



CATALOG OF USED TECHNOLOGICAL EQUIPMENT COOLING TUNNEL AND CHICKEN SLAUGHTER LINE

Owner:



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**You can watch a video presentation of the
equipment in this catalog at this link:**

<https://www.youtube.com/watch?v=XzVAA7zX678>

1. INTRODUCTION

In the company Pivka Perutninarstvo d.d. in 2024 and 2025, we are carrying out major investment works in the field of poultry meat production. We are planning major construction works and the replacement of technological equipment, with which we pursue the following goals:

- construction of a new cooling tunnel;
- expansion of the department for cutting and packing meat;
- replacement of technological equipment MEYN in hl. tunnel and cutting line;
- increasing the capacity of the entire line from the slaughterhouse to the meat warehouse from 4,000 to 6,000 chickens/hour; and
- development and production of new products.

The existing automatic slaughter line and evisceration line as well as other factory capacities and infrastructure already enable the processing of even 6,000 chickens per hour. The main reasons for changing the equipment are that the existing cooling tunnel and cutting line represent a bottleneck, as they reach too low a capacity (only 4,000 chickens per hour). In Pivka d.d. we are already preparing spatial construction reconstructions, which will also gain more floor space in the meat packing department; this will enable an increase in the production program.

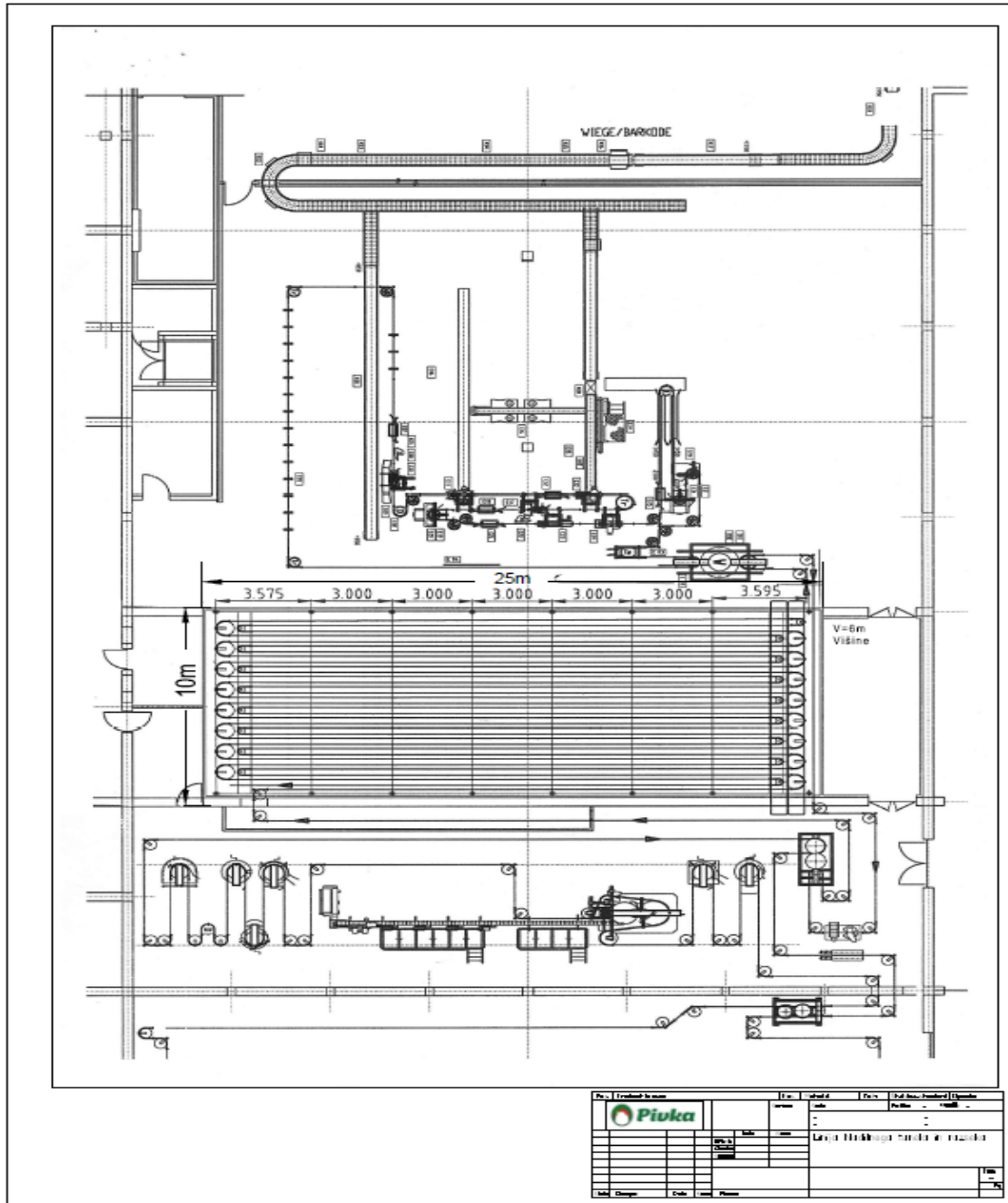
For the MEYN equipment presented in this catalog (cooling tunnel and cutting line), installed in the company Perutninarstvo Pivka d.d., the following applies:

- the equipment was installed in 2002;
- it is perfectly maintained and in excellent condition;
- the equipment is in operation and is fully functional and ensures high-quality processing of poultry meat;
- perfectly meets all modern technological requirements and is in line with the higher quality requirements of the European market;
- technological equipment enables high yields of valuable meat parts and relatively low meat loss;
- the equipment operates in accordance with all national and European laws and veterinary-sanitary and safety regulations, including HACCP etc.;
- Dutch equipment manufacturer MEYN Poultry Ltd. is a world-renowned and specialized company that has been operating under this name since 1972 and offers support in the supply of spare parts, servicing of machines, sales of new equipment, and at the same time offers customized engineering solutions.

Aleksander Debevec, CEO
Perutninarstvo Pivka d.d.

2. COOLING TUNNEL

2.1. Layout¹



Picture 1: Layout of the equipment (cooling tunnel; check the catalog appendix)

¹ A larger rendering is attached in the appendix to this catalog.

2.2. Technological description of the tunnel

In the production of meat after plucking and evisceration of chickens, the logical continuation of the technological process is the cooling of carcasses of the grill type. The existing cooling tunnel works on the principle of dry-air cooling of chicken carcasses with the help of a hanging chain transport conveyor (OHC – overhead conveyor).

PVC hangers are installed on the OHC chain according to the principle of one hanger one chicken carcass. The transporter is suspended on a supporting steel structure. The OHC is conducted in two elevation levels. On the floor of the cooling tunnel, there is enough height under the OHC for the eventual cooling of meat on pallets. Cooling evaporators with fans are installed above the OHC, which ensure intensive cooling of chicken carcasses. In order to increase the cooling capacity, we have upgraded the cooling of chicken carcasses with a liquid ice spraying system.

Air cooling with dry air allows and additional cooling with the "Thor Ice" system allows a minimum cooling temperature of up to 1% (average 0.5 - 0.7 °C). At the outlet, chilled chickens have no ice on the surface and no frozen parts of the carcass (such as wings).

