted on rollers. There is a gutter in the lower part of the body, the drive is installed in the upper part - when it is activated, it rotates the cylindrical screen. Waste or feathers are fed to the sieve and, separated from the water, they move to the outlet.

ADVANTAGES

- ✓ High separation efficiency between the medium and the liquid
- ✓ Maintenance-free

TECHNICAL SPECIFICATION

Capacity up to pcs./h	3000	5000	9000
Drum diameter Ømm	640	640	640
Total lenght mm	3500	4500	5700
Height mm	2035	2185	2300
Installed power kW	0,75	1,1	1,5

Type RZ

FEATHER TRANSPORT PUMP

The feather pump is used to transport feather from the poultry plucking process in slaughter plants. Feathers must be transported with the water.

OPERATION

The basic element of the construction is a single-stage centrifugal pump with a motor. A one-sided, free-flow impeller has vanes arranged on a disc. The rotor disk is moved away from the flow space into a cavity formed in the pump housing, which further widens the free flow space between the blade edges on the rotor face and the housing insert. The pump for transporting feathers can be mounted to existing concrete or steel tanks, as well as with a free-standing tank, which can be delivered with a pump. Feathers with water are transported to the tank, usually through a sewer, and then by a pump, through a pipeline with a diameter of Ø125 - Ø250 (depending on the type of pump), it is transported to the feather separator, where the water is initially separated from feathers

TECHNICAL SPECIFICATION

Pump model	RZ-125	RZ-150	RZ-250
Installed power	7,5 kW	11 kW	22 kW
Raising height	22-30 m	20-28 m	44-51 m
Capacity	140-270 m^3/h	160-290 m^3/h	228-612 m^3/h

Type **WDP-1/2**

up to 6000 pcs/h

FEATHER PRESS

The feather press is used to squeeze water from the feathers from plucking chickens, after initial separation in separators.

OPERATION

The feather press is installed in a place that allows the direct intake of feathers pre-separated from water. Feathers falling between the screw coils are moved along the openwork bottom of the trough towards the outlet funnel, and the imprinted water enters the gutter and is discharged into the sewer. The imprinted feathers fall directly from the outlet funnel into the container.

TECHNICAL SPECIFICATION

Screw rotation	18 obr./min
Installed power	5,5 kW – 7,5 kW depending on capacity
Voltage	3 x 380 -420 V / 50 Hz
Weight:	380 kg

Type: **PDP-1**

VACUUM PUMP

The vacuum pump with a liquid circulation is part of the vacuum system which is used for pneumatic transport of slaughter waste obtained as a result of the technological process of slaughter and evisceration (guts, paws, lungs, etc.).

OPERATION

The vacuum pump and the water tank are adapted to work in a complex system with water supply, when some of it returns to the pump, and the part needed to maintain the correct level is refilled with fresh water from the water supply system. The vacuum pump and the water tank are mounted on a single, compact base, which, if properly used, ensures maintaining the correct water level, i.e. at the height of the pump rotor axis and the overflow tube of the tank.

ADVANTAGES

- ✓ High performance
- ✓ Possibility of transporting solid particles

TECHNICAL SPECIFICATION

Pump model	75 m³/h	200 m³/h	300 m³/h	500 m³/h	700 m³/h
Installed power	2,2 / 3,0 kW	5,5 kW	7,5 kW	15 kW	22 kW, 30 kW
Power supply voltage and frequency			3 x 400 V 50 Hz		

Type **SŁS - 1/ 1,5 / 2 / 3**

SLOTTED STRAINER

The slotted sieve is used for pre-treatment of wastewater in various industries, in particular in poultry slaughterhouses, meat processing plants, sewage treatment plants.

OPERATION

The device has a large-volume pre-chamber to reduce turbulence in the wastewater. There is an overflow in the upper part of the chamber, whose task is to direct the stream to the filter cartridge. An adjustable diaphragm ensures an even flow across the entire width of the screen and prevents sudden liquid overflow. The slurry separates from the liquid as it passes through a suitably shaped filter cartridge. The solids fall down on their own, and the separated liquid flows into the main chamber of the device. The size of the trapped solids depends on the size of the aperture and may be 0.25mm, 0.5mm, 1mm, 1.6mm and others, respectively.

