







# **100** YEARS EXPERIENCE. RELIABILITY. Serving the Industry Gok 100 years PEOPLE.



# BREWHOUSES **AND COMPLETE SYSTEMS**

## **HISTORY**

he company first took root in the soil of history in 1919, when the Officine Meccaniche Padovan was founded in northern Italy and invented some of the first machines used in the wine industry.

By 1984 the company had developed to a global level when they were bought by the TMCI international Group, and then branched with increasing success out into the food sector.

Synergo Sgr, a private equity firm and majority owner since 2014, has exclusively concentrated on today's businesses that show exceptional growth levels - the beverage industry in general and the world of beer in particular by creating the most competitive solutions in the market today.

## **MISSION**

MCI Padovan conceives goods and services to satisfy its customers' needs. We like to define ourselves as a "Business Partner" rather than "Supplier", precisely because of this strong alliance which links us together and which, in return, transfers know-how to TMCI Padovan.

It is the same know-how that, skillfully employed, becomes a real company asset. When you combine our specialized personnel in the field who continuously monitor markets and trends, with our notable investments in R&D, you get results that makes us unique in the global marketplace.

## TMCI PADOVAN TODAY

A high level of specialization, a strong dedication to innovation and a natural commitment

## **VELO TODAY**

oday the Velo brand offers the most powerful and efficient solutions to all those customers in the beer world who want to be aligned with emerging needs and trends.

Deep market knowledge, international collaborations with the finest experts in the field, partnerships with universities and research centers, experience gathered through close cooperation with top customers: this is what we deliver so that our customers get the most out of every system.







## **TUNNEL PASTEURIZERS**







# **BREWHOUSES AND COMPLETE SYSTEMS**

 ${f Q}$  uality, design and flexibility are the key factors that distinguish Velo in the global competitive landscape. We offerturnkey solutions for breweries and brewpubs with more than 200 installations worldwide. Based on a detailed analysis of your ideas, we design — step by step — the implementation with the know-how and expertise required.

We specialize in brewhouse plants with a capacity from 5 to 100 hl. Together with our engineers and experienced brewers, we design complete systems

for you: from the flow sheet process to the layout, from the assembly plans to the beer production procedures, all according to the quality needed. Even employee training and customer service are included in the initial planning.

Whether dealing with the implementation of an entirely new brewery system or renovation of an existing facility, Velo is the expert partner of choice, from the malt to the bottle.



### SYSTEMS WITH 5-40 HL BREWHOUSES

Systems with two or more vessels developed from the pilot system, but with a degree of automation ranging from semiautomatic to fully automatic. The quality standards are always professional systems.



industrial, yet extremely flexible design with a high degree of automation.





### BREWPUBS

The pleasure of a beer from its source.

Food, drink, and conversation: our fundamental needs are best satisfied in a welcoming place. This is why brewpubs and restaurants with a brewery inside are now trending: here, the pleasure of having a beer straight from its source is a special event for guests.





#### PILOT SYSTEMS

We excel at integrating a high level of automation into our systems. Such technology can limit the need for manpower to simply that of supervision.

The pilot systems autonomously control the industrial brewhouse and are able to perform many of the daily tasks for the brewmaster.

# TANKS

The completeness and sophistication of our technology, as well as our design, allow us to provide diversified production with an especially high standard of: fermentation tanks, bright beer tanks, yeast propagation tanks, "dry hopping" dosing tanks, "hop back" tanks, Servitanks and all the other tanks needed to implement a complete brewery.



## BRIGHT BEER TANKS

These tanks generally have a cylindrical shape with dished ends, cooling jackets on the shell and are fully insulated. Our standard of quality is very high with an enhanced degree of customization.

### FERMENTERS

The fermenters, also called "unitanks" can first be used as fermenters and then as maturation tanks. They generally have a cylindrical-conical shape, with cooling jacket on the cone as well as on the shell and are fully insulated. Suitable for net capacity from 3 up to 800 hl.



### "HOP BACK" TANKS

Recently designed tanks for the "hop back", used for the flow infusion and separation of whole hops in the brewhouse.



### YEAST PROPAGATION TANKS

Cylindrical-conical tanks, fully insulated with cooling jackets. The sterilization sample cocks, carbon stones, magnetic stirrers and loading cells are some of the components that are usually required for these tanks.

They can be used individually or combined to implement a complete multistage yeast propagation system.





### "DRY HOPPING" DOSING TANKS

Recently designed tanks for your "dry hopping" needs which are suitable for the production of hoppy beer.

The tank is also equipped with a pump that is powered by an inverter and a series of controllers to manage the hopping phases.



### SERVITANKS

Tanks for draft beer, usually installed in brewpubs.

