

# NEWPACK DIVISION

FFS MACHINES PRODUCTION  
RANGE & INTEGRATED SOLUTIONS



ALIMENTA

NEWPACK   PARMA FOOD   BREWTECH   BERTUZZI



# THE PRODUCT

## PRODUCT AND SECTORS OF REFERENCE

**Single portions and single use portions filled and sealed made through the thermoforming process and filled in line with Form - Fill - Seal (FFS) machines**

### Sectors:

- Dairy (Yogurt, Butter, Cream etc.)
- Confectionery sector (Dessert, Cream, Honey etc.)
- Canning industries (Jam, Ketchup, Mayonnaise, Dressing sauces, Fruit puree, etc.)
- Beverage (Juices, Tea, Water, etc.)





# THE PRODUCT

## TYPE OF PACKAGING

Indicative tables of standard volumes / weights of packaged products

PRODUCT	Typical ml / g	Typical shape
Jam-Honey	20	■ ■ ■ ■
	25	■ ■ ■ ■
	30	■ ■ ■ ■
	50	■ ■ ■ ■
Ketchup-BBQ & Sauces	20	■ ■ ■ ■
	25	■ ■ ■ ■
	30	■ ■ ■ ■
	50	■ ■ ■ ■
Fresh/UHT cream	10	●
	15	●
	100	● ■ ■
	125	● ■ ■
	200	■ ■ ■
Fresh/UHT Desserts	100	● ■ ■
	125	● ■ ■
	150	● ■ ■
Yogurt	100	● ■ ■
	125	● ■ ■
	150	● ■ ■
	175	● ■ ■
	200	● ■ ■
	250	● ■ ■
Tea	200	●



Plastic containers, thermoformed and sealed

PRODUCT	Typical ml / g	Typical shape
Butter/Margarine	10	■ ■
	15	■ ■
	20	■ ■
	25	■ ■
Mayonnaise	20	■ ■
	25	■ ■
	30	■ ■
	50	■ ■
Spread, chocolate	15	■ ■
	20	■ ■
	25	■ ■
	30	■ ■
	50	■ ■
Still water & beverages	100	● ■ ■
	125	● ■ ■
	150	● ■ ■
	200	● ■ ■
	250	● ■ ■
Juices	125	● ■ ■
	200	● ■ ■
	250	● ■ ■
Tea	250	●



# THE PRODUCT

## TYPE OF PACKAGING

Standard materials for thermoforming  
and sealing the packages

### PLASTIC FILM

#### EXAMPLES OF PLASTIC FILM

- High Impact polystyrene **HIPS**
- Multilayer **HIPS/PE**  
(Polyethylene in contact with the product)
- Multilayer **HIPS/EVOH/PE**  
(EVOH gas barrier)
- Polyethylene Terephthalate **PET**
- Multilayer PET/PE  
(Polyethylene in contact with the product)
- Multilayer PET/EVOH/PE (EVOH gas barrier)
- Polyvinylchloride PVC



### LID FILM

#### EXAMPLES OF LID FILM

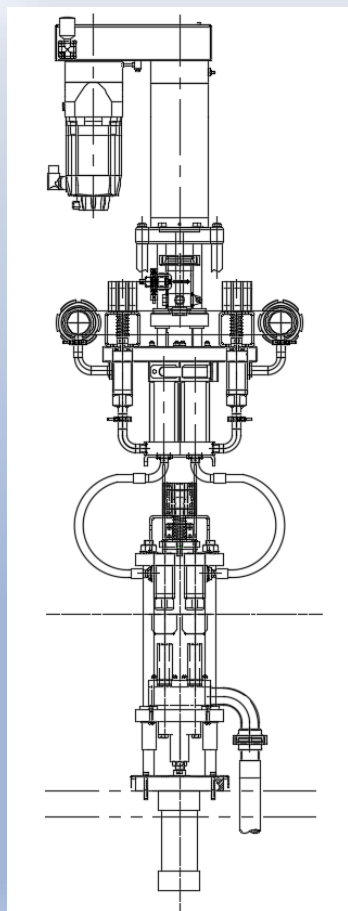
- Aluminum with heat-sealing lacquer
- Polyester-Aluminum with heat-sealing lacquer
- Multilayer film with PET structure and heat-sealing lacquer
- Multilayer with PET structure with peelable PE for heat sealing
- Mix Paper with polyester-paper structure with heat-sealing lacquer



