

CASE STUDIES





ESTABLISHED IN

STM 1981
TES 1985



PLANT AREA

6000 m²



EMPLOEES

220 persons



ENGINEERS

30 persons



MANAGEMENT

9 persons



MACHINING

32 persons



INSTALATION

70 persons



ADMINISTRATION

25 persons



ELECTRICAL ENGINEERING

6 persons



CNC

30 items



PLOT AREA

4,5 ha



IMPLEMENTED PROJECTS

about 50 every year

COUNTRIES WHERE OUR MACHINES ARE INSTALLED:



Algeria
Angola
Antigua and Barbuda
Armenia
Azerbaijan
Belarus
Benin
Burkina Faso
Cameroon
Canada
Central African Republic
Chad
Congo
Cyprus
Czech
Djibouti
Egypt
Eritrea
Guinea
Hungary
Iran
Iraq
Israel
Ivory Coast

Kazakhstan
Kosovo
Kyrgyzstan
Latvia
Liberia
Libia
Lithuania
Mali
Mauritania
Netherlands
Nigeria
Poland
Romania
Russia
Senegal
Sierra Leone
South Africa
Tajikistan
Tanzania
Togo
Tunisia
Turkmenistan
Ukraine
USA
Uzbekistan

COMPLETE FILLING LINE FOR MINERAL WATER BASED ON SYNCHROBLOCK IN MASSPOL, POLAND



CHECK VIDEO
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CHECK 3D TRIP
CLICK BUTTON



About the Client

Masspol mineral bottling plant (manufacturing and water intake) is located in the town of Zubrzyk in Beskid Sadecki region of Poprad Landscape Park. The company offers mineral and spring water packed in 500, 700, 100, 1500 and 5000 ml bottles, manufactured as part of implementing product, process and eco-innovations.



Product: still mineral water



Packaging: PET bottle (5000 ml)



Capacity: 4000 bph



Solution: Increasing the number of bottles on the pallet – from 108 to 162!

Project Requirements

It's yet another STM Group realization for this client. After delivering two blow molding machines, a time has come to make another profitable development. This time, our client needed an energy-saving technology for PET production to be eligible for receiving EU funds. The project involved manufacturing a complete turnkey filling line for PET bottles.



Implementation

- ✓ **Suggested solution: Synchroblok Combifill 4/16/6 FlowMatic BIG. The machine features 4 molding cavities, 16 filling nozzles and 6 capping heads**
- ✓ **Low energy consumption: 13W/5l bottle**
- ✓ **Innovative system for recovering compressed air, delivering air (up to 10,5 bar) to all peripheral devices in both, STM line and an adjacent line for 1,5l bottles at 18 000 bph**
- ✓ **Original bottle design – taller and slimmer than the classic model – for higher packing efficiency**
- ✓ **Dedicated palletizing system with 2 rotating plate pallet wrappers at the stacking places – wrapping occurs without pallet transfer**
- ✓ **Palletizing capacity – up to 25 pallets per hour**
- ✓ **Project was co-financed with funds from the Intelligent Development Programme 2014-2020**



COMPLETE FILLING LINE FOR BEER BOTTLING AND CANNING FOR DARUVAR BREWERY



CHECK VIDEO
CLICK BUTTON
CAN FILLING LINE



CHECK VIDEO
CLICK BUTTON
PALLETIZING SYSTEM



CHECK VIDEO
CLICK BUTTON
PET BOTTLE FILLING LINE



CHECK 3D TRIP
CLICK BUTTON



About the Client

In the very center of the Croatian town of Daruvar, there is a brewery of the same name. Founded in 1840, it is the second oldest brewery in the country. As the only one outside of the Czech Republic, it produces beer according to traditional Czech technology, which makes it unique in this field. In addition to beer in glass bottles, the company also offers it in PET bottles and cans, produced as part of the EU project "Improving the competitiveness of Pivovar Daruvar d.o.o. through investments in digital and green transformation."