Stages of technological cooling processes:

- With the help of an automatic hanger, the chickens are hung from the evisceration conveyor belt on the tunnel OHC.
- In the initial part, there is a spraying phase first, followed by a cooling phase.
- Additional cooling is performed with "Thor Ice" liquid ice
- With the help of an automatic hanger, the cooled carcasses from the OHC tunnel are hung onto the cutting line - CHICK WAY.

2.3. Basic technical data of the tunnel

Dimensions of the cooling tunnel:

- length 25 m;
- width 10 m (without drainage corridor);
- height 6 m.

Chain lengths or OHC is 1,240 m. The cooling medium is ammonia, which operates under pressure at two temperatures. levels: -40 °C and -10 °C.

2.4. Tunnel capacities

The tunnel was designed and built in 2002 for slaughter capacity (as follows):

- 3,850 chickens / hour;
- grill weight: 1.8 kg;
- cooling time: 120 min;
- temperature target: cool the breast meat from 40 °C to 4 °C.

Currently, and with the additional cooling of Thor Ice, we reach the slaughter capacity:

- 4,000 chickens / hour;
- grill weight: 1,200 to 2,200 g;
- cooling time: 120 min;
- the meat in the breast (on the bone) is cooled to 4-6 °C, which depends on the grill weight;
- offal (livers, hearts, stomachs and necks) is cooled in spinchlers - water cooling and air cooling on belt conveyors. They will keep this way of technology and equipment.

Cooling tunnel (rated power of electric motors):

- chain drives: 10 x 0.75 kW
- four fans of 6 motors each (3 kW each)

2.5. Components of tunnel equipment

1. load-bearing steel and hot-dip galvanized construction for OHC for both levels;
2. OHC suspended chain conveyor with a length of 1.240 m, which consists of:
 - Rail: set
 - Calibrated RF chains
 - Carts with wheels and carriers
 - PVC hangers
 - Direction reversing wheels
 - Charging stations
 - Drives
 - Evaporators with fans (4 pcs.)
 - Electrical cabinet and control devices with displays
 - "Thor Ice" liquid ice spraying system equipment (16 nozzles and 2 tanks)

2.5. Equipment photo gallery



Picture 2: Entrance from the evisceration to the tunnel



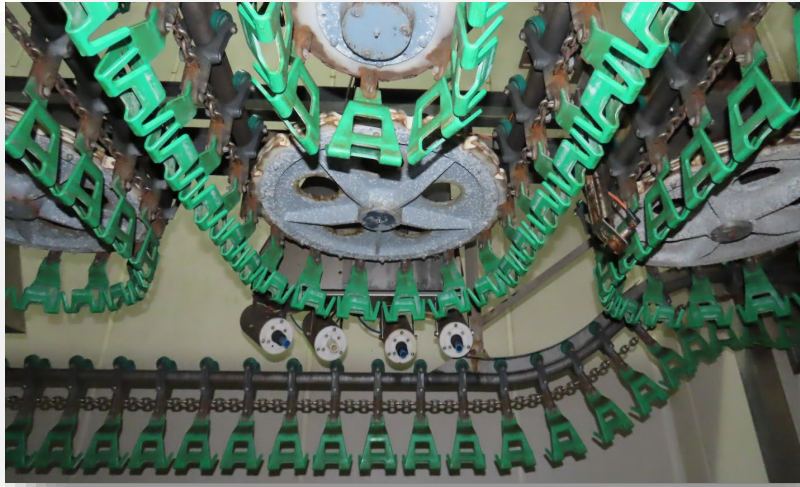
Picture 3: Spraying room



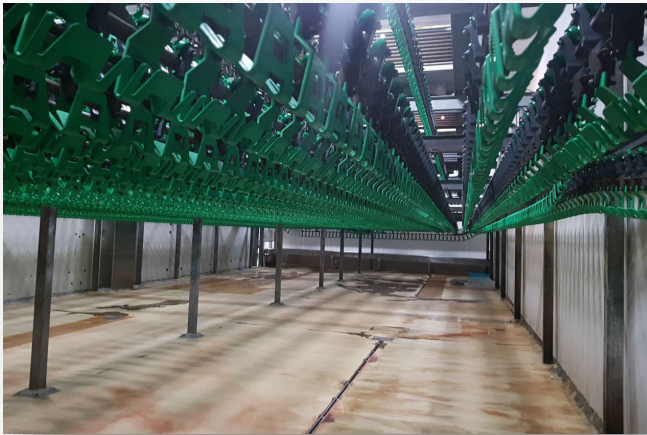
Picture 4: Tunnel (on the lower level) with tanks for liquid ice



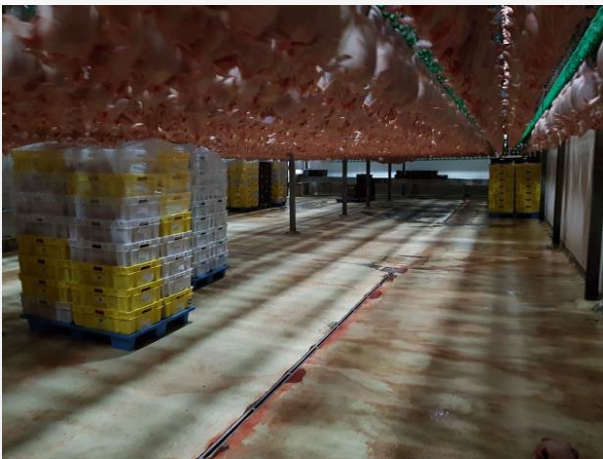
Picture 5: Tunnel (on the upper floor) with evaporators



Picture 6: Tunnel with liquid ice unit



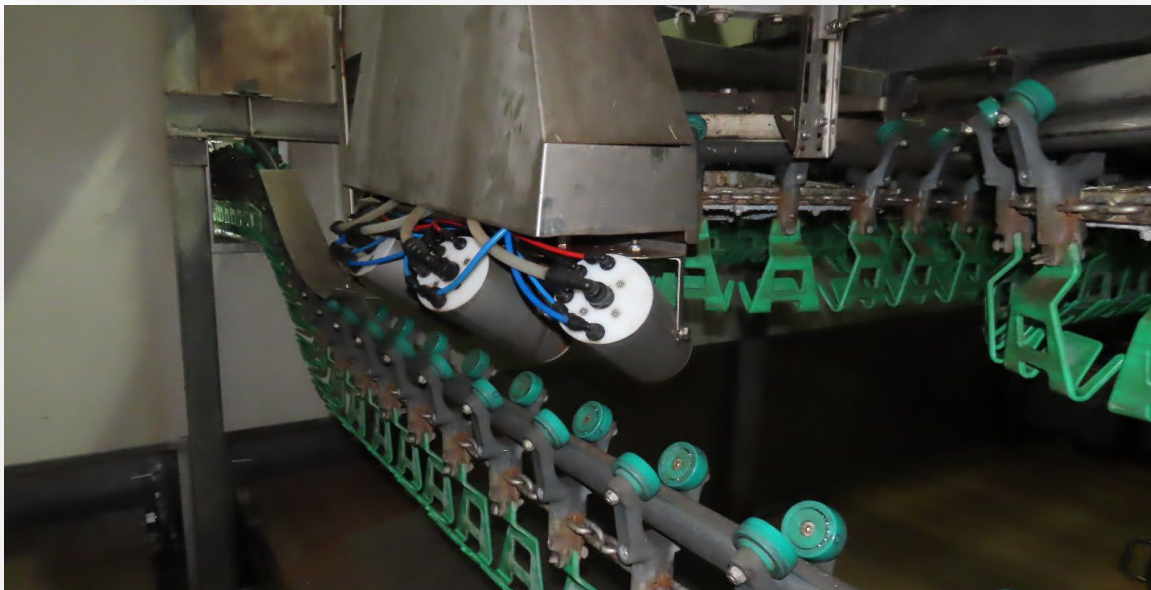
Picture 7: Tunnel (Generic View 1)



