



PROSPERO

# BREWERY EQUIPMENT

BREWHOUSES, MICRO BREWERY, FERMENTER & BRITE TANKS, FILLING & LABELERS,  
KEG WASHING/FILLERS, PACKERS, GRAIN CRUSHERS, CHILLERS, BOILERS, PUMPS, FILTERS.



## THE LOCATIONS



Disclaimer: All images and trademarks not owned by Prospero Equipment Corporation or its affiliates that appear on this catalog are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Prospero or its affiliates. Images and trademarks on this page are used solely as design examples. This catalog provides general information about Prospero Equipment Corporation its programs and services. The information contained in this catalog is not necessarily complete. For further information, customers should consult with the appropriate representative. This catalog was prepared to provide information and does not constitute a contract. The Company reserves the right, without prior notice, to change, delete, supplement, or otherwise amend at any time the information, requirements, and policies contained in this catalog or other documents. For any questions about this catalog email to [cstefanucci@prosperocorp.biz](mailto:cstefanucci@prosperocorp.biz).

©2018 Prospero Equipment Corp. Version FP-18-1 (01.2018) - Printed in USA on Recycled Paper.



Printed on  
Recycled Paper

**W**ith over 40 years of experience in the beverage industries, we have been honored to work with the most respected wineries, breweries and beverage groups across the United States, Canada and Mexico. Our long term partnerships are the result of the amazing companies and individuals who make up the Prospero portfolio. I believe strongly that respectful cooperation with our vendors and the creativity of our staff, will continue to provide our customers with the cutting edge technology that will exceed their expectations. This catalog will provide you with great information about a wide range of equipment. You can also visit our website at [www.prosperocorp.biz](http://www.prosperocorp.biz) and as well please feel free to call us direct. My staff and I look forward to being your beverage equipment supplier.

Sincerely,

*Tony Prospero*

---

#### BREW HOUSES

SK FACTORY.	08
COMPACT BREWHOUSE.	11
MICRO BREWERY.	17
FERMENTATION & BRITE TANKS.	25

---

#### FILLING & PACKAGING

LINEAR FILLING - MLE MODELS.	39
LIGHT DEPRESSION/GRAVITY.	41
SERIES BIER.	43
AUTOMATIC LABELLING.	45
KEGS FILLERS.	52
APE PACKAGING.	54

---

GRAIN CRUSHERS.	56
PUMPS.	58
BOILERS.	59
CHILLERS.	60
FILTERS.	63

FOLLOW US ON  
FACEBOOK





## WINERY



### GRAPE SORTING SYSTEM

Grape Crushers/Destemmer,  
Must pumps, Grape selection lines.



### WINE FILTERS

Plate & Frame, Horizontal Plates and  
Rotary vacuum D.E. filters



### PUMPS

Stainless steel flexible  
impeller pumps.



### WINE TANKS

Tanks for white and red wine  
fermentation and storage



### PRESSES & TANKS

-Pneumatic Presses from 5 hl to 130 hl  
open and closed tank type.  
-Tanks for white and red wine  
fermentation and storage



### COOLERS

Chillers, Heat Exchangers, Cooled  
Tanks.

## BREWERY



### BREW HOUSES / TANKS

Compact Brewhouse, Micro Brewery,  
Fermentation & Brite Tanks



### BEER FILTERS

Plate & Frame, Horizontal Plates and  
Rotary vacuum D.E. filters



### MICROBIOLOGY

Kegs and Bag-in-box Fillers,  
Microfiltration, Reverse  
osmosis

## DISTILLERY



### DISTILLATION PLANTS

Continuous & Discontinuous Distillation  
Plants, Tanks.



### DISTILL FILTERS

Plate & Frame, Horizontal Plates and  
Rotary vacuum D.E. filters



### TANKS

Tanks Distillation Plants.

## BOTTLING



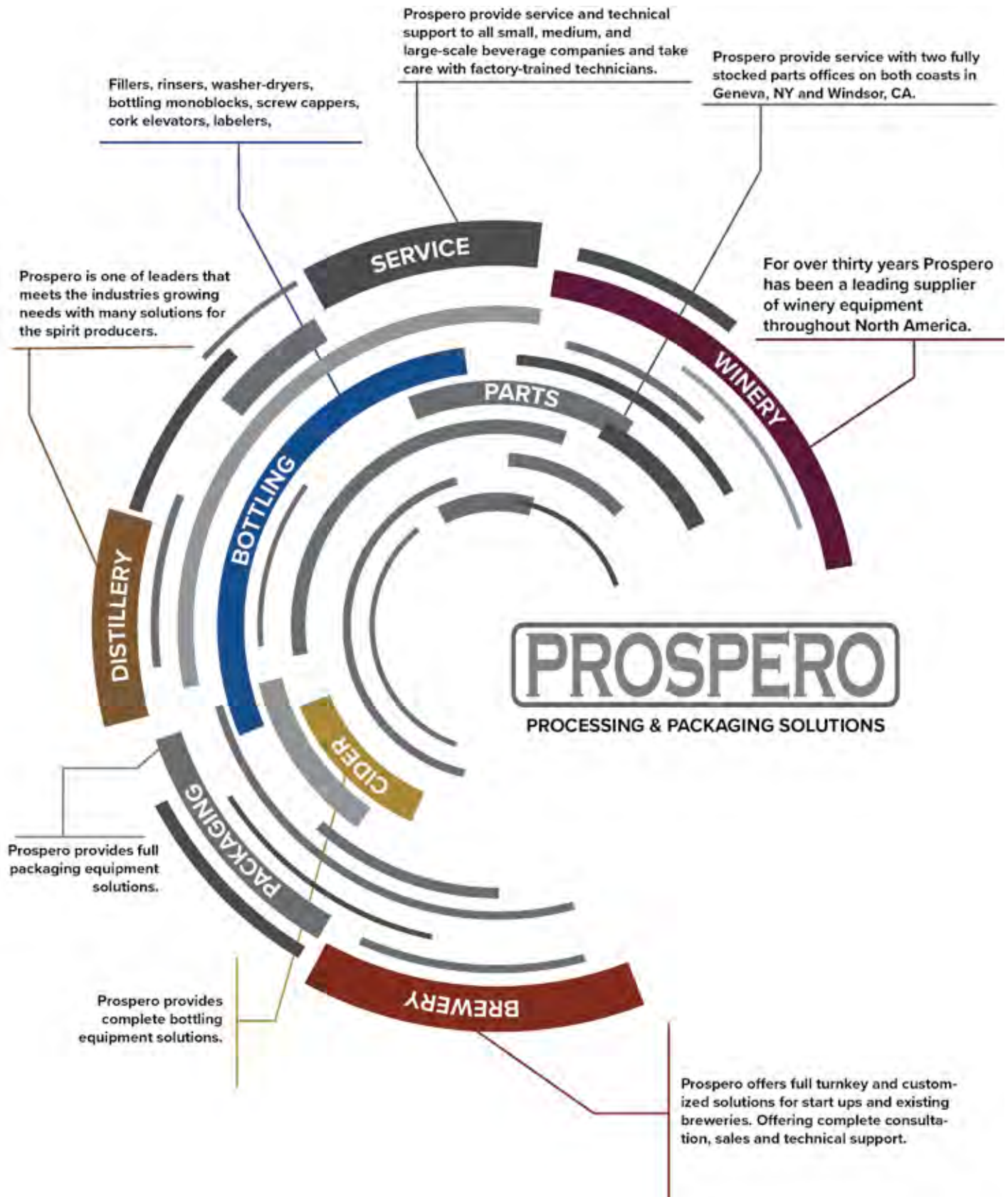
### FILLING & LABELLING MONOBLOCKS

Filling Monoblocks: Light and High Pressure Mechanical & Electropneumatic, Electropneumatic BIER High Pressure, Automatic Rinsers & Fillers, Automatic Single & Multi Head Corkers & Cappers, Corks & Screw Caps Feeder, Semi Automatic Fillers.  
Labelling Monoblocks: Automatic Washing & Drying, Automatic Sleeking & Shrinking Capping, Distribution-Capping-Linear Labelling, Mechanical & Electrical Rotating Labelers, Distribution-Capsulating-Rotating-Labelling, Washing-Drying-Distribution-Capsulating-Rotating Labelling, Semi Automatic Labellers.



### PACKAGING

Depalletisers, Carton Erectors, Packers, Inserting Machines, Carton Sealers, Conveying, Weight Control, Palletisers, Wrapping Machine.













## BEST SOLUTIONS FOR VARIOUS INDUSTRIES

Today, SK Group is a modern, renowned European company, which sells its products all over the world. A professional team of highly-qualified experts, modern techniques and technology in the planning and production and selection of the finest materials are the reasons which have convinced clients from the most demanding industries.

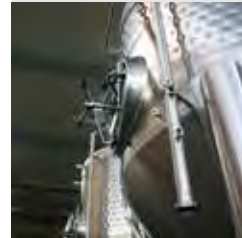
- Winemaking industry
- Beer-brewing industry
- Food processing industry
- Pharmaceutical and biopharmaceutical industry
- Custom made products for various other industries



WINE



BEER





SKRLJ

[www.skrlj.com](http://www.skrlj.com)



## COMPACT BREWHOUSE BHM 2BBL / BHM 4BBL



### Design

- all-in-one-designs / compact designs / combi tanks and multifunctional tanks in different combinations combined in a single system / individually designed tanks;
- equipped with an effective cooling and heating system, insulated vessels with thermal bottom and jacket;
- completely piped and wired,
- with an integrated pump system,
- platform for combining the vessels in a compact unite,
- with installed CIP system,
- sanitary design: polished internal tank surface and welds ensure an easy and effective cleaning of the system.

### High-quality manufacturing process

- completely made of stainless steel, only certified materials are used (option: TiN-coated stainless steel)
- automated grinding and polishing of welds and inner surfaces;
- modern welding techniques: TIG welding, laser welded cooling/heating sections (pillow plates) on tank jacket and tank bottom, orbital welded pipes;
- in designing and manufacturing of equipment general rules of the profession and good engineering and manufacturing practice are respected;
- planning, production, control and environmental management are regulated according to the ISO9001 and ISO14001 standards.

### Touch screen control panel

User friendly graphical interface is easy to understand and allows simple monitoring and control of the beer brewing process:

- pump speed control,
- mixer rotating control,
- temperature regulation (separate for side heating and bottom heating);
- setting of timers and alarms; -
- possibility of performing the multi-step mashing procedure, display of actual and set values.

### Thermal oil heating bottom and jacket

The heating bottom and jacket are part of the vessel envelope, designed to allow the control of temperature in the vessel by adjusting the through-flow of heating medium. Both vessels are equipped with heating bottom and jacket and insulated. As standard the system is provided with equipment for thermal oil heating. As option the system can be adapted for heating with steam.

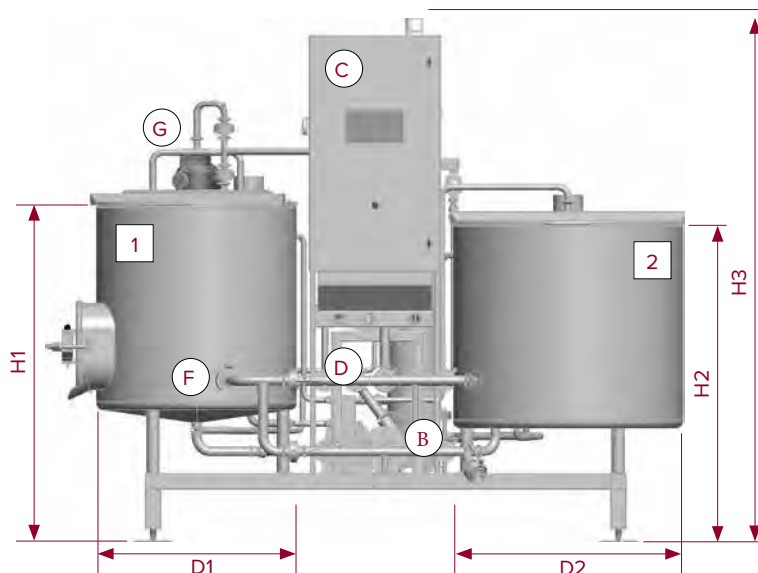
# COMPACT BREWHOUSE

## BHM 2BBL

- ▶ Single-step infusion mashing
- ▶ Multi-step infusion mashing
- ▶ Decoction mashing

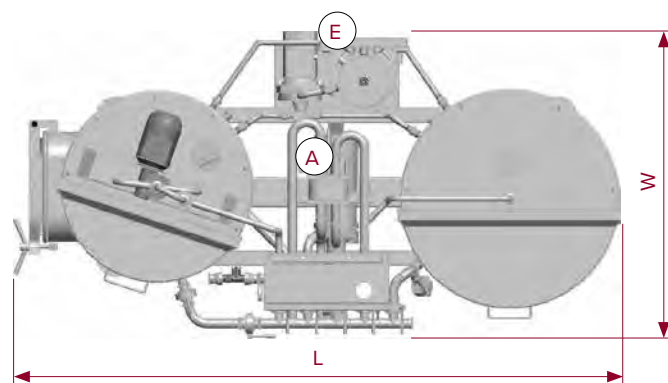
BREWHOUSE	BHM 2BBL	
MM/LT volume (1)	gal	265
K/W volume (2)	gal	91.1
MM/LT diameter (D1)	inch	30.1
K/W diameter (D2)	inch	34.0
Height (H1)	inch	50.6
Height (H2)	inch	50.6
Total height (H3)	inch	76.4
Total length (L)	inch	93.7
Total width (W)	inch	47.2
Electric power	Kw	20

\* Dimensions listed in the table are approximate and may vary slightly.



### Main components:

- 1 Mash mixer (MM) / Lauter tun (LT)
- 2 Kettle (K) / Whirlpool (W)
- A Heat exchanger
- B Pump
- C Electric box with touch screen control panel
- D Manifold with butterfly process valves
- E Integrated oil heater with pump
- F Inlet for decoction mashing
- G Rake plow with motor (adjustable rotating speed)
- H Wort filter before heat exchanger



BHM 2BBL

### Hot water tank (option)

The vessel is equipped electric heaters (for breweries with oil heating) or with heating jacket on the tank wall (for breweries with steam heating).

Hot water tank WTX	600 L / 12 kW	1200 L / 18 kW	2000 L / 24 kW
--------------------	---------------	----------------	----------------

### Cold water tank (option)

The vessel is equipped with cooling jacket (pillow plate) in the tank jacket area.

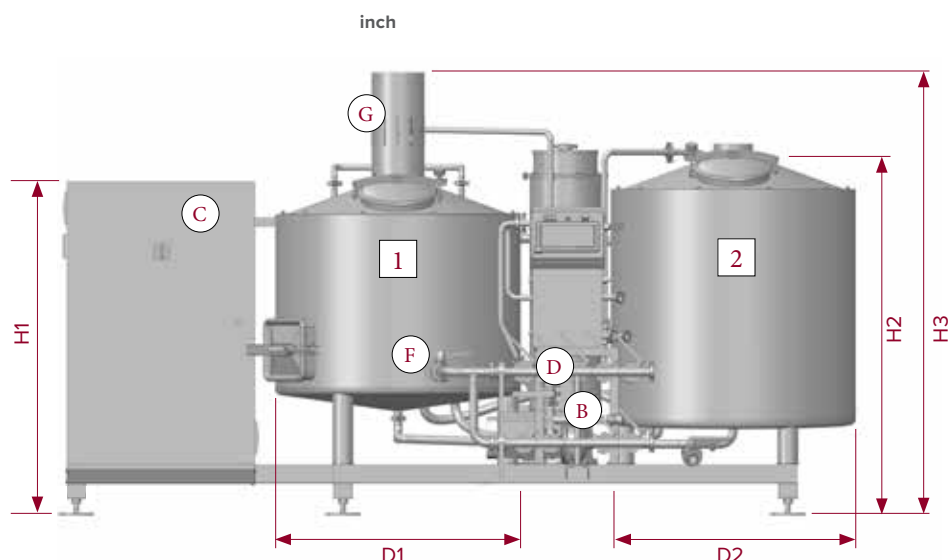
Cold water tank CTX	600 L	1200 L	2000 L
---------------------	-------	--------	--------





# COMPACT BREWHOUSE BHM 4BBL

- ▶ Single-step infusion mashing
- ▶ Multi-step infusion mashing
- ▶ Decoction mashing

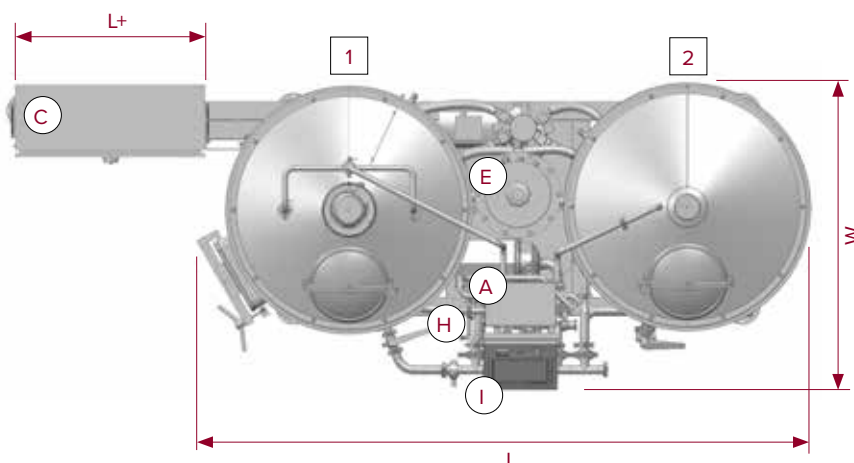


BREWHOUSE	BHM 4BBL	
MM/LT volume (1)	gal	140.0
K/W volume (2)	gal	178.3
MM/LT diameter (D1)	inch	41.0
K/W diameter (D2)	inch	41.0
Height (H1)	inch	55.7
Height (H2)	inch	58.6
Total height (H3)	inch	74.0
Length (L)	inch	102.0
Length (L+)	inch	31.5
Total width (W)	inch	49.8
Electric power	Kw	38

\* Dimensions listed in the table are approximate and may vary slightly.

## Main components:

- 1** Mash mixer (MM) / Lauter tun (LT)
- 2** Kettle (K) / Whirlpool (W)
- A** Heat exchanger
- B** Pump
- C** Control cabinet
- D** Manifold with butterfly process valves
- E** Integrated oil heater with pump
- F** Inlet for decoction mashing
- G** Rake plow with motor (adjustable rotating speed)
- H** Wort filter before heat exchanger
- I** Touch screen control panel



## Hot water tank (option)

The vessel is equipped electric heaters (for breweries with oil heating) or with heating jacket on the tank wall (for breweries with steam heating).

Hot water tank WTX	600 L / 12 kW	1200 L / 18 kW	2000 L / 24 kW
--------------------	---------------	----------------	----------------

## Cold water tank (option)

The vessel is equipped with cooling jacket (pillow plate) in the tank jacket area.