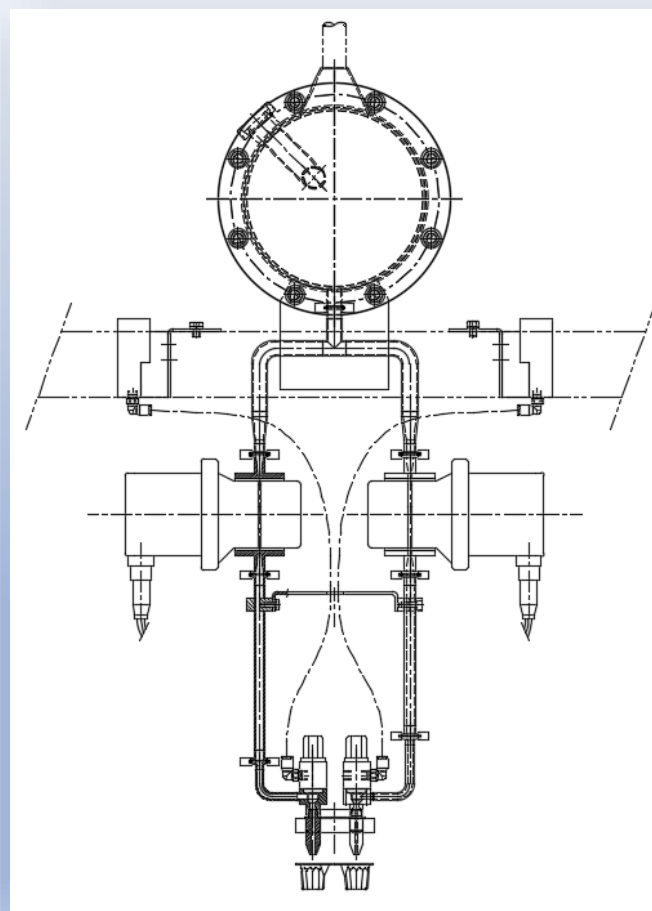
# THE PRODUCT

## CUP FILLING: Type of filling systems

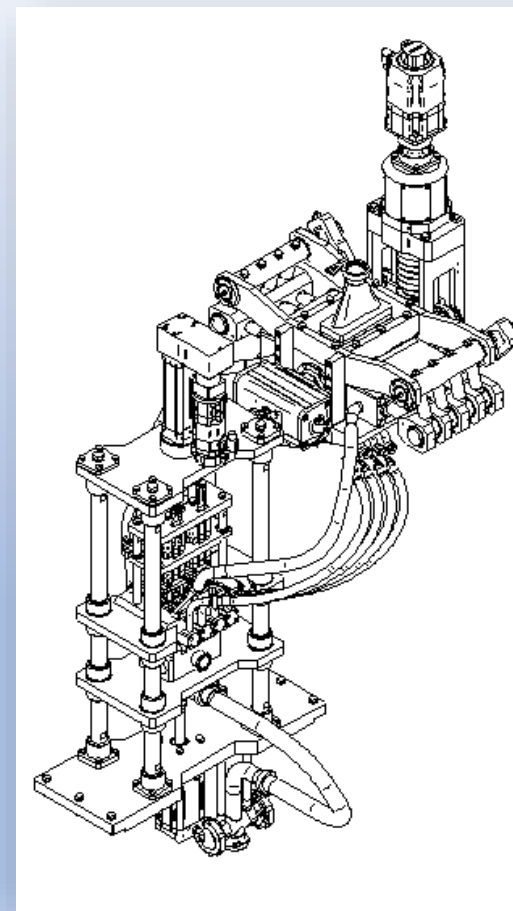
### VOLUMETRIC WITH PISTON PUMPS



### VOLUMETRIC WITH MAGNETIC / MASSIC FLOW METERS



### VOLUMETRIC FOR HIGH VISCOSITY PRODUCTS





# THE PRODUCT

## CUP FILLING: Type of filling systems

### VOLUMETRIC WITH PISTON PUMPS

PRODUCT EXAMPLE	VERSION	CLEANING / DISINFECTION
Cream-Dessert (Fresh)	H.Clean	CIP/SIP*
Cream-Dessert (UHT)	Aseptic	CIP/SIP
Yogurt	H. Clean	CIP/SIP*
Jam / Honey	H. Clean	CIP
Ketchup-BBQ-Sauces	H. Clean	CIP
Spreadable Chocolate	H. Clean	CIP

### VOLUMETRIC WITH MAGNETIC / MASSIC FLOW METERS

PRODUCT EXAMPLE	VERSION	CLEANING / DISINFECTION
Drinkable Yogurt	H.Clean	CIP/SIP*
Creamers (UHT)	Aseptic	CIP/SIP
Still water	H. Clean	CIP/SIP*
Tea	Aseptic	CIP/SIP
Fruit Juices	Aseptic	CIP/SIP

#### Note

- CIP: Clean In Place or washing performed without dismantling filler parts. Ready to be linked to the factory washing system
- SIP: Sterilization In Place or sterilization without disassembling filler parts and with the use of food grade steam. Ready to be linked to the plant steam plant (steam 1 - 3.5 bar depending on the sterilization cycle)
- SIP\*: Sterilization In Place or sterilization without disassembling filler parts with the use of chemical disinfectants through a specific phase of the washing process (final or start of production)

### VOLUMETRIC FOR HIGH VISCOSITY PRODUCTS

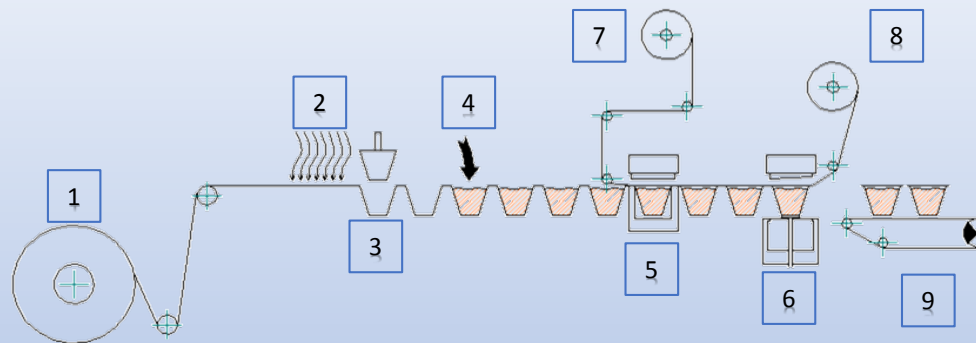
PRODUCT EXAMPLE	VERSION	CLEANING / DISINFECTION
Butter	H.Clean	CIP/SIP*
Margarine	H.Clean	CIP/SIP*
Jam	H. Clean	CIP
Pasty Sauces	H. Clean	CIP
Mayonnaise	H. Clean	CIP/SIP*



# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

### General Description



### Main Stations

- |   |   |
|---|---|
| 1) Housing and unwinding of the plastic reel              | 6) Cup cutting station for single of blister cups |
| 2) Heating station of the plastic film to be thermoformed | 7) Housing and unwinding of the lid reel          |
| 3) Cup forming station                                    | 8) Cutting scrap system                           |
| 4) Filling station  | 9) Cups' exit conveyor                            |
| 5) Lid film sealing station                               |   |



# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

### STANDARD VERSION «STD»

PRODUCT EXAMPLE	VERSION	MACHINE TYPE
Cream-Dessert (Fresh)	U.C.	HYD – F.SERVO
Cream-Dessert (UHT)	AST	F.SERVO
Yogurt	H.C. - U.C.	HYD – F.SERVO
Jam / Honey	STD	HYD – F.SERVO
Ketchup-BBQ-Sauces	H.C.	HYD – F.SERVO
Spreadable Chocolate	STD	HYD – F.SERVO