Product: beer



Packaging: aluminum can (330 ml + 500 ml) + PET bottle (2000 ml)



Capacity: 15 000 cph + 3 000 bph



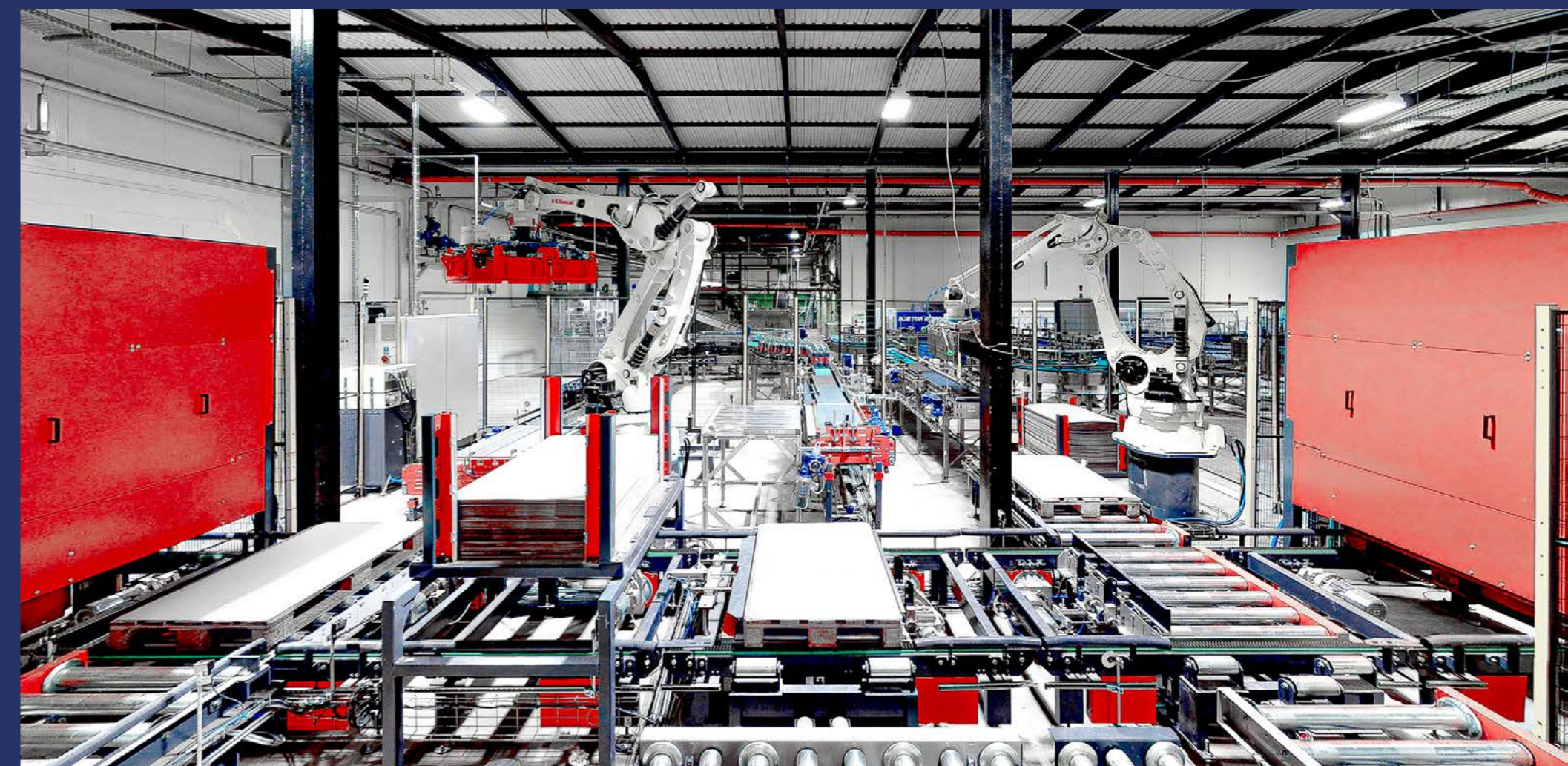
Solution: Installation of two bottling lines without interfering with the existing system



Solution: Adapting a new palletizing and depalletizing system for the existing glass bottle filling line – process automation

Project Requirements

Modernizing the production of Daruvar Brewery required designing a system that would take into account the existing line for bottling beer in returnable glass bottles, as well as all the piping and media connections that had evolved over the years of the brewery's operation. The project included the construction of two complete canning and PET bottling lines as a turnkey solution.