Cold water tank CTX	600 L	1200 L	2000 L
---------------------	-------	--------	--------







## COMPACT BREWHOUSE BH2 / BH3



### Design

- all-in-one-designs / compact designs / combi tanks and multifunctional tanks in different combinations combined in a single system / individually designed tanks;
- equipped with an effective cooling and heating system, insulated vessels with thermal bottom and jacket;
- completely piped and wired,
- with an integrated pump system,
- platform for combining the vessels in a compact unite,
- with installed CIP system,
- sanitary design: polished internal tank surface and welds ensure an easy and effective cleaning of the system.

### High-quality manufacturing process

- completely made of stainless steel, only certified materials are used (option: TiN-coated stainless steel)
- automated grinding and polishing of welds and inner surfaces;
- modern welding techniques: TIG welding, laser welded cooling/heating sections (pillow plates) on tank jacket and tank bottom, orbital welded pipes;
- in designing and manufacturing of equipment general rules of the profession and good engineering and manufacturing practice are respected;
- planning, production, control and environmental management are regulated according to the ISO9001 and ISO14001 standards.

### Touch screen control panel

User friendly graphical interface is easy to understand and allows simple monitoring and control of the beer brewing process:

- pump speed control,
- mixer rotating control,
- temperature regulation (separate for side heating and bottom heating);
- setting of timers and alarms;
- possibility of performing the multi-step mashing procedure, display of actual and set values.

### Thermal oil heating bottom and jacket

The heating bottom and jacket are part of the vessel envelope, designed to allow the control of temperature in the vessel by adjusting the through-flow of heating medium. Both vessels are equipped with heating bottom and jacket and insulated. As standard the system is provided with equipment for thermal oil heating. As option the system can be adapted for heating with steam.

- combi tanks and multifunctional tanks in different combinations;
- completely wired and piped, including manifold with butterfly process valves;
- integrated pump (in the standard configuration the brewhouse is equipped with one pump; optionally the system can be upgraded with a second pump to improve the brewing capacity of the brewhouse);
- lauter tun with heated bottom and tank wall;
- space saving design: support frame and perforated walk-on platform combine the vessels and other components in a compact block;
- master brew interface control system: temperature control, flow regulation, pump on/off, mixer rotation speed, setting of timers and step mashing parameters;
- the system allows performing of the multi-step infusion mashing;
- available also in a configuration for high gravity brewing.



### Compact Brewhouse BH2

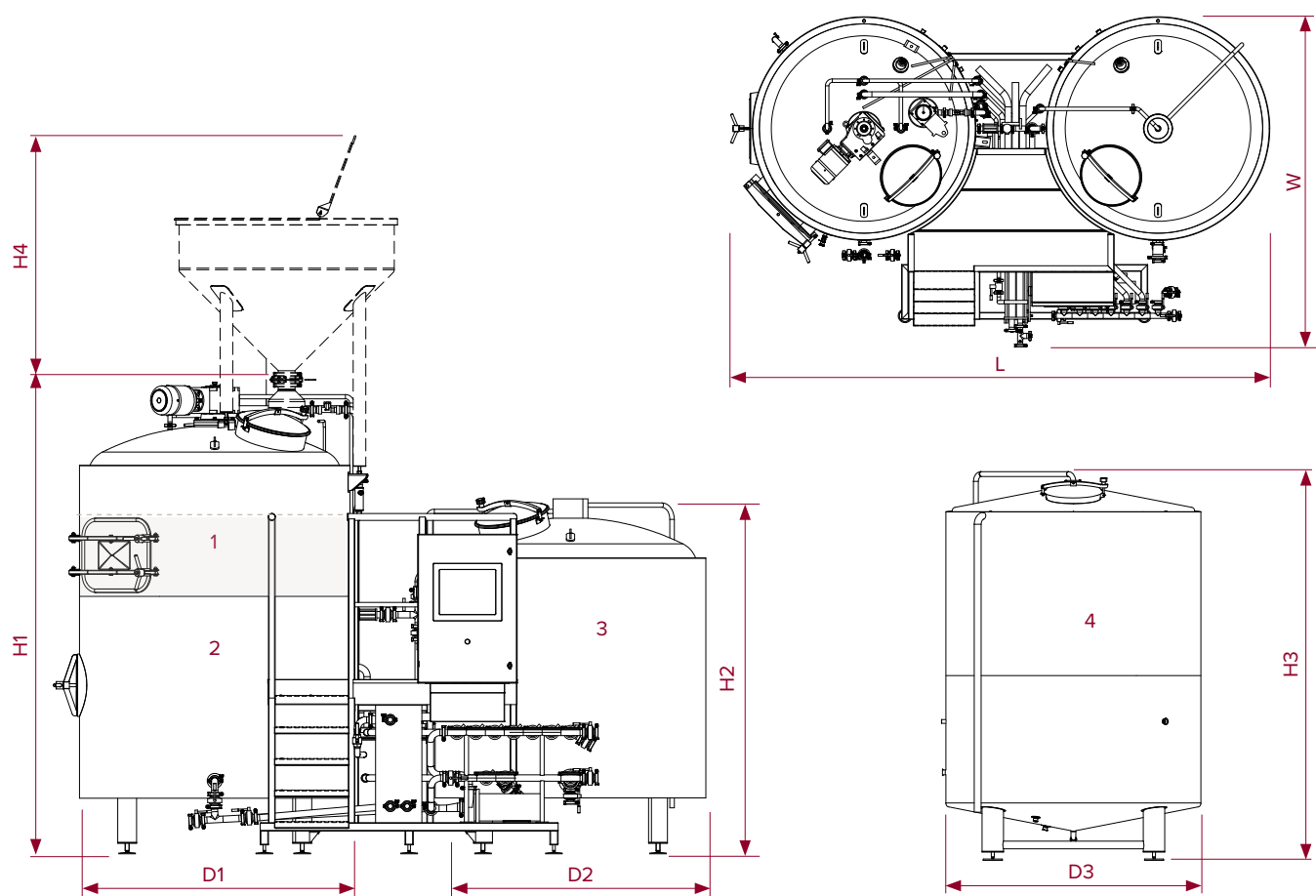
BH2

- 1** Mash mixer (MM) / Lauter tun (LT) - upper comp. of combi tank
- 2** Hot water tank (HWT) - lower compartment of combi tank
- 3** Kettle (K) / Whirlpool (W)
- A** Heat exchanger
- B** Pump
- C** Control cabinet with touch screen operating panel
- D** Integrated process piping
- E** Grist case (option)
- F** Platform with stairs and guardrails
- G** Rake plow with drive unit

### Compact Brewhouse BH3

BH3

- 1** Mash mixer (MM) / Lauter tun (LT) - upper comp. of combi tank
- 2** Whirlpool (W) - lower compartment of combi tank
- 3** Kettle (K)
- 4** Hot water tank (HWT)
- A** Heat exchanger
- B** Pump (2x)
- C** Control cabinet with touch screen operating panel
- D** Integrated process piping
- E** Grist case (option)
- F** Platform with stairs and guardrails
- G** Rake plow with drive unit



BREWHOUSE BH2 / BH3		BH 10 hl	BH 20 hl	BH 25 hl
Max mash volume in tank (1)	gal	173.0	417.4	472.8
Tank volume (2)	gal	301.2	739.6	770.1
Tank volume (3)	gal	369.8	705.3	845.3
Tank volume (4)	gal	528.3	1083.1	1347.3
Tank diameter (D1)	inch	52.5	74.4	78.3
Tank diameter (D2)	inch	52.5	69.3	75.8
Tank diameter (D3)	inch	53.9	66.1	66.1
Tank height (H1)	inch	107.5	109.8	112.2
Tank height (H2)	inch	80.7	84.6	87.0
Tank height (H3)	inch	78.7	98.4	118.1
Grist case height (H4)	inch	45.3	63.4	74.0
Total length approx. (L)	inch	133.8	167.3	181.1
Total width approx. (W)	inch	76.7	98.8	103.9

\* Dimensions listed in the table are approximate and may vary slightly.





KOTLOVNICA









## MICROBREWERY MB2 / MB4 / MB5



### The best solution for medium-sized breweries

- we plan and design complete medium-sized breweries, all systems can be designed with the client's input for a defined process;
- a variety of different vessel combinations and a number of vessels: multifunctional tanks (mash mixer - lauter, kettle - whirlpool), individual process tanks (mash mixer, lauter, boil kettle, whirlpool, hot/cold water tanks);
- fully piped and wired, including valves and sensors;
- integrated pump system;
- CIP system: separated CIP for individual tanks to prevent cross product interference;
- master brew interface control system (touch screen control panel),
- staircases and platform combine the vessels in a compact unit, perforated and sectional construction of the walk-on surface ensures protection against slipping;
- automated lautering, automated water mixing.



### Multi-step infusion mashing

Multi-step mashing procedure includes a series of rests at various temperatures in a mash mixer. From one step to the next the temperature is increased to the desired value.

The main advantage of the temperature-programmed mashing is that both specific enzyme activity and fermentability of the wort can be promoted by controlling the temperature and duration of stands at selected points. This method is widely utilized for German and European style beer.

Step mashing programme includes 6 steps with the possibility of time and temperature setting. Wort recirculation (duty cycle and pump speed) and rake rotation (duty cycle and rotation speed) can be set for each step to ensure a homogeneous mash temperature.



### Implementation of CIP cleaning

Integrated CIP system provides two different cleaning options:

Option 1: Rinse the system with water from the hot water tank. Open corresponding valves to create circulation of hot water and set the desired working speed of the pump.

Option 2: Rinse the system or individual tank with prepared cleaning substance from external source via drain connection.



### Integrated pumps

The system includes several centrifugal sanitary pumps: for hot and cold water tank, for lauter tun, for mash mixer, for kettle and whirlpool. The number of pumps depends on the brewhouse model.

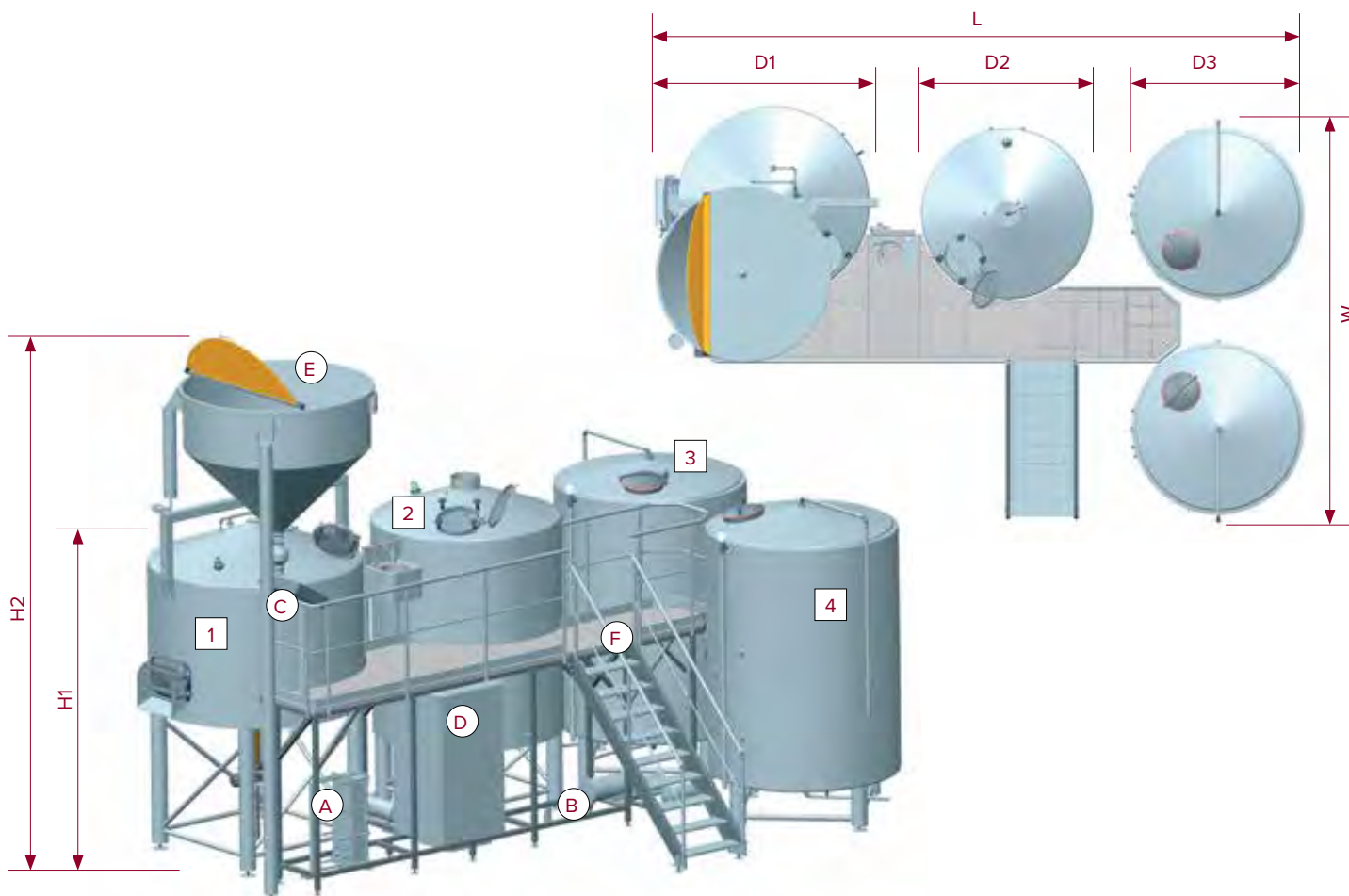
The pumps are suitable for use in food and beverage industry. They serve to offer an efficient transfer of the product and can also be used for CIP.



## MICROBREWERY MB2 30BBL

▴ Mash / Lauter tun

▴ Kettle / Whirlpool



### Main components:

- 1** Mash (MM) / Lauter tun (LT)
- 2** Kettle (K) / Whirlpool (W)
- 3** Hot water tank (HWT)
- 4** Cold water tank (CWT)
- A** Heat exchanger
- B** Pumps
- C** Control and operating panel
- D** Control cabinet
- E** Grist case
- F** Platform with stairs and guardrails

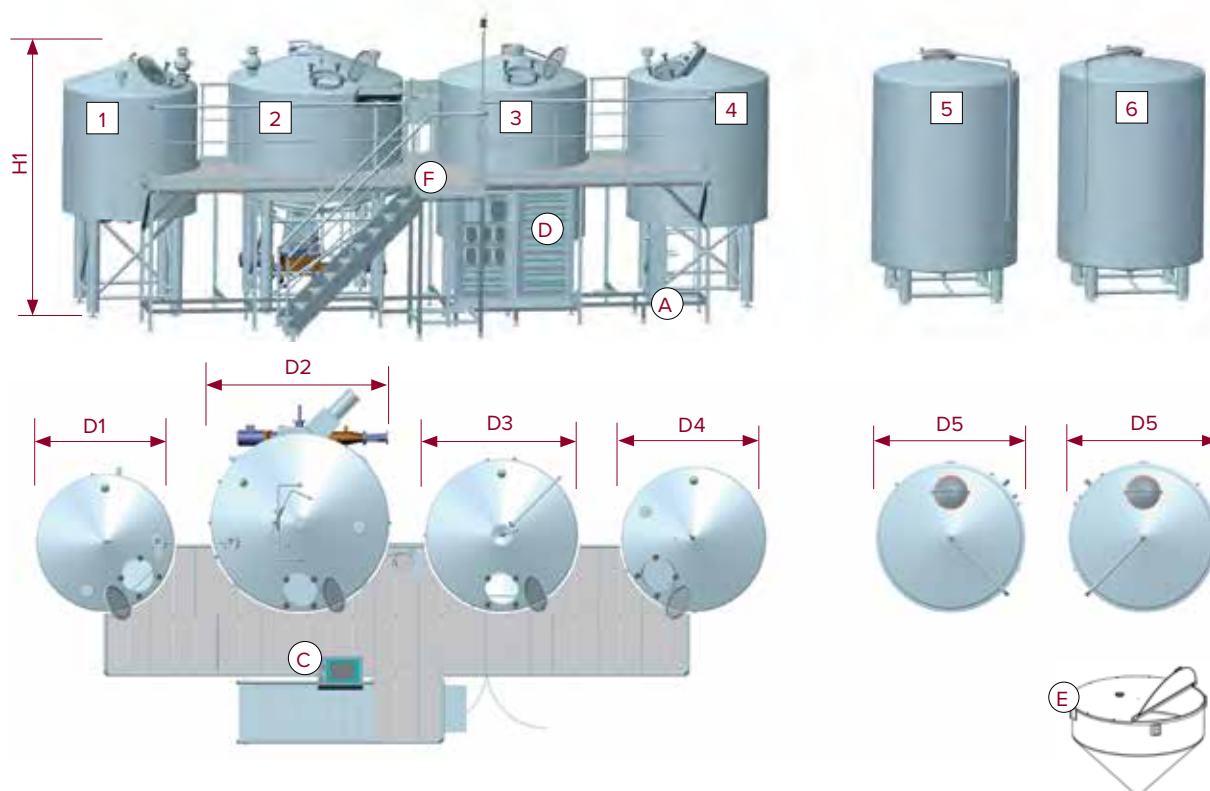
MICROBREWERY		MB2-40 hI
Mash / Lauter tun volume (1)	gal	1273.3
Kettle / Whirlpool volume (2)	gal	1534.8
Hot water tank volume (3)	gal	1888.8
Cold water tank volume (4)	gal	1888.8
Tank diameter (D1) _ ID / OD	inch	84.0 / 88.0
Tank diameter (D2)	inch	78.1
Tank diameter (D3)	inch	78.7
Height without grist case (H1)	inch	139.8
Height with grist case (H2)	inch	230.7
Total length approx. (L)	inch	299.2
Total width approx. (W)	inch	192.1

\* Dimensions listed in the table are approximate and may vary slightly.



# MICROBREWERY MB4 30BBL

- ▀ Mash mixer
- ▀ Lauter tun
- ▀ Kettle
- ▀ Whirlpool



Microbrewery		MB4-40 hl
Mash tun volume (1)	gal	989.3
Lauter tun volume (2)	gal	1532.2
Kettle volume (3)	gal	1512.4
Whirlpool volume (4)	gal	1262.7
Hot water tank volume (5)	gal	1888.8
Cold water tank volume (6)	gal	1888.8
Mash mixer diameter (D1)	inch	72.8
Lauter diameter (D2) _ ID / OD	inch	90.2 / 94.0
Kettle diameter (D3)	inch	80.1
Whirlpool diameter (D4)	inch	76.2
HWT/CWT diameter (D5)	inch	78.7
Height without grist case (H1)	inch	140.9
Height with grist case	inch	255.1
Total length approx. (L)	inch	388.1
Total width approx. (W)	inch	241.5

\* Dimensions listed in the table are approximate and may vary slightly.

