FDB ITALIA

PLANTS AND EQUIPMENT
FOR THE FOOD INDUSTRY

ENGLISH

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AHEX – Applications with Heat Exchangers

Link: https://www.fdb.it/institutional/ahex-applications-with-heat-exchangers/

•Continuos Cooling Units

https://www.fdb.it/ahex/continuos-cooling-units/

•Continuos Heating Units

https://www.fdb.it/ahex/continuos-heating-units/

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AHEX – Continuos Cooling Units

Link: https://www.fdb.it/ahex/ahex-continuos-cooling-units/

The cooler is a machine for continuous controlled cooling for food fluids.

The operator can set the machine in 3 production phases using panel buttons, these are: preparation, production and washing.
The washing configuration provides timed switching of the pneumatic valves to allow effective cleaning of all lines.

The washing can be managed through clean contacts, by a possible C.I.P. system present in the plant, allowing it to be implemented on existing lines without making major changes to the production plant.

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STANDARD COMPONENT
Plate type heat exchanger (sized in relation to the product and thermal efficiency)
Automatic adjustment for outlet temperature
Flow rate and counter pressure regulation unit (automatic or non-automatic)
Automatic cooling group with cold water
Command and control panel (standard or automatic)
Stainless steel platform complete with height-adjustable feet

OPTIONAL COMPONENT
Loading line from truck tank with flexible hose
Volumetric liter counter unit with vacuum control system
Inverter for external product loading pump management
Touch screen panel – HMI

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AHEX – Continuos Heating Units

Link: https://www.fdb.it/ahex/ahex-continuos-heating-units/

The operator can set the machine in 3 steps using panel buttons, these are: preparation, production, and washing.
The washing configuration provides timed switching of the pneumatic valves to allow effective cleaning of all lines.
The washing can be managed through clean contacts, by a possible C.I.P. system present in the plant, allowing it to be implemented on existing lines without making major changes to the production plant.

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STANDARD COMPONENT
Plate type heat exchanger (sized in relation to the product and thermal efficiency)
Automatic group for adjusting the outlet temperature (automatic or not automatic)
Automatic group of recirculation and heating of hot water by steam
Unit for potable water loading, for plant preparation and total emptying
Command and control board (standard/automatic)
Stainless steel platform complete with height-adjustable feet

OPTIONAL COMPONENT
Flow rate, counter pressure and pressure difference regulation group

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CIPP – Automatic Cleaning In Place CIP Units

Link: https://www.fdb.it/cipp/cipp-automatic-cleaning-in-place-cip-units/

Managed by a PLC on HMI with colours touch screen 12” where is possible to control in real time the state of valves, the state of pumps, the temperatures, the instant flow, the tanks level, the percentage of solutions, the state of PLC, etc.

In addition, the plant can be operated in “manual / semi-automatic”, password protected mode, in which the operator can force / enable / disable / modify each component of the P&ID.
This mode is primarily used for acting in an appropriate manner in case of emergency but still permits to a skilled operator to work completely independently from automation.

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With the following main features:

- Automatic restoring of the levels, of the temperatures and of the concentration of solutions.
- 10 recipes, with the following phases:
  - first rinse with water recovered from previous final rinse.
  - basic washing with solutions recovery/recirculation/discharge.
  - intermediate rinse.
  - Acid washing with solutions recovery.recupero/recirculation/discharge.
  - intermediate rinse.
  - sanitazing washing with solutions recovery/recirculation/discharge.
  - Final rinse with clean water recovery.Modify the flow.
- Modify the heating temperature of each phase.
- Modify the washing times of each phase.
- Skip one or more phases.
- Set a pause time of the delivery between one phase and the next.
- Automatic delivery line with automatic flow regulation.
- Automatic return line with:
  - recovery of high charged solution.
  - recirculation on low charged solutions (return to remote utilities).
  - discharge of wasted solutions.
  - recovery of clean water.
  - recirculation of wasted water (return to remote utilities).
  - discharge of wasted water.
  - start of counting of the chemical washing time only when the solutions return to CIP.

TABEL

MODEL	CAPACITY	POWER CONSUMPTION	USEFUL PRESSURE [bar]	HEATING CAPACITY
CIPP15	15000 L/h	4 kW	2,8 < 3,2 < 3,4	192 kW
CIPP20	20000 L/h	5,5 kW	3,3 < 3,8 < 3,9	302 kw

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Table options tanks of C.I.P. plants

MODEL	QUANTITY/CAPACITY	PRODUCTS
CIPP15	N° 1 tank divided in half	1. Basic solution 2. Acid solution
CIPP15	N°4 tanks	1. Basic solution 2. Acid solution 3. Disinfectant solution 4. Water recovered from the previous cycle
CIPP20	N° 3 tanks	1. Basic solution 2. Acid solution 3. Water recovered from the previous cycle
CIPP20	N° 4 tanks	1. Basic solution 2. Acid solution 3. Disinfectant solution 4. Water recovered from the previous cycle
CIPP20	N° 5 tanks	1. Potable water 2. Basic solution 3. Acid solution 4. Disinfectant solution 5. Water recovered from the previous cycle

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CONF – Packaging Machines

Link: https://www.fdb.it/institutional/conf-packaging-machines/

•Rotary 900CS-4

https://www.fdb.it/conf/rotary-900cs-4/

•Rotary 2000CA-6/8

https://www.fdb.it/conf/rotary-2000ca-6-8/

•Rotary 4000CA-6/8

https://www.fdb.it/conf/rotary-4000ca-8×2/

•Lineary 6000CA-9

hthttps://www.fdb.it/conf/lineary-6000ca-9/

•Rotary 700BA-5

https://www.fdb.it/conf/rotary-700ba/

•Lineary 1500BAW-8

https://www.fdb.it/conf/lineary-1500baw/

•Lineary 4500BAW-8

https://www.fdb.it/conf/lineary-4500baw-8/

•Vertical 2400PA

https://www.fdb.it/conf/vertical-2400pa/

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Rotary 700BA-5

Link: https://www.fdb.it/conf/rotary-700ba-5/

ROTARY 700BA is an automatic rotary packaging machine for dense and liquid food products (yoghurt, milk etc) in PE/PET/HDPE/Glass bottles with screw cap (optional). Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 700 cups per hour. The packaging machine has 5 stations.

The machine has **5 operating stations** and has an electromechanic, pneumatic-assisted functioning.
The packaging machine is completed with height-adjustable feet or wheels and it is realized in AISI304.
The capacity of the machine is from 500 to 700 bottle/hour for size from 500 ml to 1000 ml. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of bottle and installed optionals.
For example:
~700 bottles/hour* with 500 ml bottles, or smaller
~500 bottles/hour* with 1.000 ml bottles.

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The machine is equipped with volumetric dosing system.

STATION

Loading/unloading carousel	Dosing station with 2 nozzles
Where the operator places empty bottles and takes filled bottles. The carousel transports empty bottles inside the machine and extracts filled bottles. Bottles loading and unloading is done in the same of the machine and can be performed by one operator.	Equipped with volumetric filling system. The dosing product quantity is adjustable,till 1000ml

OPTION

The options can be applied in some specific stations which are free if any option is installed. Short description helps to understand better how it works.

Cap storage/application station (station 3)	Screwing station (station 4)	Date stamp, printing on bottle station (station 5)
Where the operator places the ordered caps on the chute. A slide for ordered caps positions the caps with precision and speed on the bottles.	Equipped with a constant couple screwing system with force of adjustable clamping. During the cap screwing the bottle is securely blocked by an anti-rotation device.	Intermittent pneumatic type with indelible ink and rubber modular numbers. To print the date on bottle caps.

Labeling station	Digital electro-magnetic flow meters (for liquid)
For the automatic application of self-adhesive wrap-around labels on cylindrical body of the bottles.	The product quantity dosing can be set up from control panel.

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Bottles washing and Rinsing Nozzles	**Aluminum/polycarbonate panels with safety microswitch**	**C.I.P Washing Inlet/Resend Station**

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption
1200x600x1300h mm	1.5 kW

Net Weight	Air Consumption
190 kg	200 Nl/min at 6 bar

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Rotary 900CS-4 Table Version

Link: https://www.fdb.it/conf/rotary-900cs-4-table-version/

ROTARY 900CS is a semi-automatic rotary packaging machine for dense and liquid food products (yoghurt, milk etc) in PE/PET/PS cups with heat-sealed aluminum foil lid. Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 900 cups per hour.

The capacity of the machine is from 500 to 900 cups/hour. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of cups, type of lids and installed optionals. The machine is equipped with a motorized rotating table, a volumetric filling station and it is realized in AISI304. The operator loads the empty stacked cups on rotating table and preformed aluminum lids on cups (optional: on preformed lids storage / application station). The stations provide dosing the product to the set volume, position and thermoseal aluminum lids. The operator extracts filled cups.

STATION

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Dosing Station	Thermosealer
Where the operator places empty bottles and takes filled bottles. The whirl transports empty bottles inside the machine and extracts filled bottles. Bottles loading and unloading is done in the same machine and can be performed by one operator.	With bottles tilting system, washing with disinfectant solutions in recirculation, rinsing with U.V. rays sterilized water and drying with micro-filtered compressed air

OPTION

Performed Lids Storage/Application Station	Date Stamp/Printing Station	Size Changer Kit
For preformed lids which are placed over the container with a mechanical suction system.	Intermittent pneumatic type, with indelible ink and rubber modular numbers. To print the date on bottle caps.	For cups with different diameter, with heat-sealed aluminium foil lid. Changing operation can be made in a half an hour
	Touch Screen Control Panel	

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption
700x1200x900h mm	1,0 kW

Net Weight	Air Consumption
70 kg	100 Nl/min at 6 bar

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Rotary 2000CA-6/8

Link: https://www.fdb.it/conf/rotary-2000ca-6-8/

ROTARY 2000CA is an automatic rotary packaging machine for dense and liquid alimentary products (yoghurt, milk etc) in PE/PET/PS cups with heat-sealed aluminum foil lid. Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 2000 cups per hour. The packing machine has 6 or 8 station.

The machine can have 6 or 8 operating stations and has an electromechanic, pneumatic-assisted functioning. Each station as one function (multiple dosing, labeling, get the top etc). More function permits to have a more flexible machine and packing more type of products.
The machine is equipped with a motorized rotating table, a volumetric filling station and it is realized in AISI304 and it is completed with AISI304 protection covers on the base, aluminium/polycarbonate panels with safety microswitch on the top and adjustable feet or wheels.
The capacity of the machine is till 2000 cups/hour. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of cups, type of lids and installed optionals.

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For example:
~ 2.000 cups/hour* with 100 ml cups, or smaller
~1.500 cups/hour* with 250 ml cups
~1.000 cups/hour* with 500 ml cups
The operator loads the empty stacked cups on containers store and preformed aluminum lids on lids store. The stations provide to load empty cups on rotating table, dose the product to the set volume, position and thermoseal aluminum lids, extract filled cups.
The basic stations present in rotary 2000CA are the follow.
Additional station depending on the 6 or 8 station model can be added.

STATION

Containers Store/ Load Store	Containers Store/ Load Store
For preformed cups, with double-handling system, high-precision pliers and sucker. The station automatically load the cups on rotating table one by one	Equipped with product loading hopper 25 litres. The dosing product quantity is adjustable from control panel, till 500 ml with rough mechanical regulation and fine regulation controlled by control panel.

Thermosealer	Extraction Unit
With bronze heated head and compensation springs. Temperature regulation made from the control panel.	Mechanical thrust system, pusher and slide.

6 STATION MODEL OPTION
4 of 6 station are basically. The others 2 free station can be customize with maximun 2 of the follow options. For more option look the 8 station model. The options can be apply in some specific stations which are free if any option is installed. Short description helps to understand better how it works.

Performed Lids Store/Apply Station (Station 3)	Aluminum Coil Store/Apply Station (Station 3)	Date Stamp, printing Station (Station 5)

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For preformed cups, with double-handling system, high-precision pliers and sucker. The station automatically load the cups on rotating table one by one	Equipped with product loading hopper 25 litres. The dosing product quantity is adjustable from control panel, till 500 ml with rough mechanical regulation and fine regulation controlled by control panel.	With bronze heated head and compensation springs. Temperature regulation made from the control panel.

Digital electro-magnetic flow meters (for liquid)	UV-C Lamp on Lids Slide	UV-C Lamps on Cups slide
The dosing product quantity is adjustable from control panel	For lids sterilization with U.V. ray	For cups sterilization with U.V. rays

C.I.P. Washing Inlet/Resend Station	Configuration for C.I.P Washing	Color Touch Screen Control Panel

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption
1.200 x 1.200 x 1.800h mm	1,5 kW 3PH (220V single-phase on request)

Net Weight	Air Consumption
~420 Kg	300 Nl/min at 6 bar

8 STATION MODEL OPTION
The options can be apply in some specific stations which are free if any option is installed. Short description helps to understand better how it works.

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Additional Dosing Station (station 2)	Performed Lids Store/Apply Station (Staion 4)	Date Stamp, printing Station (Station 7)
Equipped with product loading hopper 25 litres. The dosing product quantity is adjustable from control panel, till 500 ml with rough mechanical regulation and fine regulation controlled by control panel.	For preformed lids which are placed over the container with a mechanical sucking system	Intermittent pneumatic type, with indelible ink and rubber modular numbers. To print the date on bottle caps

Aluminum Coil Store/Apply Station (Station 4)	Performed Caps Store/Apply Station (Station 6)	Digital electro-magnetic flow meters (for liquid)
For aluminum lids obtained from coil	For preformed caps which are placed over the container with a mechanical sucking system	The dosing product quantity is adjustable from control panel

Color Touch Screen Control panel	C.I.P. Washing Inlet/Resend Station	Configuration for C.I.P. washing

UV-C Lamp on Lids Slide	UV-C Lamps on Cups slide
For lids sterilization with U.V. ray	For cups sterilization with U.V. rays

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption

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1.500 x 1.500 x 1.800h mm	2,5 kW 3PH (220V single-phase on request)

Net Weight	Air Consumption
~420 Kg	300 Nl/min at 6 bar

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Rotary 4000CA-8×2

Link: https://www.fdb.it/conf/rotary-4000ca-8x2/

ROTARY 4000CA is an **automatic** rotary packaging machine for dense and liquid alimentary products (yoghurt, milk etc) in PE/PET/PS **cups** with heat-sealed aluminum foil lid.
Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 4000 cups per hour.

The machine has 8 operating stations and has an electromechanic, pneumatic-assisted functioning. Each station as one function (multiple dosing, labeling, get the top etc). More function permits to have a more flexible machine and packing more type of products.
The machine is equipped with a motorized rotating table, a volumetric filling station, it is realized in AISI304. Completed with AISI304 protection covers on the base,aluminium/polycarbonate panels with safety microswitch on the top and adjustable feet or wheels.
The capacity of the machine is till 4000 cups/hour. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of cups, type of lids and installed optional.

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For example:
~ 3.600 cups/hour* with 100 ml cups, or smaller.
~2.400 cups/hour* with 250 ml cups
~1.800 cups/hour* with 500 ml cups.

The basic stations present in rotary 4000CA are the follow in the “station” section.

STATION
6 of 8 double station are standardize. 2 remains free.

Double Containers Store/ Load Store	Double Dosing Station	Double Performed Lids Store/Apply Station
For preformed stack-able cups, with double-handling system, high-precision pliers and sucker. The station automatically load the cups on rotating table one by one	Equipped with volumetric controlled dosing (no cup no dose). The dosing product quantity is adjustable from control panel, till 500 ml with rough mechanical regulation and fine regulation controlled by control panel.	For preformed lids which are placed over the container with a mechanical sucking system.

Thermosealer	Extraction Unit with Unloading Conveyor Belt L=500mm	Date Stamp, Printing Station
With bronze heated head and compensation springs. Temperature regulation made from the control panel	Mechanical thrust system, pusher and slide. On request, the conveyor belt is matchable with other transport conveyor belts.	Intermittent pneumatic type, with indelible ink and rubber modular numbers. To print the date on bottle caps

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OPTION

The others 2 free station can be customize with maximun 2 of the follow option.
The options can be apply in some specific stations which are free if any option is installed.
Short description helps to understand better how it works.

Size Charger Kit	Additional Dosing Station	Snap-On Caps/Apply station
For cups with different diameter, with heat-sealed aluminium foil lid. Operation of change can be made in half an hour. This option does not fill a free station.	The dosing product quantity is adjustable till 50 ml. Product is loaded its bin by a flexible pipe.	For preformed stack-able snap-on (covers), which are placed over the container, with double-handling system, high precision pilers and sucker.

Product Loading Hopper 25 Litres	UV-C Lamp on preformed Lids Slide	UV-C Lamps on Cups Loader
It can equipped with automatic regulation for the production phase and also for washing phase	For lids sterilization with U.V. ray.	For cups sterilization with U.V. rays.

Ink Jet Date Stamp, Prinnting Station	High Volume External Dosing Station	C.I.P. Washing Inlet/Resend Station
With computer and printing head. To print the date at any point on the container	Equipped with product loading hopper 10 litres with cover, and volumetric dosing. The dosing product quantity is adjustable till 1.000 ml, with mechanical regulation.	Composed by process tank and centrifugal electropump to provide a water flow rate for the washing of machine.

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DIMENSION AND CONSUMPTION

Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption
1.800 x 2.300 x 1.900h mm	4,3 kW single phase (3 phase on request)

Net Weight	Air Consumption
~480 Kg	600 Nl/min at 6 bar

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Lineary 1500BAW-8

Link: https://www.fdb.it/conf/lineary-1500baw/

Lineary1500BAW is an automatic lineary packaging machine for dense and liquid alimentary products (yoghurt, milk etc) in PE/PET/HDPE/Glass bottles with heat-sealed aluminum foil lid (optional) and screw cap (optional). Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 1500 bottle per hour. The packing machine can be equipped with multiple standard stations.

The machine has **8 operating stations** and has an electromechanic, pneumatic-assisted functioning.
It is completed with aluminum/polycarbonate panels with safety microswitch, height-adjustable
feet or wheels and it is realized in AISI304.
The capacity of the machine is from 650 to 1500 bottles/hour. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of cups, type of lids and installed optionals.