Implementation - Can Filling Line

- ✓ Suggested solution: Arrow CAN 40/6 ISO. The machine features 40 iso-baric filling nozzles and 6-head seamer
- ✓ Low oxygen pickup - about 35 ppb
- ✓ Efficient pasteurization thanks to dynamic pasteurizing unit which adjusts the conveyor speed and temperature
- ✓ Water recovery system
- ✓ Quick change of can format - from 500 ml to 330 ml
- ✓ Packing system adapted to 3 formats: 6x4 items on a tray with foil or 3x2 and 2x2 packs wrapped in foil only- up to 30 packages per minute





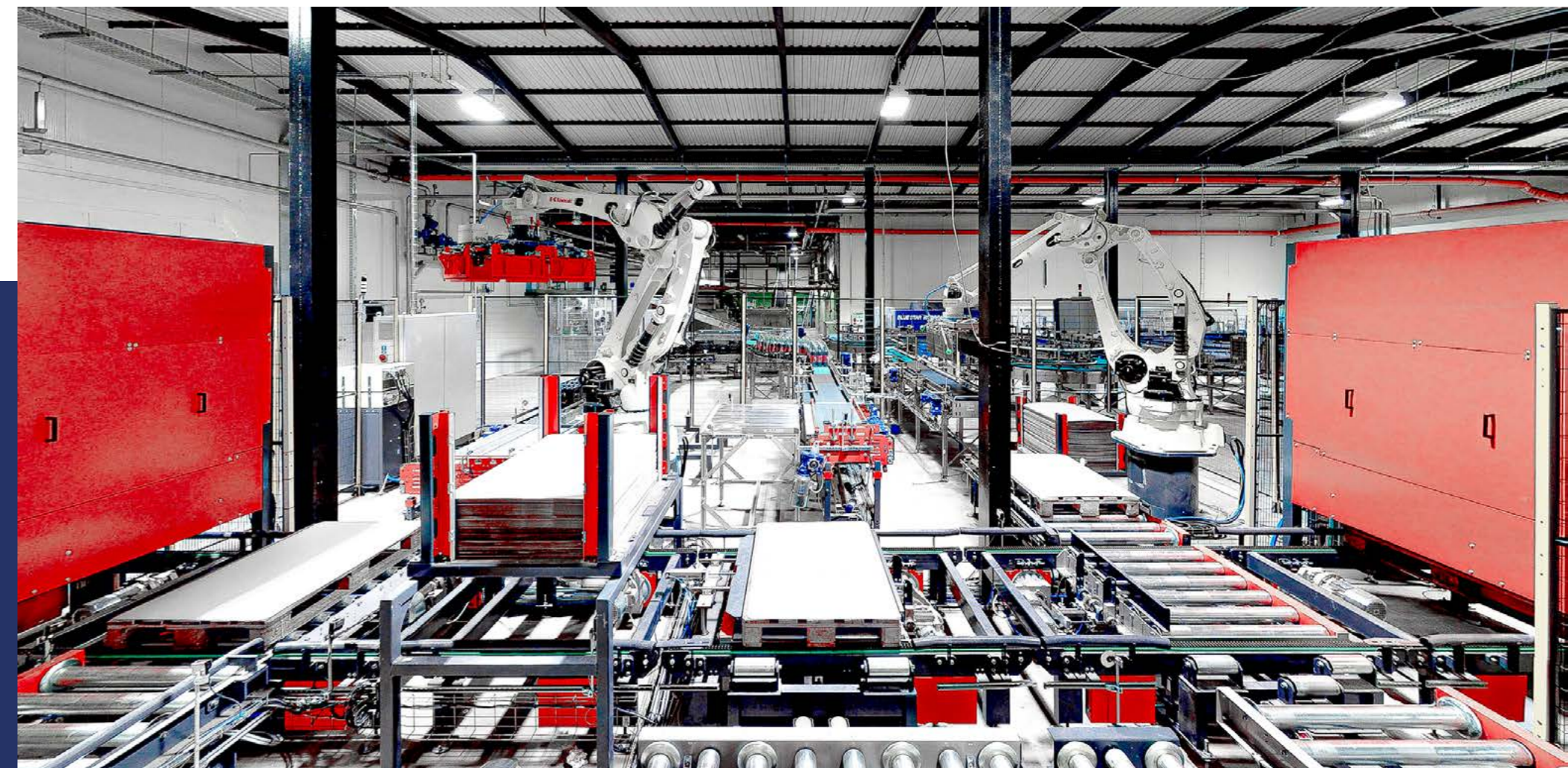
Implementation - Palletizing System

- ✔ Complex palletizing system based on two robots - maximum efficiency up to 59 pallets/hour
- ✔ Can line works independently, while second robot works on either PET or glass line
- ✔ Palletizing cans with the capacity of 15000 cph
- ✔ Palletizing PET bottles with the capacity of 3000 bph
- ✔ Depalletizing crates with empty returnable glass bottles with the capacity of 20000 bph
- ✔ Palletizing crates with full returnable glass bottles with the capacity of 20000 bph
- ✔ Project co-financed with European Funds as part of the Recovery Assistance for Cohesion and the Territories of Europe - REACT-EU



Implementation - PET Bottle Filling Line

- ✓ Suggested solution: Arrow PET 20/40/8 ISO Beer. The machine features 20 rinsers, 40 isobaric filler nozzles i 8 capping heads
- ✓ Innovative system for recovering compressed air (up to 10,5 bar) to be reused by the blow molding machine Blueline 3 Standard
- ✓ Double evacuation of oxygen before filling
- ✓ Low energy consumption: 6W for a 2-liter bottle