## Main components:

- MB4

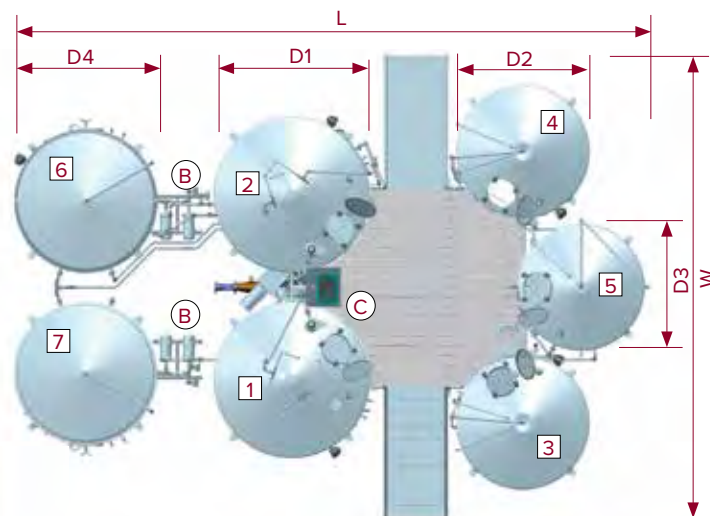
  - 1** Mash mixer (MM)
  - 2** Lauter tun (LT)
  - 3** Kettle (K)
  - 4** Whirlpool (W)
  - 5** Hot water tank (HWT)
  - 6** Cold water tank (CWT)
  - A** Heat exchanger
  - B** Integrated pumps
  - C** Control and operating touch screen panel
  - D** Control cabinet
  - E** Grist case (option)
  - F** Platform with stairs and guardrails

## MICROBREWERY MB5 30BBL

▴ 2 x Lauter tun

▴ 2 x Kettle

▴ Whirlpool



### Main components:

- MB5**
- 1** Lauter tun (LT1)
  - 2** Lauter tun (LT2)
  - 3** Kettle (K1)
  - 4** Kettle (K2)
  - 5** Whirlpool (W)
  - 6** Hot water tank (HWT)
  - 7** Cold water tank (CWT)
  - A** Heat exchanger
  - B** Pumps
  - C** Touch screen control panel
  - D** Control cabinet
  - E** Grist case
  - F** Platform with stairs and guardrails

Microbrewery	MB5-40 hl	
Lauter tun volume (1, 2)	gal	1532.2
Kettle volume (3, 4)	gal	1512.4
Whirlpool volume (5)	gal	1262.7
Hot water tank volume (6)	gal	3790.9
Cold water tank volume (7)	gal	3790.9
Lauter diameter (D1) _ ID/OD	inch	2291 / 2387
Kettle diameter (D2)	inch	2035
Whirlpool diameter (D3)	inch	1935
HWT/CWT diameter (D4)	inch	2200
Total height approx. (H)	inch	5090
Total length approx. (L)	inch	9765
Total width approx. (W)	inch	7140

\* Dimensions listed in the table are approximate and may vary slightly.













## FERMENTATION AND BRITE TANKS

Standards in the beer brewing and beverage industry are very high.

SK Group designs and manufactures various types of storage and fermentation vessels which are used under atmospheric pressure. All vessels are manufactured according to the PED Directive (97/23/EC) which ensure a safe and high quality working vessel.

In designing and manufacturing equipment, our customers' requirements and requirements of good engineering are the top priorities in the manufacturing process.

Management, planning and production systems are regulated according to the ISO9001 standards.

## COMPREHENSIVE SOLUTIONS FOR SMALL AND MEDIUM-SIZE BREWERIES







## MINI BRITE TANKS

### Brite beer tanks type LMI



Cylindrical pressure vessel

-Double wall design with insulation

-Laser welded colling zones in the tank jacket and tank bottom area,designed as pillow plate

-height adjustable tank legs

<b>Volume</b>	<b>from 2 to 8 bbl</b>
<b>Material</b>	<b>stainless steel EN1,4301 (AISI304)</b>
<b>Insulation</b>	<b>Polyurethane foam</b>
<b>External surface finishing</b>	<b>scotch brite (SB)</b>
<b>Internal surface finishing</b>	<b>Tank wall mirror finish (BA), bottom and cover brushed</b>
<b>Working pressure</b>	<b>0/+2.5 bar</b>

\*Materials and surface and finishing depend on inteded application and can be adapteded to customer's requirements.

#### LTIM tanks typically have the following essential components:

- oval manway on the tank cover, 440x310 mm, PED,
- safety valves (overpressure and vacuum),
- removable CIP tube with spray ball, butterfly valve (option),
- additional connection 3/8" on the removable CIP tube, with ball valve,
- pressure gauge,
- level indicator,
- racking port,
- sample valve (option: with installation of a T-piece the connection can also be used for wort aeration using the aeration stone),
- welded thermometer well (additional equipment for temperature regulation available as option: temperature regulator, connecting module, regulation valves),
- bottom drain port, butterfly valve (option).

## MINI FERMENTATION TANKS

### Cylindroconical fermenters type ZMI



Cylindrical pressure tanks with cone bottom and torispherical lid

-Double wall design with insulation

-Laser welded colling zones in the tank jacket and tank bottom area,designed as pillow plate

-height adjustable tank legs

<b>Volume</b>	<b>from 2 to 8 bbl</b>
<b>Material</b>	<b>stainless steel EN1,4301 (AISI304)</b>
<b>Insulation</b>	<b>Polyurethane foam</b>
<b>External surface finishing</b>	<b>scotch brite (SB)</b>
<b>Internal surface finishing</b>	<b>Tank wall mirror finish (BA), bottom and cover brushed</b>
<b>Working pressure</b>	<b>0/+2.5 bar</b>

\*Materials and surface and finishing depend on inteded application and can be adapteded to customer's requirements.

#### ZKIM tanks typically have the following essential components:

- oval manway on the tank cover, 440x310 mm, PED,
- safety valves (overpressure and vacuum),
- removable CIP tube with spray ball, butterfly valve (option),
- additional connection 3/8"on the removable CIP tube, with ball valve,
- pressure gauge,
- level indicator,
- racking port, racking pipe (option), butterfly valve (option),
- sample valve,
- welded thermometer well (additional equipment for temperature regulation available as option: temperature regulator, connecting module, regulation valves),
- bottom drain port, butterfly valve (option).

## FERMENTATION TANKS

### Pressure tanks with a cone-shaped bottom and torispherical lid

They are available in two designs:

**model ZKG** - tanks without insulation

**model ZKI** - tanks with insulation

Tanks are equipped with separate cooling zones which can be individually controlled and entirely insulated. CIP tube and a cleaning head included. The materials used and the surface finishing depend on the intended application and the customers' specifications.

#### Standard tanks:

volume	from 7 to 120 bbl
material	2B(IIIc), EN1.4301
working pressure in the tank	0/+1 bar (option: 0/+2,5 bar)
working pressure in the glycol jacket	max. 3 bar
test pressure in the glycol jacket	6 bar

	external	internal
surface	scotch brite	bottom mechanically polished Ra<0,8 µm; tank wall and lid mechanically brushed K180
welds	vertical and horizontal butt welds on the tank wall striped (BP); corner welds cleaned and passivated without brushing (CZZ)	butt welds flat brushed (K180); corner welds brushed (K180)



TANKS ZK	Theoretical Volume	Diameter int./ext.	Tank wall	Legs	Total height
BBL	gal.	inch	inch	inch	inch
7 BBL	297.2	39.3 / 43.3	39.3	47.2	98.4
10 BBL	407.1	43.3 / 47.2	45.3	47.2	104.3
15 BBL	632.7	51.2 / 55.1	49.2	51.2	122.0
20 BBL	811.8	55.1 / 59.1	55.1	59.1	129.9
30 BBL	1184.8	59.1 / 63.0	74.8	59.1	155.5
40 BBL	1556.2	63.0 / 66.9	88.6	59.1	169.3
50 BBL	2025.6	70.8 / 74.8	88.6	66.9	177.1
60 BBL	2341.6	78.7 / 82.6	77.8	78.7	179.1
80 BBL	3190.9	78.7 / 82.6	118.1	78.7	216.5
90 BBL	3556.0	82.6 / 86.6	118.1	78.7	224.4
100 BBL	4013.5	82.6 / 86.6	137.8	78.7	244.1
120 BBL	4698.0	86.6 / 90.5	147.6	98.4	273.6
120 BBL	4837.0	82.6 / 86.6	173.2	78.7	279.5



## BRITE TANKS

### Cylindrical pressure tanks with dished bottoms



They are available in two designs:

**model LTX** - tanks without insulation

**model LTI** - tanks with insulation

Tanks are equipped with laser welded heat exchangers (pillow-plate). Separate cooling zones can be individually controlled. CIP tube and a cleaning head included. The materials used and the surface finishing depend on the intended application and the customers' specifications.

#### Standard tanks:

volume	from 7 to 120 bbl
material	2B(IIIc), EN1.4301
working pressure in the tank	0/+1 bar (option: 0/+2,5 bar)
working pressure in the glycol jacket	max. 3 bar
test pressure in the glycol jacket	6 bar

	external	internal
surface	scotch brite	mechanically brushed K180
welds	vertical and horizontal butt welds on the tank wall striped (BP); corner welds cleaned and passivated without brushing (CZZ)	vertical and horizontal butt welds flat brushed (K180); corner welds cleaned and passivated without brushing (CZZ)

TANKS LT	Theorical Volume	Diameter int./ext.	Tank wall	Legs	Total height
BBL	gal.	inch	inch	inch	inch
7 BBL	278.7	37.4	49.2	15.7	82.7
10 BBL	363.5	39.3	66.9	15.7	92.5
15 BBL	538.6	47.2	59.1	15.7	98.4
20 BBL	753.9	55.1	59.1	15.7	98.4
30 BBL	1064.0	59.0	74.8	15.7	120.1
40 BBL	1383.4	62.9	86.6	19.7	131.8
50 BBL	1757.0	66.9	98.4	19.7	143.7
60 BBL	2045.7	74.8	88.6	23.6	139.7
80 BBL	2744.5	78.7	110.2	23.6	161.4
90 BBL	3140.5	82.7	114.2	23.6	171.2
100 BBL	3472.3	86.6	114.2	23.6	173.2
100 BBL	3506.6	82.7	129.9	23.6	189.0
120 BBL	4175.2	86.6	141.7	23.6	200.8
120 BBL	4146.9	82.7	157.5	23.6	216.5



## CLOSED FERMENTATION TANKS

### Closed fermentation tanks type GT

Closed cylindrical tanks to be used under atmospheric pressure available in two designs:

**model GTX** - tanks without insulation

**model GTI** - tanks with insulation

Tanks are equipped with laser welded heat exchangers (pillow-plate); separate cooling zones can be individually controlled; height-adjustable tank legs

<b>Volume</b>	<b>from 4 to 167 bbl</b>
<b>Material</b>	<b>stainless steel EN1,4301 (AISI304)</b>
<b>Insulation</b>	<b>Polyurethane foam or mineral wool</b>
<b>External surface finishing</b>	<b>scotch brite (SB)</b>
<b>Internal surface finishing</b>	<b>2R (IIIId, BA)</b>
<b>Working pressure</b>	<b>atmospheric</b>

\*Materials and surface and finishing depend on intended application and can be adapted to customer's requirements.

GT tanks typically have the following essential components:

- inlet connection
- sample valve port, racking port, drain port
- oval manway
- CIP tube with spray ball
- level indicator



## OPEN TOP FERMENTERS

### Closed fermentation tanks type FT

Open cylindrical tanks to be used under atmospheric pressure available in two designs:

**model FTX** - tanks without insulation

**model FTI** - tanks with insulation

Tanks are equipped with laser welded heat exchangers (pillow-plate); height-adjustable tank legs

<b>Volume</b>	<b>from 4 to 33 bbl</b>
<b>Material</b>	<b>stainless steel EN1,4301 (AISI304)</b>
<b>Insulation</b>	<b>Polyurethane foam or mineral wool</b>
<b>External surface finishing</b>	<b>scotch brite (SB)</b>
<b>Internal surface finishing</b>	<b>2R (IIIId, BA)</b>
<b>Working pressure</b>	<b>atmospheric</b>

\*Materials and surface and finishing depend on intended application and can be adapted to customer's requirements.

Fermentation is an important part of the brewing process. Fresh wort from the brew-house is pumped into tanks and yeast is added. The FT fermenters allow the performing of open fermentation.





# MATERIALS AND EQUIPMENT

In our production processes the following materials are used:

- ┆ EN1.4301, AISI 304
- ┆ EN1.4401 AISI 316
- ┆ EN1.4404 AISI 316L
- ┆ EN1.4571, AISI 316Ti
- ┆ EN1.4435, AISI 316L
- ┆ EN1.4307, AISI 304L

... and others, if this requested by the customer.

## Heat exchangers (pillow-plates):

- “ laser welded;
- “ separate cooling zones which can be individually controlled (one for cooling, the other for heating);
- “ the pillow plate is usually installed on the tank wall, but it can also be used on flat or cone-shaped bottoms. The laser-welding technique enables an accurate adjustment to openings, connectors and fittings on the tank surface without losing the cooling surface;
- “ the surface of the heat exchanger can be brushed, mechanical polished, marbled, scotch brite or sandblasted.

## Insulation:

- “ tank can be partial or entirely insulated,
- “ insulation material is polyurethane foam or mineral wool,
- “ insulation is covered with outer insulation jacket, which is welded diffusion resistant on the tank.

## Operating pressure:

- “ tanks for use under atmospheric pressure;
- “ pressure vessels adapted to the technological process; planning and production according to the Directive 97/23/EC (PED, Module H/H1) is supervised by the notified body for the conformity assessment (TÜV, CE 0531).

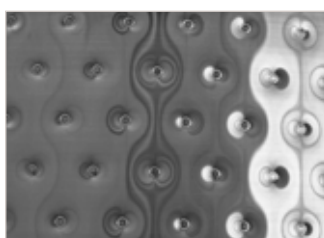
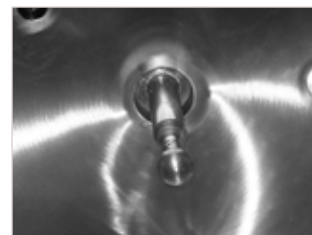
## Fittings and accessories:

- ┆ flange, threaded, TC or other connections
- ┆ oval manway on tank jacket
- ┆ CIP tube with a cleaning head
- ┆ temperature control and regulating equipment: digital thermometer DT5, temperature controller SPR8, Vintelligence software
- ┆ butterfly valves
- ┆ safety valve (spundaparat)
- ┆ yeast plug with handle
- ┆ sight glasses
- ┆ tank legs with the possibility of height regulation

... as well as other fittings and accessories according to specifications

## Temperature control box:

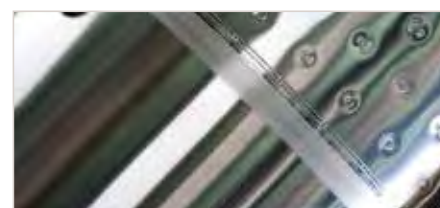
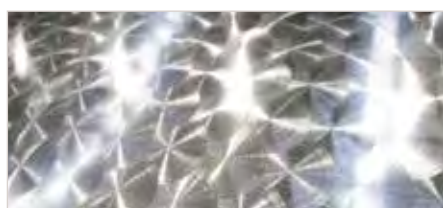
- “ enables a centralized control and monitoring of temperature parameters for up to 10 vessels;
- “ each vessel should have a temperature probe and a solenoid valve and is connected to a relevant control unit in the control box;
- “ the following parameters can be controlled: display of the current measured temperature, setting of the target temperature, setting of the hysteresis.



# MATERIALS AND SURFACE FINISHING

## Basic stainless steel surfaces

2B (IIIc)	cold rolled stainless steel with 2B (IIIc) surface according to EN 10088-2 (surface smooth, matt) irregularities on surface which appear during different manufacture procedures are allowed roughness of stainless steel (before manufacture of tanks): $0,1\mu\text{m} < \text{Ra} < 0,5\mu\text{m}$ roughness of the product is not inspected
2R (IIId, BA)	cold-rolled stainless steel with 2R (IIId) surface according to EN10088-2 (surface smooth, polished) irregularities on surface which appear during different manufacture procedures are allowed roughness of stainless steel (before manufacture of tanks): $0,03\mu\text{m} < \text{Ra} < 0,1\mu\text{m}$ roughness of the product is not inspected
1D (IIa)	hot-rolled stainless steel with 1D (IIa) surface according to EN10088-2 irregularities on surface which appear during different manufacture procedures are allowed roughness of stainless steel (before manufacture of tanks): $2\mu\text{m} < \text{Ra} < 6\mu\text{m}$ roughness of the product is not inspected



## Surface finishing

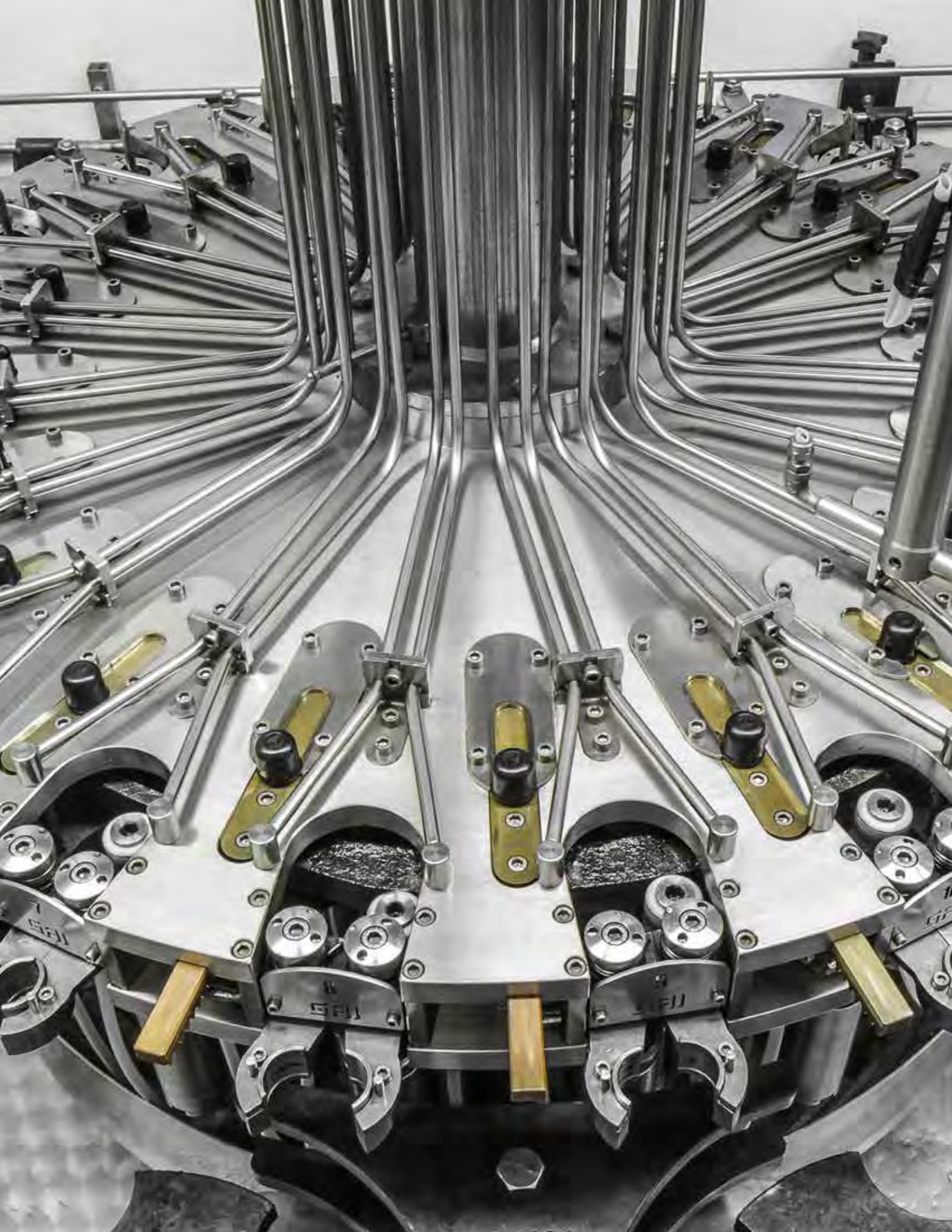
marbled (K)	for circled surface finishing the 2B or 2R stainless sheet metal is used minor surface irregularities due to characteristics of the basic material and irregularities which are caused in the course of the production process are admissible roughness of the product is not inspected
scotch brite (SB)	surface brushed with scotch brite cloth for this surface finishing the 2B or 2R stainless sheet metal is used minor surface irregularities due to characteristics of the basic material and irregularities which are caused in the course of the production process are admissible roughness of the product is not inspected
sandblasted (CrNi beads)	sand-blasting surface treatment with CrNi steel beads for this surface finishing, the 2B, 2R or 1D stainless sheet metal is used roughness of the product is not inspected
brushed K60 ( $\text{Ra} < 2,0\mu\text{m}$ ) K80 ( $\text{Ra} < 1,6\mu\text{m}$ ) K120 ( $\text{Ra} < 1,2\mu\text{m}$ ) K180 ( $\text{Ra} < 0,8\mu\text{m}$ ) K220 ( $\text{Ra} < 0,6\mu\text{m}$ )	surface brushed with abrasive band different grades of brushing, surface roughness $\text{Ra} < 2,0\mu\text{m}$ to $\text{Ra} < 0,6\mu\text{m}$ minor surface irregularities of the basic material and irregularities which are caused in the course of the production process are evened
mechanical polished $\text{Ra} < 1,2\mu\text{m}$ $\text{Ra} < 0,8\mu\text{m}$ $\text{Ra} < 0,6\mu\text{m}$ $\text{Ra} < 0,4\mu\text{m}$	surface mechanically polished with felt and polishing paste for a high-gloss surface finish different qualities of polishing surface roughness from $\text{Ra} < 1,2\mu\text{m}$ to $\text{Ra} < 0,4\mu\text{m}$
electropolished $\text{Ra} < 1,2\mu\text{m}$ $\text{Ra} < 0,8\mu\text{m}$ $\text{Ra} < 0,6\mu\text{m}$ $\text{Ra} < 0,4\mu\text{m}$	surface electropolished different qualities of electropolishing, surface roughness from $\text{Ra} < 1,2\mu\text{m}$ to $\text{Ra} < 0,4\mu\text{m}$