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For example:
~1.500 bottles/hour* with 500 ml bottles, or smaller
~1.300 bottles/hour* with 1.000 ml bottles
~650 bottles/hour* with 2.000 ml bottles

The machine is equipped with digital electro-magnetic flow meters, for a great accuracy, and a bottles washing and drying whirl. The whirl turns upside down the bottles, it washes inside the bottles with disinfectant jets in pressure, rinses with UV rays sterilized water jets and dries them though compressed micro-filtered air.

STATION

Loading/unloading whirl	Bottle washing, Rising drying whirl	Dosing Station with 5 nozzles
Where the operator places empty bottles and takes filled bottles. The whirl transports empty bottles inside the machine and extract filled bottles. Bottles loading and unloading is done in the same of the machine and can be performed by one operator.	With bottles tilting system, washing with disinfectant solutions in recirculation, rinsing with U.V. rays sterilized water and drying with micro-filtered compressed air	Equipped with product loading hopper with level probes, connections for C.I.P. washing and filling system with digital electro-magnetic flow meters. The dosing product quantity is adjustable from control panel, till 2.000 ml

OPTION
The options can be apply in some specific stations which are free if any option is installed. Short description helps to understand better how it works.

Loading/unloading conveyor belt L=3500mm (station 1)	Pre-Formed Lids Store/Apply Station (station 4)	Bottle store /Apply Station (station 6)

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Bottles loading and unloading is done in two different sides of the machine. On request the conveyor belt is watchable with other transport conveyor belts.	For aluminum preformed lids which are placed over the bottle with a mechanical sucking system.	Where the operator places the bottles in bulk. A vibrating orientation system and slide for tidied caps, positions the caps with precision and speed on the bottles

Aluminum coil/apply station (station 4)	**Thermosealer (station 5)**	**UV-C lamps on caps Slide**
For aluminum lids obtained from coil	With bronze heated head and compensation springs. Welding temperature is controlled from the control panel	For the U.V. rays sterilization of caps

Screwing Station (station 7)	**Caps Elevator/Loader**	**Date stamp, printing station (station 8)**
Equipped with a constant couple screwing system with force of adjustable clamping. During the cap screwing the bottle is strongly blocked by a anti-rotation device.	Complete with hopper and conveyor belt. To load cups from “floor height” directly into the vibrating orientation hopper	Intermittent pneumatic type, with indelible ink and rubber modular numbers. To print the date on bottle caps.

Labeling Station (on conveyor belt)	**Hepa Air Filtration System**

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For the automatic application of self-adhesive wrap-around labels on cylindrical body of the bottles. Installed on unloading belt, complete of: – Hot overprinting unit. – Character sets and tapes – Painted carbon steel frame with height-adjustable feet.	Complete of hermetic panels, to inject sterile filtered air into the machine.

Touch Screen Control Panel	C.I.P Washing Inlet/Resend Station	Volumetric flow meters (for dense product)

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption
1900 x 900 x 2200h mm	2,0 kW

Net Weight	Air Consumption
500 kg	400 Nl/min at 6 bar

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Lineary 4500BAW-8

Link: https://www.fdb.it/conf/lineary-4500baw-8/

Lineary 4500BAW is an automatic lineary packaging machine for dense and liquid alimentary products (yoghurt, milk etc) in PE/PET/HDPE/Glass bottles with heat-sealed aluminum foil lid (optional) and screw cap (optional). Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 4500 bottle per hour. The packing machine can be equipped with multiple standard stations.

The machine has **8 operating stations** and has an electromechanic, pneumatic-assisted functioning.
It is completed with aluminum/polycarbonate panels with safety microswitch, height-adjustable
feet or wheels and it is realized in AISI304.
The capacity of the machine is from 1500 to 4500 bottles/hour. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of cups, type of lids and installed optional.

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For example:
~4500 bottles/hour with 200 ml bottles, or smaller,
~3500 bottles/hour with 500 ml bottles, or smaller,
~3000 bottles/hour with 1000 ml bottles,
~1500 bottles/hour with 2000 ml bottles.
The machine is equipped with digital electro-magnetic flow meters, for a great accuracy, and a bottles washing and drying whirl. The whirl turns upside down the bottles, it washes inside the bottles with disinfectant jets in pressure, rinses with UV rays sterilized water jets and dries them though compressed micro-filtered air.

STATION

Loading/ unloading whirl	Bottle washing, Rising drying whirl	Dosing Station with 5 nozzles
Where the operator places empty bottles and takes filled bottles. The whirl transports empty bottles inside the machine and extract filled bottles. Bottles loading and unloading is done in the same of the machine and can be performed by one operator.	With bottles tilting system, washing with disinfectant solutions in recirculation, rinsing with U.V. rays sterilized water and drying with micro-filtered compressed air	Equipped with product loading hopper with level probes, connections for C.I.P. washing and filling system with digital electro-magnetic flow meters. The dosing product quantity is adjustable from control panel, till 2.000 ml.

Caps Store/Apply Station	Screwing whirl with 4 spindles
Where the operator places the caps in bulk. A vibrating orientation system and slide for tidied caps, positions the caps with precision and speed on the bottle	Equipped with a constant couple screwing system with force of adjustable clamping. During the cap screwing the bottle is strongly blocked by a anti-rotation device.

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OPTION

The options can be apply in some specific stations which are free if any option is installed. Short description helps to understand better how it works.

Aluminum coil/apply station (station 4)	UV-C lamps on caps Slide	Thermosealer (station 5)
For aluminum lids obtained from coil.	For the U.V. rays sterilization of caps	With bronze heated head and compensation springs. Welding temperature is controlled from the control panel

Caps Elevator/Loader	C.I.P Washing Inlet/Resend Station	Labelling Station
Complete with hopper and conveyor belt. To load cups from “floor height” directly into the vibrating orientation hopper.	With computer and printing head. To print the date at any point of the bottle	Complete with hopper and conveyor belt. To load cups from “floor height” directly into the vibrating orientation hopper.

Touch Screen Control Panel	C.I.P Washing Inlet/Resend Station	Volumetric flow meters (for dense product)

Hepa Air Filtration System
Complete of hermetic panels, to inject steril filtered air into the machine.

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Lineary 6000CA-9

Link: https://www.fdb.it/conf/lineary-6000ca-9/

Lineary 6000CA is an automatic linear packaging machine for viscous alimentary products (yoghurt, milk etc) in PE/PET/PS cups with heat-sealed aluminum foil lid. Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 2000 cups per hour. The packing machine has 9 station.

The machine has 9 operating stations and has an electromechanic, pneumatic-assisted functioning. Each station as one function (multiple dosing, labeling, get the top etc). More function permits to have a more flexible machine and packing more type of products.
It is realized in AISI304 and it is completed with AISI304 protection covers on the base, aluminium/polycarbonate panels with safety microswitch on the top and adjustable feet or wheels.
The capacity of the machine is till 2000 cups/hour. Production capacity is in relation to the productivity of the operator, dosing quantity, to the product density, type and size of cups, type of lids and installed optionals.

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For example:
~ 5.500 cups/hour* with 125 ml cups, or smaller.
~5.100 cups/hour* with 200 ml cups

The basic stations present in lineary 6000CA are the follow. Additional station depending on the 6 or 8 station model can be added.

STATION

Containers Store/ Load Store	Dosing Station	Performed Caps Store/Apply Station
For preformed cups, with double-handling system, high-precision pliers and sucker. The station automatically load the cups on rotating table one by one	It is equipped with product loading hopper, level sensor and volumetric dispenser controlled (no cup no dose). The dosing product quantity is adjustable from control panel, till 500 ml with rough mechanical regulation and fine regulation controlled by control panel.	For preformed caps which are placed over the container with a mechanical sucking system.

Thermosealer	Extraction Unit
With bronze heated head and compensation springs. Temperature regulation made from the control panel.	Mechanical thrust system, pusher and slide.

OPTION
5 of 9 stations are basically. The others 4 free station can be customized with maximum 4 of the follow options.
The options can be apply in some specific stations which are free if any options are installed. Short description helps to understand better how it works.

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Second Dosing Station	UV-C Lamp on Lids Slide	UV-C Lamps on Cups slide
Second dosing station to add second product like fruit puree etc	For lids sterilization with U.V. ray	For cups sterilization with U.V. rays

HEPA system for air filtration	Conveyor belt on lateral side to deliver the cups	Date Stamp, printing Station
Completed with hermetic panel for the injection of sterilized air	It is an alternative to straight exit of the standard machine.	Can be provided a pneumatic system to print the date on lid or with automatic ink jet system with computer and print head

Configuration for C.I.P Washing	C.I.P. Washing Inlet/Resend Station
Some modification are made to get the possibility to install the C.I.P. automatic/manual washing	C.I.P. washing unit with the recover and resend in the washing line of the washing solution. It is provided of tank and pump dedicated.

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power Consumption
1.200 x 1.200 x 1.800h mm	1,5 kW 3PH (220V single-phase on request)

Net Weight	Air Consumption
~420 Kg	300 Nl/min at 6 bar

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Vertical 2400PA

Link: https://www.fdb.it/conf/vertical-2400pa/

Vertical 2400PA is an **automatic** vertical **packaging** machine “form fill seal” type for the production and filling of closed bags with three weldings, starting from a coil of heat-sealed polyethylene. Extremely versatile, strong and easy to use, completely managed by PLC with “soft touch” control board, it can pack till 2400 pack/hour.

The machine is designed to work in environments classified as “aggressive” due to the presence of high humidity, condensation, and others which would otherwise cause a rapid decay of the mechanical components. It is realized in AISI304. It is complete with aluminum/polycarbonate panels with safety microswitch and height-adjustable feet.
The production capacity is in relation to the dosing quantity, to the product density, type and material and shape of bobbin and installed optionals.

For example:
~2.200 bags/hour* with 250 ml bags, or smaller
~2.000 bags/hour* with 500 ml bags

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~1.800 bags/hour* with 1.000 ml bags, or smaller

“Ermetic box” frame type in AISI304 and protected against dusts and liquids infiltrations.
“Box Motion” cross welding unit with “ups and downs” movement controlled by a brushles motor. Forming collar in AISI304, easily interchangeable.
“Hot bar” welding clamps with compressed air cooling system (to be confirmed after film sight) Coil holder with automatic centering, 400 mm max.
Ready for C.I.P. washing.

It is completed of:
– Tank with “overflow” regulation, electronic timer to control the opening of solenoid valve, product inserter pipe inside the collar. The dosing product quantity is adjustable from control panel.
– Printer

DIMENSION AND CONSUMPTION
Some additional details about size, weight and consumption of the packing machine.

Dimension	Power consumption
1.800 x 1.300 x 2.300h mm	2,5kW

Net weight	Air consumption
~550Kg	60Nl/min 6 bar

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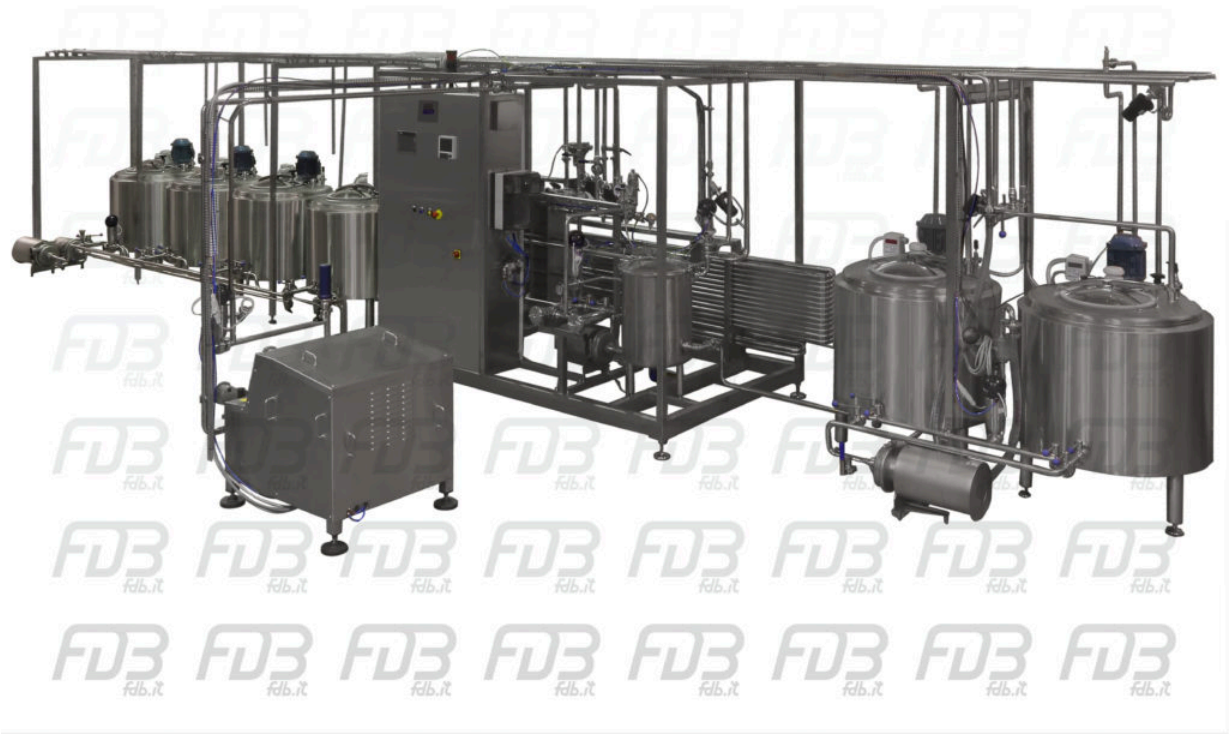
CPLA – Complete Plants

Link: https://www.fdb.it/cpla/cpla-complete-plants/

Construction of equipment, machines and complete systems for the food industry in general and in particular for the dairy sector.



FDB ITALIA boasts many years of experience in the design, construction and installation of systems for the food industry, with systems all over the world.

It is able to supply complete turnkey plants and lines for the dairy sector for the production of milk and derivatives. From the reception section to the packaging of the finished product.

During the planning phase, we analyze the customer's specifications, objectives and needs. We are available for the preliminary study of the floor plan of the building, to verify the feasibility of the project on an existing building or to provide guidelines for the sizing of a new production plant.

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Standard component

Optional component

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Model
All models

Model	Flow [l/h]				Automation
CPLA700	300 – 700				
CPLA1200	800 – 1.200				
CPLA3000	2.000 – 3.000				
CPLA5000	4.000 – 5.000				
CPLA10000	6.000 – 10.000				
CPLA20000	11.000 – 20.000				
CPLA25000	21.000 – 25.000				

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CPLA_500LXH_2000LXS

Link: https://www.fdb.it/cpla/cpla_500lxh_2000lxs/

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It is able to supply complete turnkey plants and lines for the dairy sector for the production of milk and derivatives. From the reception section to the packaging of the finished product.

During the planning phase, we analyze the customer's specifications, objectives and needs. We are available for the preliminary study of the floor plan of the building, to verify the feasibility of the project on an existing building or to provide guidelines for the sizing of a new production plant.

Industrial plant for the treatment of: – 2.000 litres/shift – 500 litres/hour of cow milk for the production of:

– Fresh milk, pasteurized, cleaned/skimmed and homogenized packed in pouches

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STANDARD COMPONENT
2.000 litres milk storage tank
500 litres/hour continuous H.T.S.T. pasteurizer
1.000 / 700 litres/hour centrifugal separator for skimming
500 litres/hour high pressure homogenizer
2.000 litres pasteurized milk storage tank
1.500 pouches/hour automatic vertical packaging machine “form-fill-seal”
Rotary screw compressor
Boiler for hot water (fuel type or electric)
Ice bank for cold water

OPTIONAL COMPONENT
Automatic C.I.P. washing unit

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Model	Flow [l/h]	Capacity [l/shift]	Packaging [p/h]	Product	Automation
CPLA_500 LXH_2000LXS	500	2000	1500	Fresh milk	Semi-automatic

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CPLA_700LXH_2400LXS

Link: https://www.fdb.it/cpla/cpla_700lxh_2400lxs/

Construction of equipment, machines and complete systems for the food industry in general and in particular for the dairy sector.

Industrial plant for the treatment of: – 2.400 litres/shift – 700 litres/hour of cow milk for the production of:

– Yoghurt, pasteurized, cleaned/skimmed and homogenized packed in cups and bottles.

STANDARD COMPONENT
1.200×2 litres milk storage tank
700 litres/hour continuous H.T.S.T. pasteurizer

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1.000 / 700 litres/hour centrifugal separator for skimming
700 litres/hour high pressure homogenizer
1.200×2 litres yoghurt fermentation tanks
2.000 cups/hour automatic rotary packaging machine 1.500 bottles/hour lineary packaging machine 500 cups/hour vertical filling machine
Rotary screw compressor
High pressure steam generator
Ice bank for cold water

OPTIONAL COMPONENT
Automatic C.I.P. washing unit

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Model	Flow [l/h]	Capacity [l/shift]	Packaging [p/h]	Product	Automation
CPLA_700 LXH_2400LXS	700	2400	2000 / 1500 / 500	Yoghurt	Semi-automatic

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CPLA_1200LXH_10000LXS

Link: https://www.fdb.it/cpla/cpla_1200lxh_10000lxs/

Always attentive to improvement and technological research, FDB ITALIA can boast high quality standards in the construction of its machinery and guarantees the customer an efficient and reliable service. With a complete service in the design phase, FDB ITALIA builds single machines, parts of plants or complete “turnkey” systems for the production of fresh milk, UHT milk, yoghurt, cheeses, mozzarella, ricotta, cream, butter, semi-artisan and industrial ice cream, from the simplest to the automatic solutions, even with remote management systems and integration with the factory supervisor for Industry 4.0.

Industrial plant for the treatment of: – 10.000 litres/shift – 1.200 litres/hour of cow milk or recombined milk from powders and flavours, for the production of:

– Fresh milk, pasteurized, cleaned/skimmed and homogenized packed in bottles.

– Fermented milk with flavours, pasteurized, cleaned/skimmed and homogenized packed in bottles.

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– Dense yoghurt, pasteurized, cleaned/skimmed and homogenizer, packed in cups.