ADVANTAGES

- ✓ High efficiency of sewage treatment
- ✓ Filter element with high slit accuracy and high smoothness of the working surface
- ✓ Reliable operation

TECHNICAL SPECIFICATION

Technical data based on the assumptions: gap width 0.5 mm, performance given for clean water.

Sieve size	3000	2000	1500	1000
Capacity (l/sek.)	80	57	38	16
Sieve width mm	2 x 1454	1954	1454	954
Dimension L	3030	2064	1564	1064
Connection diameter: inlet, outlet	Depending on the needs and arrangements with the client Range: 110 do 250 mm			

OTHER TECHNOLOGICAL DEVICES

The highest quality auxiliary devices, improving the course of subsequent technological processes. From single conveyors to complex conveying systems.

PNEUMATIC GUN FOR RUBBER FINGERS REPLACEMENT

Devices for replacing rubber fingers in devices: pickers, gizzard washers, gizzard washer and cleaners etc.

OPERATION

A special grab with an actuator is used to replace the rubber finger, which is activated by pressing a button on the handle. To replace the finger, insert its protruding part into the gun sleeve and press the button that activates the gripping mechanism.

ADVANTAGES

- ✓ Fast, secure method of finger changing
- ✓ One device suitable for many types of machines.

TECHNICAL SPECIFICATION

Weight	2,25 kg
Demand	Compressed air

Type LO-1

PACKING FUNNEL

The device is used for manual packing of carcasses into plastic bags.

OPERATION

The funnel is mounted to the packing table or other stable surface with screws. Packing the carcass in a plastic bag is done by hand. The bag is placed on the narrower side of the funnel, while the carcass is inserted from the opposite side. The device is an ideal solution in plants with low processing capacity.

ADVANTAGES

- ✓ Simple design
- ✓ Quick assembly
- ✓ Easy-to-use

Type LT-E

ELECTRONICAL BIRDS COUNTER

The device is used to register the amount of slaughtered poultry.

OPERATION

Carcasses suspended on shackles move next to the counter, and a system of two sensors (photo-optical and inductive) records the passing carcasses, eliminating any errors. The totalizer registers the object only when both sensors are activated simultaneously.

ADVANTAGES

- ✓ Simple design
- ✓ Quick assembly
- ✓ Easy-to-use
- ✓ Possibility to operate with any type of shackles and connectors, thanks to the vertical and horizontal adjustment

TECHNICAL SPECIFICATION

Weight	16 kg

Type **MBF-1**

BOOT AND APRON WASHER

A free-standing device, used for manual washing of shoes and aprons with brushes attached to the device wall.

OPERATION

The rear wall of the washer is used to hang up the apron, while the crossbar at the bottom is used to place the leg on it. The washer for boots and aprons can be placed anywhere, because its structure is stable and does not require additional support. It is possible to make a washer for washing aprons only with one brush, without a acrossbar for put the leg. This type of washer requires mounting to hooks.

ADVANTAGES

- ✓ High washing efficiency
- ✓ Stable and durable construction

Type **MB-1**

BOOTS WASHER

The device is used for manual washing of employees' shoes.

OPERATION

The water is activated by pressing the button with the foot. Water connection ½ ", drainage through a standard siphon Ø 50, located at the bottom of the washer.

ADVANTAGES

- ✓ High washing efficiency

TECHNICAL SPECIFICATION

Overall dimensions:	W= 555 mm H= 430 mm

Type **UK**

KNEE WASHBASIN

Knee-operated washbasins are intended for hand washing in poultry plants, food processing plants, hospitals, laboratories and other enterprises where the outflow of water should not be activated manually.