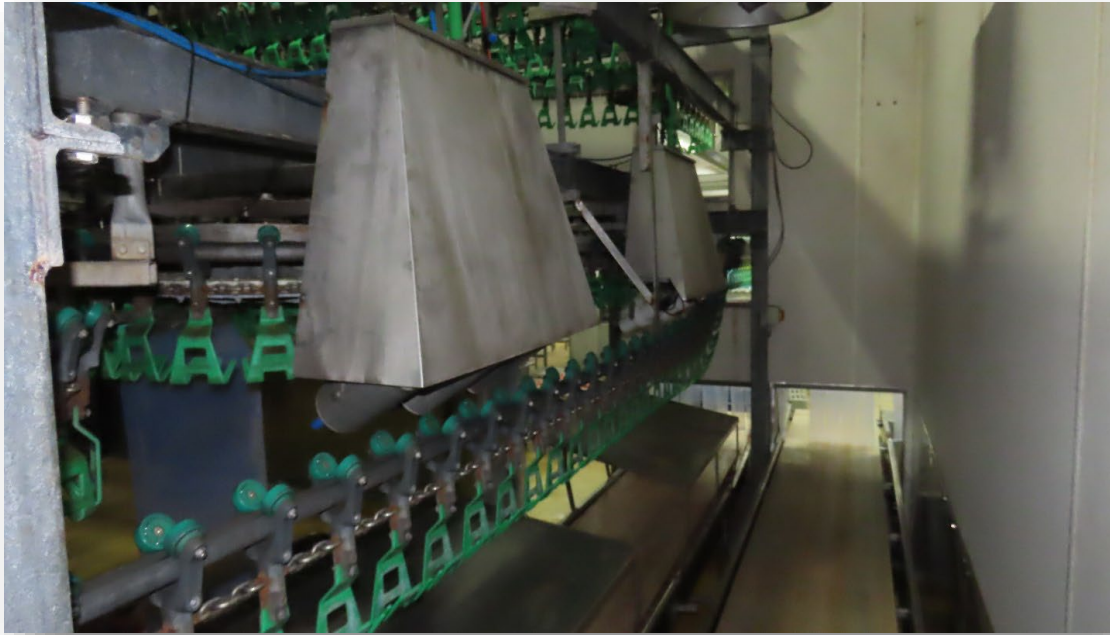
Picture 8: Tunnel (Generic View 2)



Picture 9: Chicken tunnel



Picture 10: Liquid ice unit



Picture 11: Liquid ice unit



Picture 12: Overhead conveyer (OHC)



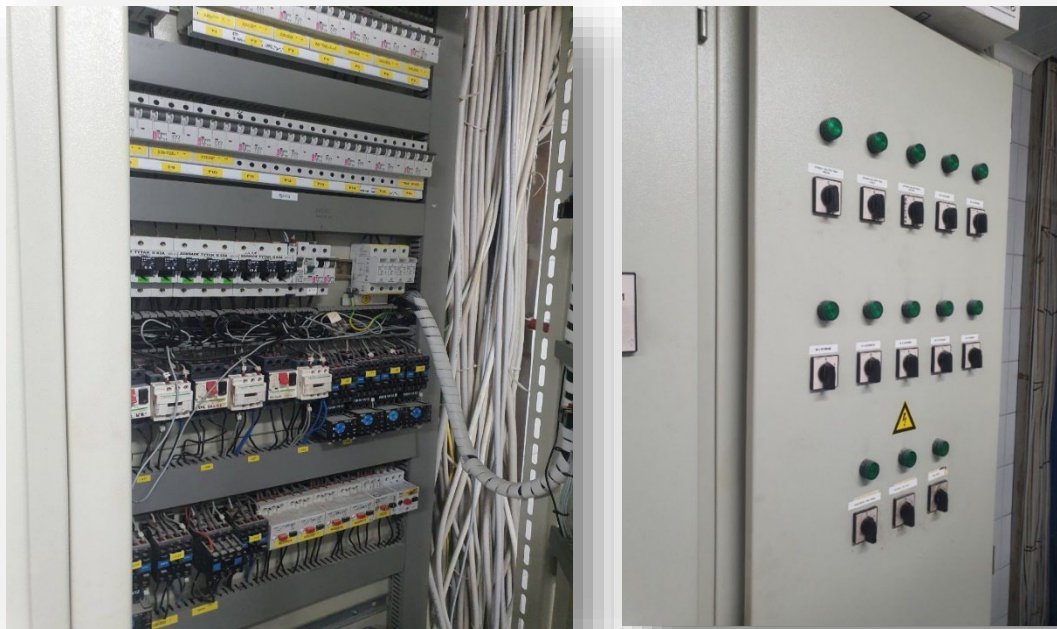
Picture 13: Exit from the tunnel to the packing house



Picture 14: Return of empty OHC (from tunnel back to evisceration)



Picture 15: Electric cabinets (section)



Picture 16: Electric cabinets (cooling tunnel)