– Fresh white cheese, pasteurized, cleaned, packed in vacuum boxes

STANDARD COMPONENT
5.000 litres/hour vacuum litres counter
5.000×2 litres cow milk storage tanks with recombined milk preparation unit
1.200 litres/hour continuous H.T.S.T. pasteurizer
1.200 litres/hour self-cleaning cream separator
1.200 litres/hour high pressure homogenizer
600×3 litres fermentation tanks 1.600×2 litres pasteurized milk tanks 1.200 litres cheese vat 3.000×2 litres whey tanks
1.500 bottles/hour automatic packaging machine with labelling machine and shrink-wrapper tunnel 6000 cups/hour automatic packaging machine
Rotary screw compressor
High pressure steam generator
Ice bank for cold water
Semi-automatic C.I.P. washing unit

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OPTIONAL COMPONENT
Water filtration unit and reverse osmosis plant

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Model	Flow [l/h]	Capacity [l/shift]	Packaging [p/h]	Product	Automation
CPLA_1200 LXH_10000LXS	1.200	10.000	6.000 1.500	Pasteurized milk, liquid and dense yogurt, fresh cheeses	Semi-automatic

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CPLA_5000LXH_30000LXS

Link: https://www.fdb.it/cpla/cpla-5000lxh-30000lxs/

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Industrial plant for the treatment of: – 30.000 litres/shift – 5.000 litres/hour of cow milk or recombined milk from powders, for the production of:

– Fresh milk, pasteurized, cleaned/skimmed and homogenized packed in pouches.

– Fermented milk, leben, pasteurized, cleaned/skimmed and homogenized packed in bottles.

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– Smoothed cheese, pasteurized, cleaned/skimmed, packed in cups.

STANDARD COMPONENT
10.000 litres cow milk storage tank 5.000×2 recombined milk tanks
5.000 litres/hour continuous H.T.S.T. pasteurizer
5.000 litres/hour self-cleaning cream separator
5.000 litres/hour high pressure homogenizer
2.400×5 litres fermentation tanks 10.000 litres pasteurized milk tank 2.500 litres cheese vat 5.000 litres whey tank
2.400 pouches/hour automatic packaging machine “form-fill-seal” 1.500 bottles/hour automatic packaging machine 1.500 cups/hour automatic packaging machine
Rotary screw compressor
High pressure steam generator
Ice bank for cold water

OPTIONAL COMPONENT
Automatic C.I.P. washing unit

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Model	Flow [l/h]	Capacity [l/shift]	Packaging [p/h]	Product	Automation
CPLA_5000 LXH_30000LXS	5.000	30.000	2.400 1.500 1.500	Pasteurized milk, yogurt, smooth cheese	Semi-automatic

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DEGA – Vacuum Degassers

Link: https://www.fdb.it/dega/degasser/

FDB ITALIA deaerators operate under vacuum and have the main purpose of extracting the volatile parts present in the product, which could alter the organoleptic characteristics of the product.

The product enters from the upper part of the tank, is distributed on its walls with a tangential inclination, so as to create a laminar flow. This allows the volatile part of the product to separate and thanks to the controlled vacuum system inside the tank, to be removed from the tank. The volatile parts, gases and odors extracted from the vacuum created by the liquid ring pump, if required, can be cooled by a multi-tube exchanger. The product is then discharged from the tank via the centrifugal pump mod. FCA, which automatically maintains the constant level.

The operator can set the degasser in 5 stages using panel buttons, these are: sanitization, preparation, production, production end and washing.

The washing configuration provides a flow increase and timed switching of the pneumatic

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valves to ensure an effective cleaning. The washing cycle can be managed by a remote C.I.P. plant, allowing it to be implemented on existing lines without making major changes to the production plant.

Standard components
Constant level tank
Sanitary centrifugal flow pump mod. FCA managed by a frequency inverter drive
Liquid ring vacuum pump controlled by inverter
Power line and control of the remote loading pump
Command and control board
Stainless steel skid with height-adjustable feet.

Optional components
Frequency inverter for the remote loading pump
HMI touch screen panel
Remote control
Shell and multi-tubes heat exchanger

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Model	Inlet Pressure [Bar]	Vacuum Pressure [Bar]	Max Temperature [°C]
All Models	1,0 ÷ 3,0	-0,85	+95 (higher on request)

Model	Flow rate [L/h]	Product pump FCA [kW]	Vacuum Pump [kW]	Capacity of Tank [L]	Automation
DEGA300/900	300 – 900	1,1	0,37	100/196	Automatic Semi-automatic
DEGA1000/2500	1.000 – 2.500	1,5	0,55	150/246	Automatic Semi-automatic
DEGA3000/4000	3.000 -4.000	2,2	0,75	200/358	Automatic Semi-automatic
DEGA4500/5500	4.500 – 5.500	3	1,1	250/424	Automatic Semi- automatic
DEGA6000/10000	6.000 -10.000	4	1,5	300/481	Automatic Semi-automatic
DEGA11000/18500	11.000 -18.500	5,5	2,2	400/578	Automatic Semi-automatic
DEGA19000/27500	19.000 -27.500	7,5	3	500/754	Automatic Semi-automatic
DEGA28000/39000	28.000 -39.000	9	4	600/954	Automatic Semi-automatic

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DEGA – Vacuum liter-counters

Link: https://www.fdb.it/dega/dega-vacuum-liter-counters/

The vacuum litres-counter is a machine for counting the flow of product by means of a flow meter, with greater precision.

The product flow is aspirated in the deareator tank through the vacuum generated by a compressed air ejector and injected with a tangential inclination to the walls in order to create a laminar flow. The volatile part of the product is withdrawn out through the vacuum suction system.
The processing level/flow is maintained constant by an inverter driven centrifugal pump, which provides to send the product to a electro-magnetic flow meter.
The working principle ensures high performance combined with high measurement accuracy. In fact, the deareator works in vacuum and it facilitates the expansion of air bubbles and the following separation by surfacing.
Furthermore, the pump, placed downstream the deareator, generates a pressure jump that compresses the residual micro-bubbles minimizing the measuring error made by the flowmeter, placed downstream of the pump.

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The operator can set the litres-counter in 4 stages using panel buttons: preparation, production, production end and washing.

The washing configuration provides timed switching of the pneumatic valves to allow effective cleaning of all lines. The washing can be managed through clean contacts, by a possible C.I.P. system present in the plant, allowing it to be implemented on existing lines without making major changes to the production plant.

Standard component
Constant level AISI304 stainless steel tank
Sanitary centrifugal pump for product relaunch mod. FCA managed by inverter
Digital electro-magnetic flow meter
Compressed air ejector for the production of vacuum
Command and control board with printer
Stainless steel skid with height-adjustable feet

Optional component
Alimentary flexible pipe for receiving from truck tank
Tank for receiving from bins
Plates heat exchanger
Liquid ring vacuum pump controlled by inverter
HMI touch screen panel
Remote control

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Model	Inlet Pressure [Bar]	Vacuum Pressure [Bar]	Max Temperature[°C]
All Models	0	-0,85	+95 (higher on request)

Model	Flow Rate [L/h]	Electropump FCA [kW]	Capacity of Tank [L]	Automation
DEGA900	300 – 900	1,1	50/147	Automatic / Semi-automatic
DEGA2500	1.000 – 2.500	1,5	100/196	Automatic / Semi-automatic
DEGA4000	3.000 -4.000	2,2	150/246	Automatic / Semi-automatic
DEGA5500	4.500 – 5.500	3	200/353	Automatic / Semi-automatic
DEGA10000	6.000 -10.000	4	250/424	Automatic / Semi-automatic
DEGA18500	11.000 -18.500	5,5	300/481	Automatic / Semi-automatic
DEGA27500	19.000 -27.500	7,5	400/578	Automatic / Semi-automatic
DEGA39000	28.000 -39.000	9,2	500/754	Automatic / Semi-automatic

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ESLP – Pasteurizers ESL

Link: https://www.fdb.it/eslp/eslp-pasteurizers-esl/

Managed via PLC on HMI with 12 “color touch-screen LCD screen, from which it is possible to check the status of the valves, the state of the pumps, the percentage of opening of the modulating valves, the temperatures, the pressures in real time on P&ID. the instant flow rate, the liters of product processed, the level in the tank, the status of the plc, etc. 10 production recipes are available.
In each recipe it is possible to set the temperatures, the instant flow rate and manage any bypass (optional).

The operator has the possibility to configure the pasteuriser in sanitization with hot water in recirculation, in temperature stabilization before production, in production with automatic request of the product, at the end of production with total emptying of the product, in cooling / switching off and in wash.

The end-of-production sequence provides for total emptying by pushing with water, designed to reduce product losses to a minimum. 1 washing recipe is available (remotely). In each recipe it is possible to set temperatures, instant flow and manage possible bypass. The washing configuration provides timed switching of the pneumatic valves allowing effective cleaning of all lines. Washing can be managed by your C.I.P. or from the washing

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preparation group (optional). Furthermore the system can be controlled in “manual / semi-automatic” mode, in which the operator can force / activate / deactivate / modify the P&ID components.

This mode is mainly used to act as appropriate in the event of unforeseen events but allows an experienced operator to conduct in a completely independent manner by automation.

Moreover with the following features:

- First pasteurization stage H.T.S.T. (high temperature, short time) with indirect steam / water / product exchange.
- Second stage of pasteurization E.S.L. (extended shelf life) with indirect exchange steam / water / product.
- Product / product heat recovery> 85%.
- Digital recording and automatic regulation of pasteurization temperature H.T.S.T., with deviated.
- Digital recording and automatic regulation of pasteurization temperature E.S.L.
- Digital recording and automatic adjustment of the outlet temperature.
- Digital recording of differential pressure.
- Automatic adjustment of the exchanger counter-pressure.
- Automatic adjustment of the counter-pressure of the E.S.L. line.
- Automatic flow rate adjustment.
- Constant automatic level in the tank, with remote pump control.
- Valvole pneumatiche con sensore di posizione e led di stato.

STANDARD COMPONENTS
Costant level tank
Centrifugal sanitary pump
Plates heat exchanger
Automatic unit for sterilization and outlet temperature control
Automatic unit for flow and back-pressure regulation
Rectilinear holding pipe
Automatic unit for hot water circulation and heating through steam
Automatic unit for cooling with water

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Automatic unit for potable water loading, for plant preparation and total emptying
Command and control board
Stainless steel skid with height-adjustable feet
Structure with housed connections

OPTIONAL COMPONENTS
High pressure homogenizer
Connection line for fixed / variable flow homogenizer with automatic sterilizer
Vacuum degasser
Automatic group automatic washing unit for recirculation
HMI web server, remote management

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HTST – Pasteurizers

Link: https://www.fdb.it/institutional/htst-pasteurizers/

I degasatori FDB ITALIA operano sottovuoto e hanno come scopo principale, l'estrazione delle parti volatili presenti all'interno del prodotto, che potrebbero alterare le caratteristiche organolettiche del prodotto.

•HTST – Pasteurizers HTST

https://www.fdb.it/htst/htst-pasteurizers/

•Pasteurizers Batch

https://www.fdb.it/htst/pasteurizer-batch/

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HTST – Pasteurizers HTST

Link: https://www.fdb.it/htst/htst-pasteurizers-htst/

H.T.S.T means high temperature short time. Many products such as milk, juice, wine and other liquid food can be pasteurized.

Pasteurization is a process of food preservation in which packaged and non-packaged foods (such as milk and fruit juices) are treated with mild heat, to eliminate pathogens and extend shelf life. The process is intended to destroy or deactivate microorganisms and enzymes that contribute to food spoilage or risk of disease, including vegetative bacteria.

H.T.S.T. pasteurization means **High Temperature** for a **Short Time**.

The heat exchange process takes place on the **continuous flow** of product, which is heated to the required heating temperature, for a standstill time, then to the required outlet temperature.

The HTST pasteurizer is equipped with several controls to ensure the effectiveness of the treatment, record the preliminary process of sanitization, preparation, start and end of

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product treatment and washing of the machinery.

The operator can set the pasteurizer in 5 stages using panel buttons, these are: sanitization, preparation, production, production end and washing.

The washing configuration provides a flow increase, temperatures change and timed switching of the pneumatic valves to ensure an effective cleaning. The washing cycle can be managed by a remote C.I.P. plant, allowing it to be implemented on existing lines without making major changes to the production plant.

Standard components
Constant level tank
Sanitary centrifugal flow pump mod. FCA managed by a frequency inverter drive
Plate heat exchanger mod. PHEX FDB with hot/cold heat recovery
Automatic unit for temperatures regulation
Unit for flow, back-pressure and differential pressure regulation
Sanitary centrifugal booster/timing pump mod. FCA (when required)
Heated product holding tube
Automatic unit for hot water with centrifugal pump and proportional valve
Unit for cooling with water
Unit for potable water loading
Command and control board with digital recorder
Pneumatics board
Stainless steel skid with height-adjustable feet

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Model		Max Temperature [°C]
All models		+95 (higher on request)

Model	Flow rate [L/h]	Installed power [kW]
HTST300/900	300 – 900	
HTST1000/2500	1.000 – 2.500	
HTST3000/4000	3.000 – 4.000	
HTST4500/5500	4.500 – 5.500	
HTST6000/10000	6.000 – 10.000	
HTST11000/18500	11.000 – 18.500	
HTST19000/27500	19.000 – 27.500	
HTST28000/39000	28.000 – 39.000	

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Model #########	Semi-Automatic light ############	Semi-Automatic ############	Automatic ############	Full-Automatic ############
Control for the remote loading pump	Power line, optional	Dry signals, Power line, optional	Dry signals, Power line, optional Power line with inverter, optional	Dry signals, Power line, optional Power line with inverter, optional
Level on balance tank	Float-ball inlet with flow adjusting butterfly valve	Float-ball inlet with flow adjusting butterfly valve. Min/max level probe Min/max level probe and pneumatic valve, optional Continuous level probe and pneumatic valve, optional	Continuous level probe and pneumatic valve	Continuous level probe and pneumatic valve
Control of flow pump	With inverter and visual flow-meter Pump speed change on cycle switch	With inverter and visual flow-meter Pump speed change on cycle switch With inverter and digital flow-meter for automatic flow, optional	With inverter and digital flow meter for automatic flow	With inverter and digital flow meter for automatic flow
Differential pressure and back-pressure control	With pressure probes and flow adjusting butterfly valve	With pressure probles and pressure adjusting butterfly valve With pressure probes and proportional valve, optional	With pressure probes and proportional valve	With pressure probes and proportional valve
Heating temperature control	Automatic, with indirect exchange water/product	Automatic, with indirect exchange water/product	Automatic, with indirect exchange water/product	Automatic, with indirect exchange water/product
Outlet temperature control	Manual adjusting on thermometer	Automatic with proportional valve on temperature probe	Automatic with proportional valve on temperature probe	Automatic with proportional valve on temperature probe
Potable water control	Manual loading	Manual loading Automatic loading on cycle switch, optional	Automatic loading on cycle switch	Automatic loading on cycle switch

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Command and control board, automation	Digital recorder PID controllers Phase switch: sanitization, production, washing,	Digital recorder PID controllers PLC Internet remote assistance, optional Basic data exchange, and basic remote management, optional Phase switch: sanitization, preparation (optional), production, end_production (optional), washing	Digital recorder PID controllers PLC and HMI touch panel Internet remote assistance Db data exchange and remote management, optional Phase switch: sanitization, preparation, production, end_production, washing Pneumatic valves with control unit, optional	Digital recorder PID software PLC and HMI touch panel Internet remote assistance Db data exchange, remote management systems and integration with factory supervisor for Industry 4.0 Phase switch: sanitization, preparation, production, end_production, washing Pneumatic valves with control unit

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Optional components
Heated product holding pipe for two or more holding times
Unit for heat recovery adjusting to obtain a constant temperature to centrifugal separator or to degasser or to homogenizer
Unit for product pre-cooling with tower water/well water
Unit for product cooling or post-heating on outlet (cold outlet / hot outlet)
Unit for product cooling, post-heating, super hot post-heating on outlet (cold outlet / hot outlet / super hot post-heating, up to pasteurization temperature)
Heating by indirect exchanger water/product, with built-in electrical hot water boiler (Max temperature +85°C)
Heating by indirect exchange steam/water/product, with self-operated pressure reducer and brazed plate heat exchanger
Heating by indirect exchange steam/water/product, with built-in electrical steam generator
Shell and multi-tubes heat exchanger mod THEX FDB for high pasteurization temperature
Connection line for centrifugal separator
Connection line for degasser
Connection line for high pressure homogenizer
Automatic C.I.P. washing unit, built-in
Perimeter structure with housed the connections

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Optional equipment
Self-cleaning centrifugal separator
Vacuum degasser DEGA FDB
High pressure homogenizer
Electrical hot water boiler, stand-alone
Electrical steam generator, stand-alone
Hot water heating unit by steam, stand-alone
Automatic Cleaning In Place C.I.P. unit CIPP FDB, stand-alone

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Batch Pasteurizers

Link: https://www.fdb.it/tank/batch-pasteurizers/

The batch pasteurizer is very useful for treating fluids with very high viscosity and low conductivity such as custard and other viscous creams.

This configuration avoids high pressure drops and controls the pasteurization process with greater flexibility. They can provide a continuous flow of incoming and outgoing product, easily managing the pasteurization maintenance time.
This flexibility offers the possibility of processing many different products and obtaining the best quality. Batch Pasteurizer can be equipped with multiple tanks that work in parallel to provide a continuous flow.
The number of tanks required depends on the time required to reach the pasteurization temperature and the physical properties of the fluid. Small tanks require shorter heating times. Heating and cooling are supplied to the product through a jacket around the pasteurization tank and the product is continuously mixed through a stirrer inside it. There is a relationship between the volume of the tanks and the flow rate provided and is shown

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in the following table.
The minimum number of tanks is 2. For special requirements it is possible to provide a higher flow rate with small tanks.

Volume of each Tank [L]	Flow rate [L/h]
150	250-300
300	300-600
600	600-1200
1200	1200-2400
2400	2400-4800

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PHEX – Plate Heat Exchangers

Link: https://www.fdb.it/phex/plate-heat-exchangers/

Plate heat exchangers are the most efficient and suitable exchangers for the food industry. They are suitable for non-viscous food products such as water, milk, beer etc.

The most important information for designing a plate heat exchanger is: the fluids involved in the exchange, the flow rate and the input / output temperature of the product, the flow rate and the input (or output) of the temperature of the process fluid (such as water, steam, etc.).