# FILTRATION



# FLASH PASTEURIZERS



We have always been recognized as the world leader in the filtration field with our vertical screen pressure filters. With a large selection of models, from the easy tilting ones, to those with an automatic vibration or centrifugal unloading system, customers can find what is most suited to their needs.





Diatomaceous earth (D.E.) filters can be used for intermediate beer filtration by using adjuvants of different permeability, making it possible to obtain various levels of filtration from coarse up to the almost sterile beer. These filters have horizontal filtering screens with tilting screen-pack for cake discharge



# PLATE AND SHEET OR PLATE AND FRAME FILTERS

Plate filters can be used for the final beer filtration by using sheets with different degrees of filtration, starting from coarse sheets up to those that ensure the product's sterility. A low pressure steam sterilization (about 15 minutes at  $110^{\circ}$ C) of these filters properly prepares them for beer.



#### DIATOMACEOUS EARTH FILTERS FROM 5 UP TO 20 SQM

Vertical or horizontal screen filters with automatic discharge of the cake through vibration or rotation of the screen-pack. Construction made entirely in AISI 304 stainless steel. Compact sized units are on casters.







### DIATOMACEOUS EARTH FILTERS FROM 20 UP TO 100 SQM

Heavy-duty horizontal screen filters with automatic discharge through centrifugation of the filtering screen-pack. Built entirely of AISI 304 stainless

steel on casters or fixed shock absorbent feet.



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### AUTOMATIC PASTEURIZERS

Completely automatic pasteurization lines where each individual phase is managed by the PLC. If required, they can be interfaced with filling lines and washing systems (CIP). We can supply different turnkey systems which also include utilities, such as heat generators (hot water or steam), refrigeration units and all the accessories needed for a complete plant.



► lash pasteurization is a process that extends the shelf life of beer without greatly modifying its organoleptic characteristics. The technique consists of treating the beer with the following heat cycle:

• heating the product to a certain temperature (known as the pasteurization temperature)

• maintaining the pasteurization temperature for a

determined time. In beer generally at 72 °C for 30 seconds, which corresponds to 26 Pasteurization Units (PU)

• cooling to the required temperature.



### SEMIAUTOMATIC PASTEURIZERS

Pasteurizers in which the control of the set PU is automatic. All the other functions are manual.





### PASTEURIZERS FOR MULTIPLE FILLING UNITS

Extremely complex and flexible units, designed for multiple filling demands with integration of a carbonator before or after the storage tanks. The controller allows bottles, barrels and key-kegs fillers with different values of CO2 saturation in different lines to be used all at the same time.

# TUNNEL PASTEURIZERS



# CARBONATORS AND DEAERATORS



unnel pasteurization increases the shelf life of bottled beer without causing any significant alterations to its organoleptic characteristics.

### **SEMIAUTOMATIC** PASTEURIZEURS

Pasteurizers in which the control of the PU is automatic. All the other functions are manual.

### AUTOMATIC PASTEURIZERS

Pasteurization lines that are completely automatic. Each phase is managed by the PLC and, if required, can be interfaced with filling lines. We can supply different turnkey systems which also include utilities, such as heat generators (hot water or steam), refrigeration units and all the accessories needed for a complete plant.

### DOUBLE-LEVEL AUTOMATIC PASTEURIZERS

Units with identical features as the automatic pasteurizers but designed for customers that have limited space.

### SEMIAUTOMATIC CARBONATION MACHINES

Unit which controls the CO2 set point automatically. All the other functions are manual.

### AUTOMATIC CARBONATION MACHINES

Unit in which a PLC fully and automatically controls the CO2 levels and all the other functions during the process.

### DEAERATORS

Deaerator plant designed to strip oxygen from the process water to a value of less than 20 ppb.

# **CIP UNITS**

Food processing plants are

required to meet increasing stricter

To achieve this, it is fundamental to

correctly manage the washing and

sanitation/sterilization in the piping,

valves, tanks and all the parts in

contact with the product.

hygiene standards.











## Carbonation increases the amount of CO2 dissolved in beer.

The technique consists of injecting the required amount of CO2 into the line. This unit can stand alone connected directly to the beer tanks, or it can be integrated in a production/bottling line. A homogenization tank can be assembled downstream of the CO2 dosing unit when necessary.





### MANUAL OR SEMIAUTOMATIC CIP

Unit with one or more tanks, generally one for cold water and one or more insulated ones with a heating system for hot solutions.

### AUTOMATIC CIP

Unit with the same characteristics as the manual or semiautomatic CIP but with a PLC to manage each recipe.

### AUTOMATIC MULTILINE CIP

CIP with multiple lines in order to wash several machines or tanks at the same time, using different chemicals solutions, each set with its own CIP recipe.



## TMCI PADOVAN SPA

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