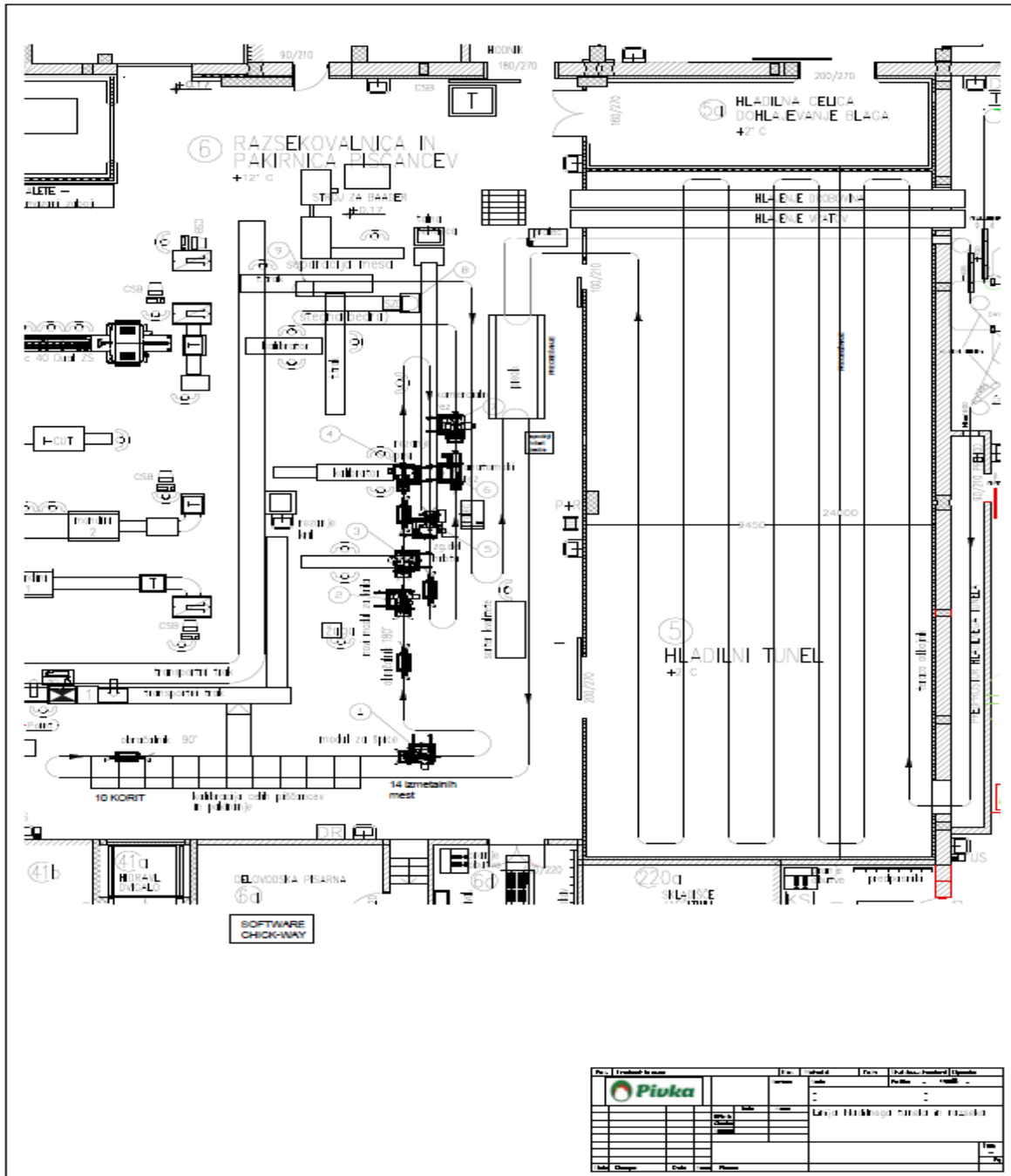
Picture 17: Electric cabinets (Chick Way)



Picture 18: Electrical cabinets (overhanging)

3. CHICK WAY: THE LINE FOR AUTOMATIC CHICKEN CUTTING

3.1. Layout²



Picture 19: Layout of the equipment (cutting; check the catalog appendix)

² A larger rendering is attached in the appendix to this catalog.

3.2. Technological description of the cutting line

The cutting line is an automatic line also called CHICK WAY. Most of the equipment is suspended on an INOX supporting structure and supported by numerous electronic sensors and devices for automatic work. All control devices on the line are connected with computer software. Via the computer, the line can be freely set and thus determined:

- line speed,
- weight intake of grill chickens,
- remove damaged chickens with a manual sensor,
- feeding and determining the proportion of whole chickens and calibrating chickens into 10 weight categories.

Nine modules enable the automatic dissection of chickens in two ways: anatomical cut and commercial cut. The following cutting options are available:

- Dissection of wings in three ways: whole wings, wings without tips and wings by links: separated first link, separated second link and separated tips.
- Breast cutting; the anatomical cut enables high-quality processing to obtain the fillet.
- Cutting two parts of the backs into an anatomical or commercial cut: the upper (chest) part and the lower (back) part.
- Hip cutting: anatomical or commercial cutting.
- Cutting thighs and legs separately: commercial or anatomical cut.
- According to the data from the computer. At the same time, a number of statistics are kept: the number of whole chickens according to calibres, the number of cut-up chickens, average weight, speed, etc.

The cooled chicken carcasses (grill) of the chickens are hung from the tunnel OHC belt to the cutting line via an automatic hanger. After a visual inspection by the control worker, damaged chickens (bruises) are eliminated via the sensor. The next stage is the calibration of the chicks and the ejection into the RF trough (depending on the setting on the computer). 100% packing of whole chickens or 100% cuts or splits can be specified. It all depends on the needs of the market and the quality of the grill chickens. In the following, the built-in modules take over the work, which are set manually (manually) according to the average grill weight of the chickens and enable the processes according to the options mentioned above. Additional equipment (such as belt conveyors, etc.) is placed on the floor below the CHICK WAY line.

3.3. Basic technical data

- the length of the OHC is 110 m
- capacity is 4,000 chickens / hour
- cutting options of 1,200 to 2,200 g grill weight or 1.85 to 3.3 kg live weight of chickens.
- conditions: 80% weight uniformity in flocks of chickens

The following average proportions are achieved with an anatomical cut: 11% of the entire wing, 42-43% of the breast, 28-30% thigh (14% leg and 16% thigh) and 17-18% back. Rated power of electric motors:

- chain drive: 2 x 1.1 kW
- modules:
 - 2x 0.55 kW
 - 2x 0.55 kW
 - 2x 0.75 kW
 - 2x 1.00 kW
 - 2x 1.00 kW
 - 1x 0.55 kW
 - 2x 1.00 kW
 - 1x 1.00 kW

3.4. List of included equipment items

In this part, the offer consists of the following equipment:

1. Automatic chicken hanger.
2. Suspended supporting INOX structure for OHC conveyor.
3. OHC chain conveyor 110 m long, which consists of:
 - rails (set),
 - an electronic tape scale connected to the Chick Way system,
 - calibrated RF chain,
 - carts with wheels and special PVC - metal hangers,
 - direction reversing wheels,
 - charging stations,
 - drive stations,
 - sensors,
 - ejectors,
 - hangers' rectifiers,
 - various guides,
 - equipment for visual quality control,
 - hanger washing machine.
4. Nine modules for cutting or processing grill chickens.
5. Chick Way computer hardware and software.
6. Belt conveyor for chicken wings.
7. Belt conveyor for chicken backs.
8. Collection belt conveyor.
9. Stainless steel troughs (10 pcs) for whole chickens with three mobile troughs with funnels for packing chickens in bags.