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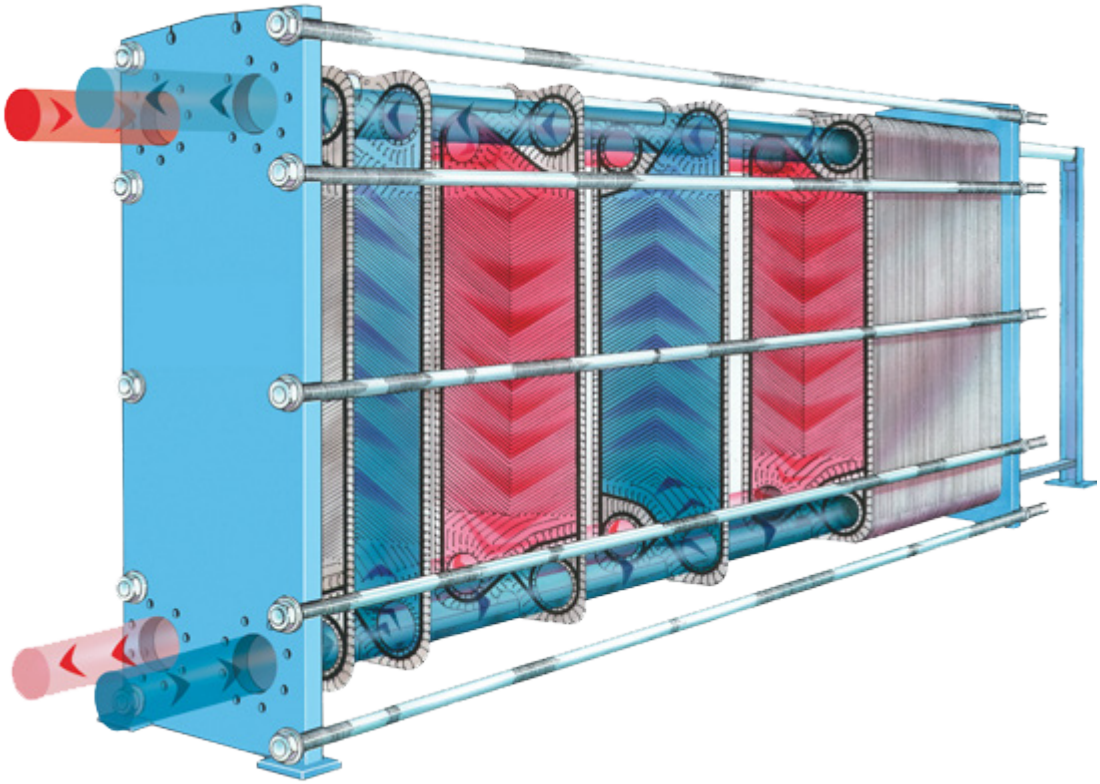

Structure, size and number of stages depend on the specific application and performance required.
We design and optimize the plate heat exchanger specifically for your application. Other customizations can be added.

AISI316 stainless steel guarantees the suitability of the machine for the food industry. AISI304 can be used for water or other process fluids (not food products). The thickness of the plate depends on the differential pressure of the second side. The gasket material depends on the fluids involved. A wider range of products is offered.

A summary table of each possible product is shown with some additional technical details. The legend is shown first in the table.

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LEGEND

G=glued	L=locked	N=NBR, NBR/HT	E=EPDM	V=VITON
316L=AISI316L	316=AISI316	304=AISI304	Ti=Titanium	DW=Double wall FF=Free flow

TABLE

Frame Model	Plate Surface (m2)	Plate Port (mm)	Plate Materials	Gasket Material—Gasket Locking (Glued/Locked)	Double wall / Free flow
FDB030	0,030	32	316	N/E—G	
FDB037	0,037	29	316L/Ti	N/E/V—L	DW
FDB046	0,046	32	316L	N/E/V—L	
FDB047	0,047	28	304/316L/Ti	N/E/V—L	
FDB060	0,060	nd	316	N/E—G	
FDB070	0,070	29	316	N/E/V—G	
FDB075	0,075	29	316L/Ti	N/E/V—L	
FDB080	0,080	nd	316	N/E—L	
FDB085	0,085	nd	316	N/E—G	
FDB090	0,090	40/42	316/Ti	N/E—L	DW
FDB093	0,093	56	316L/Ti	N/B/V—L	
FDB115	0,115	50	316L	N/E/V—L	
FDB120	0,120	67	304/316	N/E—G	DW

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FDB130	0,130	67	304/316/Ti	N/E/V—L/G	DW
FDB135	0,135	55	304/316/Ti	N/E/V—G	
FDB150	0,150	56	316L/Ti	N/E/V—L	DW
FDB169	0,169	56	304/316L/Ti	N/E/V—L	DW
FDB180	0,180	67	304/316	N/E/V—G	
FDB210	0,120	56	316L/Ti	N/E/V—L	
FDB240	0,240	100	304/316L/Ti	N/E/V—L	DW
FDB260	0,26	78/105	304/316/Ti	N/E/V—L/G	DW
FDB400	0,400	100	304/316L/Ti	N/E/V—L	
FDB440	0,44	105	304/316/Ti	N/E/V—L/G	DW
FDB460	0,46	105	316L	N/E/V—L	FF
FDB500	0,500	100	304/316L/Ti	N/E/V—L	DW
FDB540	0,54	nd	304/316/Ti	N/E/V—L/G	
FDB550	0,55	nd	304/316/Ti	N/E/V—L/G	
FDB610	0,61	nd	304/316/Ti	N/E/V—G	
FDB640	0,64	nd	304/316/Ti	N/E/V—G	

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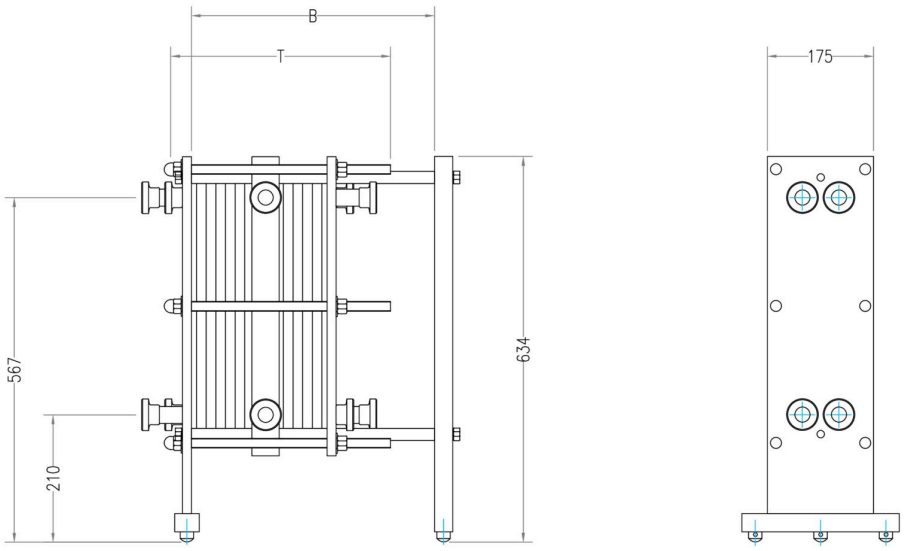
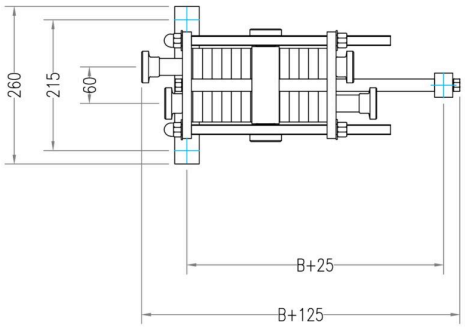
PHEX_FDB030

Link: https://www.fdb.it/phex/phex_fdb030/





FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,03 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	31 mm
DIN11851	DN32
CLAMP DIN32676	DN32
CLAMP ISO2852	DN25
CLAMP BS4825	1"
SMS	1"
BSPT	1"
RJT	1"
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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PLANTS AND EQUIPMENT FOR THE FOOD INDUSTRY
36034 Malo Vicenza Italy
Tel +39 0445 637 525
Telefax +39 0445 637 560
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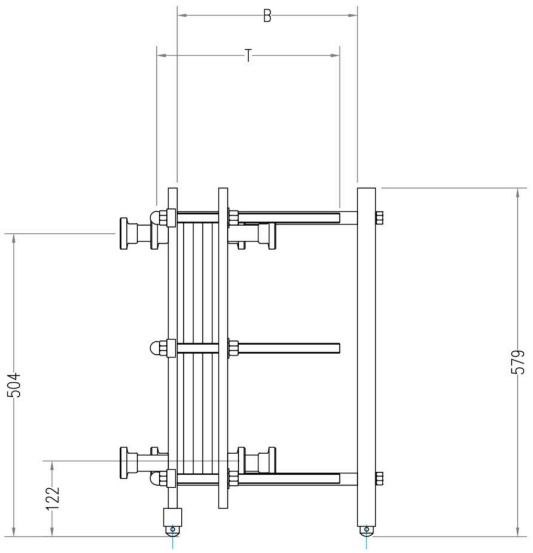
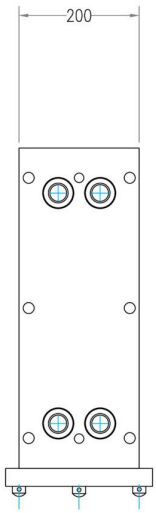
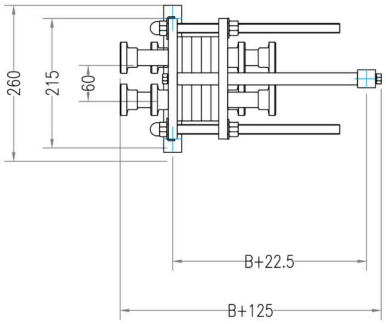
TITLE/NAME: FDB030 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB030_DIMENSIONAL.PDF

PHEX_FDB037

Link: https://www.fdb.it/phex/phex_fdb037/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,037 m^2
WORKING/TEST PRESSURE	10/13 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	37 mm
DIN11851	DN40
CLAMP DIN32676	DN40
CLAMP ISO2852	DN25
CLAMP BS4825	1"
SMS	1"
BSPT	1"
RJT	1"
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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36034 Malo Vicenza Italy
Tel +39 0445 637 525
Telefax +39 0445 637 560
www.fdb.it info@fdb.it

TITLE/NAME: FDB037 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB037_DIMENSIONAL.PDF

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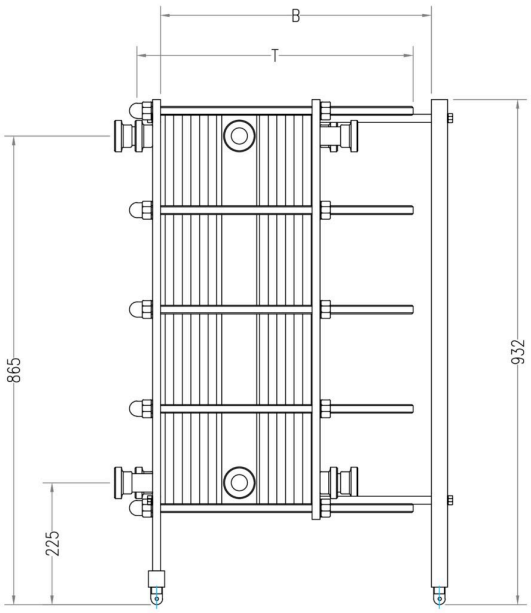
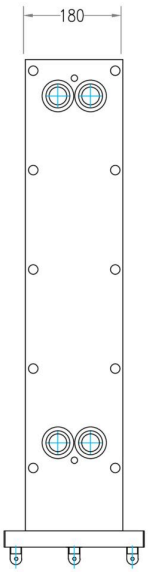
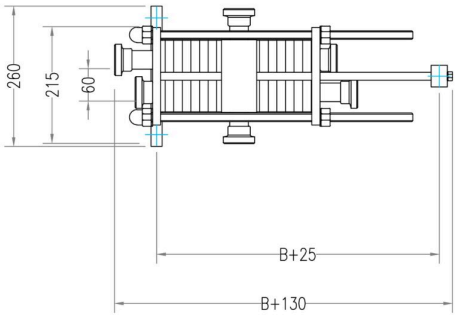
PHEX_FDB060

Link: https://www.fdb.it/phex/phex_fdb060/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,06 m^2
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	30 mm
DIN11851	DN32
CLAMP DIN32676	DN32
CLAMP ISO2852	DN25
CLAMP BS4825	1"
SMS	1"
BSPT	1"
RJT	1"
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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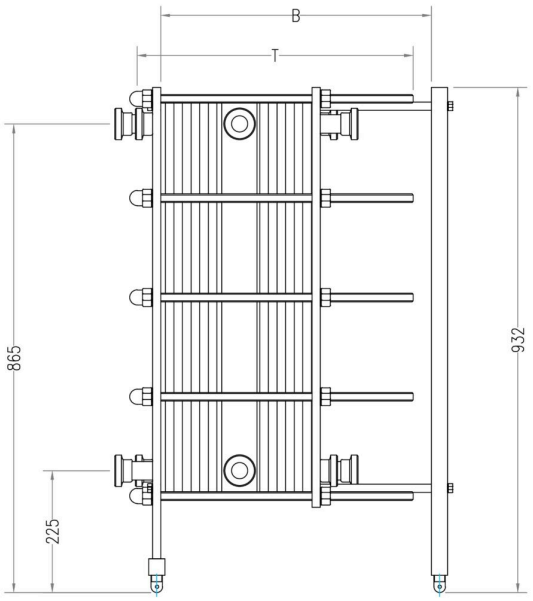
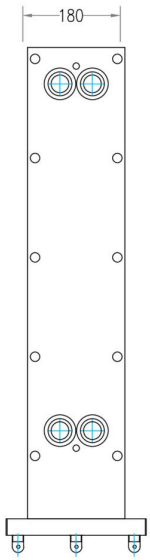
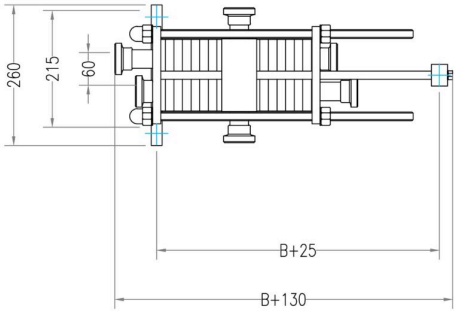
TITLE/NAME: FDB060 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB060_DIMENSIONAL.PDF

PHEX_FDB070

Link: https://www.fdb.it/phex/phex_fdb070/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,07 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	30 mm
DIN11851	DN32
CLAMP DIN32676	DN32
CLAMP ISO2852	DN25
CLAMP BS4825	1"
SMS	1"
BSPT	1"
RJT	1"
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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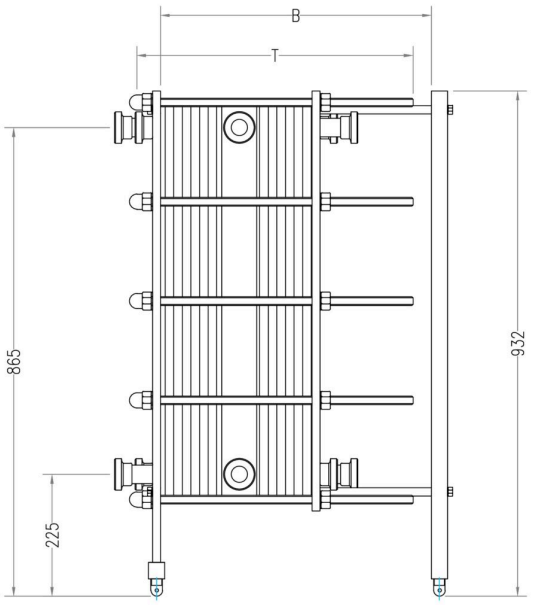
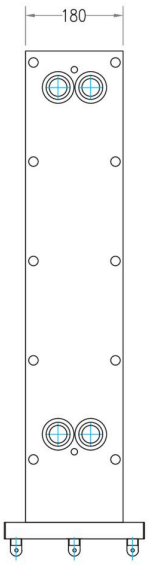
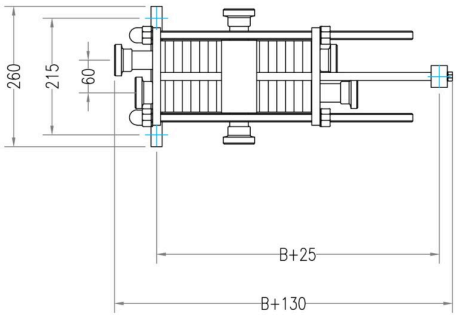
TITLE/NAME: FDB070 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB070_DIMENSIONAL.PDF