## Welds finishing

passivated (CZZ)	weld surface chemically passivated and cleaned, without any additional treatment weld structure is visible
striped (BP)	weld zone is brushed with grain 80 weld structure is partially visible weld zone is partially evened with the surface roughness of the weld surface is not inspected
polished unbrushed (C)	weld zone is chemically passivated, cleaned and mechanically polished weld structure is visible roughness of the weld surface is not inspected
brushed K120 ( $\text{Ra} < 1,2\mu\text{m}$ ) K180 ( $\text{Ra} < 0,8\mu\text{m}$ ) K220 ( $\text{Ra} < 0,6\mu\text{m}$ )	weld zone is brushed with grain 120, 180 or 220 weld structure is not visible weld zone is evened with the surface
brushed and polished $\text{Ra} < 1,2$ $\text{Ra} < 1,0$ $\text{Ra} < 0,8$ $\text{Ra} < 0,6$ $\text{Ra} < 0,4$	weld zone is brushed and polished with polishing paste for a high-gloss surface finish roughness of the weld surface $\text{Ra} < 1,2\mu\text{m}$ to $\text{Ra} < 0,4\mu\text{m}$ weld structure is not visible weld zone is evened with the surface









## MECHANICAL FAMILY

Still wines from 3,000 to 15,000 bottles/hour.

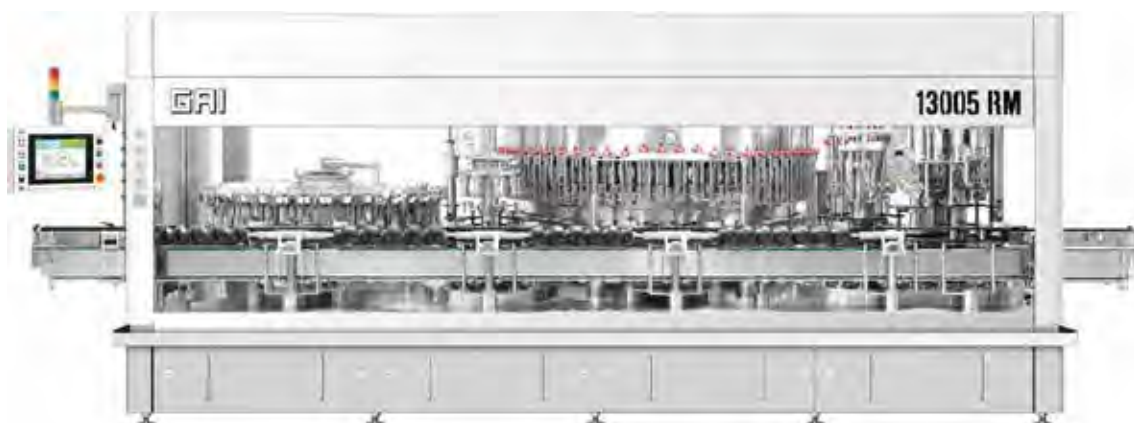
### SERIES FMT AND FMA

**Rinsing, de-aeration, gravity filling, inert gas injection, vacuum corking, capping.**

With outputs over 3,000 b/h, the single-head corks used in the previous series is replaced by a multi-head corks.

These machines have been designed for large scale bottling producers and offer a wide range of options to combine different functions in a flexible manner, depending on the customer's needs.

Great efforts have been made to design extremely reliable machines suitable for long work shifts and requiring minimum and easy maintenance. Moreover, the machines have been automated as much as possible.



FUNCTION		3652 FM	4052FM	5052FM	6052FM	8052FM	10052FM	12052FM
Rinser	n	15	16	20	24	28	36	40
Deareator	n	4	4	4	6	6	8	8
Filler	n	18	20	24	36	44	54	54
Gas injector	n	4	4	4	6	6	8	8
Corker	n	3	3	4	5	6	8	8
Capper	n	3	3	4	5	6	6	8
Output	gal/h	854	951	1162	1347	1717	2086	2641
	l/h	3200	3600	4400	5100	6500	7900	10000
Speed	bott./h	1000-4000	1000-4500	1200-6000	1200-6000	1800-9000	2400-12000	2400-12000
	bott./min	16-67	16-75	20-100	20-100	30-150	40-200	40-200

Not binding data.







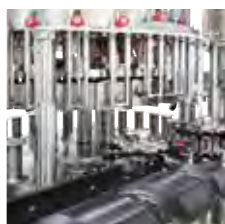
## ELECTRO-PNEUMATIC VALVE

A new era for bottling has begun

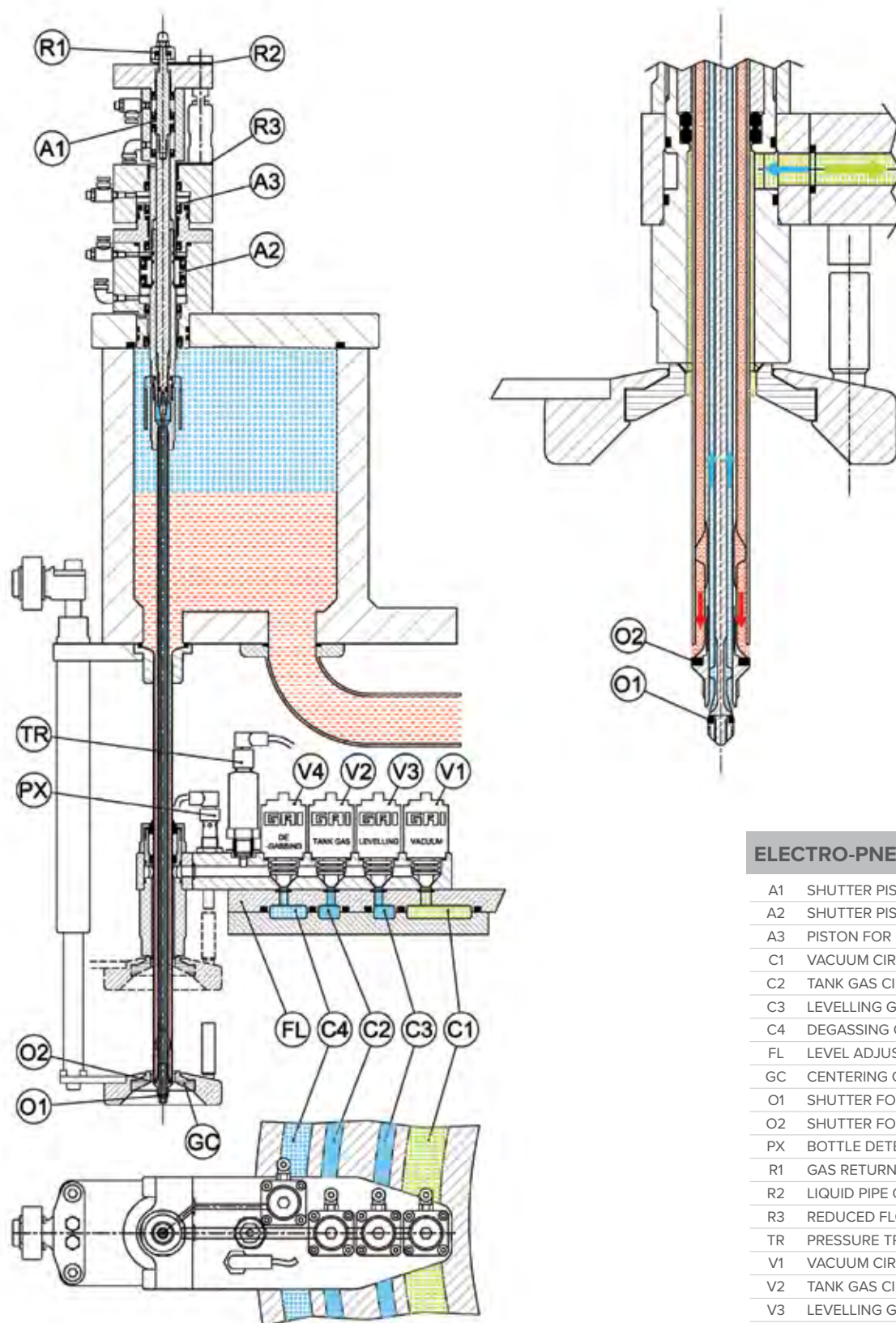
### Bottling changed by Gai's Patents

Over 100 million bottles produced in the first 2 years from their launch in 2013, steadily growing orders from different markets and sectors, including the most difficult ones. The electro-pneumatic spout or 'UNICA' valve represents a radical upturn that immediately revealed as a great advantage and is now required by an increasing number of new customers.

- **Sparkling and still wine** without compromise.
- **Output increase** up to 30% more for sparkling wines.
- **Level adjustment** from 25 to 100 mm from the top of the mouth, in an automatic and centralized way with no manual intervention. It can be performed even with the machine running.
- **Filling cycle** with total repeatability, possibility to store the correct working sequence. All the stages keep the set duration also when speed is changed. Total control over the filling operation is granted.
- **Optimized sterilization** by opening and washing one circuit at a time, always with the proper pressure and for the necessary time, in a totally automatic way.
- **Automatic dummy bottles** (for machines with 20 or more spouts and manual ones for 12 and 16 spouts). They are always present on the machine and they are automatically and simultaneously inserted, even with time setting, with no manual intervention. They optimize sterilization because they allow to open or close the drain pipe according to the circuit that needs washing.



## E HP



## ELECTRO-PNEUMATIC FILLING VALVE

A1	SHUTTER PISTON FOR GAS RETURN
A2	SHUTTER PISTON FOR LIQUID PIPE
A3	PISTON FOR REDUCED FLOW
C1	VACUUM CIRCUIT
C2	TANK GAS CIRCUIT
C3	LEVELLING GAS CIRCUIT
C4	DEGASSING OUTLET CIRCUIT
FL	LEVEL ADJUSTMENT FLANGE
GC	CENTERING CONE SEAL
O1	SHUTTER FOR GAS RETURN
O2	SHUTTER FOR LIQUID PIPE
PX	BOTTLE DETECTION PROXIMITY
R1	GAS RETURN OPENING ADJUSTMENT
R2	LIQUID PIPE OPENING SETTING
R3	REDUCED FLOW ADJUSTMENT
TR	PRESSURE TRANSDUCER
V1	VACUUM CIRCUIT VALVE
V2	TANK GAS CIRCUIT VALVE
V3	LEVELLING GAS CIRCUIT VALVE
V4	DE-GASSING OUTLET CIRCUIT VALVE



# ELECTRO-PNEUMATIC VALVE

## Advantages

### 1. Flexible filling

All the operating parameters: vacuum in bottle, working pressure (from 0 to 8 bar) partial opening, filling level and degassing cycle are set on the control panel and can be modified without any manual intervention. Therefore, it will be possible to pass from one type of bottling to another easily. The liquid passage opening can be divided to have a large flow filling followed by a reduced flow. This is an advantageous solution for difficult products because the foam is limited and the level is precise.

### 2. Level adjustment

Automatic and centralized level adjustment with an adjustment range from 25 to 100mm from the rim, even with the machine running. The shape of the valves enables it to reach a specific level with a tolerance of  $\pm 0,5$  mm, due to the levelling operation.

### 3. Structure with double tube with lower closing

The closure of the filling and the gas return tubes enables them to reach precise levels even without using the levelling procedure. However, it is recommended to use the levelling device, as it considerably reduces the product quantity into the gas return tube, which benefits the next bottling operation. To be sure of the gas return for this minimum quantity of product, it is advisable to choose the solution E2 with the gas return in a separate vessel. The closure of the gas return tube has many advantages during the degassing phase with an important increase in productivity of sparkling wines.

### 4. Automatic dummy bottle

Automatic and simultaneous positioning of all dummy bottles, always present on the machine (from 20 filling valves). The GAI dummy bottle is under patent protection and is able to optimize sterilization because it is possible to open or close the discharge according to the specific circuit that needs cleaning.

### 5. Secure sterilizing cycle

Electro-pneumatic valves, together with dummy bottles with discharge circuit, guarantee effective and well defined sterilizing cycles for each filler circuit. The automatic CIP is strongly recommended for time-saving and for sterilization cycle security.

### 6. Operating cycle iteration

The filling cycle, managed with timing phases, guarantee the maximum iteration, making it unaffected to speed variation on the production line. Working phases can be optimized and personalized according to the product to be bottled, improving quality and productivity. Timing is determined in seconds, tenths and hundredths with a repeatability of 1/100 of second.

### 7. Bottle detection

The proximity of each spout guarantees the bottle real presence and enables it to start the filling cycle exactly when the bottle is sealed on the cone.

### 8. Pressure Transducer

The pressure transducer on each spout enables it to constantly control the bottle pressure, in order to check that the filling cycle is carried out correctly and to detect any anomalies or malfunctions.

These controls allow for the detection of insufficient vacuum, exploded bottles or missing seals on the cone, pressure trends during degassing and the efficiency of every single filling valve.

### 9. Four electro-pneumatic valve structure

Using four electro-pneumatic valves to separately control the following circuits: 1. vacuum, 2. tank gas, 3. levelling and 4. degassing.

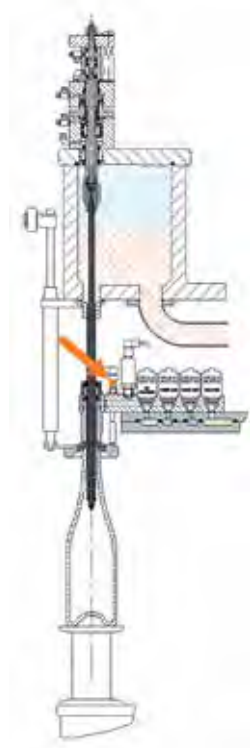
In comparison with the systems with three valves only, the tank gas valve enables pressure compensation in the bottle without using the return gas tube (it avoids sprinkling product residues inside the bottle).

The electro-pneumatic valves and the in-feed pipes placed near the filling spouts minimize the volume in the pipe, thus reducing gas consumption, increasing productivity and ensuring an easy and proper filler sterilization.

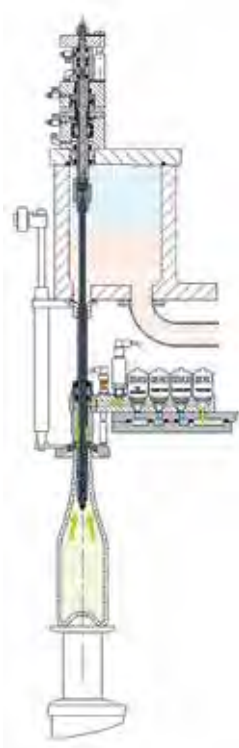
### 10. Format saving

The filling cycle can be set through the control panel and it does not require any manual intervention on the filler. Saving cycles and repeating them simplifies and speeds up the format change operation, ensuring more uniformity in the process.