The particular goal of this investment was to become independent of external services for beer bottling and canning, and to increase production efficiency by using green and digital technologies as well as innovative business processes, resulting in:

- reducing energy consumption by 5.93% kWh/hl
- reducing beer loss in production by 22.96 l/hl
- reducing the sewage load by 0.094m³/hl
- increasing revenue from sales and exports by 26%
- maintaining the existing 53 employees and employing 15 new ones

COMPLETE OIL FILLING LINE FOR WILMAR



CHECK VIDEO
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About the Client

Wilmar is a Polish company in the food industry, located in Lower Silesia. Founded in 1990, it specializes in rapeseed processing. The company combines the exceptional and versatile properties of this plant with action for sustainable development. Wilmar delivers products developed within its own research department and with technologies created from scratch. The quality of Wilmar's food products is guaranteed with the implementation and certification of the FSSC 22000 quality control system. This confirms that thanks to the cooperation with STM Group, oil packaging meets the most demanding safety criteria.



Product: rapeseed oil



Packaging: PET bottle (500ml, 1l, 2l, 3l, 5l, 10l) + glass bottle (0,5l, 0,75l, 1l)



Capacity: 8000 bph for 1-litre bottles



Greenfield Project: system implemented from the ground up

Project Requirements

This ambitious project involved designing and manufacturing bottling lines for glass and PET containers in 9 different formats! Moreover, the energy-efficient solutions implemented in the project, paved the way for the company to obtain EU funding.