PHEX_FDB080

Link: https://www.fdb.it/phex/phex_fdb080/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,08 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	30 mm
DIN11851	DN32
CLAMP DIN32676	DN32
CLAMP ISO2852	DN25
CLAMP BS4825	1"
SMS	1"
BSPT	1"
RJT	1"
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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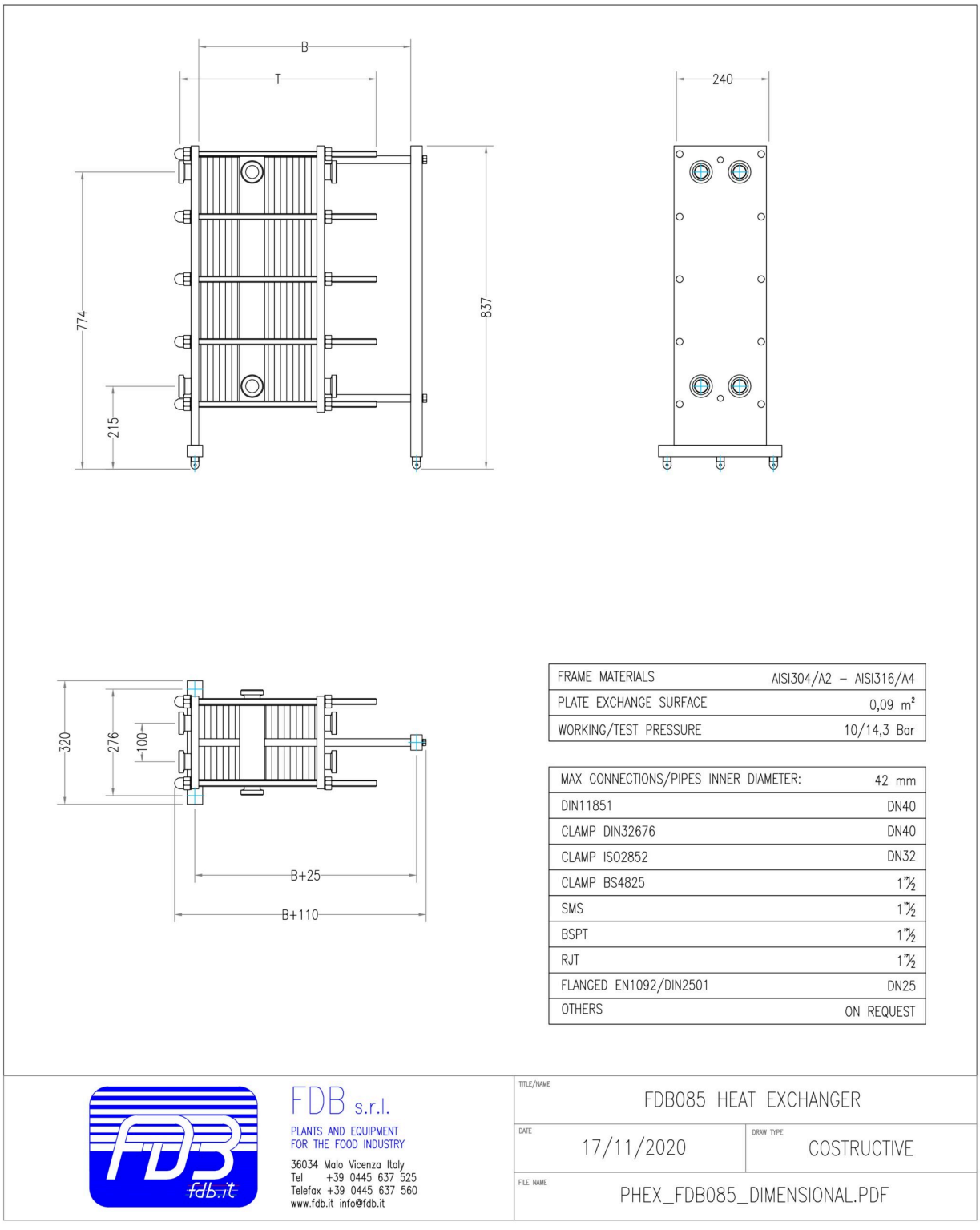
TITLE/NAME: FDB080 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB080_DIMENSIONAL.PDF

PHEX_FDB085

Link: https://www.fdb.it/phex/phex_fdb085/



FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,09 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	42 mm
DIN11851	DN40
CLAMP DIN32676	DN40
CLAMP ISO2852	DN32
CLAMP BS4825	1"½
SMS	1"½
BSPT	1"½
RJT	1"½
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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TITLE/NAME: FDB085 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB085_DIMENSIONAL.PDF

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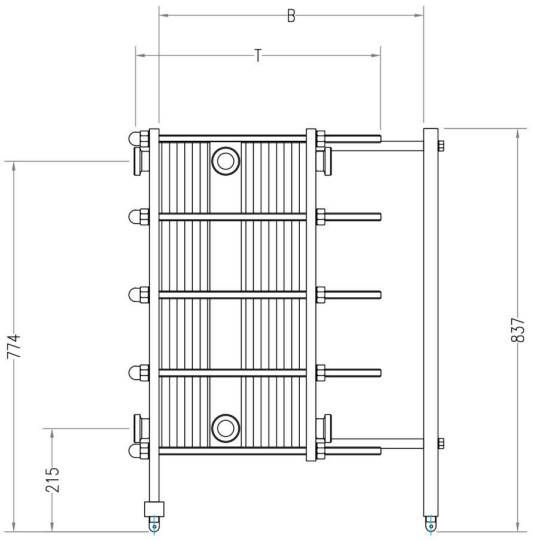
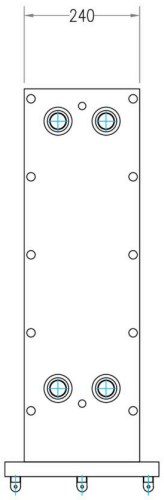
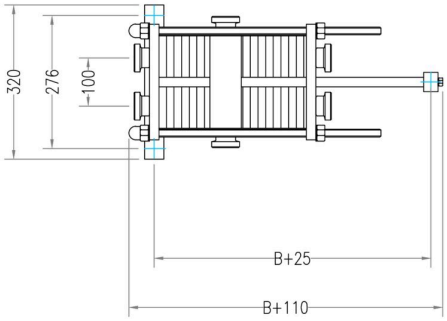
PHEX_FDB090

Link: https://www.fdb.it/phex/phex_fdb090/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,09 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	42 mm
DIN11851	DN40
CLAMP DIN32676	DN40
CLAMP ISO2852	DN32
CLAMP BS4825	1"½
SMS	1"½
BSPT	1"½
RJT	1"½
FLANGED EN1092/DIN2501	DN25
OTHERS	ON REQUEST

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TITLE/NAME: FDB090 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB090_DIMENSIONAL.PDF

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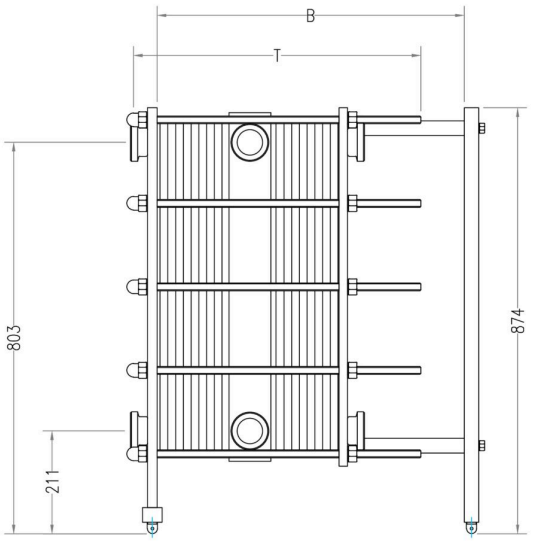
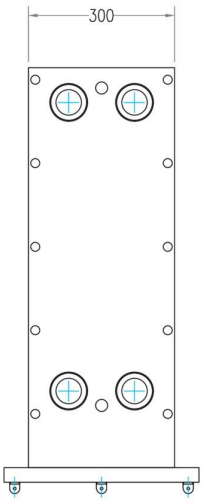
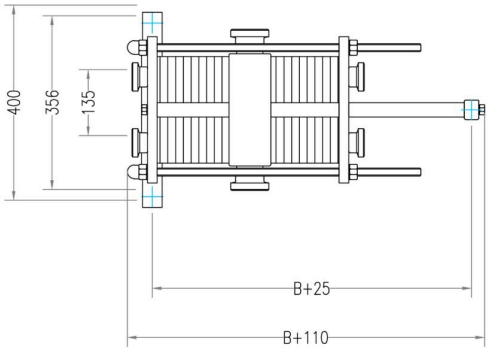
PHEX_FDB120

Link: https://www.fdb.it/phex/phex_fdb120/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,12 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	67 mm
DIN11851	DN65
CLAMP DIN32676	DN65
CLAMP ISO2852	DN50
CLAMP BS4825	2"½
SMS	2"½
BSPT	2"½
RJT	2"½
FLANGED EN1092/DIN2501	DN50
OTHERS	ON REQUEST

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TITLE/NAME: FDB120 HEAT EXCHANGER
DATE: 17/11/2020
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FILE NAME: PHEX_FDB120_DIMENSIONAL.PDF

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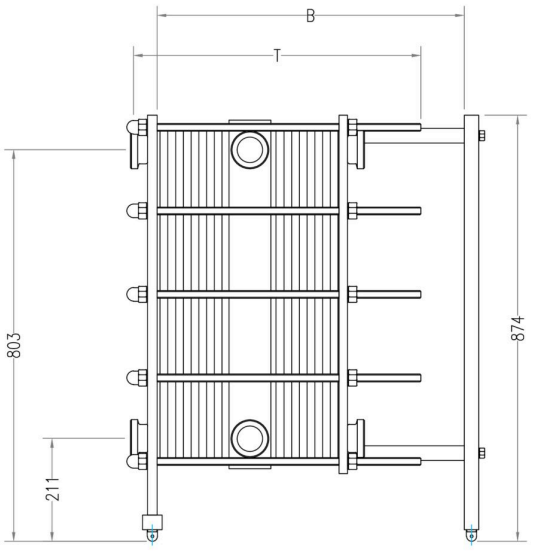
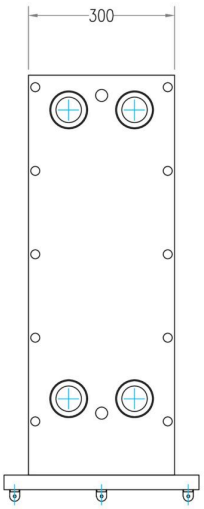
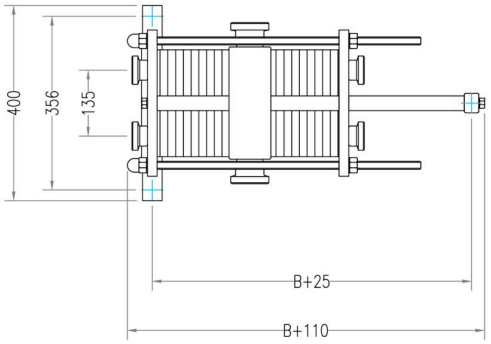
PHEX_FDB130

Link: https://www.fdb.it/phex/phex_fdb130/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,13 m^2
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	67 mm
DIN11851	DN65
CLAMP DIN32676	DN65
CLAMP ISO2852	DN50
CLAMP BS4825	2"½
SMS	2"½
BSPT	2"½
RJT	2"½
FLANGED EN1092/DIN2501	DN50
OTHERS	ON REQUEST

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TITLE/NAME: FDB130 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB130_DIMENSIONAL.PDF

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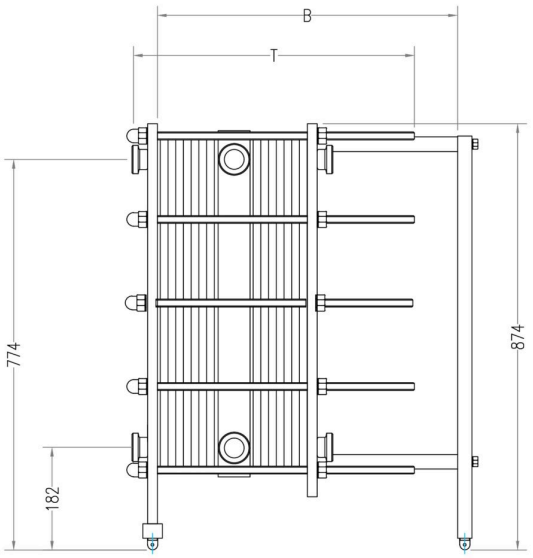
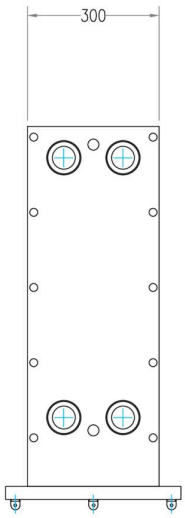
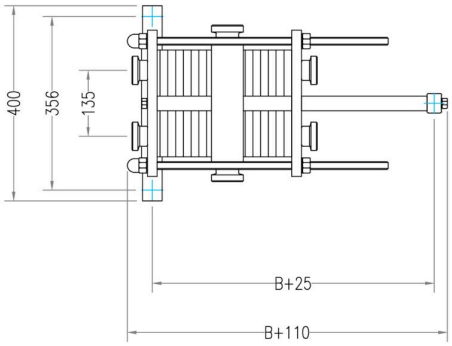
PHEX_FDB135

Link: https://www.fdb.it/phex/phex_fdb135/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,135 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	55 mm
DIN11851	DN50
CLAMP DIN32676	DN50
CLAMP ISO2852	DN40
CLAMP BS4825	2"
SMS	2"
BSPT	2"
RJT	2"
FLANGED EN1092/DIN2501	DN40
OTHERS	ON REQUEST

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TITLE/NAME: FDB135 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB135_DIMENSIONAL.PDF

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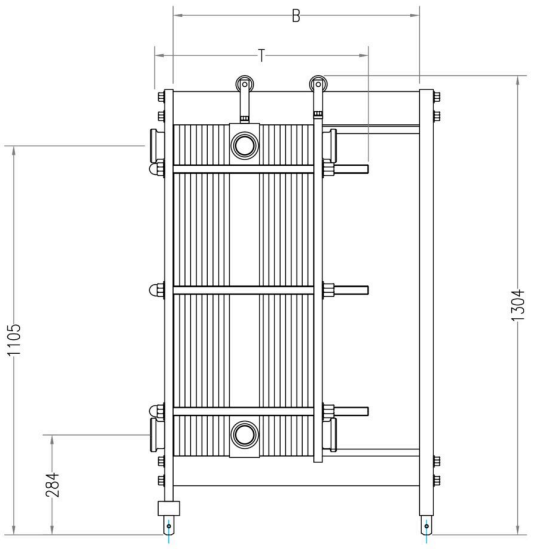
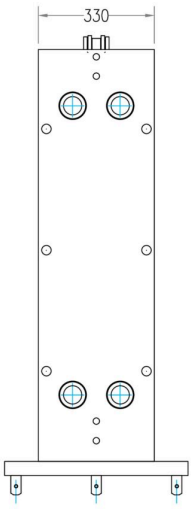
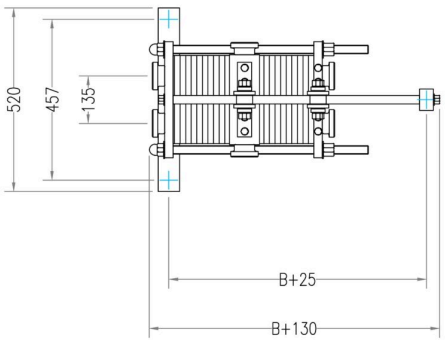
PHEX_FDB180

Link: https://www.fdb.it/phex/phex_fdb180/







FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,18 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	67 mm
DIN11851	DN65
CLAMP DIN32676	DN65
CLAMP ISO2852	DN50
CLAMP BS4825	2"½
SMS	2"½
BSPT	2"½
RJT	2"½
FLANGED EN1092/DIN2501	DN40
OTHERS	ON REQUEST

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TITLE/NAME: FDB180 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB180_DIMENSIONAL.PDF

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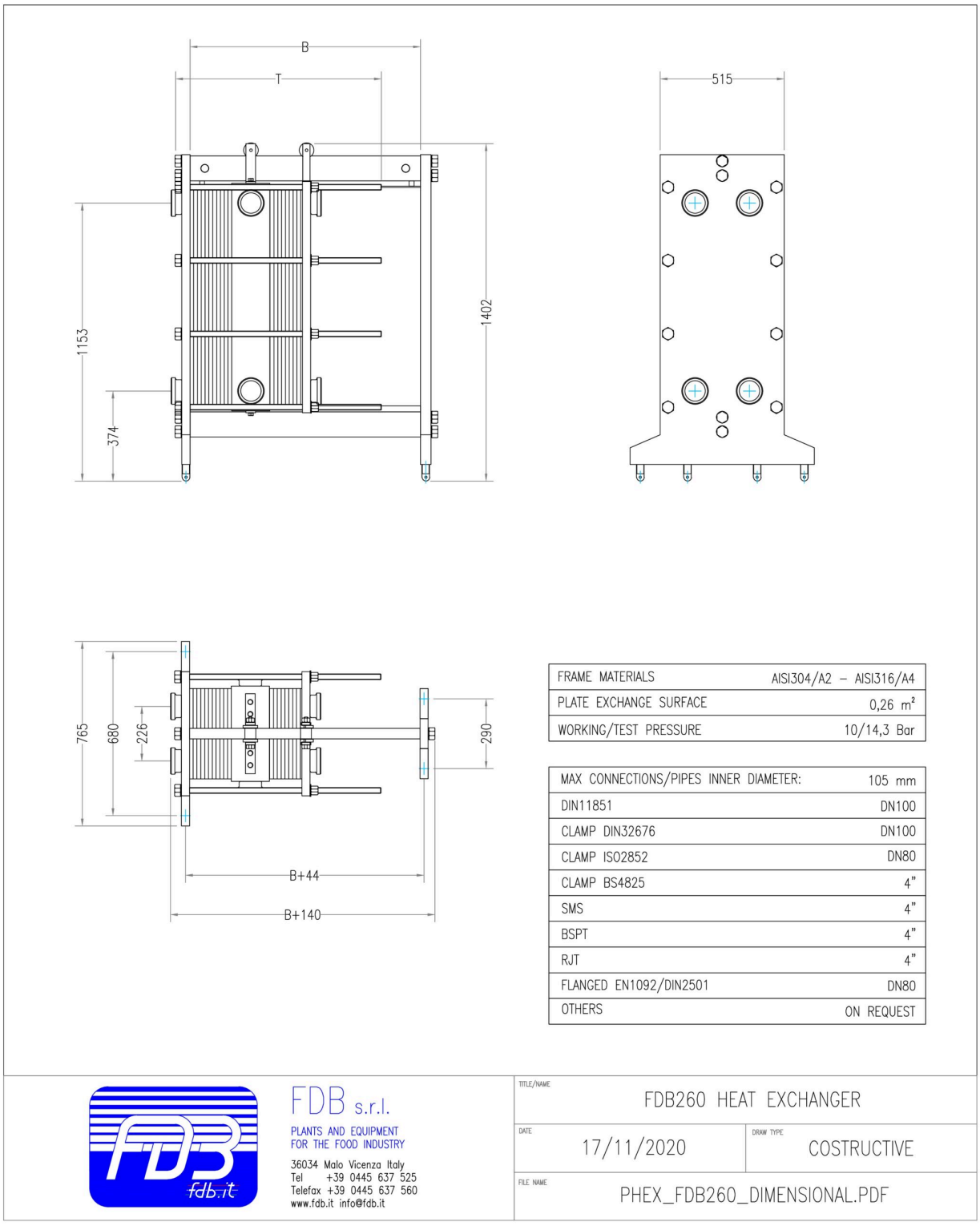
PHEX_FDB260

Link: https://www.fdb.it/phex/phex_fdb260/



FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,26 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	105 mm
DIN11851	DN100
CLAMP DIN32676	DN100
CLAMP ISO2852	DN80
CLAMP BS4825	4"
SMS	4"
BSPT	4"
RJT	4"
FLANGED EN1092/DIN2501	DN80
OTHERS	ON REQUEST