### HIGH CLEAN VERSION «H.C.»

PRODUCT EXAMPLE	VERSION	MACHINE TYPE
Drinkable Yogurt	H.C.-U.C.	HYD – F.SERVO
Creamers (UHT)	AST	F.SERVO
Still water	H.C.-U.C.	HYD – F.SERVO
Tea	AST	F.SERVO
Fruit Juices	AST	F.SERVO

### ULTRA CLEAN VERSIONE «U.C.»

### ASEPTIC VERSIONE «AST»

PRODUCT EXAMPLE	VERSION	MACHINE TYPE
Butter	H.C.	HYD – F.SERVO
Margarine	H.C.	HYD – F.SERVO
Jam	STD	HYD – F.SERVO
Pasty Sauces	H.C.	HYD – F.SERVO
Mayonnaise	H.C.	HYD – F.SERVO

### Notes

- HYD: Forming, sealing and cutting stations driven by hydraulic system
- F.SERVO: All the main stations are driven by «BRUSHLESS» systems
- HYD-F.SERVO: the machines can be made in both configurations



# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

### MAIN FEATURES ACCORDING TO THE MACHINE VERSIONS

VERSION	TUNNEL	TUNNEL PRESSURIZATION	RAW MATERIAL STERILIZATION	TUNNEL & STATIONS STERILIZATION	IML OPTION	TYPES
STD	opt	X	X	X	X	HYD – F.SERVO
H.C.	✓	✓*	✓°	X	X	HYD
H.C.	✓	✓*	✓°	X	✓	F.SERVO
U.C.	✓	✓**	✓°°	X	X	HYD
U.C.	✓	✓**	✓°°	X	✓	F.SERVO
AST	✓	✓**	✓°°°	✓	✓	F.SERVO

#### Legend















- X : Not foreseen
- ✓ : included
- ✓\* : over pressure with filtrated air
- ✓\*\* : Overpressure by means of aseptic air filters
- ✓° : Lid film sterilization with UVC rays
- ✓°° : Lid film sterilization with H<sub>2</sub>O<sub>2</sub>
- ✓°°° : both plastic and lid film sterilization with H<sub>2</sub>O<sub>2</sub>



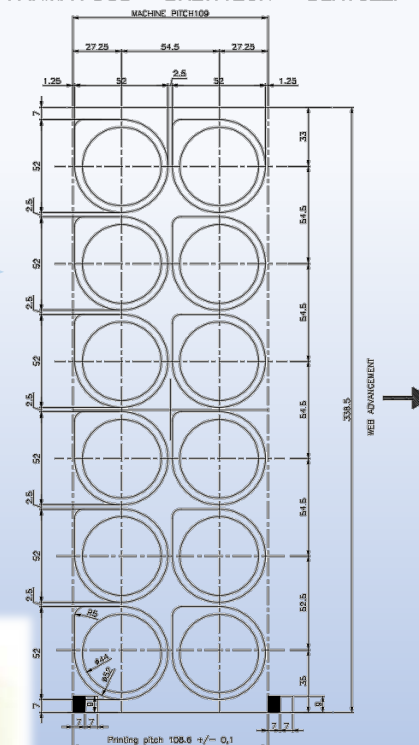
# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

Machine capacity according to filled products and cups' volume

PRODUCT	Typical Volume / weight	Typical shape 	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to
Jam-Honey	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	20		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	25		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	30		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	50		-	12.000	15.000	18.000	28.800	34.560	55.200	57.600	-
Spread. chocolate	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	15		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	20		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	25		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	30		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	50		-	12.000	15.000	18.000	28.800	34.560	55.200	57.600	-
Ketchup	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	20		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	25		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	30		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	50		-	12.000	15.000	18.000	28.800	34.560	55.200	57.600	-

Example of Layout 6x2
















N.B. The values in the table are indicative and must be confirmed by our Technical Office on the basis of the products and dimensions of the containers defined for a specific project.

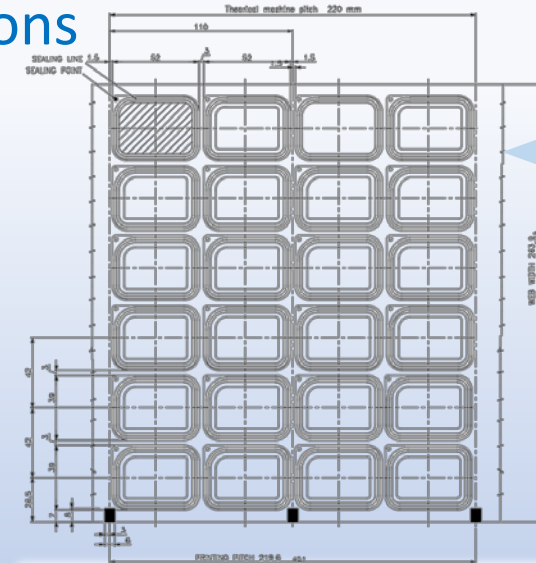


# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

Machine capacity according to filled products and cups' volume

PRODUCT	Typical Volume / weight	Typical shape 	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to
BBQ & Sauces	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	20		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	25		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	30		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	50		-	12.000	15.000	18.000	28.800	34.560	55.200	57.600	-
Mayonnaise	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	20		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	25		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	30		-	-	16.800	20.160	32.400	38.880	62.400	64.800	-
	50		-	12.000	15.000	18.000	28.800	34.560	55.200	57.600	-
Butter/Margarine	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	10		-	-	16.200	19.440	30.000	30.000	57.600	60.000	-
	15		-	-	16.200	19.440	30.000	30.000	57.600	60.000	-
	20		-	-	15.000	18.000	28.200	28.200	54.000	56.400	-
	25		-	-	16.800	20.160	28.200	28.200	54.000	56.400	-



Example of  
Layout 6x4



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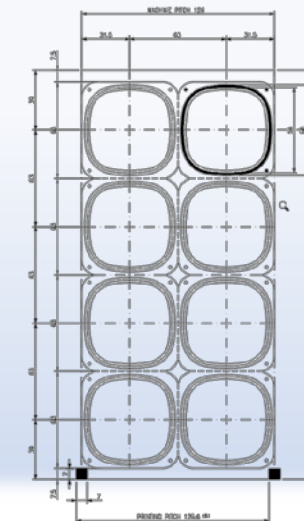


# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

Machine capacity according to filled products and cups' volume

PRODUCT	Typical Volume / weight	Typical shape	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to	C/h up to
	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
Fresh/UHT cream	10	●	-	-	-	-	32.400	38.880	-	64.800	95.400
	15	●	-	-	-	-	32.400	38.880	-	64.800	95.400
	100	● ■	-	12.000	15.000	18.000	27.600	33.120	-	-	-
	125	● ■	-	12.000	15.000	18.000	27.600	33.120	-	-	-
	200	■	9.000	12.000	15.000	18.000	-	-	-	-	-
Fresh/UHT Desserts	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	100	● ■	-	12.000	15.000	18.000	28.000	33.500	-	-	-
	125	● ■	-	12.000	15.000	18.000	28.000	33.500	-	-	-
	150	● ■	-	12.000	15.000	18.000	-	-	-	-	-
Yogurt	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	100	● ■	-	12.000	15.000	18.000	28.000	33.500	-	-	-
	125	● ■	-	12.000	15.000	18.000	28.000	33.500	-	-	-
	150	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	175	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	200	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	250	● ■	8.260	11.040	13.800	16.560	-	-	-	-	-



N.B. The values in the table are indicative and must be confirmed by our Technical Office on the basis of the products and dimensions of the containers defined for a specific project.



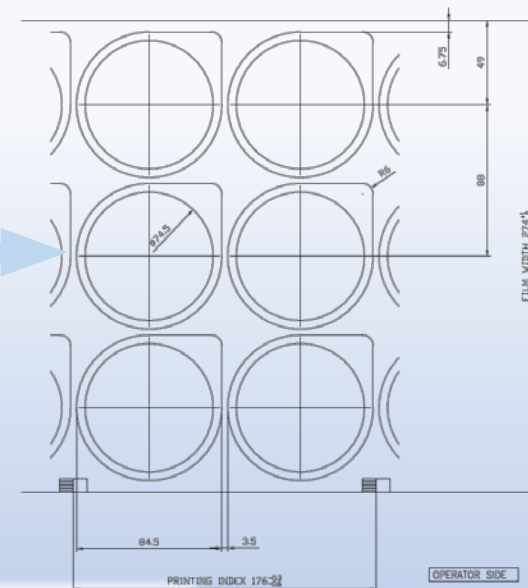
# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions

Machine capacity according to filled products and cups' volume

PRODUCT	Typical Volume / weight	Typical shape	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to	c/h up to
	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
Still water & beverages	100	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	125	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	150	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	200	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	250	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	330	● ■	8280	11.040	13.800	16.560	-	-	-	-	-
Tea	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	200	●	-	12.000	15.000	18.000	-	-	-	-	-
	250	●	-	12.000	15.000	18.000	-	-	-	-	-
Juices	ml / g	Cup's layout	3x2	4x2	5x2	6x2	5x4	6x4	8x5	10x4	10x6
	125	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	200	● ■	-	12.000	15.000	18.000	-	-	-	-	-
	250	● ■	-	12.000	15.000	18.000	-	-	-	-	-

Example of Layout 3x2



N.B. The values in the table are indicative and must be confirmed by our Technical Office on the basis of the products and dimensions of the containers defined for a specific project.



# FFS MACHINES

## HORIZONTAL FORM FILL SEAL: Types and versions



### Main features according to FFS Version

VERSION	Frame	Forming Plug Assist	Filler pumps movement	Raw Material Advancement	Plastic Cups pitch control	Lid Printing manage	Self Adjust Position of Sealing Station	Self Adjust Position of Cutting Station	Trimmer with plugs and Matrix (single cutting)	Trimmer with sequential cutting (Blades & Matrix)
HYD	Stainless-steel	Pneum.	Servo	Servo	Automatic	✓	X	Servo	✓	✓
F.SERVO	Stainless-steel	Servo	Servo	Servo	Automatic	✓	Servo	Servo	✓	✓

VERSION	HMI	Electric Boards & Panels	Wiring Protection Degree	Safety guards with locking devices	PLC Safety version	Drivers & Brushless devices	Standard in Pneumatic	Internet Connection Devices	Operational Recipe Upload-download	Washing cycles management
HYD	Touch	Inox	IP65	✓	✓	Main Int. Brands	Festo	✓	✓	✓
F.SERVO	Touch	Inox	IP65	✓	✓	Main Int. Brands	Festo	✓	✓	✓



# INTEGRATE SOLUTIONS



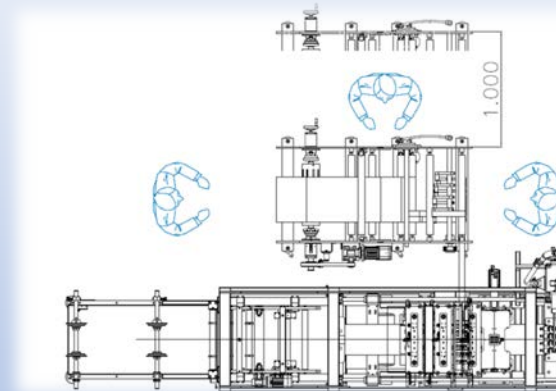
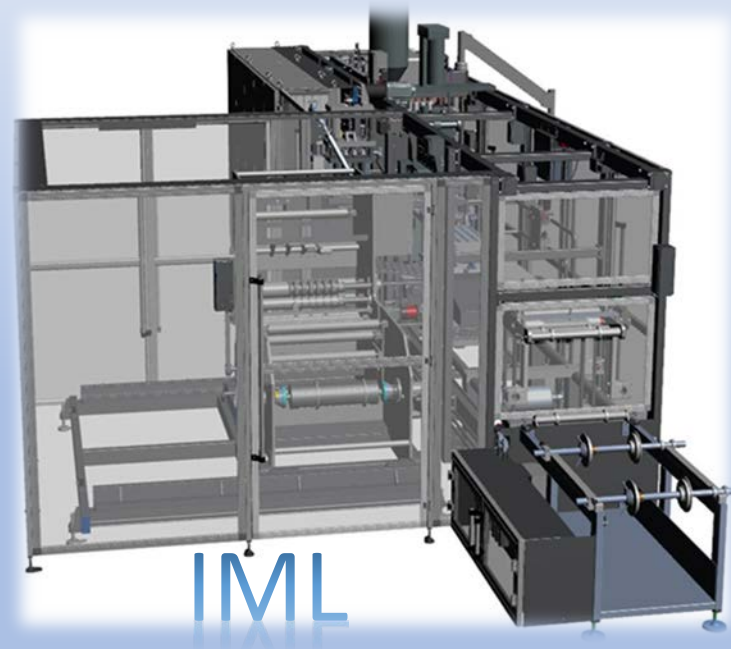
ALIMENTA