Implementation

- ✓ **2 Blow molding machines**
 - **Blueline 6 Hitech (500ml – 2l bottles) - capacity up to 10 500bph**
 - **Blueline 1 BIG MAX (3l – 10l bottles) - capacity up to 1100bph**
- ✓ **Innovative system for recovering compressed air, delivering air (up to 10,5 bar) to all peripheral devices on the manufacturing site.**
- ✓ **2 Monoblocks**
 - **Arrow PET/Glass UNIV 20/6 Weightmatic (500ml – 2l bottles) featuring 20 filler nozzles and 6 capping heads - capacity up to 8100 bph**
 - **Arrow PET 9/3 Weightmatic BIG (3l – 10l bottles) featuring 9 filler nozzles and 3 capping heads - capacity up to 1100 bph**





Implementation

- ✓ **3 Labelling machines:**
 - For application of “wrap-around,” self-adhesive labels
 - For application of self-adhesive labels on square containers
 - For “hot glue” application of paper labels
- ✓ **Carton packaging using the “wrap around” method - up to 15 packs per minute**
- ✓ **Automatic palletizing based on a robot with a universal gripper for both cardboard boxes and PET bottles + pallet wrapper with a rotating arm**
- ✓ **EURO and DHP pallet handling**
- ✓ **Additional module for covering the pallet with film from above**
- ✓ **The project was co-financed from the Rural Development Program for 2014-2020.**



COMPLETE FILLING LINE FOR WATER AND CARBONATED BEVERAGES FOR URGA WATER



CHECK VIDEO
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About the Client

The founders of the 885 water brand (obtained from a depth of 885 feet/170m) set themselves the goal of following European Union guidelines: “bottled at the source.” The Latvian company started operating in 2021 and currently produces carbonated and still mineral water in 500 and 1000 ml bottles.



Product: water & soft drinks



Packaging: PET/ BIO PET/ R PET bottles (500 ml + 1 500 ml) with a Sport Cap



Capacity: 6000 bph



Greenfield Project: system implemented from the ground up

Project Requirements

The main goal of the project was to achieve maximum process automation to reduce service costs. It involved building a complete PET bottling line as a turnkey solution in a completely new production hall.