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TITLE/NAME: FDB260 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB260_DIMENSIONAL.PDF

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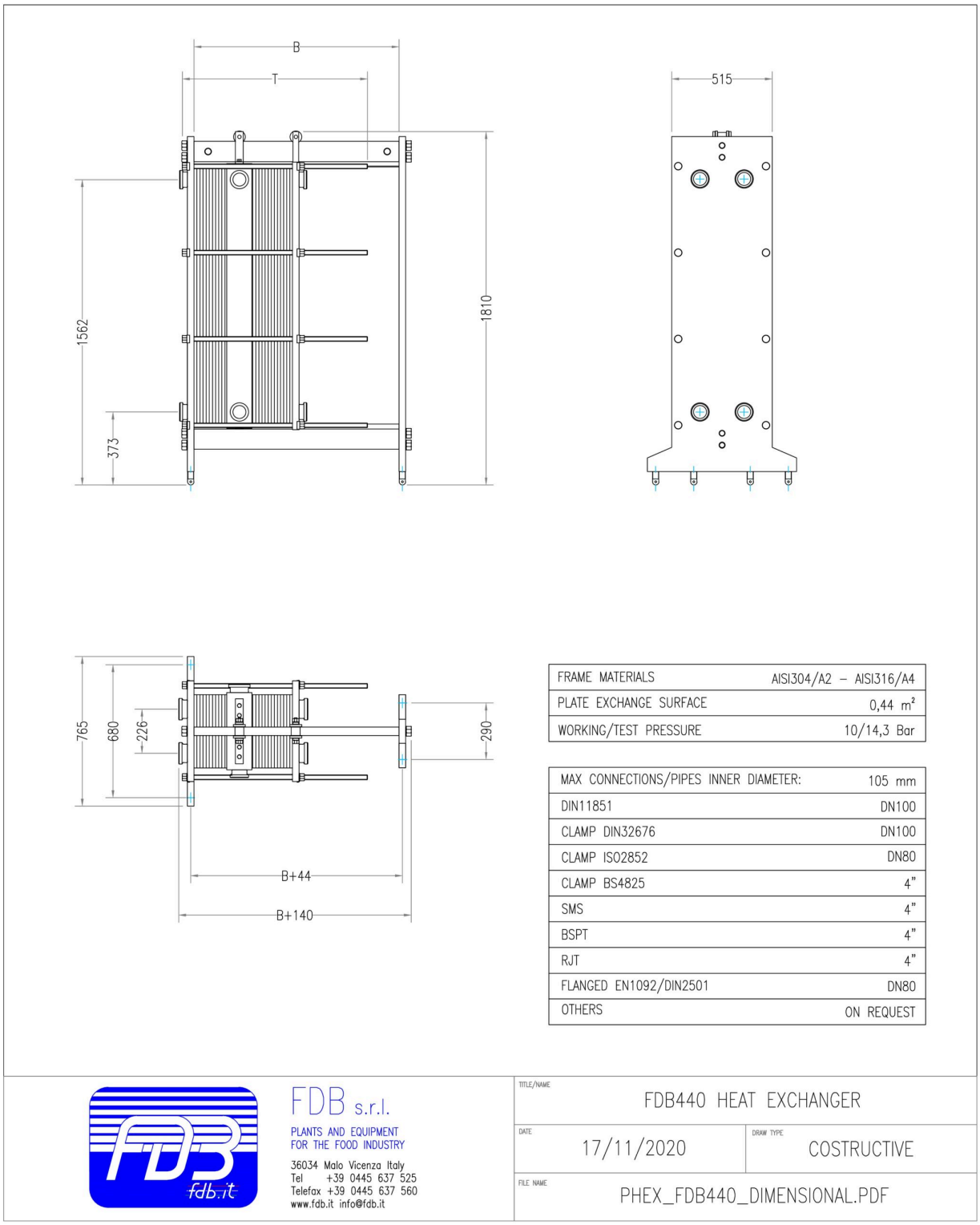
PHEX_FDB440

Link: https://www.fdb.it/phex/phex_fdb440/



FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,44 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	105 mm
DIN11851	DN100
CLAMP DIN32676	DN100
CLAMP ISO2852	DN80
CLAMP BS4825	4"
SMS	4"
BSPT	4"
RJT	4"
FLANGED EN1092/DIN2501	DN80
OTHERS	ON REQUEST

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TITLE/NAME: FDB440 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB440_DIMENSIONAL.PDF

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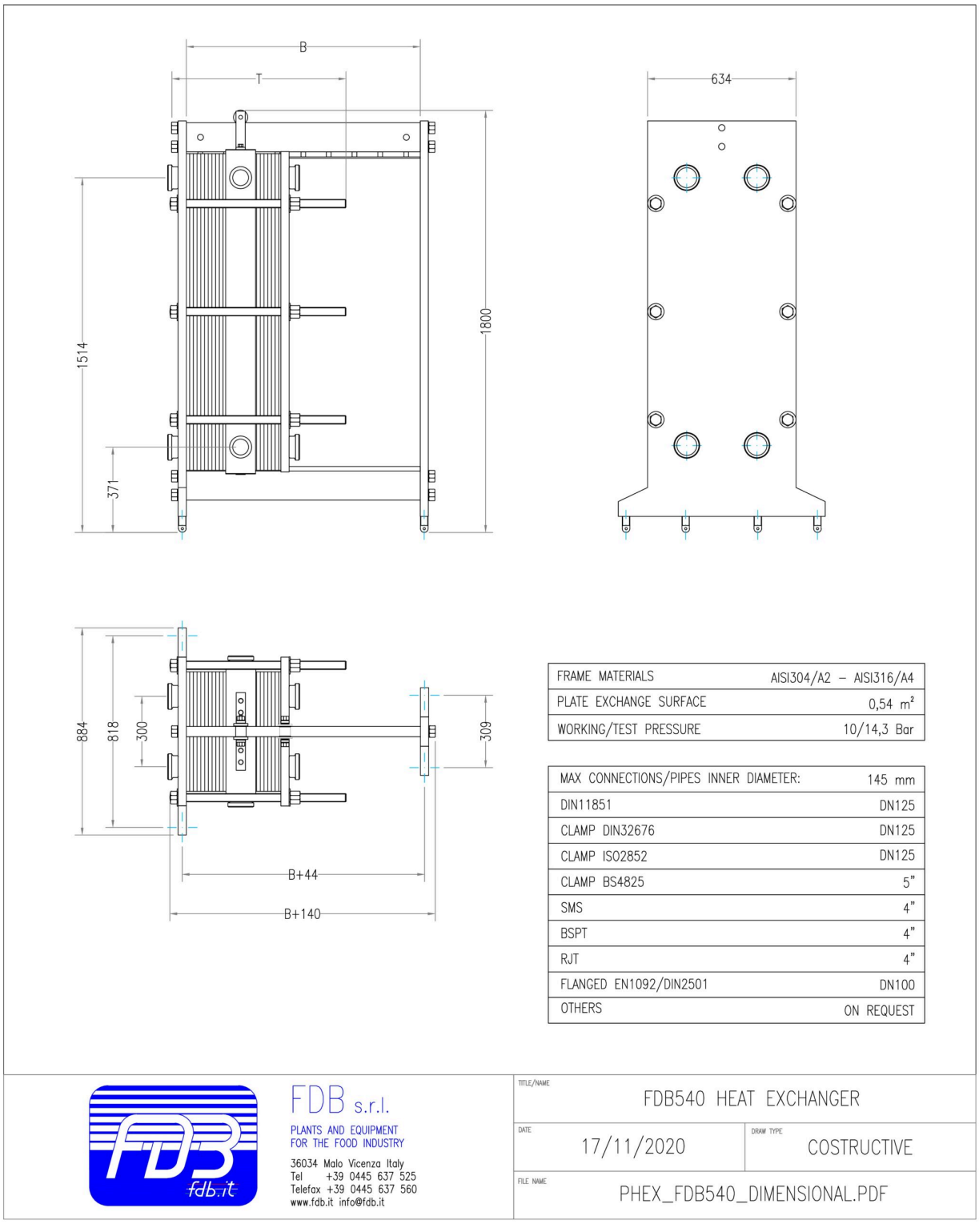
PHEX_FDB540

Link: https://www.fdb.it/phex/phex_fdb540/



FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,54 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	145 mm
DIN11851	DN125
CLAMP DIN32676	DN125
CLAMP ISO2852	DN125
CLAMP BS4825	5"
SMS	4"
BSPT	4"
RJT	4"
FLANGED EN1092/DIN2501	DN100
OTHERS	ON REQUEST

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TITLE/NAME: FDB540 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB540_DIMENSIONAL.PDF

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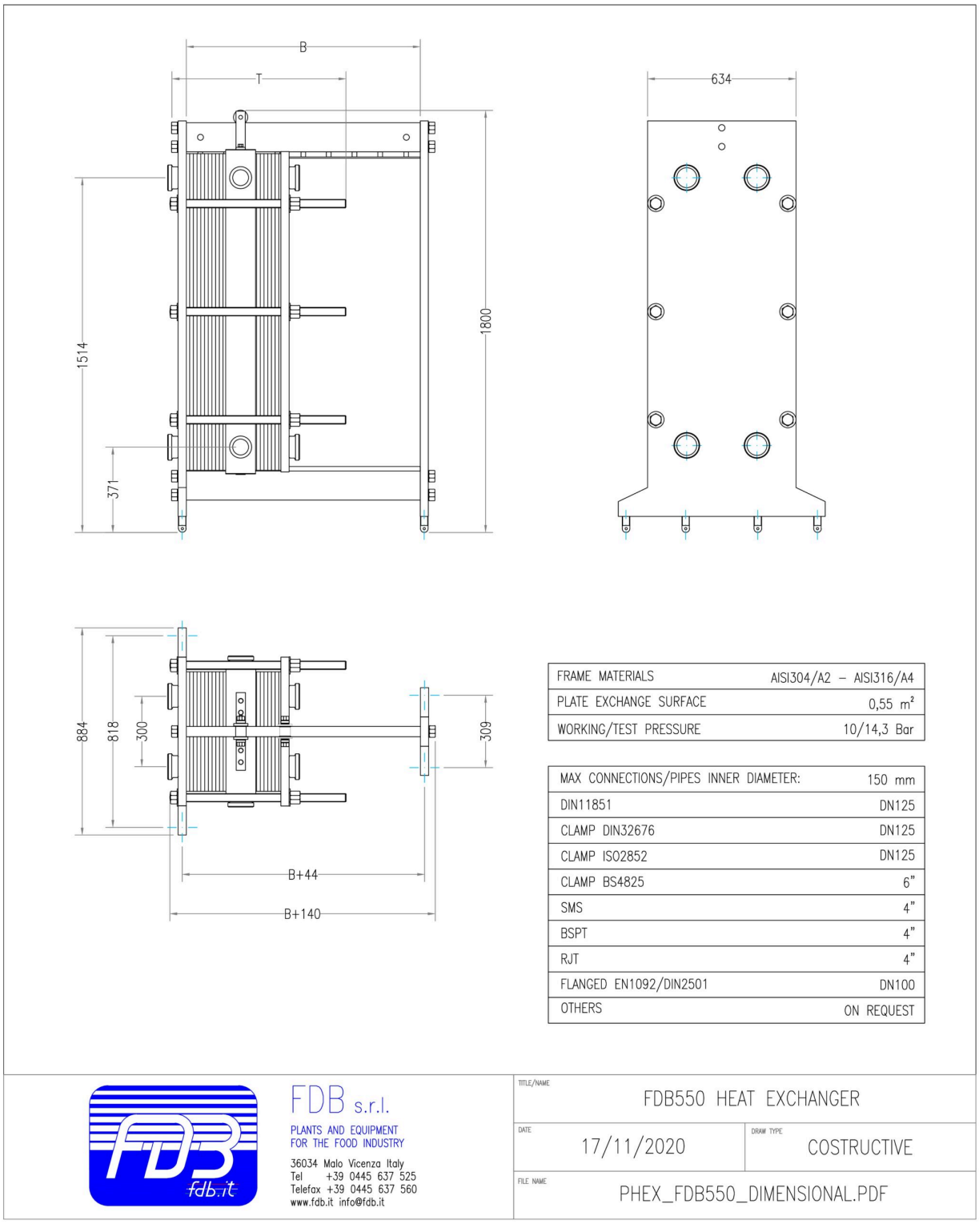
PHEX_FDB550

Link: https://www.fdb.it/phex/phex_fdb550/



FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,55 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	150 mm
DIN11851	DN125
CLAMP DIN32676	DN125
CLAMP ISO2852	DN125
CLAMP BS4825	6"
SMS	4"
BSPT	4"
RJT	4"
FLANGED EN1092/DIN2501	DN100
OTHERS	ON REQUEST

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TITLE/NAME: FDB550 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB550_DIMENSIONAL.PDF

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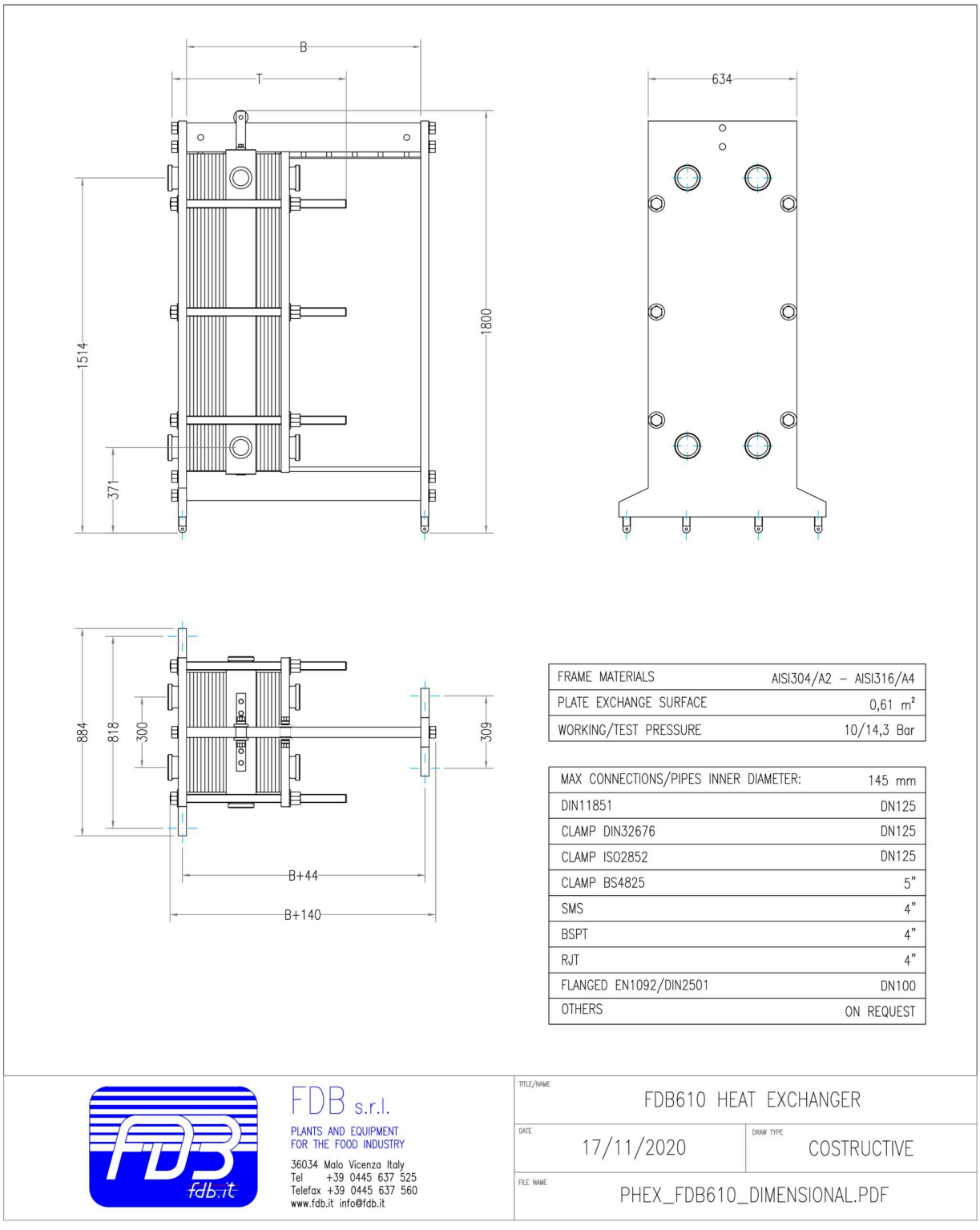
PHEX_FDB610

Link: https://www.fdb.it/phex/phex_fdb610/



FRAME MATERIALS	AISI304/A2 – AISI316/A4
PLATE EXCHANGE SURFACE	0,61 m²
WORKING/TEST PRESSURE	10/14,3 Bar

MAX CONNECTIONS/PIPES INNER DIAMETER:	145 mm
DIN11851	DN125
CLAMP DIN32676	DN125
CLAMP ISO2852	DN125
CLAMP BS4825	5"
SMS	4"
BSPT	4"
RJT	4"
FLANGED EN1092/DIN2501	DN100
OTHERS	ON REQUEST

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TITLE/NAME: FDB610 HEAT EXCHANGER
DATE: 17/11/2020
DRAW TYPE: COSTRUCTIVE
FILE NAME: PHEX_FDB610_DIMENSIONAL.PDF

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PUMP – Centrifugal Pumps

Link: https://www.fdb.it/institutional/pump-centrifugal-pumps/

PUMP – Centrifugal sanitary pumps, FCA series

PUMP – Semi-open impeller centrifugal sanitary pumps, FCA series

PUMP – Closed impeller sanitary pumps, FCE series

PUMP – Closed impeller centrifugal pumps, FCE series

PUMP – Self-priming sanitary pumps with open impeller, reversible, TPA series

PUMP – Self-priming sanitary pumps with open impeller, reversible, TPA series

PUMP – Sanitary centrifugal dissolvers Triblender with semi-open impeller, TFCA series

https://www.fdb.it/pump/pump-sanitary-centrifugal-dissolvers-triblender-with-semi-open-impeller-tfca-series/

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PUMP – Semi-open impeller centrifugal sanitary pumps, FCA series

Link: https://www.fdb.it/pump/pump-semi-open-impeller-centrifugal-sanitary-pumps-fca-series/

Semi-open impeller centrifugal sanitary electropumps for the transfer of food liquids, also abrasive and corrosive.
The parts in contact with the product are made of AISI316L while the parts not in contact in AISI304. Complete with stainless steel motor casing and heigh-adjustable feet. Available with differemt powers to ensure the best combination of head and flow rate, depending on the costumer's needs.