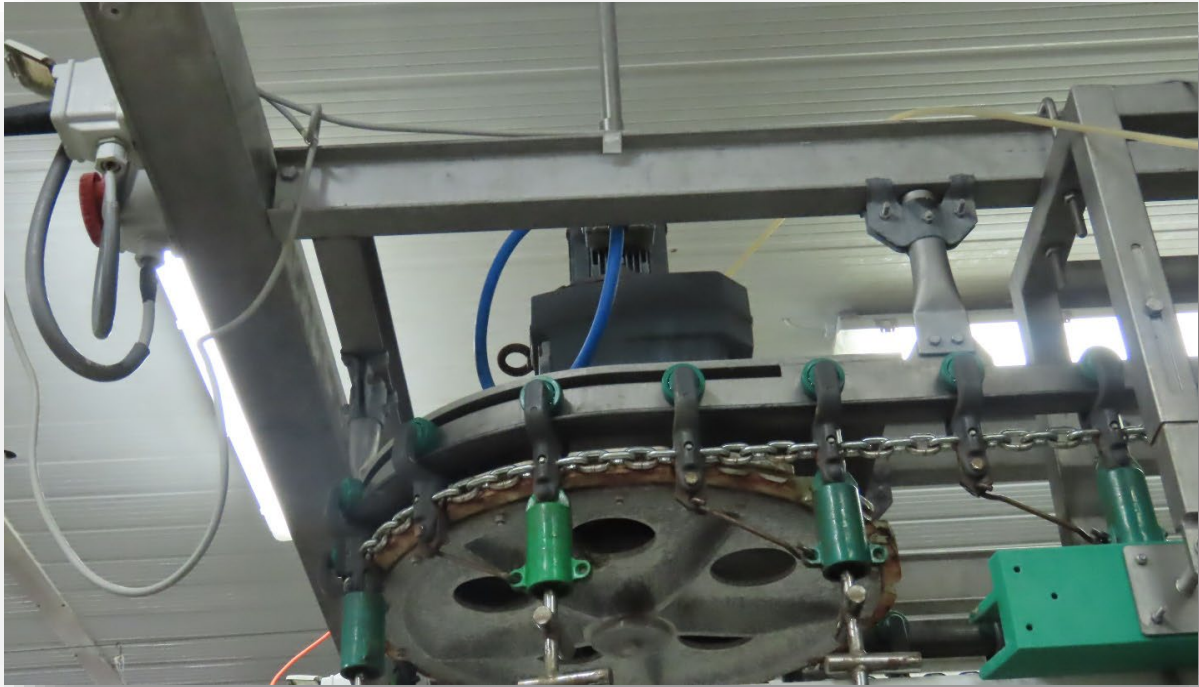
3.5. Equipment photo gallery



Picture 20: Support structure: OHC, drives, hangers



Picture 21: Support structure: OHC, drives, hangers



Picture 22: Support structure: OHC, drives, hangers



Picture 23: Support structure: OHC, drives, hangers



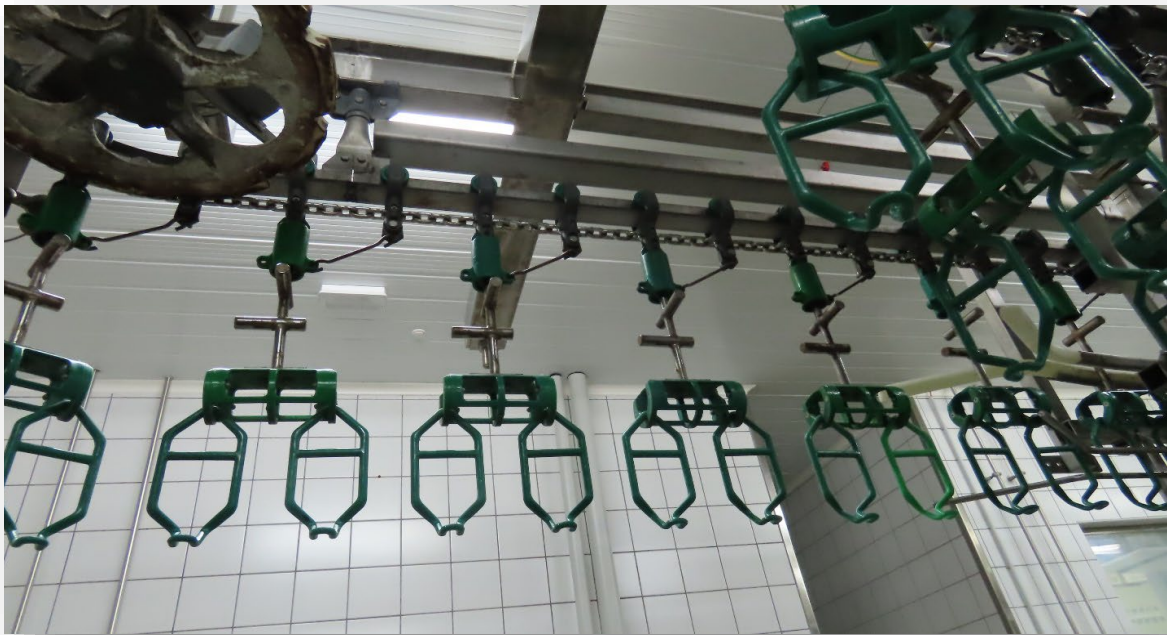
Picture 24: Support structure: OHC, drives, hangers



Picture 25: Support structure: OHC, drives, hangers



Picture 26: Support structure: OHC, drives, hangers



Picture 27: Support structure: OHC, drives, hangers



Picture 28: Automatic hanger



Picture 29: Automatic hanger



Picture 30: Automatic hanger



Picture 31: The line behind the automatic hanger and quality control



Picture 32: The line behind the automatic hanger and quality control



Picture 33: Chickens packaging and Chick Way booth



Picture 34: Chickens packaging and Chick Way booth



Picture 35: Chickens packaging and Chick Way booth



Picture 36: Chick Way booth



Picture 37: Chick Way booth



Picture 38: Chick Way module 1: wing tips



Picture 39: Chick Way module 1: wing tips



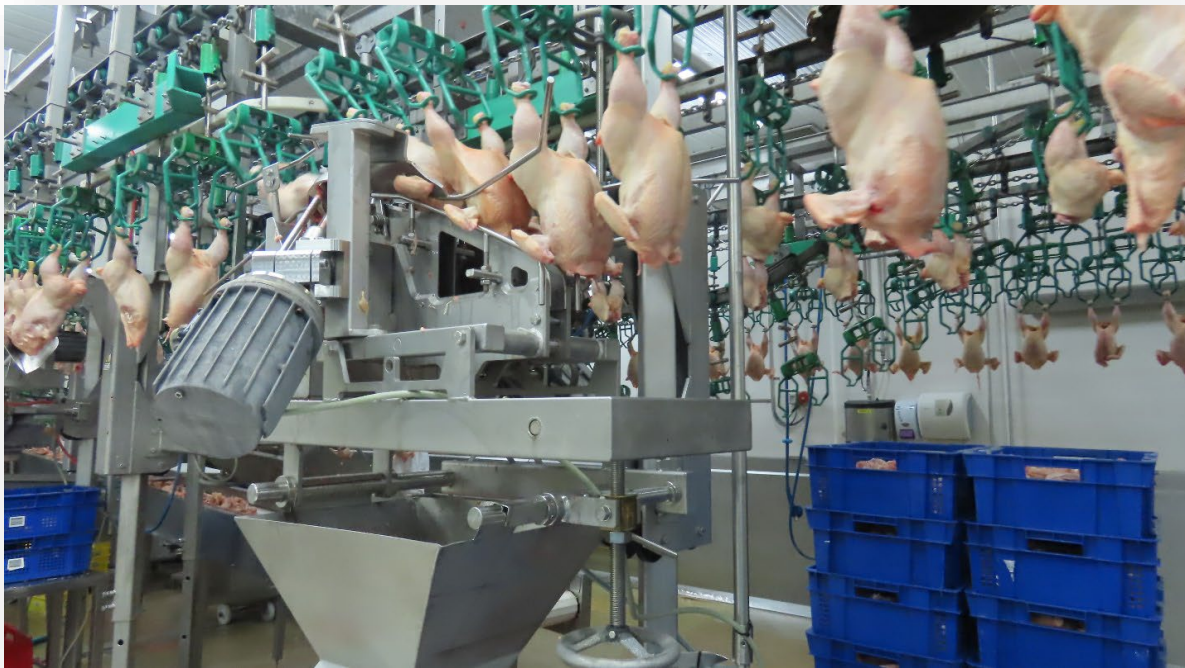
Picture 40: Chick Way module 1: wing tips