OPERATION

The knee-mounted washbasin is made of acid-resistant stainless steel.
Equipped with a standard siphon, spout, valve and mechanical water mixer, therefore it should be supplied with hot and cold water.
The water flows out after pressing the appropriate place in the front wall of the washbasin with your knee.
The water flow time depends on the ring placed in the valve and can be from 4 - 12 seconds. The temperature of the water is regulated by a mixer placed under the washbasin.
We offer knee sinks of various shapes, sizes, free-standing and wall-hung. In addition to the standard washbasins, as shown in the drawings below, other washbasins with other dimensions can be made according to the sketch provided by the customer.

ADVANTAGES

- ✓ Hygienic start-up
- ✓ Easy to assemble

Type **WZP-1, WZP-2**

CRATE TROLLEY

The trolley for transporting containers is an auxiliary device in poultry slaughter plants.

OPERATION

The trolley structure is made of stainless, acid-resistant steel. Plastic wheels with high mechanical strength. Appropriate location of the wheels ensures inclination and facilitates unloading the trolley. Standard: single and double strollers.

ADVANTAGES

- ✓ Stable structure
- ✓ High load resistance

Type **MPE**

CRATES AND EURO PALLETS WASHER

The washer is used for effective cleaning of containers and euro-pallets from any dirt resulting from the per-slaughter process.

OPERATION

The washer removes all kinds of dirt, from solid dirt (i.e. remains of meat, cheese, starch, fat, etc.) to liquid dirt (blood, milk, whey, oil, fat, etc.). A single washing cycle consists of many operations, which include initial washing, main washing, and rinsing. A chain conveyor installed inside the washer transports the washed item inside the device.

ADVANTAGES

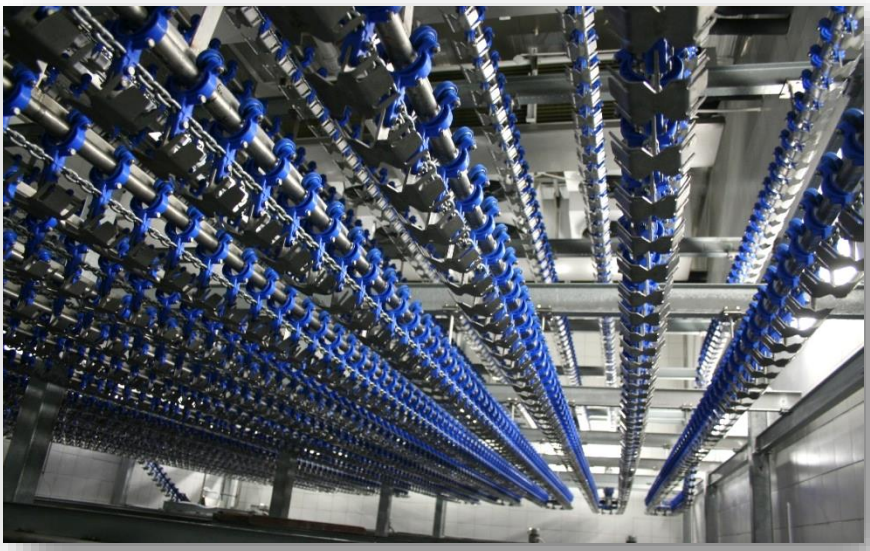
- ✓ High washing efficiency
- ✓ Maintenance-free

TECHNICAL SPECIFICATION

	MPE	CRATE TYPES AND DIMENSIONS DESTINED FOR WASHING BY MPE	
Capacity	Depends on washer lenght L=250-850 crates/h	E2 KFC	600 x 400 x 200 600 x 400 x 500
Overall dimensions	W=1550 Masa= 650 kg	Euro pallets	1200 x 800 x 180

Type **PŁ-U/P/S/PJ**

OVERHEAD CHAIN CONVEYOR



Designed to transport the product at all stages of the technological process.

OPERATION

The conveyor can be freely configured so that it is fully adapted to the investor's needs. The use of appropriate size shackles allows for the transport of all types of poultry and all kinds of divided elements. The standard conveyor is based on a load chain with a division of 1 ”. It can be made in a stainless or galvanized version. The conveyor includes: drive, tensioner, 90o and 180o bends, straight tracks, vertical bends, chain carts, shackles, joints. The chain conveyor is suspended from the supporting structure, additionally made according to the contractor's guidelines.