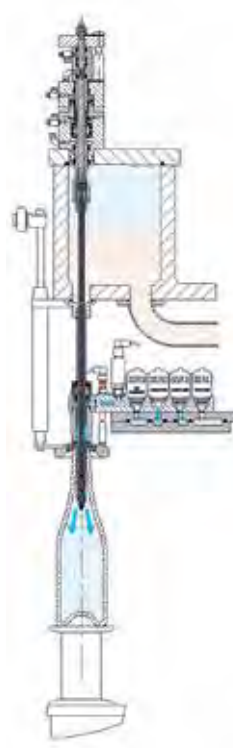
## WINE FILLING



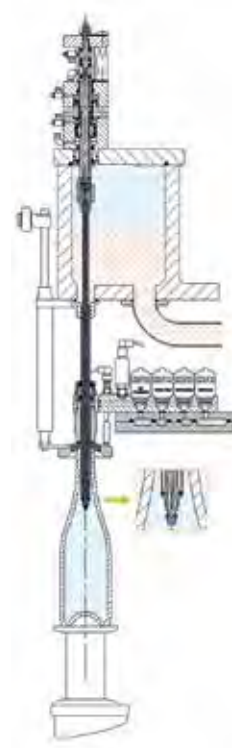
BOTTLE PRESENCE



DEAERATION

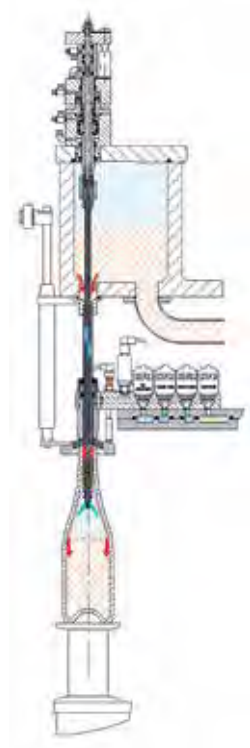


TANK GAS

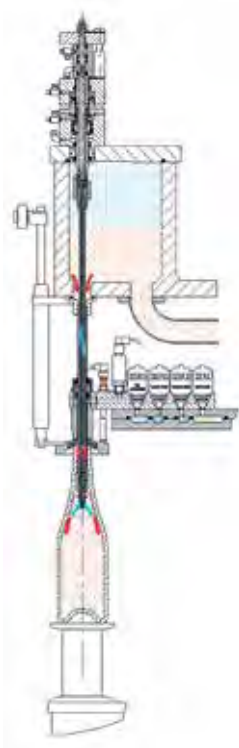
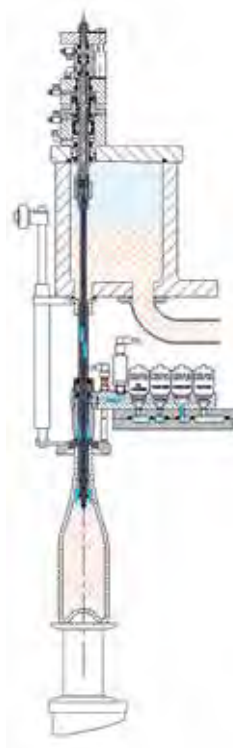


GAS SHUTTER OPENING

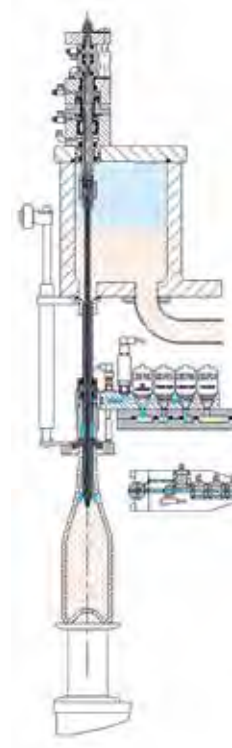
## FUNCTIONAL



BIG FLOW FILLING

REDUCED FLOW  
FILLING

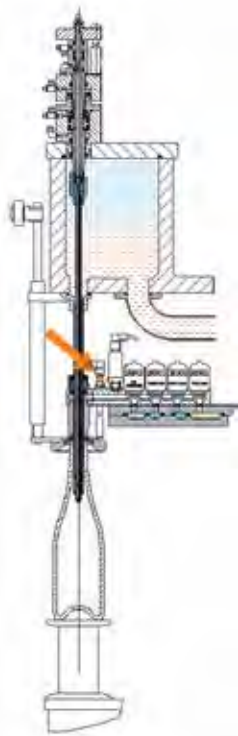
LEVELLING



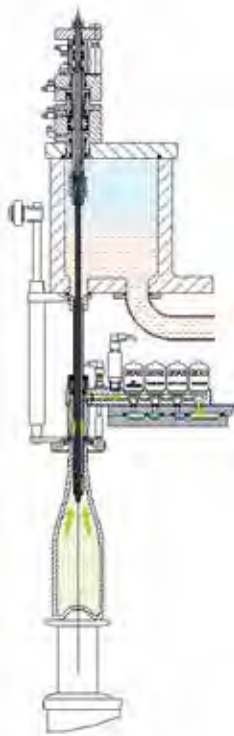
DEGASSING



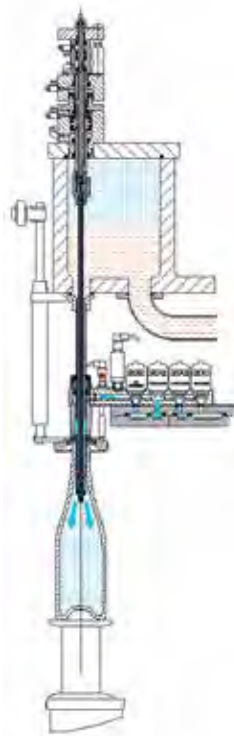
## BEER FILLING



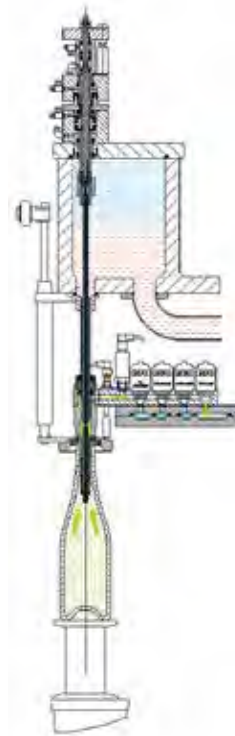
BOTTLE PRESENCE



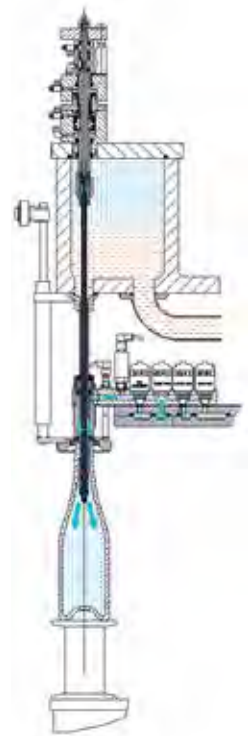
FIRST DEAERATION



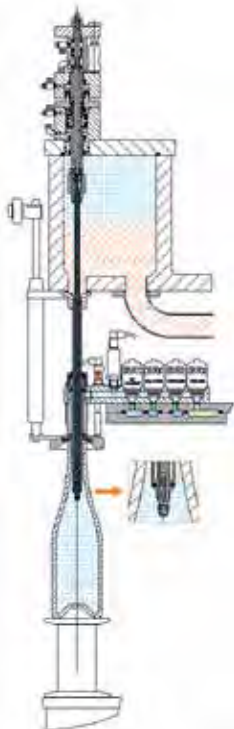
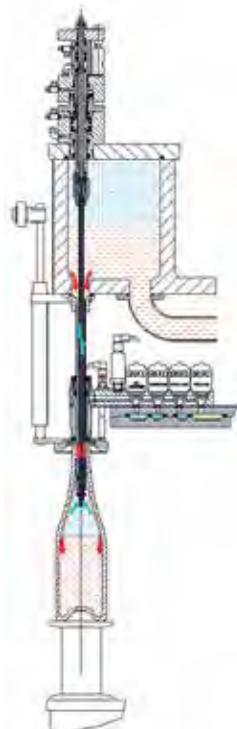
TANK GAS



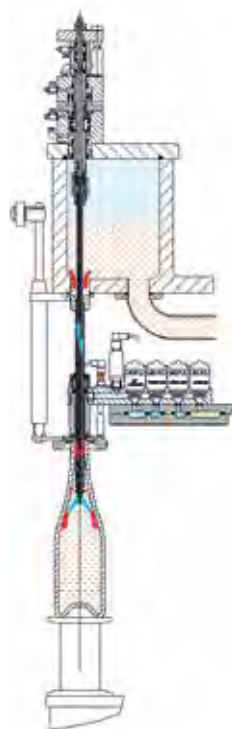
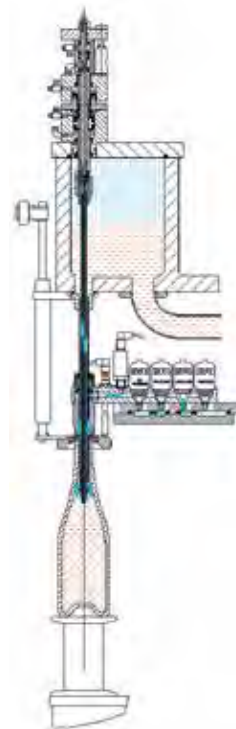
SECOND DEAERATION

PRESSURE  
COMPENSATION

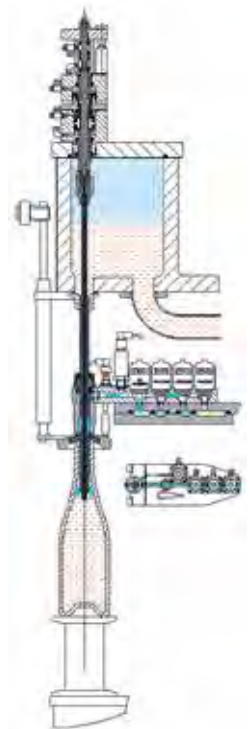
## FUNCTIONAL

GAS SHUTTER  
OPENING

BIG FLOW FILLING

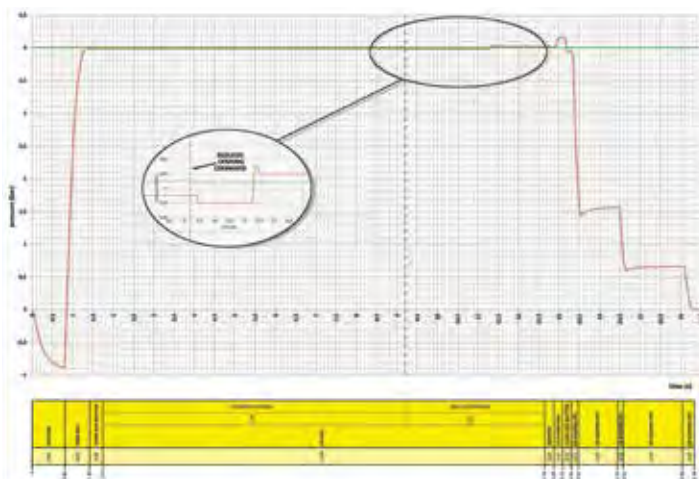
REDUCED FLOW  
FILLING

LEVELLING

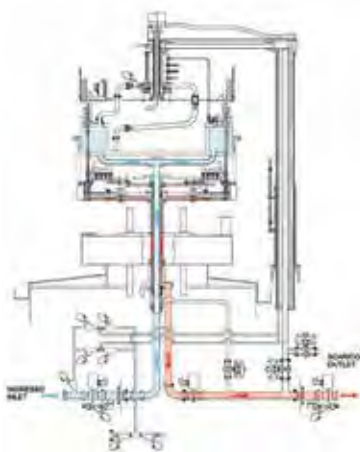


DEGASSING

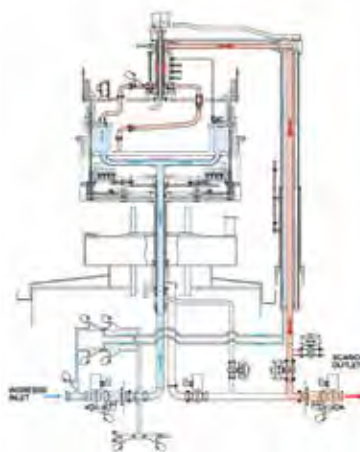
## PRESSURE TREND DURING THE FILLING CYCLE



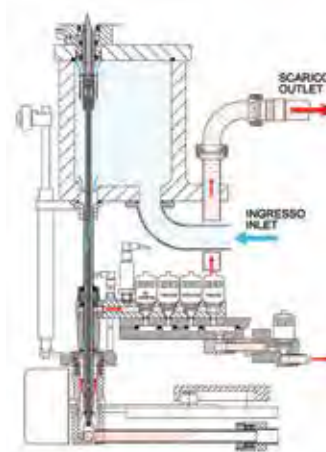
## PRESSURE TREND DURING THE FILLING CYCLE



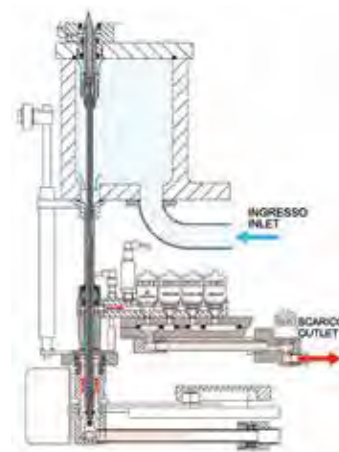
RINSING CYCLE  
AFTER BOTTLING



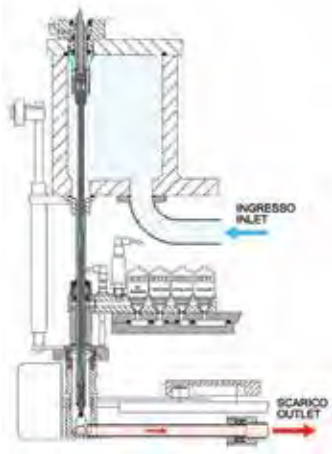
TANK AND COUNTERPRESSURE  
GAS INLET WASHING CYCLE



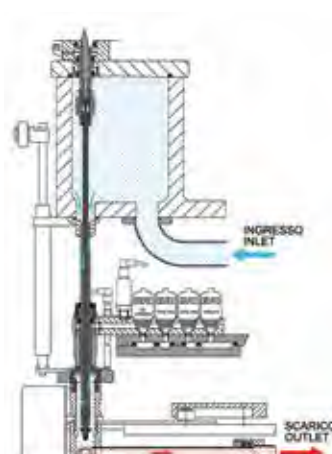
GAS RETURN TUBE  
WASHING CYCLE



FILLING TUBE WASHING  
CYCLE



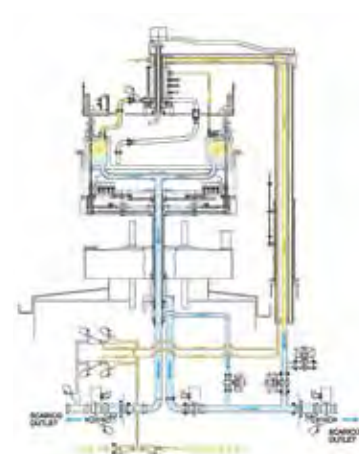
VACUUM CIRCUIT WASHING  
CYCLE



DEGASSING CIRCUIT  
WASHING CYCLE

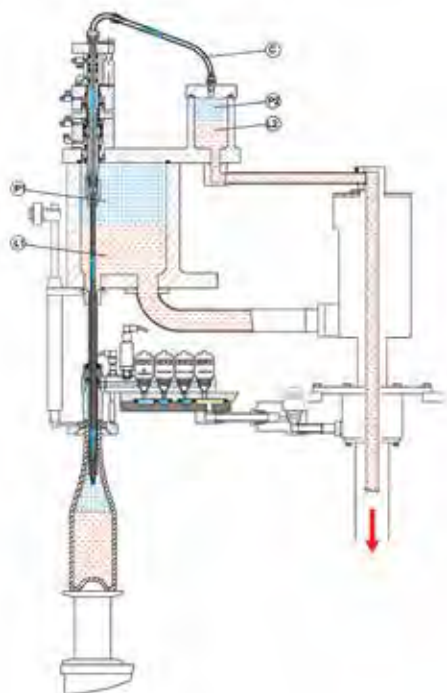


TANK GAS AND LEVELLING GAS  
CIRCUITS WASHING CYCLE



EMPTYING AND DRAINAGE WITH  
GAS INJECTION (or sterile air)





## E2 HP

### Gas return to separated tank

With the E2 HP system the gas return line is connected to a secondary collection tank P2. This tank is pressurized at the same level as the first tank P1. Any drops of liquid that remain in the gas return line C after the filling procedure are collected in L2 rather than in L1.

The advantages to this are:

1. Reduced oxygen pick-up. Drops coming from C were in contact with bottle gas and therefore are minimally oxidized.
2. Improved aseptic conditions. Drops coming from C were in contact with the bottle and therefore have a minimum risk of contamination. The quantity of liquid going into L2 is minimal. This liquid is recovered and the operator can decide where to move it.

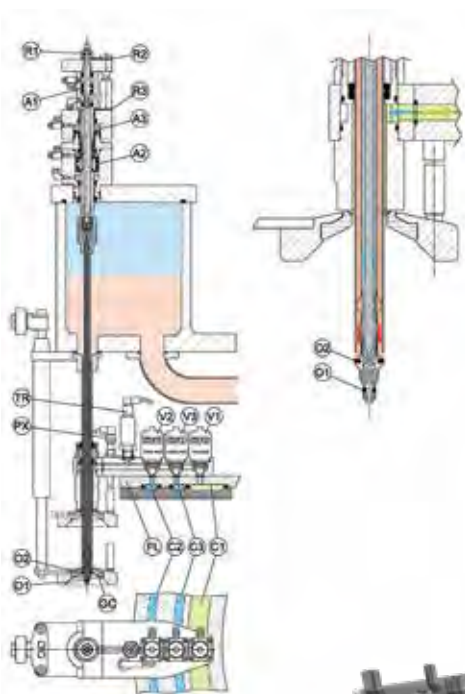
## 42000 E LP

### Light pressure valve

E LP valve is exactly the same as E HP version, except from the degassing circuit. This valve was designed to bottle still or slightly sparkling products with a working pressure from 0 to 2 bars. Thanks to this relatively low pressure, the degassing operation is not necessary because it occurs spontaneously when the bottle is moved away from the filling valve. The valve and the filler configurations are simpler and therefore cheaper, but with the same operations of bottle vacuum, tank gas and levelling.

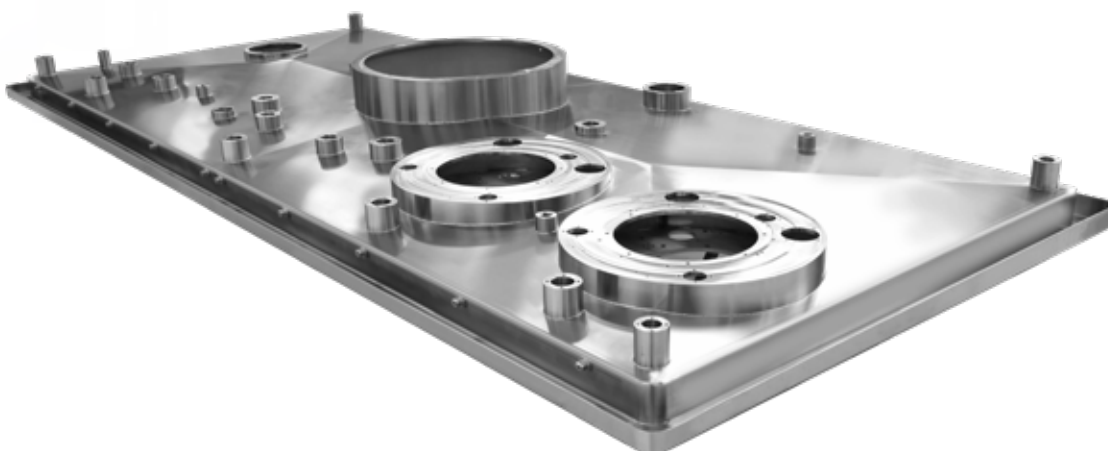
Therefore, E LP version has all advantages described for E HP, but cannot bottle sparkling wines or be modified to do this.

E HP can bottle both still and sparkling products; E LP can bottle only still or slightly sparkling products.