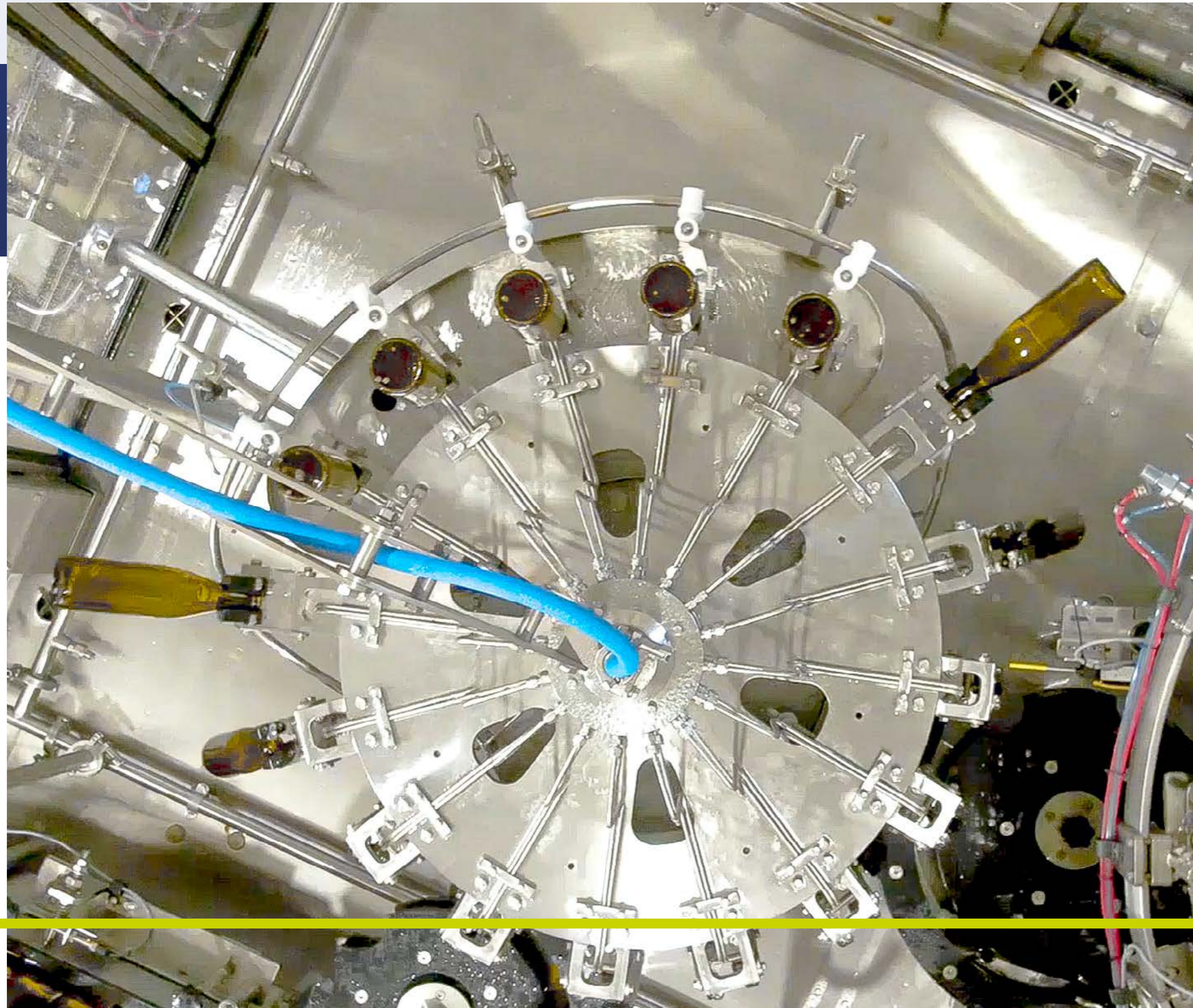


Implementation

- ✓ Suggested solution: Blow molding machine Blueline 4 STD + Triblock Arrow PET 20/40/8 ISO. Machines feature 4 blowmold cavities + 20 rinsers, 40 filler nozzles and 8 capping heads
- ✓ Automatic process control control in the blow molding machine, allowing for remote machine diagnostics
- ✓ STM JG6 Flowmix mixer with a capacity of up to 9,000 l/h
- ✓ STM Mega Roll 9T labeling machine with a capacity of up to 10,000 bph
- ✓ Eco-friendly label adhesion
- ✓ Packaging system adapted for 2 formats: 3x4 and 3x2 packages wrapped in foil - up to 30 packages/min
- ✓ Bottle made of 25% recycled plastic
- ✓ Downsizing line operation to 3 people



COMPLETE HYBRID LINE FOR BEER CANNING AND PETBOTTLING FOR BROWAR ZAMKOWY



CHECK VIDEO
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CHECK 3D TRIP
CLICK BUTTON



About the Client

Browar Zamkowy is one of the oldest breweries in Poland, founded in 1567 on the castle hill in Raciborz. With an annual production capacity of 60,000 hl, this historic brewery is constantly expanding its operations, opening two new bottling lines in 2021. In order to meet the demands of consumers and grocery store chains, the facility, which until then had specialized in producing beer in returnable glass bottles, has undergone another stage of evolution.



Product: beer



Packaging: glass bottle (330 + 500 ml) & aluminum can (500 ml)