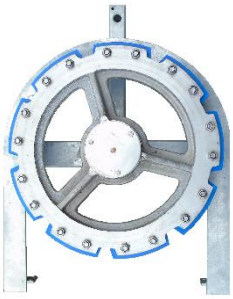
ADVANTAGES

- ✓ Fully customizable
- ✓ Many types of shackles

ELEMENTS OF OVERHEAD CHAIN CONVEYOR

- Drive unit

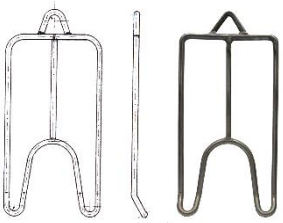
- Trolley on the pipe line – plastic and stainless steel execution



- Curve 180°

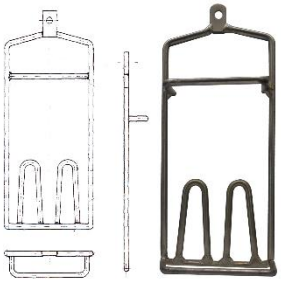
- Plastic trolley on T-track

- Curve 90°



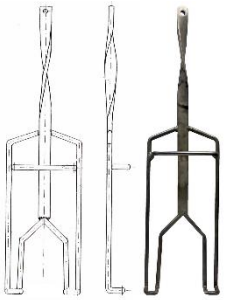
- Evisceration shackles for automatic evisceration lines

- Spring tensioner



- Manual slaughtering shackle

- Chain tensioner



- Slaughtering shackle

Type **PT-0,3/0,4/0,5/0,6**

MODULAR BELT CONVEYOR

The belt conveyor is used in internal transport, where there is a need to move elements or details. In poultry slaughterhouses, it can be used to transport poultry carcasses, divided pieces, offal, feathers, etc.

OPERATION

The belt conveyor is a free-standing device, so it can be located anywhere, depending on the needs. The conveyor consists of a drive unit, a tensioning unit and a straight segment. The transporting element is a belt, selected appropriately to the transported material (when transporting elements intended for consumption, a food belt, adapted to direct contact with food, is used).

ADVANTAGES

- ✓ Transport of elements over any distance
- ✓ Possibility to freely set the conveyor
- ✓ Widely applicable

TECHNICAL SPECIFICATION

Lenght	2 – 10 m
Width	200- 1000 mm
Height	400-750 mm or another

Type **TW-„B”/N or P**

GRAVITATIONAL ROLLER CONVEYOR

The roller conveyor is designed for transporting live bird crates, egg cartons and other kinds of packaging.

OPERATION

The conveyor does not have a drive installed, while the appropriate inclination of the conveyor obtained by adjusting the height of the legs, ensures proper operation of the roller table of the transported element. The transporter can be assembled in any length from standard segments with a length of 1000 mm, 2000 mm and a 90 ° curve. At the customer's request, a segment of a different length can be made, and appropriate railings can be made to prevent the transported items from falling. The rollers can be made of stainless steel or PVC, and all of them have bearings.

ADVANTAGES

- ✓ Simple design
- ✓ Efficiency
- ✓ Easy to clean
- ✓ Possibility of any location of the conveyor

TECHNICAL SPECIFICATION

Lenght	Fully customisable
Width	standard 500 and 600,
Height	Fully customisable

Type **TW-N**

ROLLER CONVEYOR WITH A DRIVE UNIT

The roller conveyor with a drive unit is used to transport heavy objects with regular shapes and a relatively large contact surface with rollers, e.g. containers, cartons, etc.

OPERATION

In the conveyor, each roll is driven. The rollers can be made of stainless steel or PVC, and all of them have bearings. The drive is transmitted from the gear motor via a roller chain. The roller conveyor can be arranged in any length, the longest section driven by one chain can be 9 m. At the customer's request, a conveyor can be made combined with segments of a gravity roller conveyor, and appropriate barriers to prevent the transported items from falling down.