Picture 41: Chick Way module 1: wing tips



Picture 42: Chick Way module 2: the second joint of chicken wings (optional)



Picture 43: Chick Way module 3: the first and the second joint (third joint) of wings / complete wings



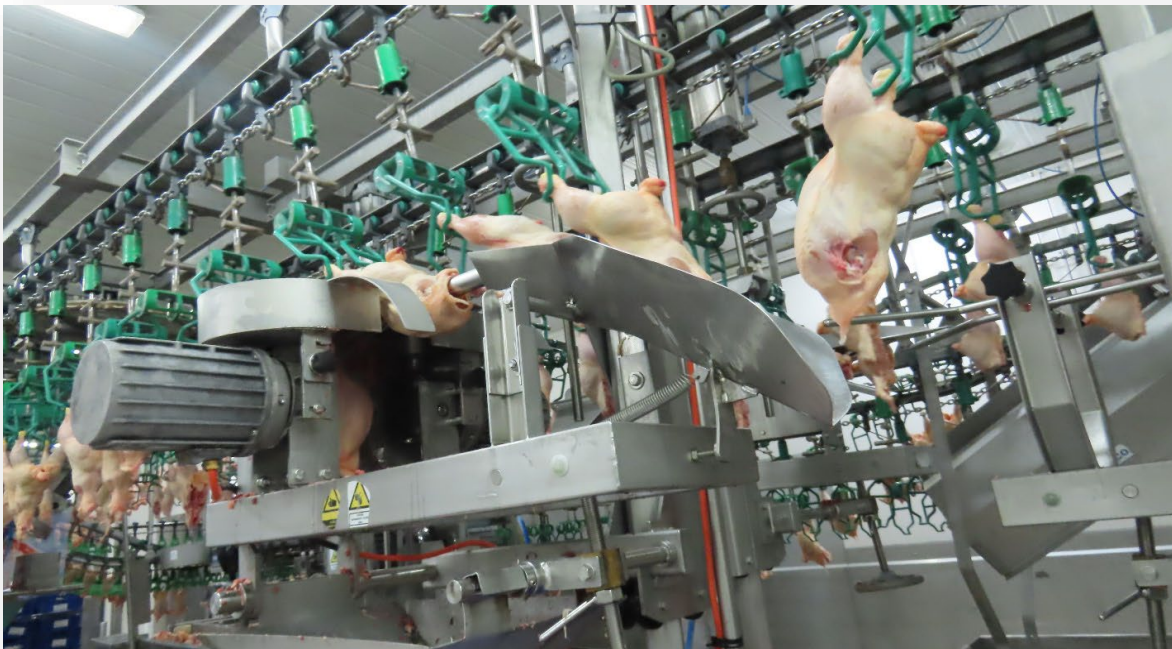
Picture 44: Chick Way module 3: the first and the second joint (third joint) of wings / complete wings



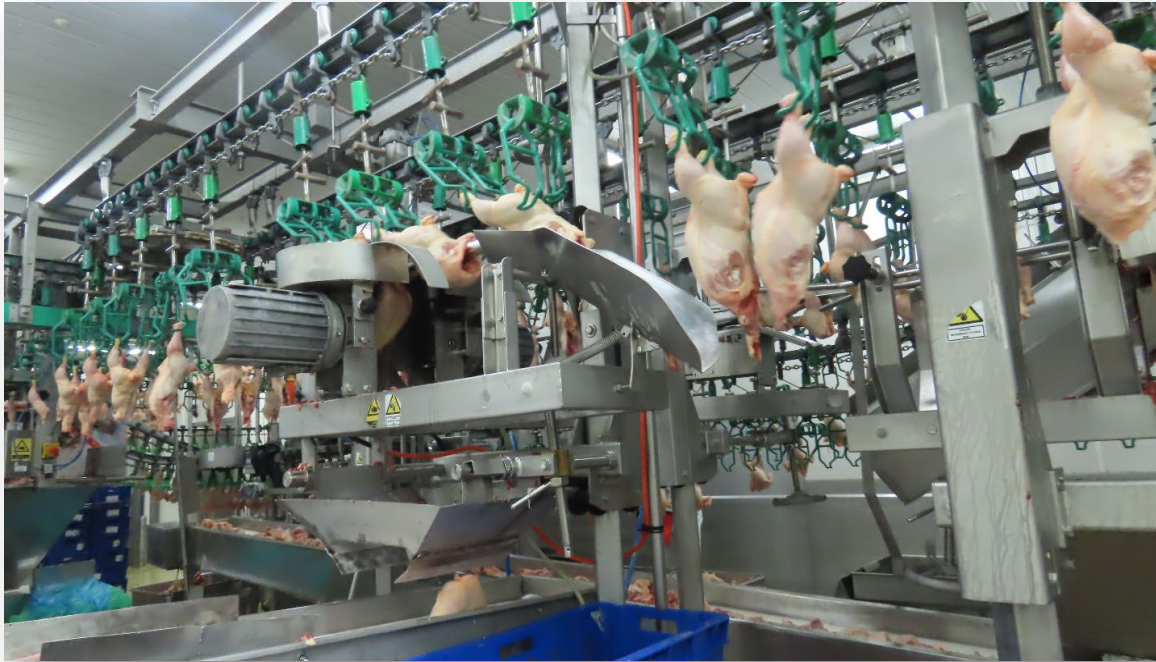
Picture 45: Chick Way module 3: the first and the second joint (third joint) of wings / complete wings



Picture 46: Chick Way module 3: the first and the second joint (third joint) of wings / complete wings