NEWPACK PARMA FOOD BREWTECH BERTUZZI

## **LABEL APPLICATION:** The IML technology (In Mould Labeling)

IML (In Mold Labeling) technology consists in applying a wrapping paper label on the body of the container directly during the molding process. For this purpose, a specific group is supplied which makes the labels from a single printed roll.

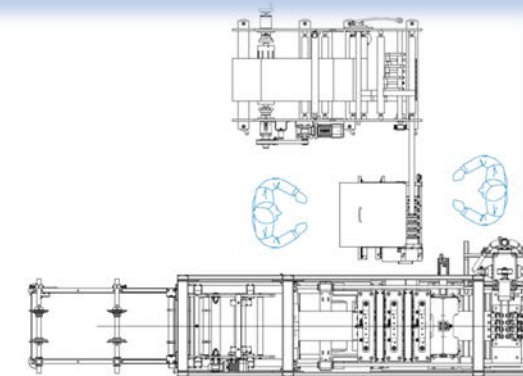
Simple and practical solutions for the optimization of production activities and system tuning



Easy access and system adjustments during the production phases with particular attention to the operator safety aspect.



Contenitori esempio



Ease of access and system adjustments during the system set-up and maintenance phases.



# INTEGRATE SOLUTIONS



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NEWPACK PARMA FOOD BREWTECH BERTUZZI

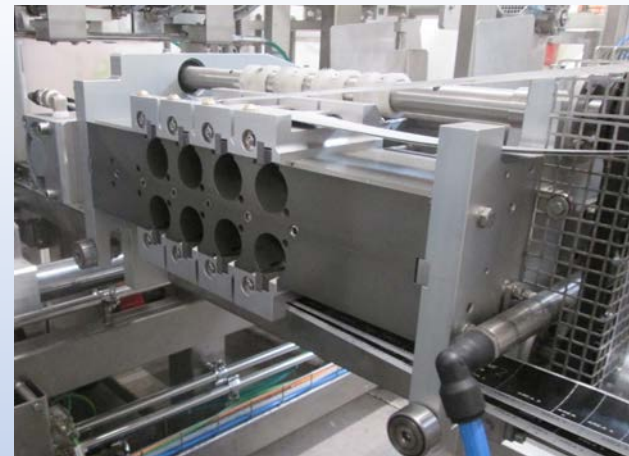
## LABEL APPLICATION: The IML technology (In Mould Labeling)



Paper reel support



Pulling & cutting



Label forming & cutting



In mould label insertion



The IML technology combined with the FFS thermoforming machines by Alimenta Industries, allows the labeling of containers with different volumes having the same shape but with different heights



# INTEGRATE SOLUTIONS

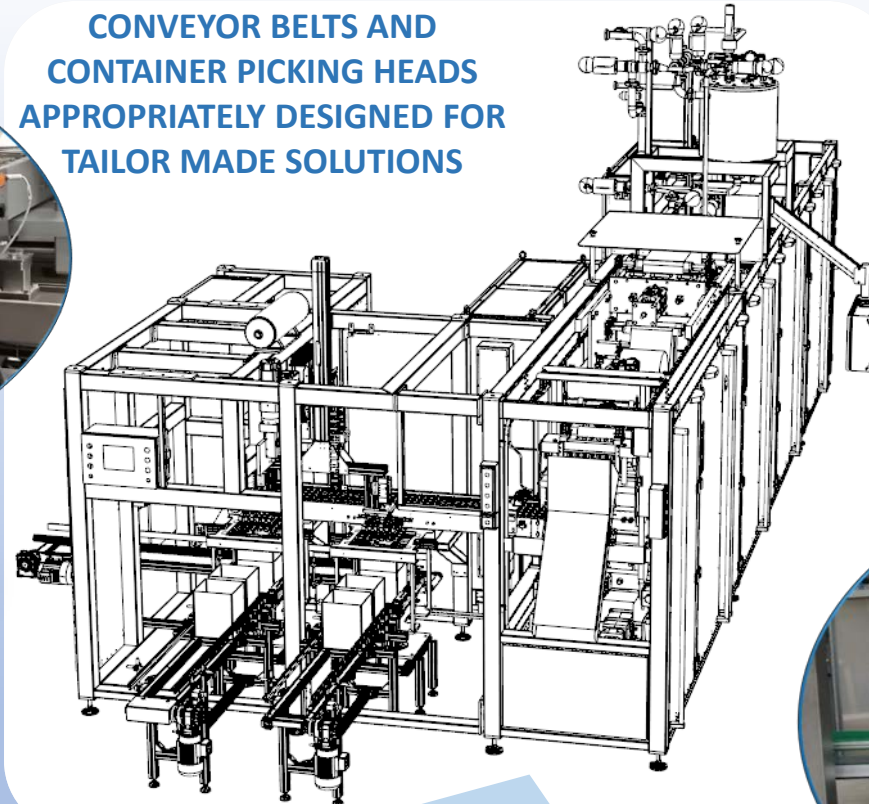


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NEWPACK PARMA FOOD BREWTECH BERTUZZI