ADVANTAGES

- ✓ Widely applicable
- ✓ Full adjustment to the investor's expectations
- ✓ Easy to clean
- ✓ Possibility of any location of the conveyor

PLATFORMS

Platforms are auxiliary elements in processing plants, intended for all kinds of technological operations during the slaughtering, processing, packing and dividing of poultry.

OPERATION

Platforms made of corrosion-resistant materials, so they can be used in food production plants. The platforms are made at the investor's request, in accordance with the technological design. They can be used in all food processing plants, laboratories, hospitals, shops, etc.

ADVANTAGES

- ✓ Special executions in accordance with design assumptions
- ✓ Widely applicable

Type WW-1, WW-2

STAINLESS STEEL BATHTUBS

The stainless steel bathtub is used to collect and transport solid and liquid products, consumables or waste.

OPERATION

Stainless steel tanks are made in variants

- movable tanks - equipped with movable wheels, or with a pair of swivel wheels and a pair of fixed wheels;

- standing tanks

ADVANTAGES

- ✓ Stainless steel bathtubs guarantee their useful life
- ✓ wide application

TECHNICAL SPECIFICATION

Standard dimensions of the bathtubs are presented in the table below. At the customer's request, we make bathtubs of other dimensions.

Lenght mm	1250
Width mm	750
Height mm	Tank height: 600 Bathtub with wheels: 900 Standing bathtub : 750

Type **SN-1**

TOOL STERILIZER

The device is used to destroy all kinds of microorganisms on tools, such as knives, sharpening devices, which are used in food processing plants.

OPERATION

The basic element in the sterilizer is a container with an insert for knives and steel stays. The sterilization process in the device takes place in water. Water is supplied through a standard ½ "connection, and its excess flows down through an overflow pipe connected to the ½" drain valve. An electric heater is used to heat the water, which is controlled by the temperature control system. The temperature in the sterilizer can be read on the dial thermometer located on the outer wall of the sterilizer. Depending on the course of the technological line, a left or right sterilizer can be used.

ADVANTAGES

- ✓ Effectiveness of tool sterilization
- ✓ Compact size

TECHNICAL SPECIFICATION

Voltage	220 V
Heater power	1000 W
Temperature range	85-92°C
Capacity	~6,6 l
Model of thermometer	clockwork

WASTEWATER TREATMENT

Industrial wastewater treatment plants resulting from the slaughter process and sanitary sewage treatment plants.

OPERATION

The technological line of the sewage treatment plant is equipped with the following components:

- Arc sieve (mechanical cleaning of solid parts)
- Degreaser with pumps and agitators (separation of fat, mixing and averaging of wastewater)
- Retention reservoir with a pump and agitator system (collection of sewage and daily averaging of the quantitative and qualitative composition)
- Physical and chemical pre-treatment plant (flocculator, flotator with saturator used to carry out physicochemical reactions)
- Biological reactor for wastewater treatment with biological methods, consisting of:

- pretreated sewage retention tank- denitrification chambers with a pump and agitator system - nitrification chambers with a system of blowers and diffusers aerating the wastewater, and valve chambers - secondary settling tanks (final separation of sludge from treated sewage) - secondary settling tanks (final separation of sludge from treated sewage)

Sludge pumping, dewatering, collection and storage system:

- o Purified sewage pumping station
  o Control and measurement system

The entire treatment plant process is controlled automatically.

The sewage treatment plant is equipped with a system of valves and emergency bypasses ensuring stable operation in special cases.

If you want to:

- ✓ Receive a price offer for a selected device
- ✓ Create a technological project of the slaughterhouse from scratch
- ✓ Modernize or rebuild plant

Contact the sales department by phone:

☎ +48 (044) 647 61 74 (extension numbers 223,224,225)

☎ phone. 794 995 695

Or write to us:

✉ sprzedaz@szlachetstal.pl

✉ sales@szlachetstal.pl

If you want to:

- ✓ Receive an offer for any spare part,
- ✓ Ask for a service or renovation of the device

Contact the service department by phone:

☎ phone. 690 022 089

Or write to us:

✉ ryszard@szlachetstal.pl