Contact us to know which is the best for your needs.
For a more timely response, providing us with the required product, scope and application, we will to provide you with a quotation tailored to your needs.

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STANDARD COMPONENTS
Stainless steel motor cover
Stainless steel base with height-adjustable feet
Ceramic micro shot peening finishes

OPTIONAL COMPONENTS
Version/m with flushed seal for high temperatures, and extremely abrasive, viscous and corrosive liquids
Connections with other unifications (CLAMP, SMS, RJT, UDF, BSPT, EN1092, etc.)
Polished finishes (Ra<0.8 µm)
Anti-vibration feet for floor installation
Feet with fixing plates for installation on a frame
Motor inverter

MODEL	CONNECTIONS	MAXIMUM TEMPERATURE
All models	DIN11851	+95°C (higher on request)

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MODEL	POWER [KW]	FRAME DIMENSION [MEC]	FLOW [L/H]	STANDARD CONNECTIONS [IN/OUT]
FCA2	0,25	71	0-3000	40/25(20)
FCA3	0,37	71	0-5000	40/25
FCA5	0,55	71	0-7000	40/32
FCA7	0,75	80/90	0-10000	50/25(20)
FCA11	1,1	80/90	0-15000	50/25
FCA15	1,5	80/90	0-20000	50/32
FCA22	2,2	80/90	0-25000	50/40
FCA30	3	100/112	0-30000	65/40
FCA40	4	100/112	0-36000	65/50
FCA55	5,5	132	0-42000	80/50
FCA75	7,5	132	0-49000	80/65
FCA90	9	132	0-56000	80/80
FCA110	11	160	0-64000	100/80
FCA150	15	160	0-72000	100/100

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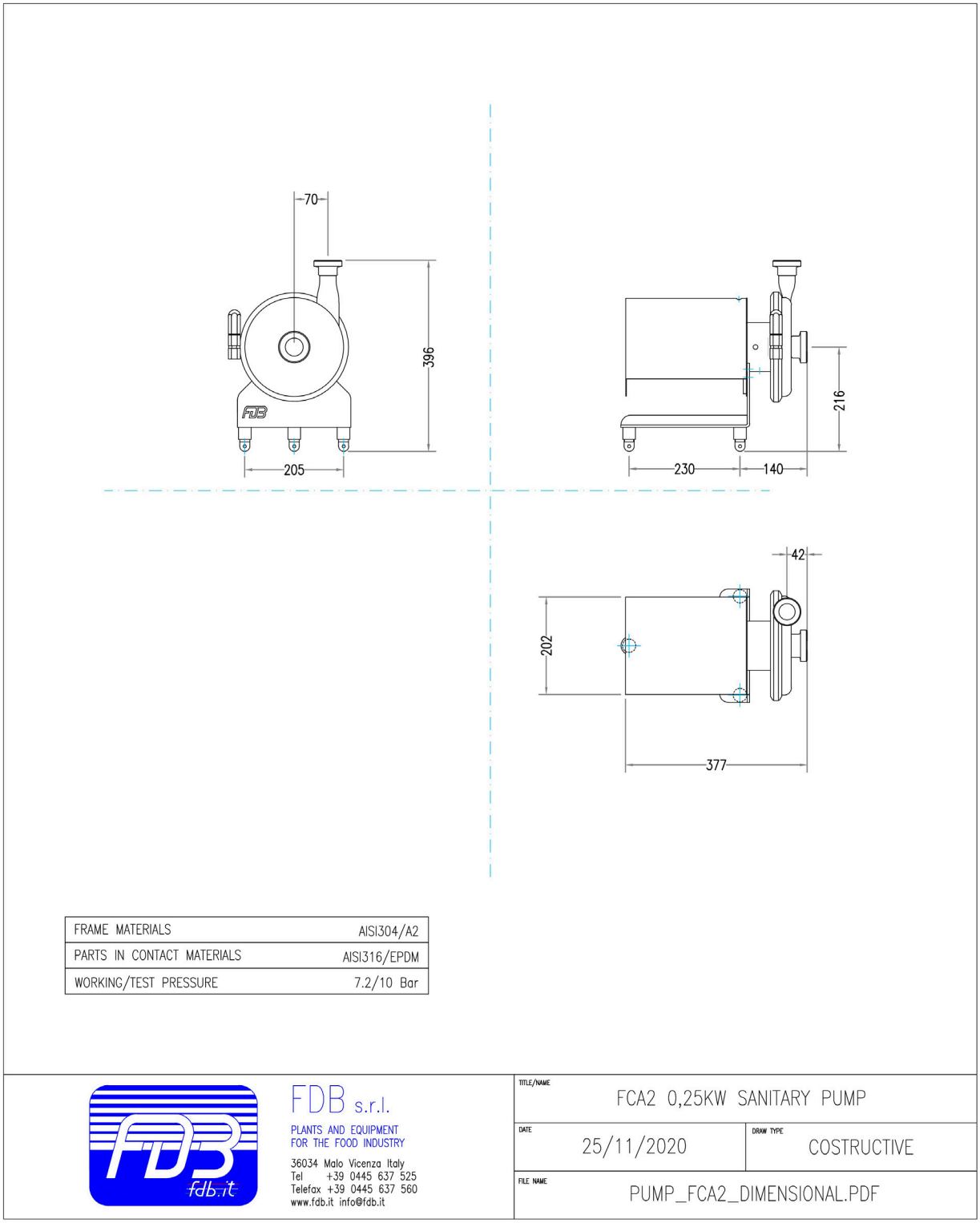
PUMP_FCA2

Link: https://www.fdb.it/pump/pump_fca2/



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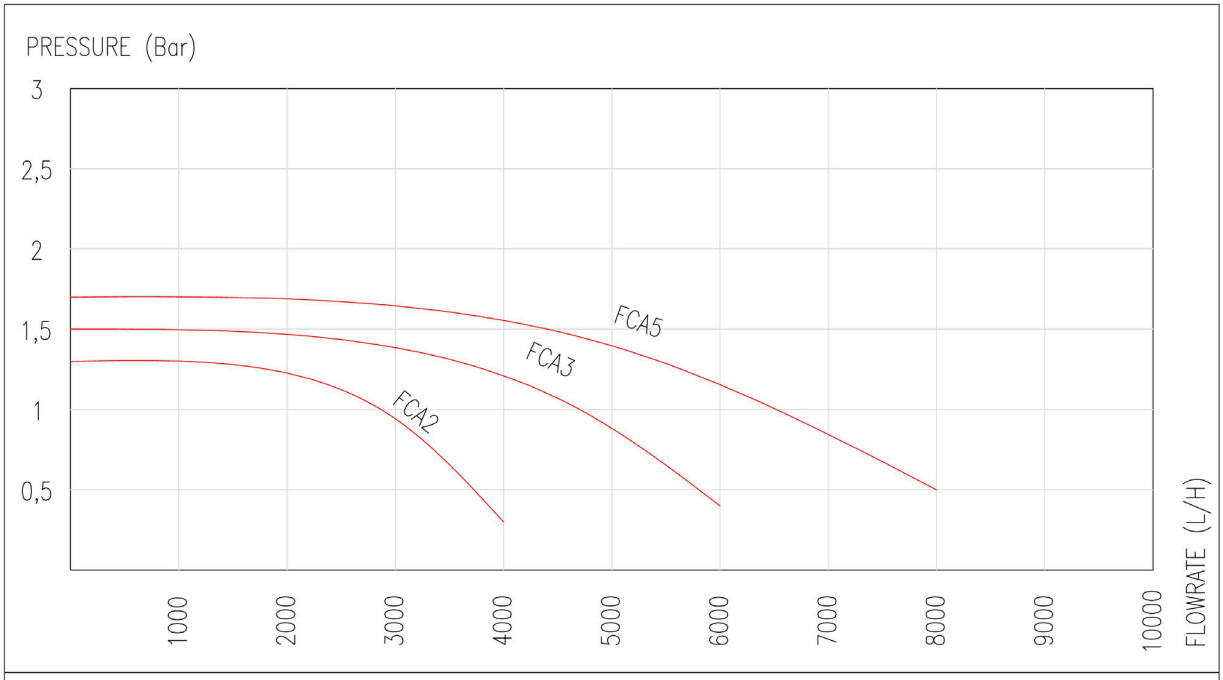

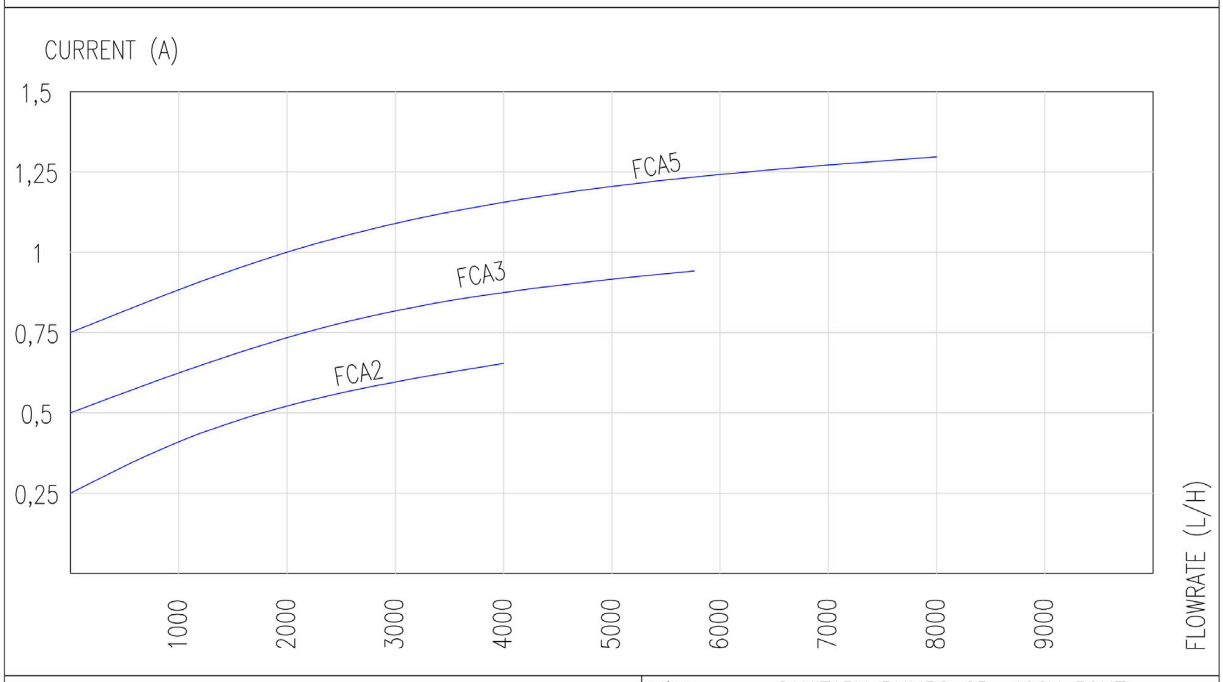

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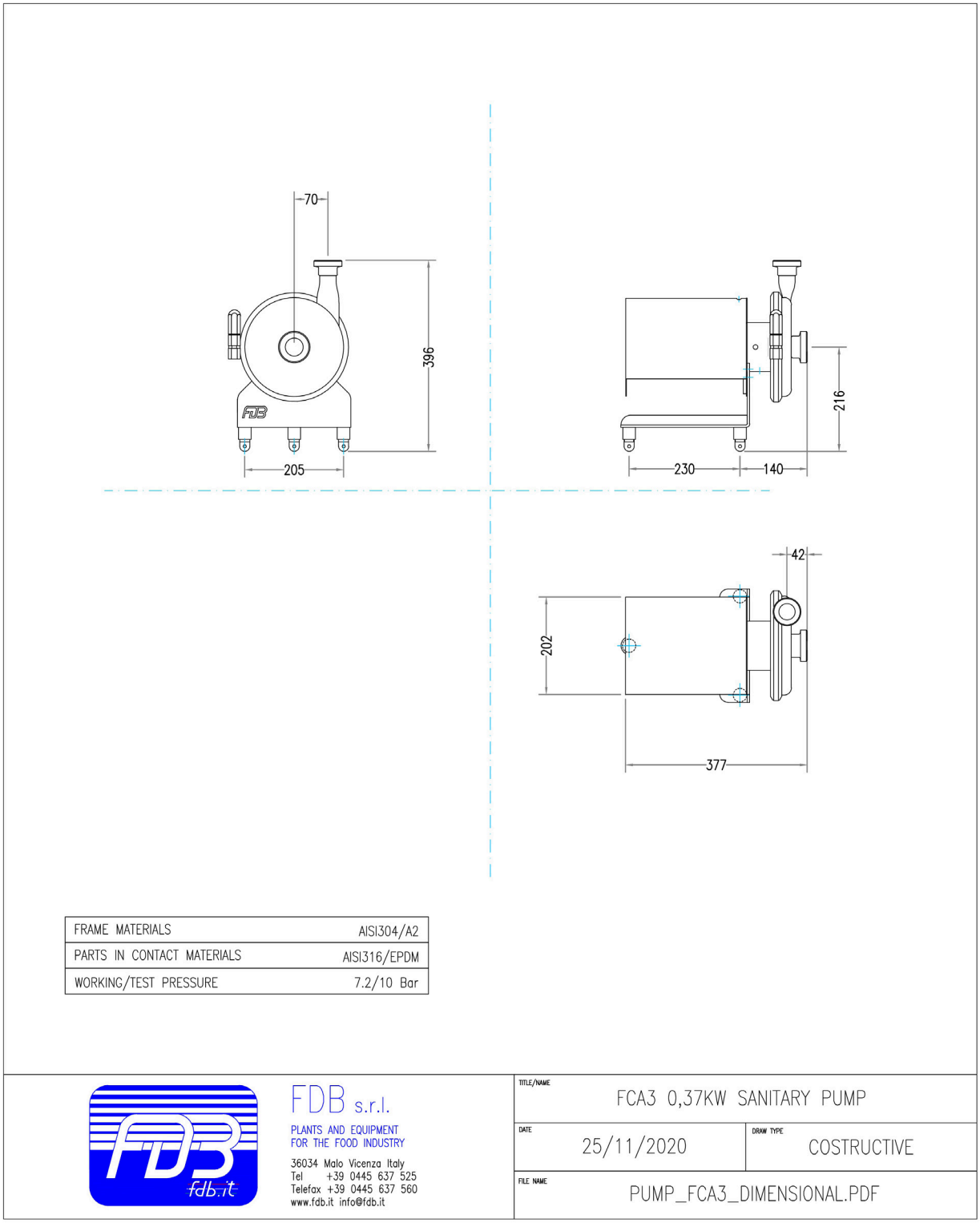
TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA2 0,25KW – FCA3 0,37KW – FCA5 0,55KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA2_FCA3_FCA5_PERFORMANCE.PDF

PUMP_FCA3

Link: https://www.fdb.it/pump/pump_fca3/



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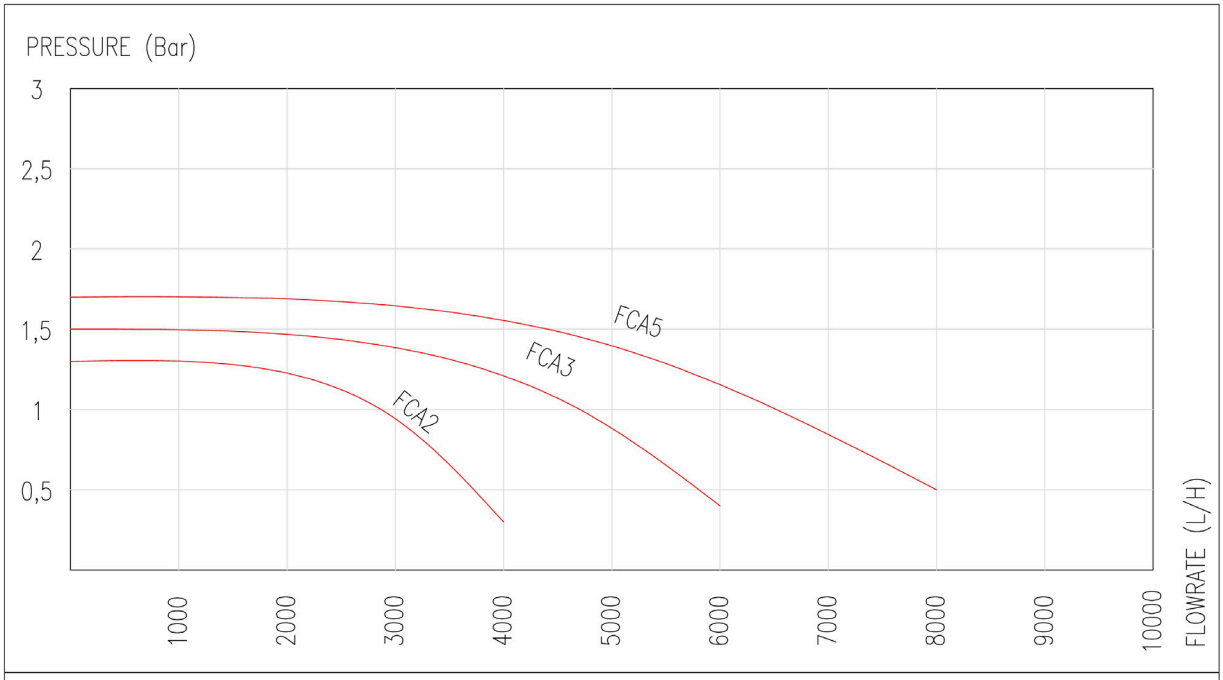