## SECONDARY PACKAGING: PICK & PLACE systems

CONVEYOR BELTS AND  
CONTAINER PICKING HEADS  
APPROPRIATELY DESIGNED FOR  
TAILOR MADE SOLUTIONS



CARTON WAREHOUSES WITH  
SYNCHRONOUS  
FUNCTIONALITY AT THE PICK &  
PLACE HEAD OF THE  
CONTAINERS

FILLED CARTON EXAMPLE



The PICK & PLACE machine, combined with the FFS  
thermoforming machines by Alimenta Industries, allows the  
filling of American-type cartons with the containers leaving the  
cutting station



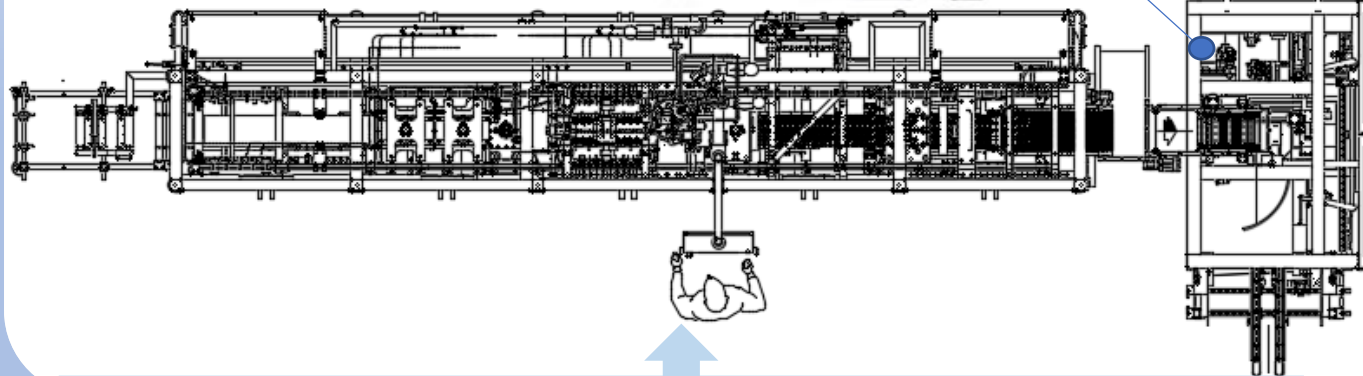


# INTEGRATE SOLUTIONS

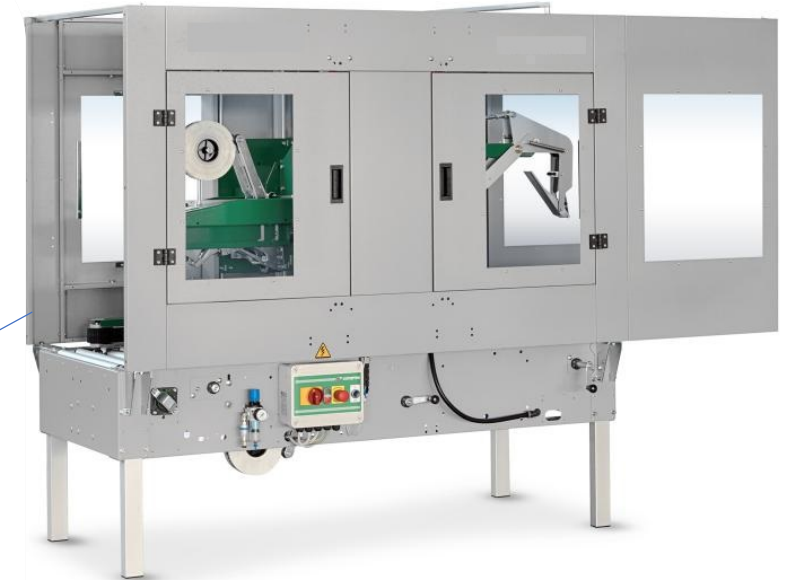
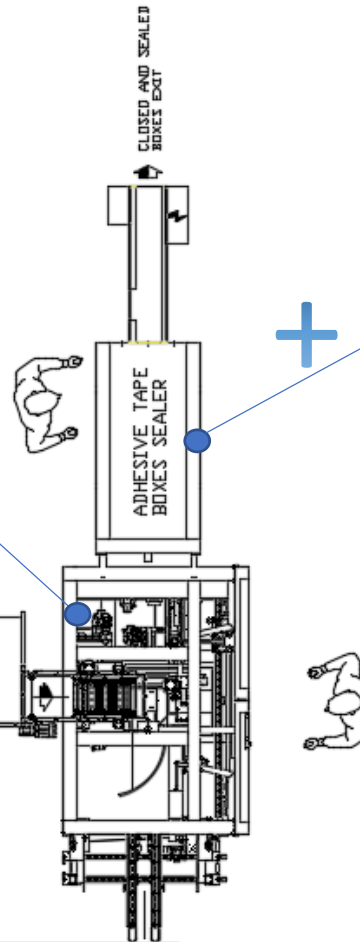


## SECONDARY PACKAGING: PICK & PLACE with carton forming systems

Solutions with Pick & Place and automatic carton forming group integrated in a single unit that works synchronously with the exit of the containers from the FFS machine



Integrated solution with FFS machine and automatic carton forming machine and box closure with adhesive tape