Picture 47: Chick Way module 4: breasts



Picture 48: Chick Way module 4: breasts



Picture 49: Chick Way module 4: breasts



Picture 50: Chick Way module 4: breasts



Picture 51: Chick Way module 5: upper back



Picture 52: Chick Way module 5: upper back



Picture 53: Chick Way module 6: lower back



Picture 54: Chick Way module 6: lower back



Picture 55: Chick Way module 6: lower back



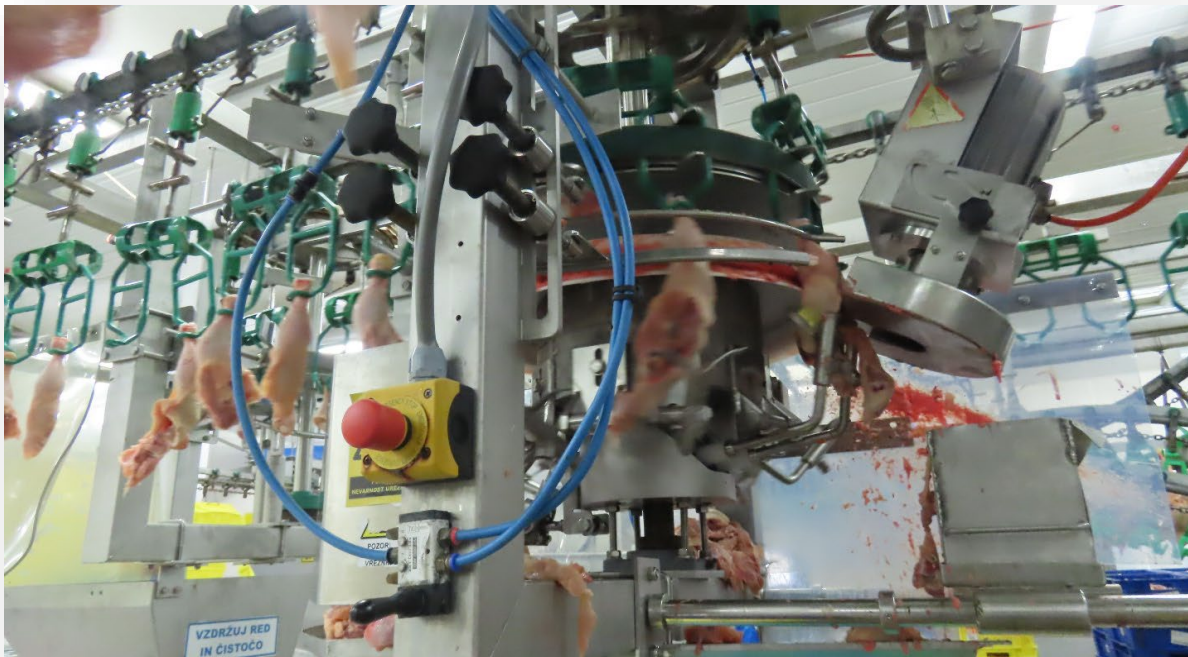
Picture 56: Chick Way module 7: commercial cutting (optional)



Picture 57: Chick Way module 7: commercial cutting (optional)



Picture 58: Chick Way module 8: legs (optional thighs or drumsticks)



Picture 59: Chick Way module 8: legs (optional thighs or drumsticks)



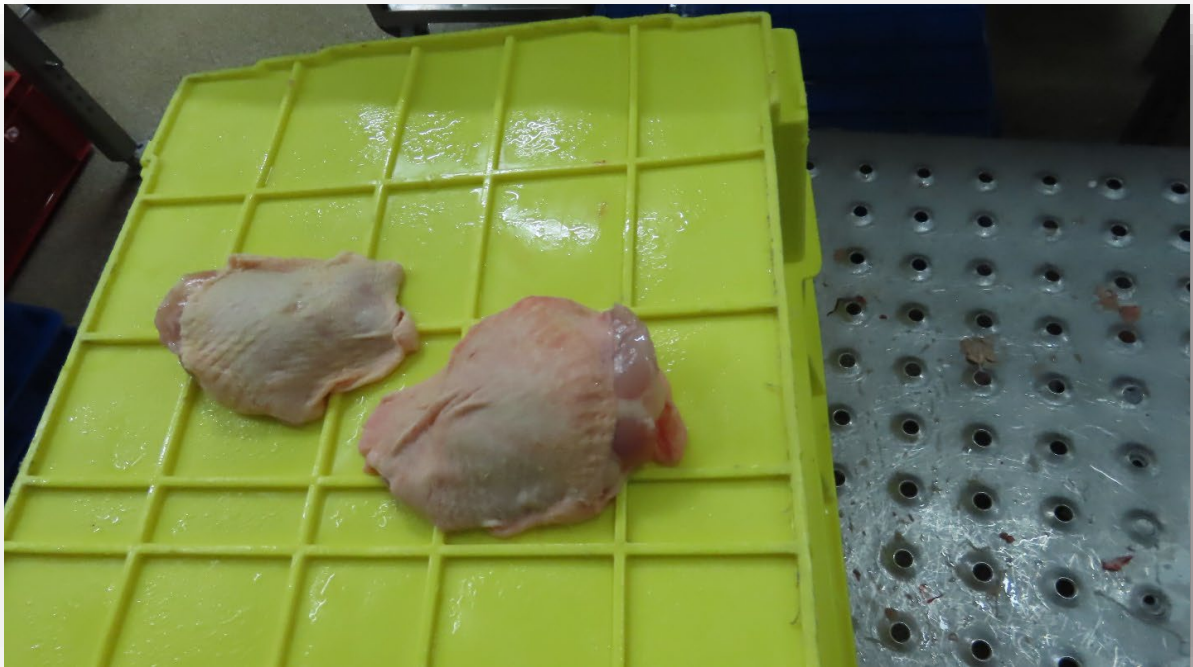
Picture 60: Chick Way module 8: legs (optional thighs or drumsticks)



Picture 61: Chick Way module 8: legs (optional thighs or drumsticks)



Picture 62: Chick Way module 8: legs (optional thighs or drumsticks)



Picture 63: Chick Way module 8: legs (optional thighs or drumsticks)



Picture 64: Chick Way module 8: legs (optional thighs or drumsticks)



Picture 65: Chick Way module 9: dropper (thighs or drumsticks)

4. PRICE, TERMS OF SALE AND DISASSEMBLY TIMETABLE

The quantitative and more detailed composition of the sales equipment can be seen in the previous chapters of this catalog. The entire equipment according to this catalog is sold on a "seen - bought" basis.

The sales price does not include VAT, dismantling costs and other costs of taking the equipment into the buyer's possession. A sales contract is concluded between the buyer of the equipment and the seller, which also regulates the dismantling procedure and timeline. Ownership of the equipment remains with the seller until the full purchase price is paid.

Price of the cooling tunnel: **negotiable**

Price of equipment for cutting chickens (including hanger): **negotiable**

Payment for the equipment is made to the business account of the owner of the equipment:

- 30% of the purchase price before disassembly
- 70% of the purchase price before pickup

Dismantling can only be carried out by temporary agreement with the seller and on weekends. Dismantling takes three days. The costs of dismantling, depositing, loading and transporting the equipment are borne by the buyer.