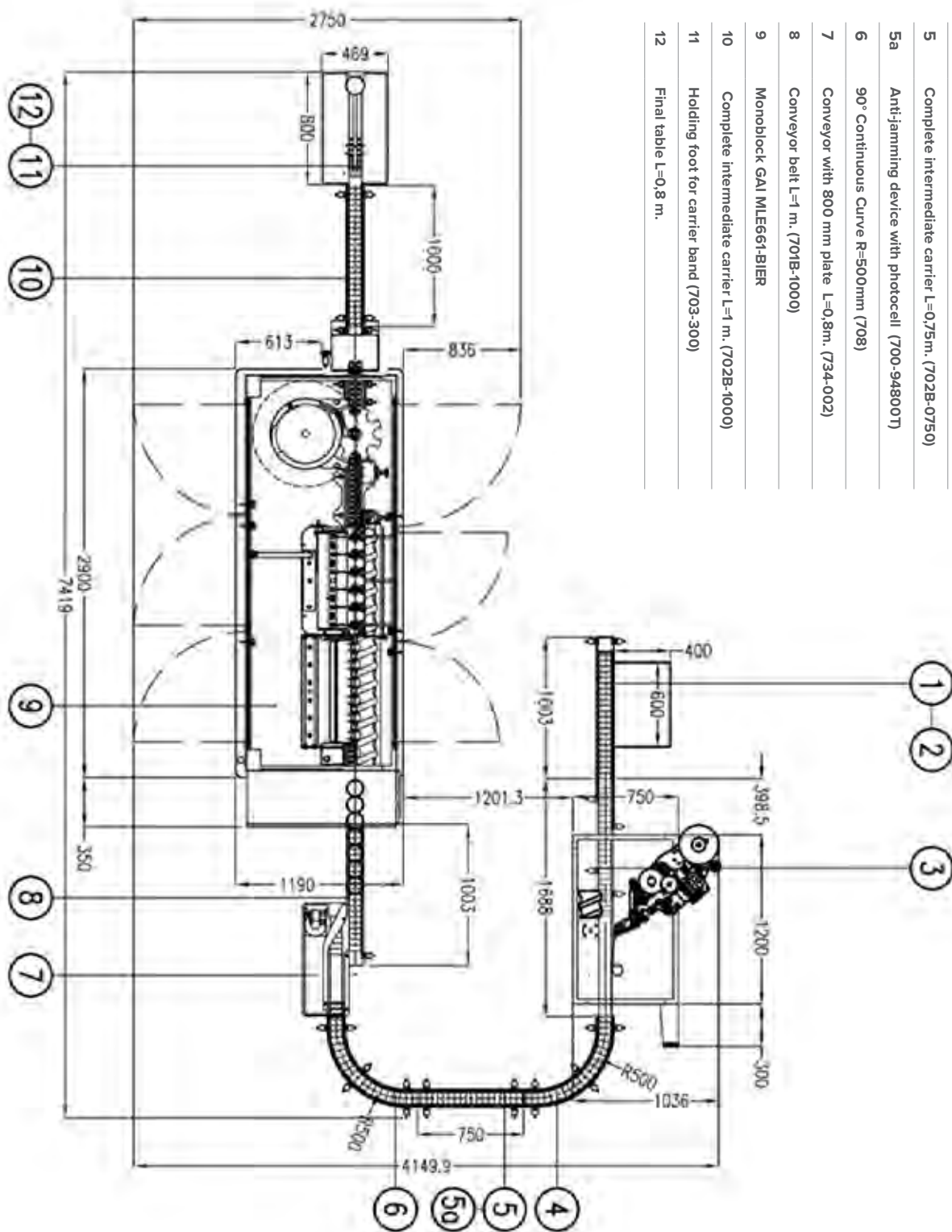
## ROOF BASEMENT

The roof basement is the ideal choice because all the upper surfaces are slanted toward the perimeter collection channel, there are no points where fluids can stagnate and all the washing fluids can quickly drain. It is also easier to clean the machine. The entire structure is made of AISI304 stainless steel. The lower plate is 15 to 20 mm thick sized up to 4,000 x 8,000 mm. The cylinders, that hold the monobloc turrets in position, are welded onto the frame. The upper section (skin) is a 5 mm thick glazed AISI304 stainless steel sheet that links the lower part to the turret basements. This whole structure is rigid and reasonably light. All the upper and lower connections are NC machine-tool worked, they are therefore extremely precise. These parts are all produced in-house, which confirms the greater flexibility of our labor force and our state-of-the-art equipment.



## LAYOUT U-SHAPE

POS.	DESCRIPTION
1	Conveyor belt complete with back roll L=1m. (701B-1000)
2	Holding foot for carrier band (703-300)
3	Labeler GAI 6012
4	90° Continuous curve R=500mm (708)
5	Complete intermediate carrier L=0,75m. (702B-0750)
5a	Anti-jamming device with photocell (700-948007)
6	90° Continuous Curve R=500mm (708)
7	Conveyor with 800 mm plate L=0,8m. (734-002)
8	Conveyor belt L=1 m. (701B-1000)
9	Monoblock GAI MLE661-BIER
10	Complete intermediate carrier L=1 m. (702B-1000)
11	Holding foot for carrier band (703-300)
12	Final table L=0,8 m.







## SERIES MLE

**Still wines, champagne, sparkling wines and beer from 500 to 1,500 bottles/hour.**

The MLE Monoblock is a Linear Fully Automatic bottling machine.

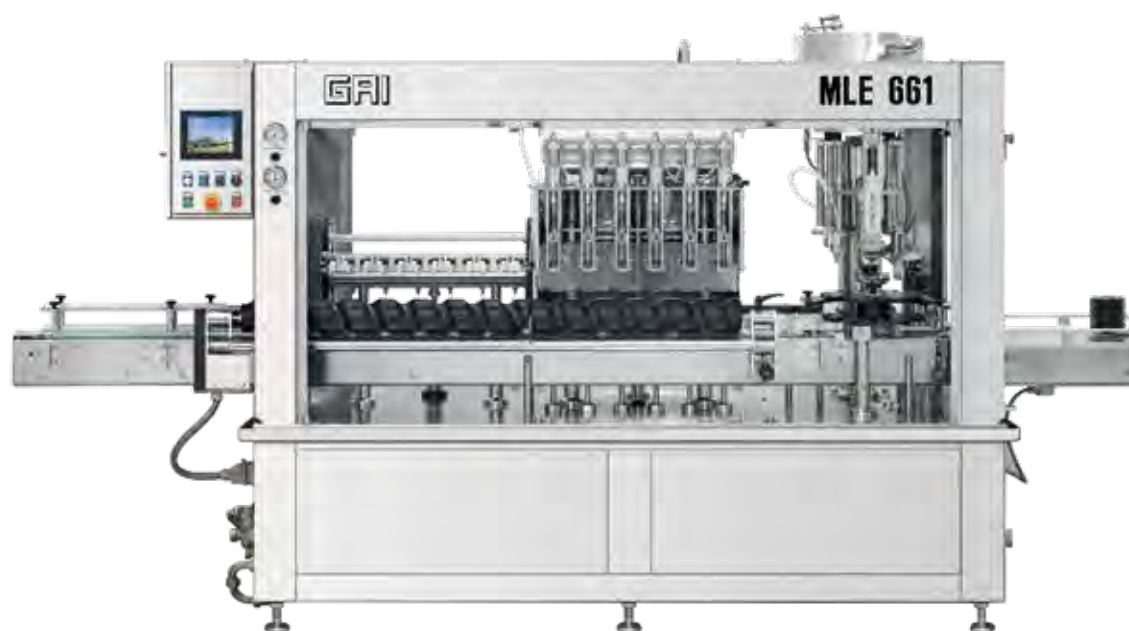
4 or 6 nozzles for rinsing, 4 or 6 nozzles for filling and single head for crowning or corking.

The machine has been designed to bottle high quality products using the new Electro-Pneumatic Filling Valve "UNICA" able to work with still and sparkling products without compromises.

## MLE HP / MLE BIER

**Rinsing, Filling, Crowning/corking.**

The basic functions for bottling, you can fill both carbonated and non-carbonated products.



FUNCTION		MLE 441	MLE 661	MLE 881
Rinser	n	4	6	8
Filler	n	4	6	8
Capper	n	1	1	1
Production Still beer	gal/h	139	198	198
	lt /h	525	750	950
Production Beer	gal/h	99	139	139
	lt/h	375	525	675
Speed Still Beer Referred to 0,50L bottle format	gal/h	700	1000	1300
	lt /h	12	17	22
Speed Beer Referred to 0,33L bottle format	bott./h	900	1200	1500
	bott/min	15	20	25

Not binding data.



G032 RE HP

9643



## SERIES FE HP / RE HP

Still, champagne and sparkling wines from 1,000 to 15,000 bottles/hour.

Rinsing, still or sparkling wine complete filling cycle with electropneumatic spout, vacuum corking, capping. The HP Series is the most flexible and complete series belonging to the range with electric spout, suitable for bottling both sparkling and still wines without compromise.



FUNCTION		2032FEHP	2532FEHP	3032REHP	3632REHP	4032REHP	5032REHP
Rinser	n	12	12	12	16	16	20
Filler Valves	n	12	16	20	20	24	28
Corker	n	1	1	1	3	3	4
Capper	n	1	1	1	3	3	4
Still wine production	gal /h	475	635	792	792	977	1162
	l /h	1800	2400	3000	3000	3700	4400
Sparkling wine production	gal /h	290	383	475	475	581	697
	l /h	1100	1450	1800	1800	2200	2640
Speed	bott./h	600-3000	600-3000	600-3000	1000-4500	1000-4500	1200-6000
	bott./min	10-50	10-50	16-50	16-50	16-75	20-100

Not binding data.

FUNCTION		6032REHP	7032REHP	8032REHP	10032REHP	12032REHP	15032REHP
Rinser	n	20	24	28	36	40	48
Filler Valves	n	32	36	40	48	60	72
Corker	n	4	5	6	8	8	10
Capper	n	4	5	6	8	8	10
Still wine production	gal /h	1347	1532	1717	2086	2641	3170
	l /h	5100	5800	6500	7900	10000	12000
Sparkling wine production	gal /h	805	924	1030	1254	1585	1902
	l /h	3050	3500	3900	4750	6000	7200
Speed	bott./h	1200-6000	1500-7500	1800-9000	2400-12000	2400-12000	3000-15000
	bott./min	20-100	25-125	30-150	40-200	40-200	50-250

Not binding data.



3031 FM BIER

GFI





## SERIES BIER

### Beers from 1,000 to 18,000 bottles/hour.

Quality beers have long been an area of great interest for Gai. We have created specific machines for these products keeping in mind their typical problems, from their particular sensitivity to oxidation, to the various sizes of bottles to be filled and capped. This family also includes mechanical and electro-pneumatic series, with all the advantages implied by this second solution.



FUNCTION		1531 FM-BIER	3031 FM-BIER	5031 FM-BIER	3031 FE-BIER	5031 FE-BIER
Rinser	n	9	12	16	12	16
Filler	n	8	12	16	12	16
Crown/Capper	n	1	1	3	1	3
Output	gal/h	132	290	450	290	450
	l/h	500	1100	1700	1100	1700
Speed	bott./h	500-1500	600-3000	1000-5000	1000-3000	1500-5000
	bott./min	8-25	10-50	16-83	16-50	25-83

Not binding data.

FUNCTION		6031 RE-BIER	7031 RE-BIER	8031 RE-BIER	10031 RE-BIER	12031 RE-BIER	14031 RE-BIER	18031 RE-BIER
Rinser	n	16	20	24	24	28	32	40
Filler	n	20	24	28	32	36	40	50
Crown/Capper	n	4	4	6	6	8	10	10
Output	gal /h	554	686	792	898	1056	1240	1585
	l/h	2100	2600	3000	3400	4000	4700	6000
Speed	bott./h	1500-6000	1500-7000	2000-8000	2000-10000	2500-12000	3000-14000	3000-18000
	bott./min	25-100	25-116	33-133	33-166	41-200	50-233	50-300

Not binding data.





CERTIFIED BY **GRI** GROUP LIMITED  
CE  
ALYF802  
BODY-16  
3341  
MANUFACTURED BY



## CAN SERIES

**From now on, canned craft beers are possible too.**

The new CAN series linear monoblocs belong to an ambitious project with the aim of satisfying the increasingly frequent requests for machines suitable for cans.

They are provided with a mechanism, which guarantees quality even to small and medium productions.

### The main innovative solutions are the following:

The work cycle is performed using inert gas in every station, thus considerably reducing beer oxidation.

Disinfection is easy and safe: all circuits can be easily reached and are designed to avoid dangerous stagnations.

Unique on the market thanks to quality and performances

**NEW**



FUNCTION		MLE4441-CAN	MLE6661-CAN
Ø Can	inch	1.96-3.34	1.96-3.34
	mm	50-85	50-85
Rinser	n	4	6
Filler	n	4	6
Can lids dispenser	n	4	4
Seamer	n	1	1
Output	gal/h	118	171
	lt /h	450	650
Speed	can/h	up to 1.200	up to 1.600
	can/min	up to 20	up to 27

Not binding data.





3

4











## **SIFA FLUID FOOD TECHNOLOGIES AND AUTOMATION**

SIFA designs, engineers, constructs, develops and installs complex and technologically advanced plants. SIFA is leader in the separation market segment with its tangential microfiltration lines and is equally advanced in other separation methods, incl. flotation, traditional filtration, microfiltration, ultrafiltration, nanofiltration and inverse osmosis. SIFA is the only company that produces filters customized to meet individual process requirements and engineers and produces all types of membranes. It has a long experience and offers an excellent range of machines and products for barrel filling, bags-in-box and automated systems for the cleaning and sanitization of microfiltration and bottling plants .



## IDROKEGS S2 / S3

The Idrokegs washer for stainless steel kegs is a machine with 2 work heads. It was developed by Sifa's engineering department to wash and clean kegs. The entire structure of the machine and the parts that are in contact with the washing water are in AISI 304 and 316 stainless steel. The work phases are managed automatically. The only manual phase is the loading and unloading of the kegs.



## MEGAWAPP 18KW / 36KW

Sifa's steam generators were designed to supply continuous steam from 0 to 10 bar at temperatures from 100 to 190°, with instant dispensing of steam. They occupy a minimal amount of space and are wheeled for rapid movement and use without fixed connections. It's especially utilized in the food and chemical-pharmaceutical sector to sanitize and sterilize infestation equipment, microfiltration systems, storage tanks, autoclaves, etc. In conjunction with plate or coil heat exchangers, it can be used for the production of hot water. In addition, its special solid steel structure ensures excellent resistance to wear and reduces the amount of routine maintenance operations that have to be carried out.

Sectors of greatest use: Food, pharmaceutical, mechanical

The Range: offers a vast selection of systems divided by hourly production and different levels of automatism.



CHARACTERISTICS		IDROKEGS S2	IDROKEGS S3
Number of tanks	n	2	2
Tank capacity gal	gal (lt)	36.9 (140)	
AVERAGE PRODUCTION			
Hourly production-fast cycle	n	13	13
Hourly production-short cycle	n	7	7

Not binding data.



SIFA MB/MW 01 S



SIFA MB/MW 41 A



## MASTERKEG

For the washing and filling of the kegs, SIFA suggests Masterkeg, a range of machines projected and realized with particular attention to the sanitary aspect and available in different sizes and models. The whole structure of the machine, such as the parts that get in contact with the liquid are entirely made up in stainless steel inox AISI 304.

The filling-head has been studied with particular attention in order to avoid any contact of the product to the air and to grant the filling in full sterility. The washing system has been studied to ensure:

- a) A good washing
- b) The verifying and check of the rinsing
- c) The check - at every final working phase - of the missing presence of liquid in the keg, controlling that way any undesired pouring and also giving the certainty of the correct discharge phases.

The machines are prearranged for the connection to the steam generator, for the hot sterilization of the tanks. The control and check features are placed in a hermetically sealed control panel and managed electronically by a PLC.

Our valves for the check of the washing and filling cycles, are made up in bloom-turned stainless steel inox, and thanks to their excellent intern finish, permits an easy-wash and sterilization, avoiding a settle of dirt.

Moreover, the special solid structure in stainless steel grants an excellent resistance to the wear and reduces to the minimum the ordinary maintenance.

### THE RANGE:

There is a vast range of installations, divided by hourly production and by different automatism levels.

### MODEL

- Masterkeg compact MB 01 S
- Masterkeg compact MW 01 S
- Masterkeg compact MB 11 S (MB 11 A version with motorized roller conveyor and barriers with stop blocks)
- Masterkeg compact MW 11 S (MW 11 A version with motorized roller conveyor and barriers with stop blocks)
- Masterkeg pro MB 21 A - MB 31 A - MB 41 A
- Masterkeg pro MW 21 A - MW 31 A - MW 41 A

### EQUIPMENT

- Stainless steel frame
- Steel Pipe Product aisi 304/316 L
- Electric steel AISI 304 L
- Power cable 5 m
- Feet adjustable support
- Regulators type of stem
- Function washing and filling by PLC
- Operator interface with touch screen
- Sensor detection fluid to the end of each stage of washing and rinsing vaporization (no condensation)
- Filling with pressure sensor and maximum liquid level detection
- Heating detergent through pocket steam or electric resistance
- Electric socket for connection of pump power
- Cip tank for basic detergent
- Cip tank for acid detergent
- Recirculation pumps basic detergent
- Recirculation pumps basic detergent and acid
- Kit for cleaning and sanitizing filling heads
- Use and maintenance manual Italian and English

### CYCLES

- Pre-washing
- Basic washing
- Rinsing
- Acid wash (on MB)
- Rinse
- Vaporization
- Filling

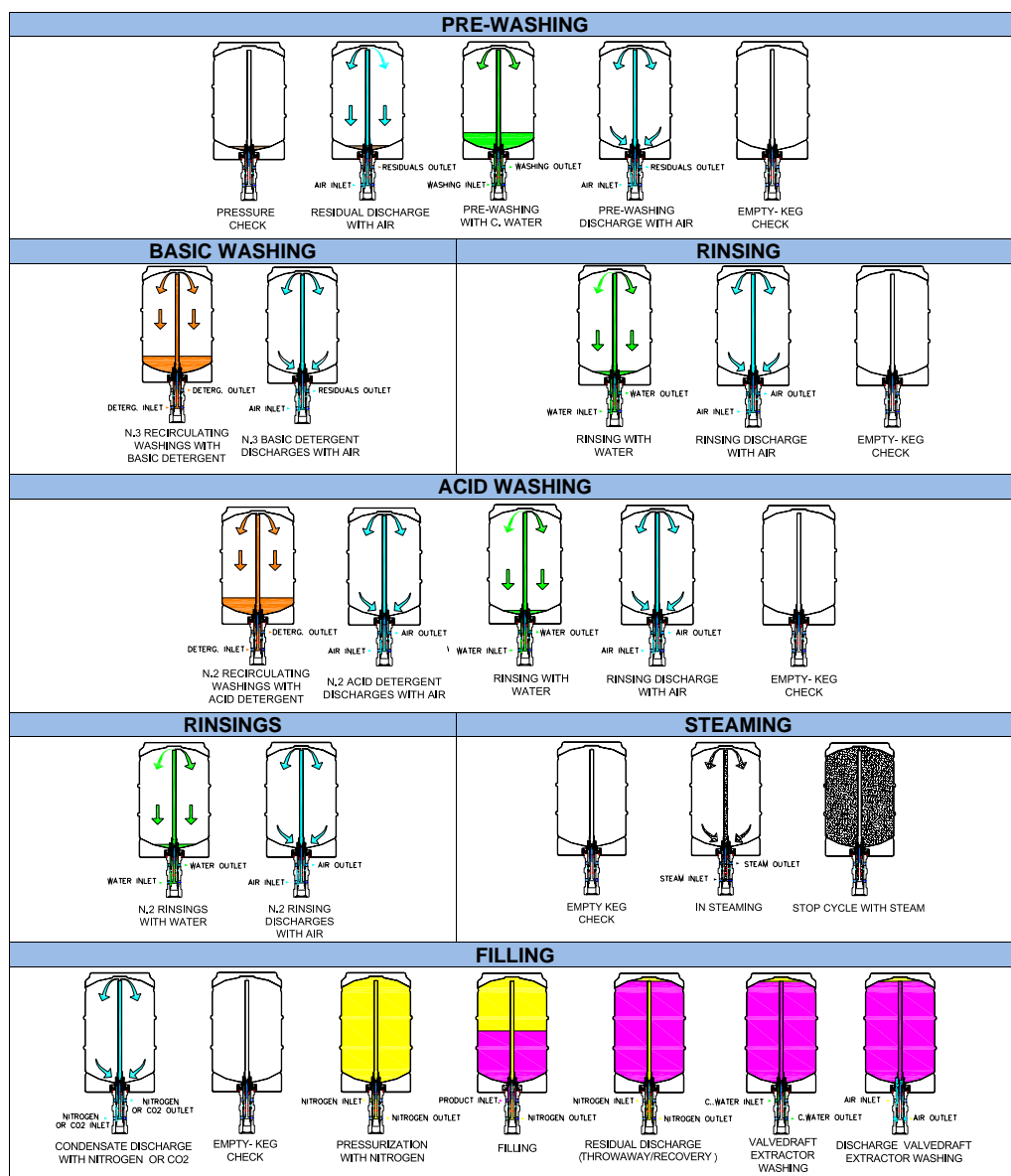


SIFA MB/MW 11 S

# MASTERKEG COMPACT MB 01 S / MB 11 S

FEATURES	MB 01 S	MB 11 S
Keg filling range	2.64-13.20 gal (10-50 l)	2.64-13.20 gal (10-50 l)
Product treated	Beer	Beer
Washing heads	/	1
Filling heads	/	1
Heads fill / wash	1	/
Liter counter accuracy	± 0.20%w	± 0.20%w
Average filling accuracy	± 1.5%	± 1.5%
Accident-prevention protection	Double push button for cycle start	Double push button for cycle start
Sanitization – sterilization	Water-chemical-Steam	Water - Chemical - Steam
PRODUCTIONS		
Max. hourly keg production 5.28/7.92 gal (20/30 l)	19	36
Max. hourly keg production 13.20 gal (50 l)	16	32

Not binding datas.