Taping machine for closing the top flaps of filled boxes

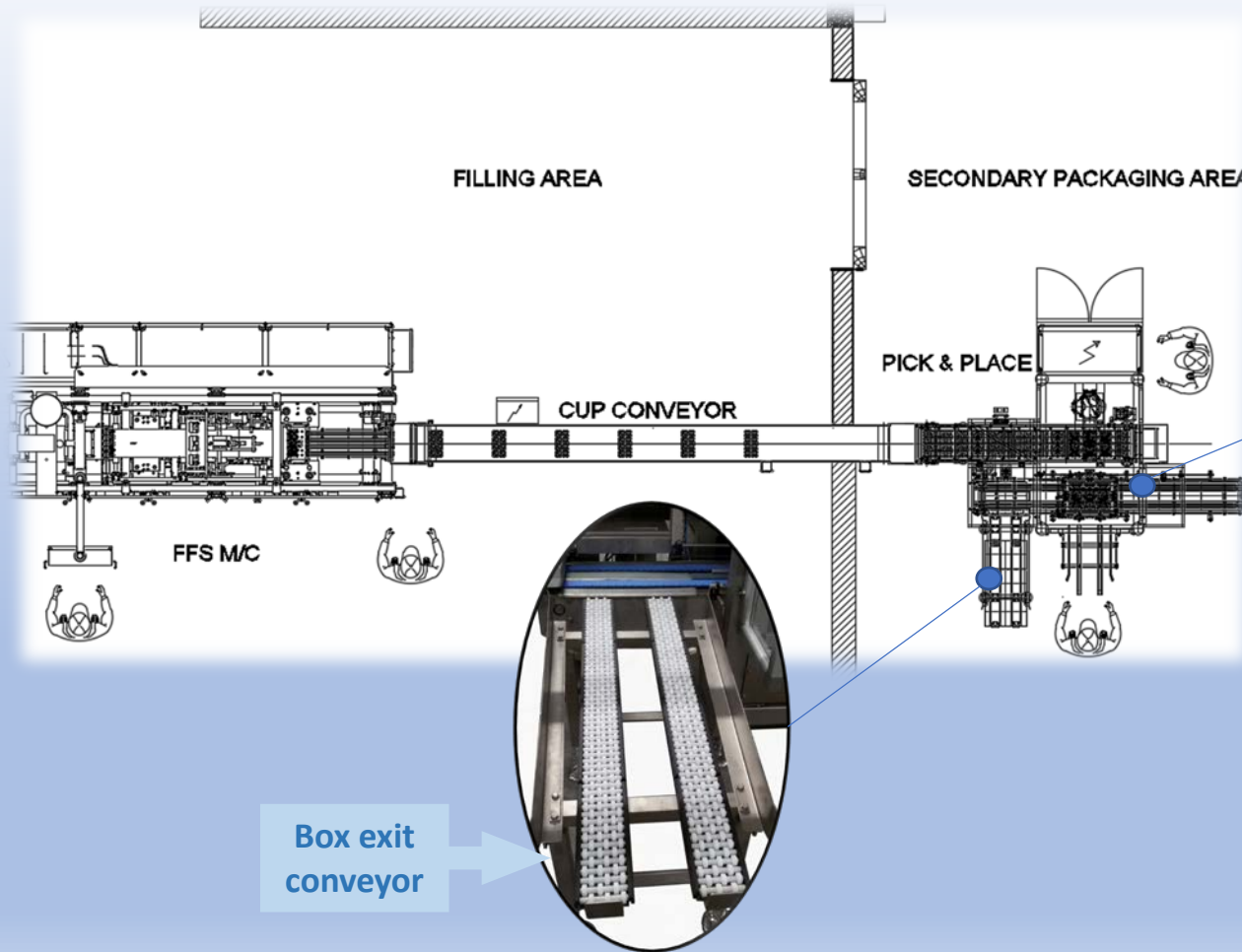


# INTEGRATE SOLUTIONS



## SECONDARY PACKAGING: PICK & PLACE system with Robot

Specific solutions in case of high precision performances for cups cartoning



Pick & Place  
overview



Cups Pick  
& Place  
head



Boxes feeding  
conveyor





# INTEGRATE SOLUTIONS



## PROCESS PLANTS : specific systems for product feeding of FFS machines

Starting from Butter & Margarine blocks

- Whole stainless-steel execution
- CIP ready design

Hopper for blocks feeding & processing

Moveable Cochlea made in high hygienic execution

Feeding system with integrated CIP system

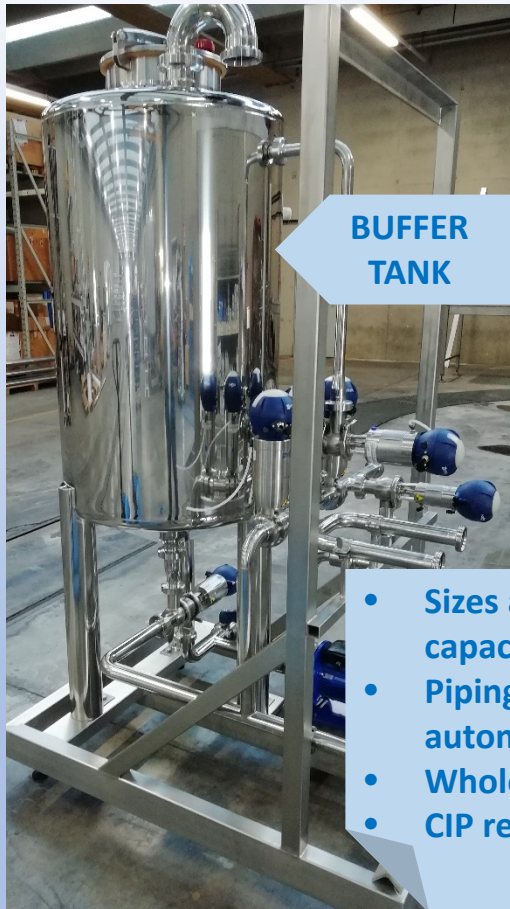




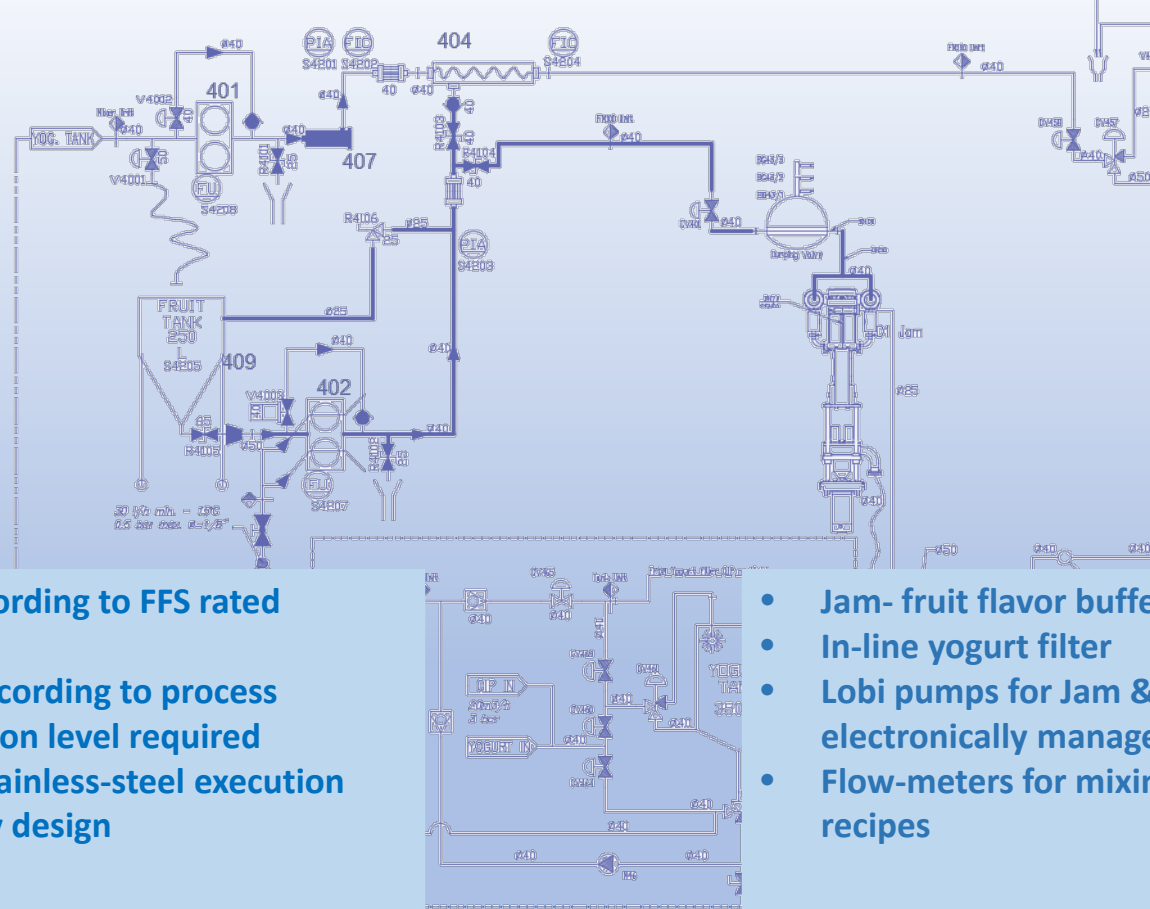
# INTEGRATE SOLUTIONS

## PROCESS PLANTS : specific systems for product feeding of FFS machines

Raw & Mixed yogurt feeding systems