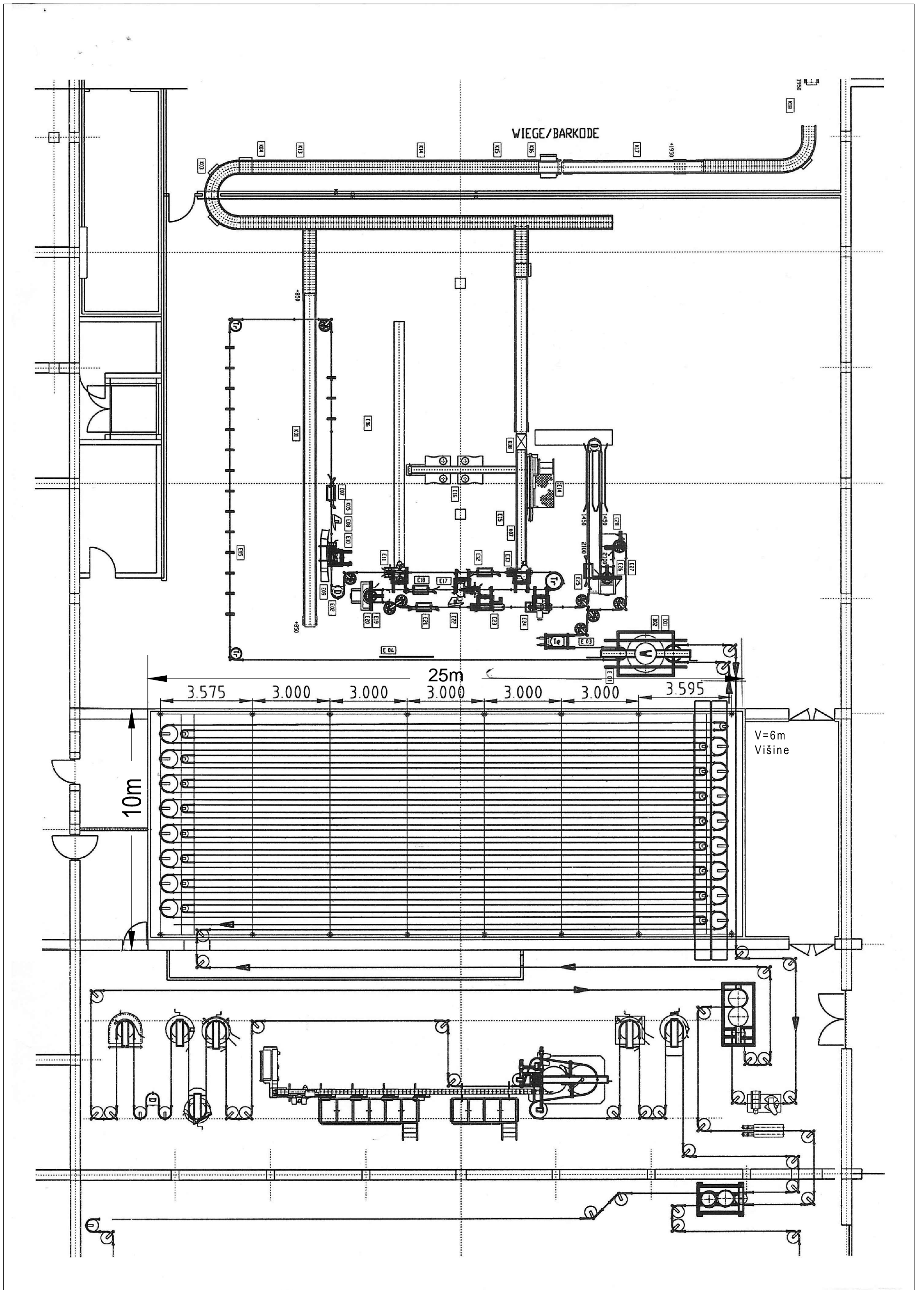
Estimated deadlines for dismantling:

- cooling tunnel: no earlier than October 2024.
- chicken cutting equipment and hanger: no earlier than February 2025.

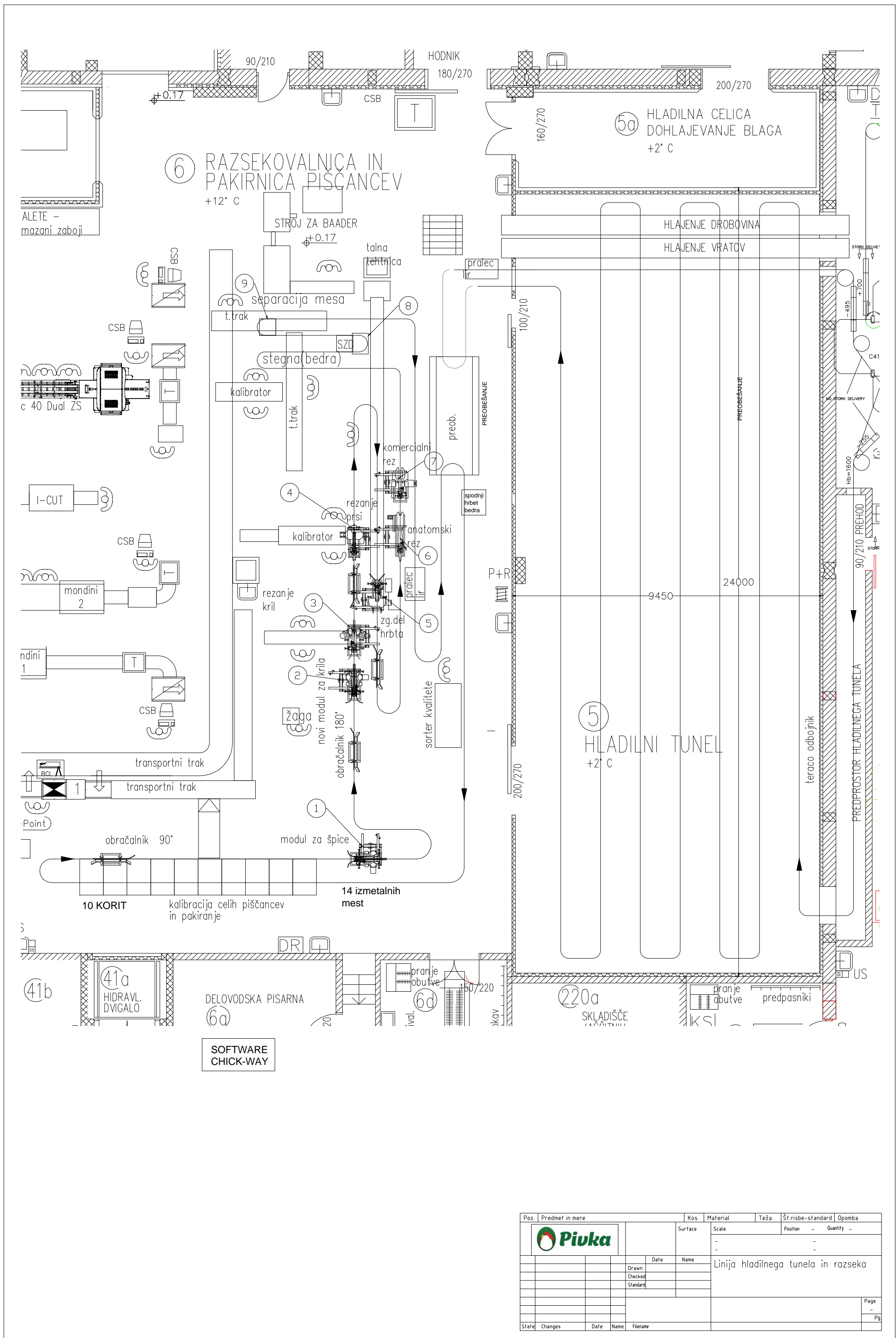
5. APPENDICES

Spatial distribution plan (layout) of the cooling tunnel

Spatial distribution plan (layout) of Chick Way



Poz.	Predmet in mere	Kos	Material	Teža	Št.risbe-standard	Opomba
		Surface	Scale		Position	Quantity
		Date	Name			Linija hladilnega tunela in razseka
		Drawn				
		Checked				
		Standard				
State	Changes	Date	Name	Filename		Page
						Pg



Poz.	Predmet in mere	Kos	Material	Teža	Št.risbe-standard	Opomba
		Surface	Scale	Position	Quantity	
		Date	Name	Linija hladilnega tunela in razseka		
		Drawn				
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