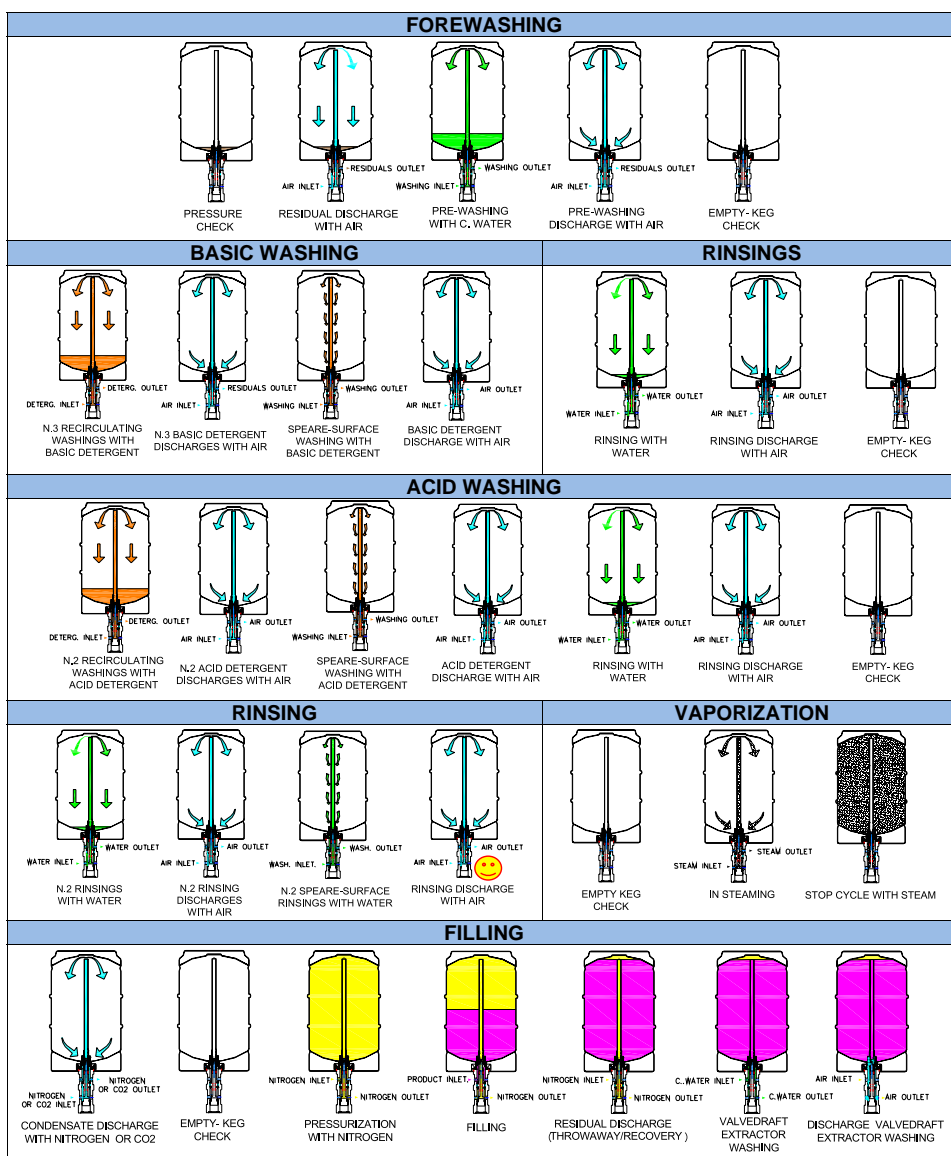
**WORKING CYCLE**

# MASTERKEG PRO MB 21 A / MB 31 A / MB 41 A

FEATURES	MB 21 A	MB 31 A	MB 41 A
Keg filling range	2.64-13.20 gal (10-50 l)	2.64-13.20 gal (10-50 l)	2.64-13.20 gal (10-50 l)
Product handled Wine and similar liquids	Beer	Beer	Beer
Washing heads	2	2	2
Filling heads	2	2	2
Liter counter accuracy	± 0.20%	± 0.20%	± 0.20%
Average filling accuracy	± 1.5%	± 1.5%	± 1.5%
Accident-prevention protection	Barriers with stop blocks		
Sanitization – sterilization	Water - Chemical - Steam		
PRODUCTIONS			
Max. hourly keg production 5.28/7.92 gal (20/30 l)	40	50	68
Max. hourly keg production 13.20 gal (50 l)	30	40	50

Not binding datas.

## WORKING CYCLE



☺ Optional: Check of the last rinsing (for the absence of residues)





## MOREKEGS COMPACT 01 S



KEYKEG



KEYKEG SLIM



POLIKEG



PETAINER



ECO KEG



The Morekegs Compact S is a one-piece version filler. Conceived for the filling of steel keg and PET keg ones for beer, still wine, sparkling wine, beverages etc. It is made in the version for standard Inox keg and PET keg type: Polikeg®, Ecokeg®, Petainer®, Key-Keg®, and Key Keg®

Slim Line. Gruppo Bisaro's technical staff is at the client's disposal to study the adjustment of kegs that are different from the ones provided in the catalogue. Using the same machine, via the simple keying in on the operator panel, you can fill various types of plastic kegs taking care to assemble each time the specific kit for the type of keg that is to be used. The kit is made up of a centering device (ferrule) and a head that adjusts to the type of keg system. The entire structure of the machine and the parts that are in contact with the filling liquid are made out of AISI 304 and 316 stainless steel. The work phases are managed automatically. The only manual step is the loading and unloading of the keg at the processing point.

FEATURES	COMPACT 01S
Keg filling range	2.64-7.92 gal (10-30 l)
Product handled	Wine and similar liquids      Wine-Beer-Similar liquids
Filling heads	1
Liter counter accuracy	± 0.20%
Average filling accuracy	± 1.5%
Accident-prevention protection	Protection in polycarbonate
Sanitization – sterilization	Water - Chemical - Steam
<b>PRODUCTIONS</b>	
Hourly Production (depends of the type of keg and the work cycle)	45/55





TMCI Padovan is a company that made history in the food and beverage technology sectors. For many application fields, in particular filtration and thermal exchange, TMCI Padovan has become synonymous itself of the product category.

The company went through many phases, without losing sight of focus on food technologies and the innovation inclination. Especially in recent years, the company focused itself on research and development, putting effort in technical and technological border scopes, in order to be a landmark in the market for worldwide customers. For 100 years, projected to the next 100

TMCI Padovan acquired the brand Velo in 2014, totally dedicated the beer world.

Velo has 25 years of experience in this sector. Thanks to its plants, it has seen growing some of the craft breweries more blazoned and famous in the world.

Competence, reliability and flexibility are its drivers.

Velo cooperates with small and medium breweries, offering a unique mix of management know-how and solidity of its turnkey plants.

To bigger realities, Velo dedicates all its design, technical and constructive flexibility; custom plants for recipes and exclusive customers.



Double deck beer  
pasteurizing tunnel



# CARBONICATORS



Carbonicator 3000 l/h

Carbonation is an operation that allows to increase the amount of CO<sub>2</sub> dissolved in beer. The technique consists in injecting in line the required amount of CO<sub>2</sub>. This unit can stand alone connected directly to the beer tanks, or it can be integrated in a production/bolting line. A homogenization tank can be assembled downstream to the CO<sub>2</sub> dosing unit when necessary.



## SEMI-AUTOMATIC CARBONATION MACHINES

Unit which controls the CO<sub>2</sub> set point in automatic. All the other functions are manual.

## AUTOMATIC CARBONATION MACHINES

Unit in which a PLC controls, fully automatically, the CO<sub>2</sub> and all the other functions during the process.

## DEAERATOR

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



Cooling exchanger

## OPTIONALS:

- AUXILIARY COOLING EXCHANGER (for product outlet at + 5°C)
- SANITARY PUMP
- CARBO TRANSMITTER ANTOON PAAR AT OUTLET PRODUCT



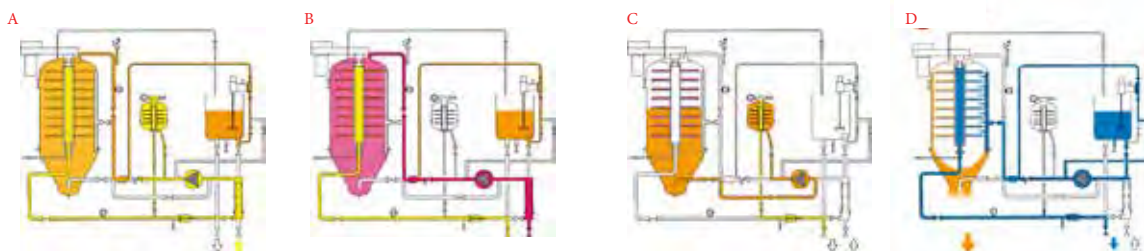




**TMCI**  
SYSTEMS PRODUCE  
**PADOVAN**



## GREEN FILTER



### A Pre-coating

The filter is filled with water that flows in a closed circuit. The filter aid suspension is injected into the circuit and retained by the filter plate cloths forming an even pre-coat.

### B Filtration

The liquid to be filtered is fed by the main pump added of a variable quantity of filter aid (diatomite). The solid substances to separate and the filter aid are retained by the filter plates, thus forming an even and porous cake.

### C Scavenge filtration

During pre-coating in the filtration chamber another pre-coat is formed in the auxiliary filter. The latter is used during filtration exclusively for the residues filtration. The main pump is also used to feed this filter.

### D Cake discharge and filter washing

The cakes are detached by rotating the filter elements and fall on the bottom of the chamber and then on the vat. After this operation, the filter plates are washed with water sprayed through the vertical manifold. The filter plates rotate during this operation so that all parts may be washed.

### The standard version consists of:

- stainless steel (304) construction
- horizontal plates with 65 micron stainless steel mesh
- stainless steel feed pump
- piston or membrane type dosing pump
- plate spacers in Noryl,
- plate-stack rotation device (models 6 and up)
- fixed manifold for plates final washing,
- d.e. tank with coaxial agitator with dosing pump,
- manual flushing seals group,
- butterfly valves in stainless steel,
- lighted sight-glass at product inlet and outlet,
- basin for cake collection, on wheels, in stainless steel,
- electric switch board with stainless steel box.
- All filters have optional residual filtration (standard in smaller machines)



## PAD FILTERS



Made of 304 Stainless steel and includes Noryl plates which are steam resistant. Filter includes 1-1/2" triclover butterfly valves, pressure gauges, sample valve, sight glass, and gaskets. Mounted on wheels for easy movement. All filters are equipped with external piping.

FILTER MODEL	FILTERING SURFACE
20 Plates	10.76 sq. ft.
30 Plates	49.5 sq. ft.
40 Plates	66.7 sq. ft.
60 Plates	102.2 sq. ft.
80 Plates	135.6 sq. ft.
100 Plates	172.2 sq. ft.
Double Filtration Plate	

\*Not binding data.

## SANITARY FILTERS WITH TRICLOVER



These filters are made entirely of AISI 304 or 316 stainless steel, including the frame, valves, tank and accessories. Sightglasses are provided for inspection purposes on both the product inlet and the filtrate outlet. A complete range of accessories is available to adapt the filters to the processing of all sorts of product, including: wine, syrups, beer, fruit juices, vinegar, spirits, water and oil, and for uses in the chemical and pharmaceutical sectors. Models with filter sheets from 400x400 to 600x600 mm. (15.7"x15.7" to 23.6" x 23.6")













## BABYDEPAL

### Depalletizer

Depalletizer which transfers the bottle layer by lifting it thanks to inflatable pick-up rubbers.

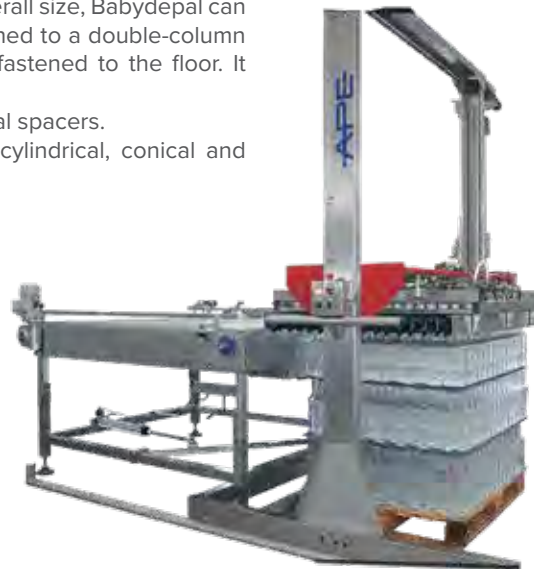
The machine enables a single operator to feed the line, through a few simple operations. It allows the transfer of a whole layer from the pallet onto the depalletizing table in less than a minute, thus eliminating physical stress and giving the operator time to carry out other control tasks. Due to its small overall size, Babydepal can be also placed into structures with little space available. The gripping head is fastened to a double-column stainless steel structure, which performs a horizontal translation on railed guides fastened to the floor. It deposits the bottle layer onto the depalletizing table.

Thanks to Babydepal great versatility, changeover is quick and occurs through special spacers.

The depalletizer can be equipped so as to work with different kinds of bottles: cylindrical, conical and rectangular shaped bottles, even with non-standard sizes pallets.

Hundreds of Babydepal are performing in wineries all over the world. -

**Output: 6000 bottles/hours.**



## DEPAL 2010

### Depalletizer

Automatic multi-format push-type depalletizer to transfer a whole layer of bottles, it allows to process bottles of different size, requiring no format adjustment. The machine is designed with a sturdy double-column frame. Depalletizer basic version is supplied with the pallet placed on the ground and interlayer removing device. DEPAL 2010 main structure can be equipped with various additional units: full pallet feed modules, interlayer store and empty pallet store for different automation degrees according to customer needs and output required. A row unloading device is available as option to depalletize non-cylindrical bottles. DEPAL 2010 processes also bottles in plastic cases.

This is a reliable machine which has been tested for several years in many wineries all over the world.

**Output: from 5000 to 12000 bottles/hours.**





## PAL 2010

### Fixed-carriage palletizers

Automatic palletizer with empty pallet magazine, full pallet ejection roller table, automatic pallet wrapping machine. A doubled transfer table makes for perfect layer formation even when there are interior empty spaces. PLC-controlled Multiprogram pallet format changeover.

Operating:

Automatic infeed timing modular belt ensures case spacing and its proper orientation. APE "step-by-step" infeed modular belt takes no more adjustments thanks to its new design.

Case rows take are placed on a pre-forming space. Rows Pre-forming operation is executed every palletizing cycle with time savings

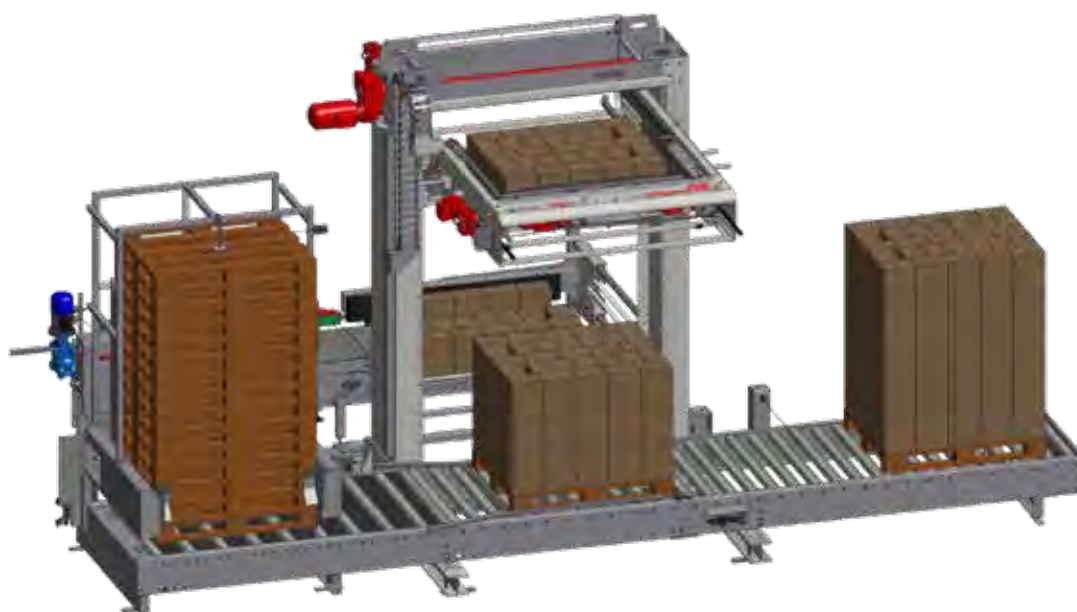
Pushing device loads proper case rows on layer formation space composing the layer palletizing pattern

Transfer plate handles case layers, moving at the height of the pallet, and automatically centers each layer on the pallet.