- Sizes according to FFS rated capacity
- Piping according to process automation level required
- Whole stainless-steel execution
- CIP ready design



- Jam- fruit flavor buffer tank
- In-line yogurt filter
- Lobi pumps for Jam & Yogurt both electronically managed
- Flow-meters for mixing % control & recipes

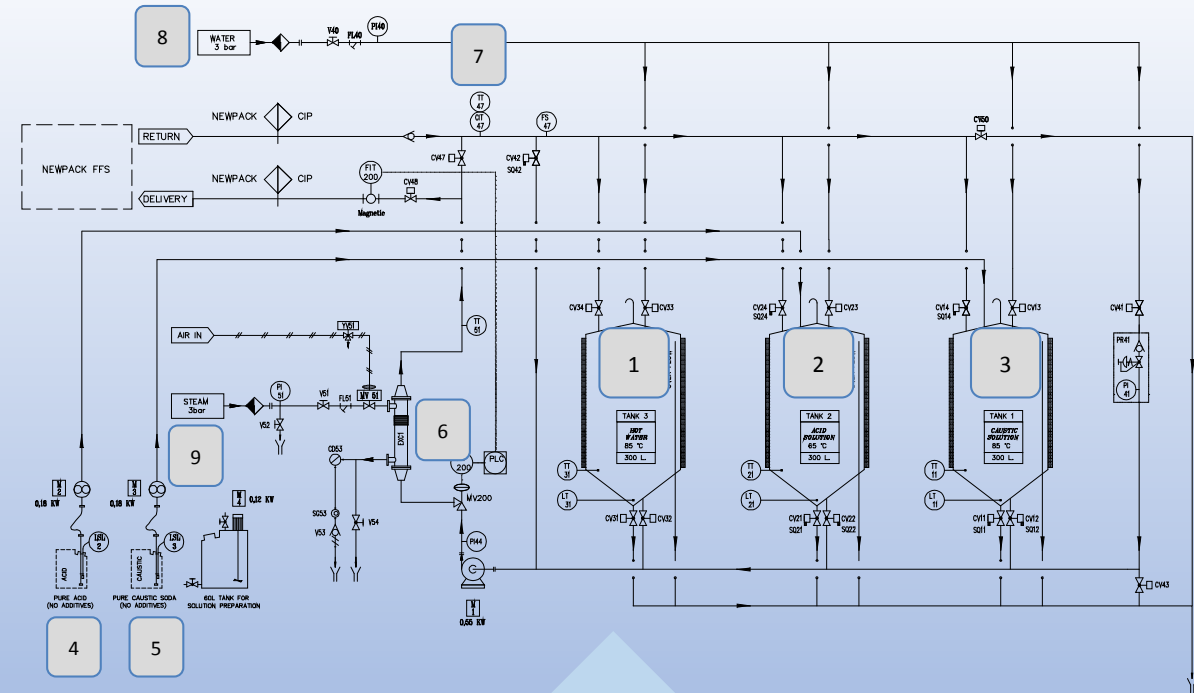


- Whole stainless-steel execution
- CIP ready design



# INTEGRATE SOLUTIONS

## PROCESS PLANTS: CIP Systems





# Some important References



Ketchup-BBQ sauce-Jam-Honey



Jam-Spreadable chocolate



UHT Cream & Desserts



Dipping sauces



Jam-Honey



Jam-Honey



Spreadable butter



White & Mixed Yogurt



White & Mixed Yogurt



UHT Coffe Creamers



Spreadable butter



Dipping sauces



# The end

Thanks for your attention