Capacity: 4500 bph + 3500 bph & 6000 cph



Solution: designing as many shared stages for both filling processes as possible

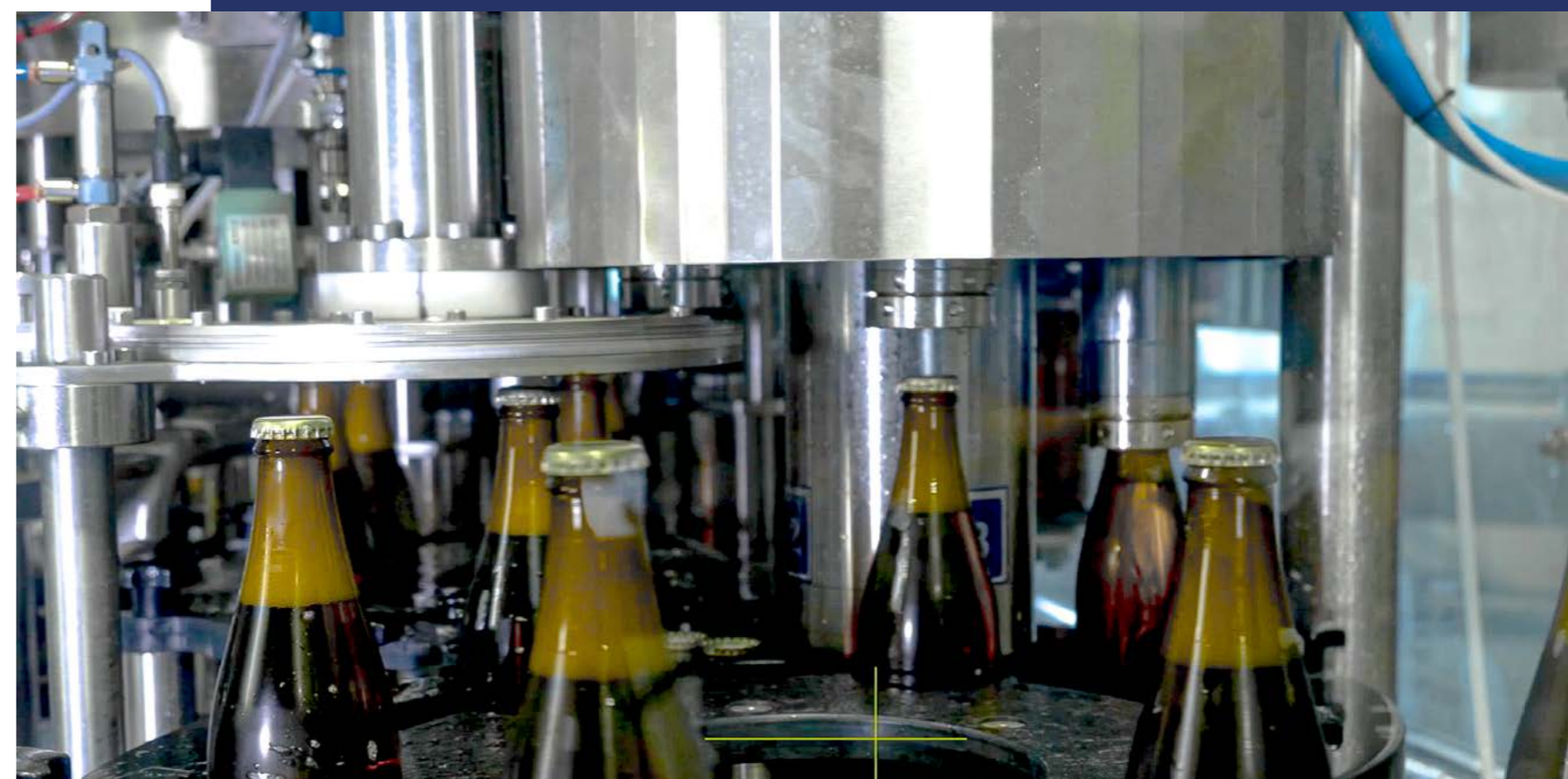
Project Requirements

Designing two production lines on a 230 m² space was a significant challenge. To meet the customer's expectations, we proposed the installation of hybrid equipment. We opted for universal machines that would be able to handle various packaging formats, thus taking up less space.



Implementation

- ✓ Suggested solution for glass bottles: Arrow Glass ISO Beer 16/16/4. Triblock featuring 16 rinsers, 16 isobaric fillers and 4 capping heads
- ✓ Suggested solution for aluminum cans: Arrow Can 16/2 ISO Beer. Machine featuring 16 isobaric fillers and 2 seamers
- ✓ 4 universal devices for both lines: depalletizers, filling level inspector, air knives and labelling machines
- ✓ Flash pasteurizer with a capacity of 3000 l/h to minimize the use of space
- ✓ Conveyors installed at 3 meters high to fully utilize the space above
- ✓ Innovative system for dosing nitrogen in the cans before seaming
- ✓ Minimizing oxygen pickup in bottled beer down to 100 ppb thanks to double oxygen evacuation before filling





CHECK OUR OTHER PROJECTS