APE transfer plate allows case centering and positioning by two-side slide opening. This specific design ensures takes no more optional devices ensuring perfect layers

The self-adjusting layer retainer sweep bar allows automatic centering of each layer on the pallet. Ultra soft and precise retaining operation by gearmotor units.

**Output up to 1,000 cartons/hour.**



## BEER TRIBLOCK

Carrier standard 200 / Isola 2 HM Beer - Isola 3/4 HM Beer



## CARRIER STANDARD 200

### Carrier erecting and packing machine

New and innovative packaging solution, it blends in a single machine all carrier erecting and packing. CARRIER STANDARD 200 overcomes manual operations and goes one better current solutions, which require more machines and space. Within its compact frame, affordable and high performing, CARRIER STANDARD 200 is the perfect packaging solution for every craft brewery.

#### Carrier erecting unit

Provides carriers erecting and their transfer to in-line carrier packer. APE "teardrop" synchronized and servo-controlled movement design allows carriers feed to the opening station.

#### Bottles packing unit

Provides bottles line up and its placement into carriers.

Bottles conveyor ensures continuous product feed to the picking platform.

Carriers, coming from erecting unit, are transferred to packing platform.

Dedicated packing head picks up and places bottles inside the carrier.

A specific carrier centering device provides with follow through packing operations to assure gentle product handling and labels integrity.



Carrier erecting unit



In-line carrier packing unit



## ISOLA 2 HM BEER

### Case erecting and bottle/carrier packing machine

A new project, developed on more than thirty – years packaging machinery experience.

It blends all case erecting and packing in a single machine.

Within its compact frame, reliable and high performing, ISOLA 2 HM BEER integrates the perfect packaging solution for every craft brewery.

#### CASE ERECTING UNIT

Provides square, well-sealed cases to in-line packer. The pressing device compresses bottom flaps, before packing, to keep up with the most safe seal before packing operations.

#### BOTTLES/CARRIERS PACKING UNIT

Provides product line up and placemet. Dedicated packing head picks up and places product inside the case. A special centering device provides follow through packing operations to assure gentle product handling and labels integrity.



Case erecting unit



In-line case packing unit

## ISOLA 3/4 HM BEER

### Partition inserting and top sealing unit machine

ISOLA 3/4 HM BEER completes the perfect packaging solution for every craft brewery.

The machine provides, thanks to an APE unique solution, partition inserting and hot melt top sealing by means of the same machine or, as an alternative, only hot melt top sealing.

#### PARTITION INSERTING AND TOP SEALING UNIT

A new solution that blends partition inserting and hot melt top sealing operation in a single machine.

The partition head automatically opens multi-celled lightweight chipboard and places it into the case.

Pressing operation is executed while case stops to keep up with the most secure seal.

#### TOP SEALING UNIT

Provides hot melt top sealing.

Pressing operation is executed while case stops to keep up with the most safe seal.



Partition inserting unit



Hot melt top sealing unit

## GRAIN CRUSHERS



The function and scope of the machine:

Grain-crop crackers are suitable for the crushing of air-dried corn, wheat, barley and other small-seed crops. The granule size of the crushed seeds can be adjusted by varying the clearance distance between the crushing cylinders. The family of cracking machines is suitable to meet the needs of small, medium or large farms, depending on the output category.

It is well known that ruminants in general, and calves in particular, are not fond of finely milled crops, so their feed intake of these is low.

Unlike milled crops, the crushed feed does not result in the mouth and respiratory tract of the stock being choked, so the ruminants are capable of a higher intake. The feed still maintains a loose structure in the rumen, ideal for the promotion of digestion, and thus enabling a better utilisation of the feed.

The outcome of all this is that for stock fed by crushed grain, in comparison with stock fed by milled feedstuffs, the number of digestion disorders will decrease and the appetite will improve, resulting in the keeping of animals being more economical.

Construction and operation of the machine

Cracking of the crop is achieved by the 2 cylinders located in the housing.

The cracking cylinders are driven by an electric motor by means of a V-belt.

The two cylinders are connected by gears.

The rate of grain input into the cracker can be varied infinitely, depending on the type and moisture content of the crop.

The grain is nipped between the cylinders according to the set clearance distance.

The cracking tolerance can be varied infinitely between broad limits.

The surface of the cylinders is coated with hard-metal powder, so these have a very long lifetime.

The magnet located in front of the feed opening prevents steel objects falling between the cylinders.

The cracker can be mounted on supporting legs or on a wall console.

For different voltages rewire the motor and change the circuit breaker.

FUNCTION		RX-250	RX-600	RX-1100
Power input	HP	2	3.6	6.4
	kW	1,5	2,7	4,8
Network voltage	V	230, 1 f, 50 Hz		400, 3 f, 50 Hz
Dimensions	inch	43x23x49		49x69x66
	mm	1100x600x1250		1250x1750x1670
Cracking output (wheat with 14 % water content)	lbs/h	551	1322	2425
	kg/h	250	600	1100
Adjustable cracking clearance	mm	0.2 - 4.5		
Hopper volume	gal	2.6	13.2	
	l	10	50	
Noise output, Lc:	db/A	99	102	106



Very easy to handle because the grate size can be changed with a single movement, the magnets can be cleaned comfortable.



The noise level is low because the eccentric lever can be fixed and the gear is made of plastic.



## AUGER FLEX FLO



Nothing beats GSI's Flex-Flo™ Feed Delivery System in flexibility and adaptability. Using PVC tubing as the carrier of feed not only provides flexibility in facility design, but reduces dust, provides protection against insect and rodent contamination, and reduces stressful operation noise.

Both tubing and augers are available in a variety of models. Whether its ground feed, crumble feed, mash, high moistures corn, shelled corn or pellets, AP has the transport system to fit your needs. For corn up to 27% moisture and other hard to flow materials, the Flex-Flo™ High Roughage system utilizes a combination of a Model 300 (75mm) auger in a Model 350 (90mm) tube. For pelleted feeds, a specially designed auger is available for Model 300 Flex-Flo™, which increases the tolerance between the tube wall and auger. This increased tolerance prevents auger plugging and damage to expensive pelleted feeds.

The Flex-Flo Fill System consists of a combination of PVC tubes and preformed PVC elbows. A special PVC cement is used to connect the tubes and elbows. The PVC tube contains a rotating auger which conveys the feed to the different outlet holes.

Model: 300

Tube Diameter O.D. : 3"

Tube Corner Radius: 5'

Maximum Single System Length: 200'

Motor Sizes at Max. Length (Horsepower): 1HP

Capacity (lbs./minute at 40 lbs. per cu. ft.): 50

Max. Extension Length (at Motor end of first system): 240

The System is composed by:

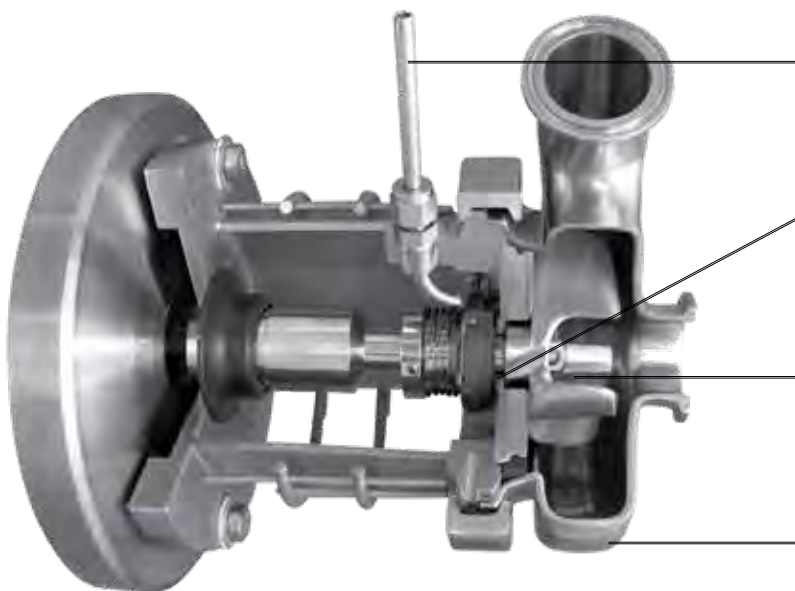
- FLX-2459-60 Model 300 Flex-Flo DDPU, 358 RPM, 1/2 HP, 1 PH, 60 Hz, 115/230V
- FLX-2696 Model 300 Flex-Flo D.D. Driver and Tube Anchor
- FLX-4496 Model 300 Flex-Flo Direct Drive Control Unit, 220V
- PVC-1101 Model 300 PVC Flex-Flo 45° Elbow, 5' Radius
- PVC-1005 Model 300 PVC Flex-Flo 10' PVC Straight Tube
- FLX-2538 Model 300 PVC Flex-Flo Tube Coupler
- FLXA-2390 Model 300 Flex-Flo Auger 50'
- AP-2276 Model 300 Flex-Flo Kwik-Attach Drop Kit
- FLX-4684 Model 300 Flex-Flo S.O. unloaded w/anchor & bearing
- FLX-2470 Adhesive, PVC cement

## CENTRIFUGAL PUMP - TOP FLO



The Top-Flo® name represents the finest in sanitary process equipment. TOP-FLO® pumps have been designed to offer efficient transfer of product over a wide range of head and viscosity conditions. TOP-FLO® pumps are easy to install, clean, and operate. TOP-FLO® pumps are suitable for use in CIP (clean in place) installations. This feature enables easy self-cleaning with no dismantling or take-down. Sanitizing of all product contact areas is automatic. All TOP-FLO® pumps are available in standard inlet sizes and outlet sizes. In addition, enlarged inlet sizes are available for special applications.

Pump Casings: - Volute type - Standard  
 - inlet-oversizing as noted in chart above  
 Pump Connections:  
 Sanitary: - Clamp - Bevel Seat (ACME)  
 industrial: - Threaded- Flanged  
 Pump Finishes: - Polished or Electropolished  
 Pump Seals: - Available in D, DG, E, and F styles  
 Motor Housings: - TEFC (Totally Enclosed Fan Cooled) - Washdown Duty  
 Motor, Electrical:  
 - 3 Phase: 230/460 volts | 1750 & 3500 rpm  
 - Single Phase: 115/230 volts | 1750 & 3500 rpm



Type F seal: Water cascade attachment is recommended for pumping tacky or hot products up to 200° F, and for vacuum applications to 14" Hg.

Superior seal: Provides a longer life and less downtime. High grade finish reduces pressure at sealing surface results in less wear and greater efficiency.

No disassembly for cleaning: Unique groove-in-shaft design directs sanitizer to all critical areas. A must for clean-in-place applications.

Casing: Finely polished casing suitable to meet numerous requirements. Casing available in a wide selection of port connections to meet a variety of piping systems.



## MULTI PASS HORIZONTAL BOILER - MPH



Competitively-priced, narrow in width & easily serviced, this boiler is a modified Scotch, three-pass fire tube design for use as a 15 PSI steam or 30 PSI water unit. The sizes range from 5 BHP to 150 BHP, natural gas or LP gas, #2 oil, dual fuel or biogas fired. Ideal for: breweries, distilleries, schools, apartments, bakeries, brewpubs, laundromats, dairies and many more applications.

Range: 5 to 150 HP, 15 PSI steam or 30 PSI water  
Fuels: #2 Oil, Natural or LP gas, Dual fuel, Methane / Biogas

### MPH Features:

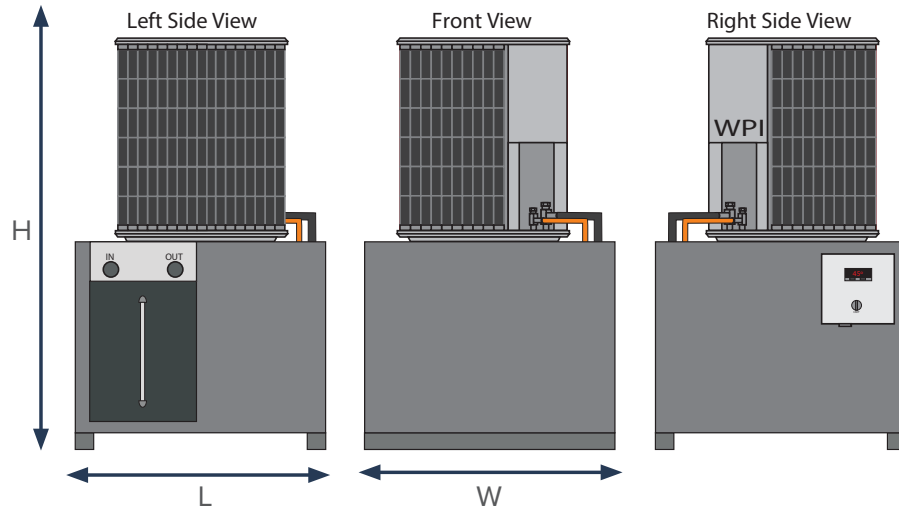
- 32-1/2" Compact width permits installation through narrow doors and passageways MPH 5-80
- Inverted skid base for forklift handling with low profile
- Lifting holes for rigging into tough spots
- Bottom hand holes for thorough cleanout
- Top hand hole for tube inspection
- Cleanout door on flue box
- Trim for 15 psi steam or 30 psi water
- Low/High/Low standard burner operation MPH 30-125
- Modulating burner standard MPH 150, on/off burner MPH 5-20
- Natural gas, propane, methane, biogas, oil, or dual fuel firing
- Optional hot water coils 300 to 2460 G.P.H.
- Overflow tapping for steam unit
- Individual tapings for steam controls
- 83%+ efficiency. Economizer package available for high efficiency
- Wet base design
- Three pass, firetube construction
- Welded tubes are schedule 40 pipe for long life
- 13 Gauge rolled tubes are easily replaced
- Fully packaged or knocked down
- Forced draft firing, no special vent requirements
- Constructed in accordance with requirements of Section IV of the Boiler and Pressure Vessel Code
- All boilers are designed, inspected and stamped for conformity to the requirements of the National Board of Boiler and Pressure Vessel
- Inspectors and packaged to meet CSD-1 safety requirements.

## AIR COOLED PACKAGED CHILLER

### Standard Features:

- High Efficient R-410A Refrigerant
- Copeland Scroll compressor(s)
- Insulated stainless steel copper-brazed plate evaporator(s) (others available)
- Cast iron end suction centrifugal supply pump rated at 2.4gpm per ton at 100' TDH (stainless available)
- Insulated polypropylene reservoir with fill port and liquid level sight glass (larger volumes available)
- Thermostatic expansion valve, filter drier, sight glass installed on refrigerant circuit(s)
- Service ports and valves
- NEMA 4 control panel with digital temperature controller
- High and low pressure safety
- Single point power connection
- Direct drive fan(s) made to run slower and more quiet
- Vertical air discharge fans minimizes operating sound
- Weather resistant fan motor made to survive in the elements.
- Highly efficient coil provides excellent heat transfer and low air resistance
- Energy Star qualified unit
- Assembled, plumbed, and wired on industrial epoxy-coated steel frame
- Refrigerant circuit(s) pressure tested for leaks with nitrogen charge
- Refrigerant circuit(s) vacuum tested for leaks to negative-psi pressure
- Refrigerant circuit(s) fully charged with refrigerant
- Hydronic circulation loop leak tested under full flow using the WHALE-SOFT™ Testing Platform
- Complete systems fully run tested under heat load using the WHALE-SOFT™ Testing Platform





Tonnage at Standard Conditions	Model	Leaving Glycol Temperature	90°F Ambient		100°F Ambient		110°F Ambient	
			BTU/hr	Tonnage	BTU/hr	Tonnage	BTU/hr	Tonnage
5	SA5	25°F/-3.9°C	36,050	3.00	33,450	2.79	30,700	2.56
		45°F/7.2°C	55,400	4.62	51,750	4.31	48,050	4.00
		65°F/18.3°C	81,000	6.75	76,000	6.33	71,000	5.92
7.5	SA7.5	25°F/-3.9°C	57,750	4.81	53,950	4.50	49,850	4.15
		45°F/7.2°C	84,750	7.06	79,500	6.63	74,250	6.19
		65°F/18.3°C	120,000	10.00	114,000	9.50	107,000	8.92
10	SA10 SA10D	25°F/-3.9°C	72,100	6.01	66,900	5.58	61,400	5.12
		45°F/7.2°C	110,800	9.23	103,500	8.63	96,100	8.01
		65°F/18.3°C	162,000	13.50	152,000	12.67	142,000	11.83
20	SA20D	25°F/-3.9°C	140,500	11.71	131,000	10.92	120,500	10.04
		45°F/7.2°C	211,500	17.63	199,000	16.58	187,000	15.58
		65°F/18.3°C	308,000	25.67	290,000	24.17	272,000	22.67

\*Standard Site Conditions: 50°F/10°C Leaving Water/Glycol Temperature, 95°F/35°C Ambient Temperature, 0% Glycol\*

Model	Tons	BTU/hr	kW of Heat Removal	Refrigeration Circuits	Dimensions L x W x H	Process Pump	Tank Volume (gal)	Inlet Outlet	FLA/MCA/MOCP at 208-240V/1ph	FLA/MCA/MOCP at 208-240V/3ph	FLA/MCA/MOCP at 440-480V/3ph	FLA/MCA/MOCP at 380-415V/3ph	FLA/MCA/MOCP at 575-600V/3ph
SA5	5	60,000	17.6	1	36"x36"x68"	1HP	30	1"	42.1/52.6/60	23.5/29.4/30	11.6/14.5/30	14/17.6/30	9.0/11.3/30
SA7.5	7.5	90,000	26.4	1	48"x48"x84"	2HP	30	1.25"	N/A	37.7/47.1/60	18.1/22.6/30	21.9/27.4/30	13.7/17.1/30
SA10D	10	120,000	35.2	2	68"x44"x84"	2HP	40/100	1.25"	N/A	46.5/58.1/60	22.6/28.3/30	27.4/34.2/60	16.9/21.1/30
SA20D	20	240,000	70.3	2	89"x68"x84"	3HP	100	1.5"	N/A	84.5/105.6/150	45.2/56.4/60	54.7/68.4/100	34.1/42.6/60

Not binding data.











# PROSPERO

## Corporate Office

123 Castleton Street  
Pleasantville, NY 10570  
Phone: (914) 769-6252  
Fax: (914) 769-6786  
info@prosperocorp.biz

## WestCoast

7787 Bell Road  
Windsor, CA 95492  
Phone: (707) 838-2812  
Fax: (707) 838-3164  
westcoast@prosperocorp.biz

## Northeast

2204 State Route 14 N  
Geneva, NY 14456-9510  
Phone: (315) 719-0480  
Fax: (315) 719-0481  
geneva@prosperocorp.biz

## Northwest

1722 SW HWY 18 Suite B  
McMinnville, OR 97128  
Phone: (503) 472-6767  
Fax: (503) 472-6768  
northwest@prosperocorp.biz

## Canada

438 Isabey Suite 270  
Montreal, Quebec H4T 1V3  
Phone: (514) 667-0557  
Fax: (514) 336-7117  
canada@prosperocorp.biz

## British Columbia

Authorized Agent  
Stefan Buhl  
Phone: (250) 317-4378  
bc@prosperocorp.biz



BP-18-1