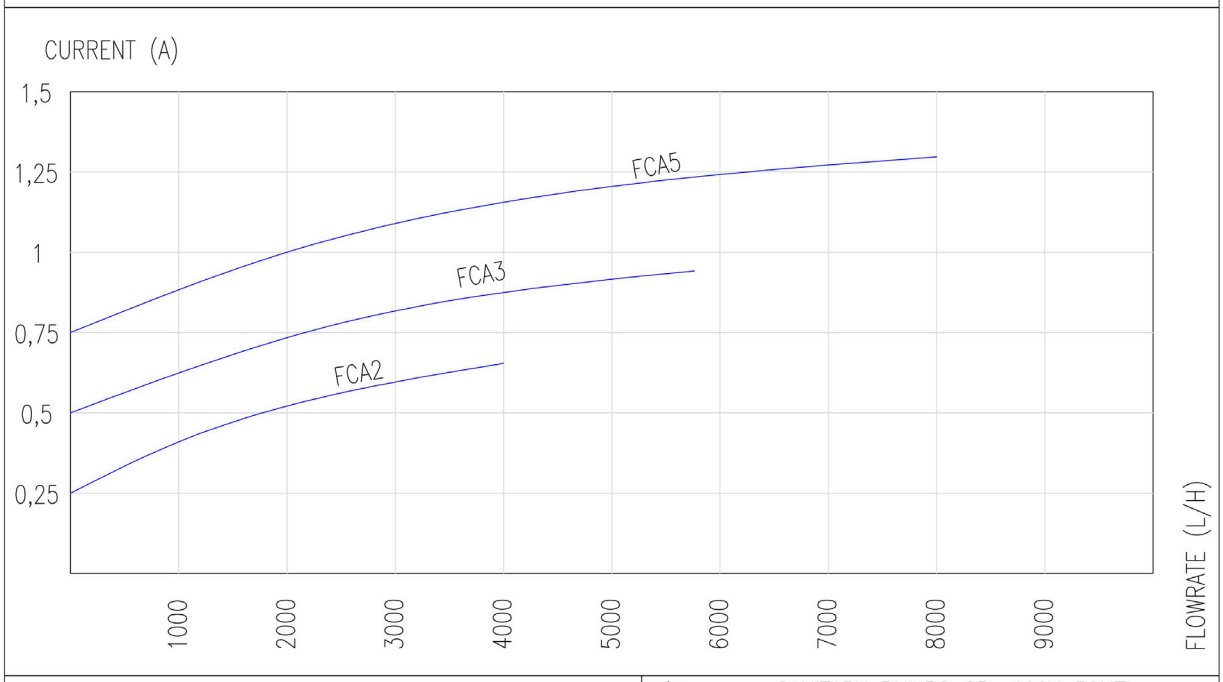

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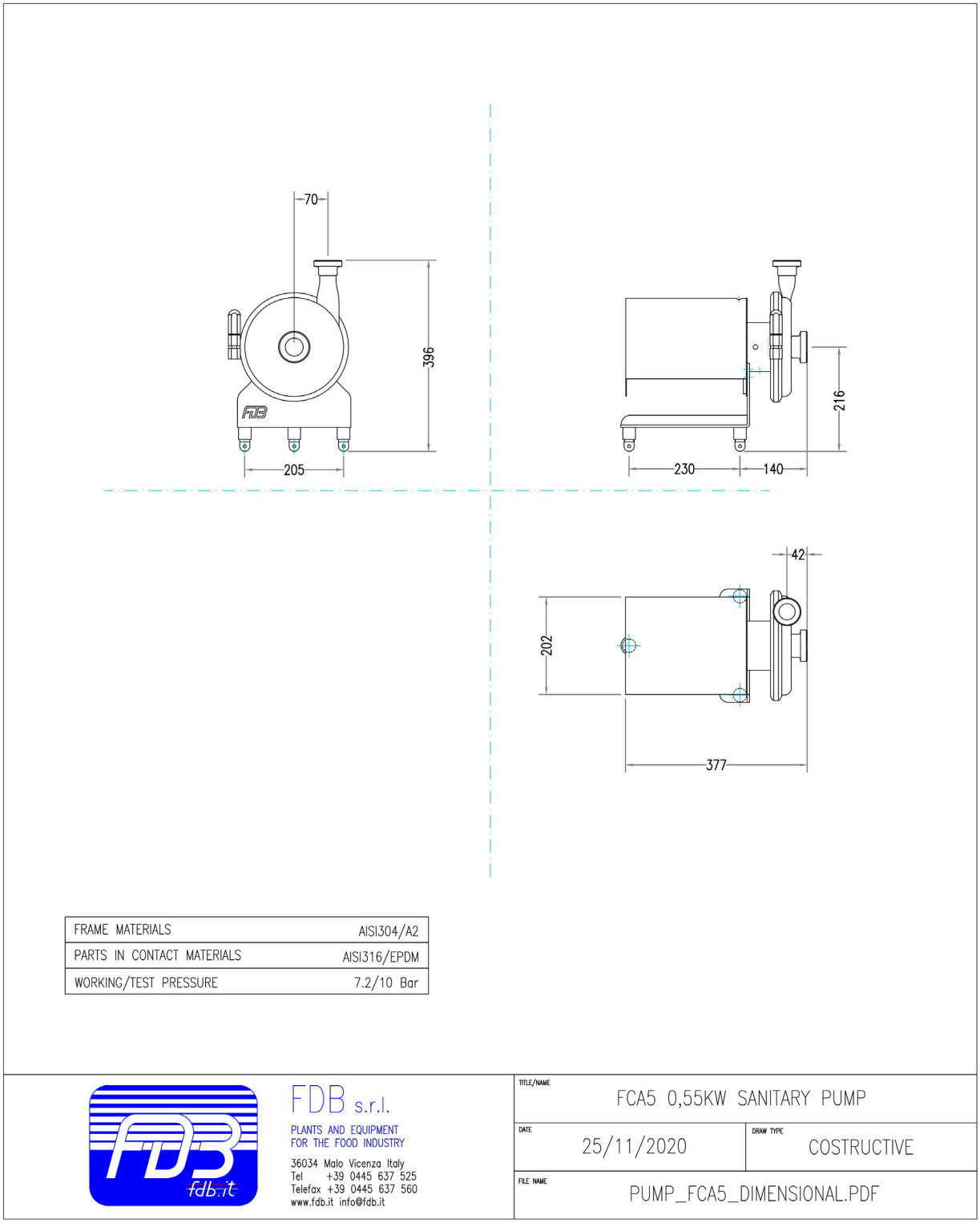
TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA2 0,25KW – FCA3 0,37KW – FCA5 0,55KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA2_FCA3_FCA5_PERFORMANCE.PDF

PUMP_FCA5

Link: https://www.fdb.it/pump/pump_fca5/



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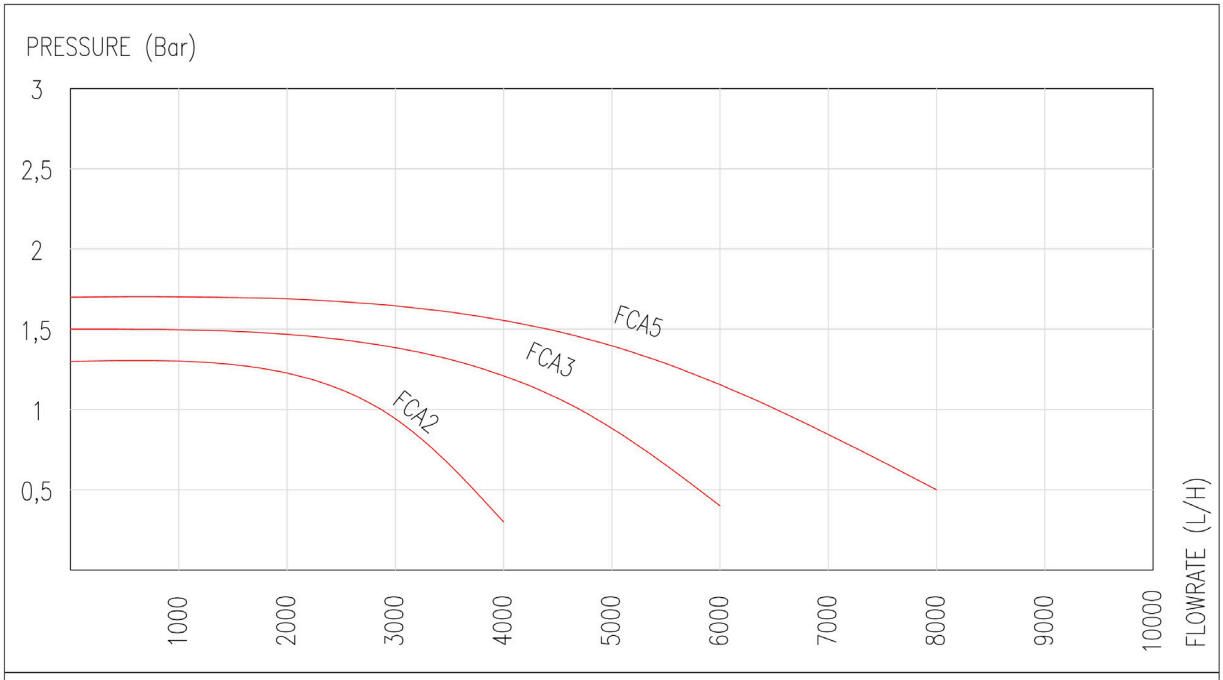

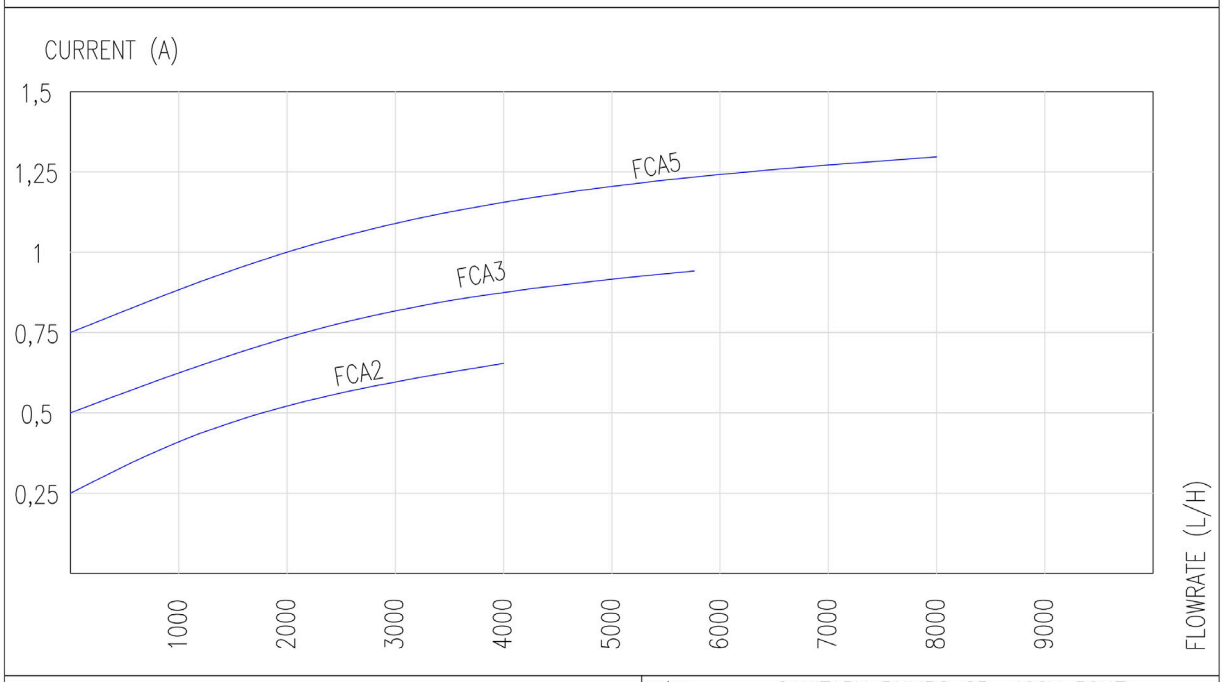

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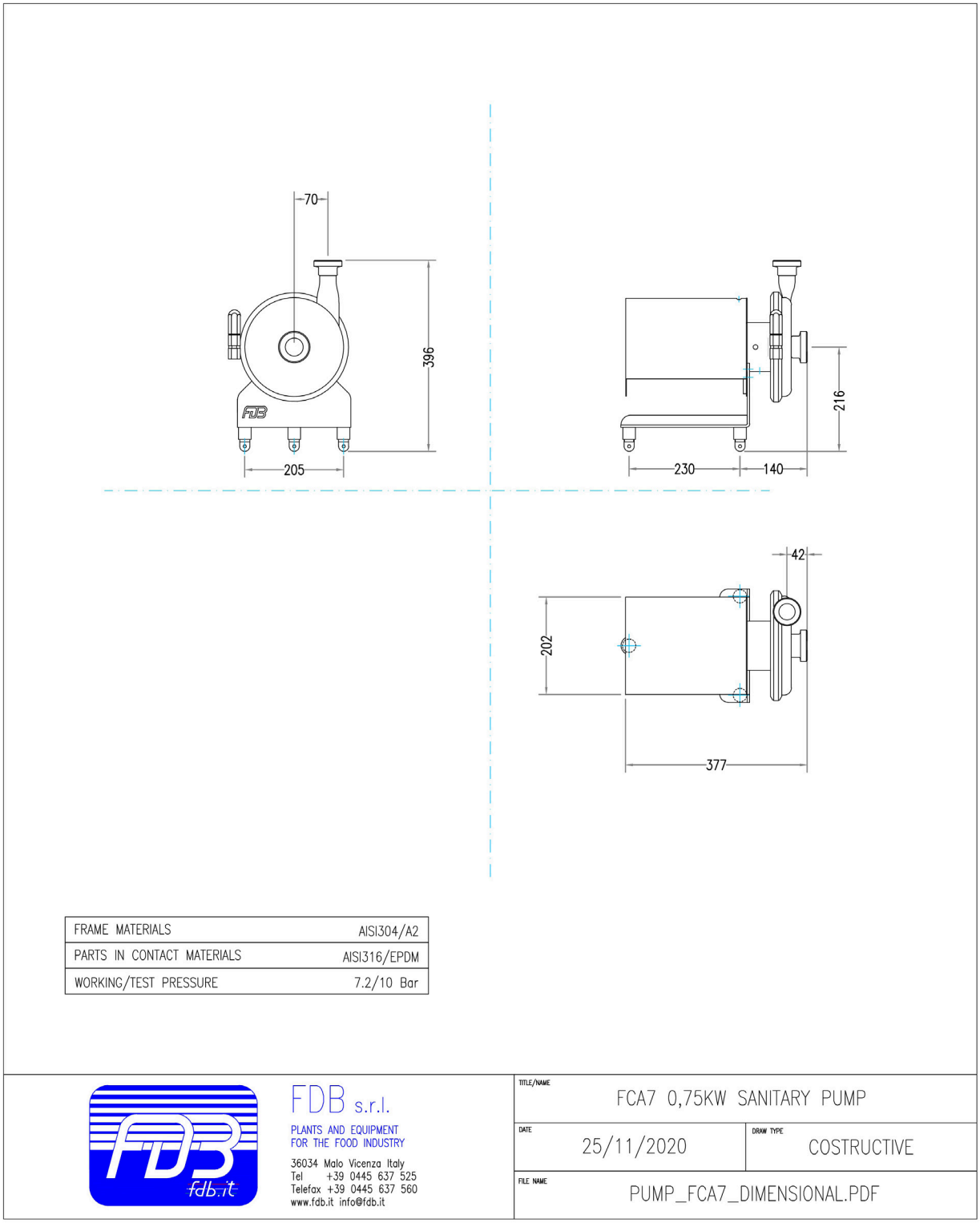
TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA2 0,25KW – FCA3 0,37KW – FCA5 0,55KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA2_FCA3_FCA5_PERFORMANCE.PDF

PUMP_FCA7

Link: https://www.fdb.it/pump/pump_fca7/



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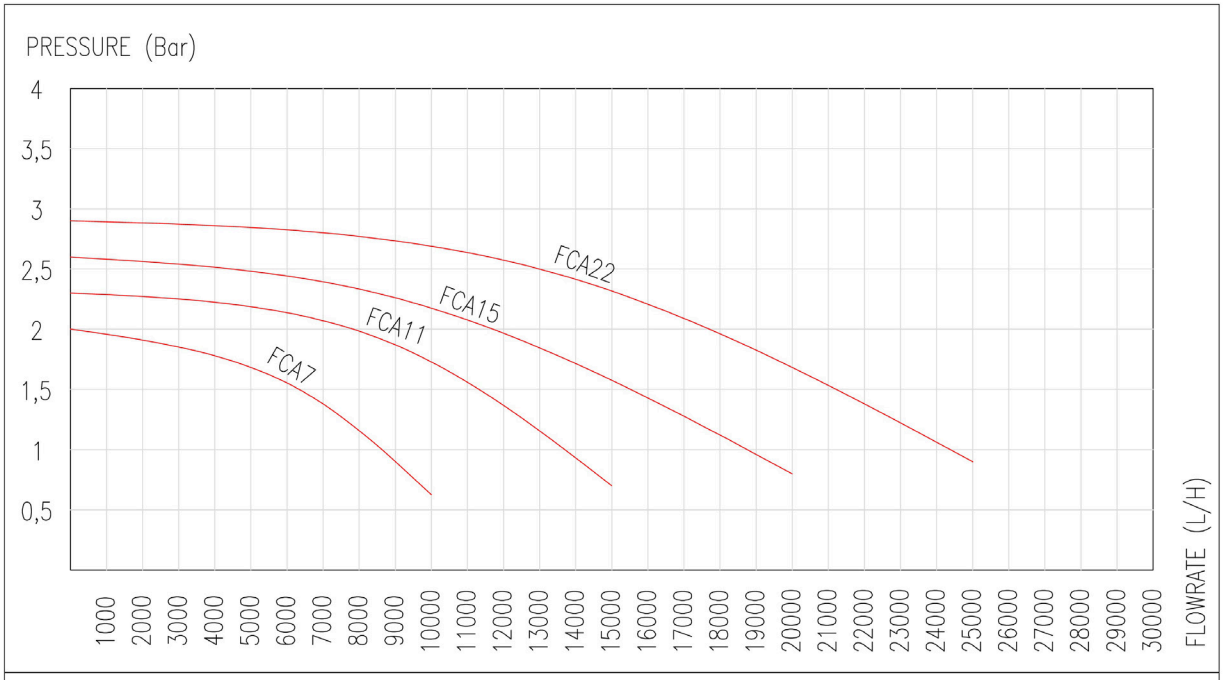

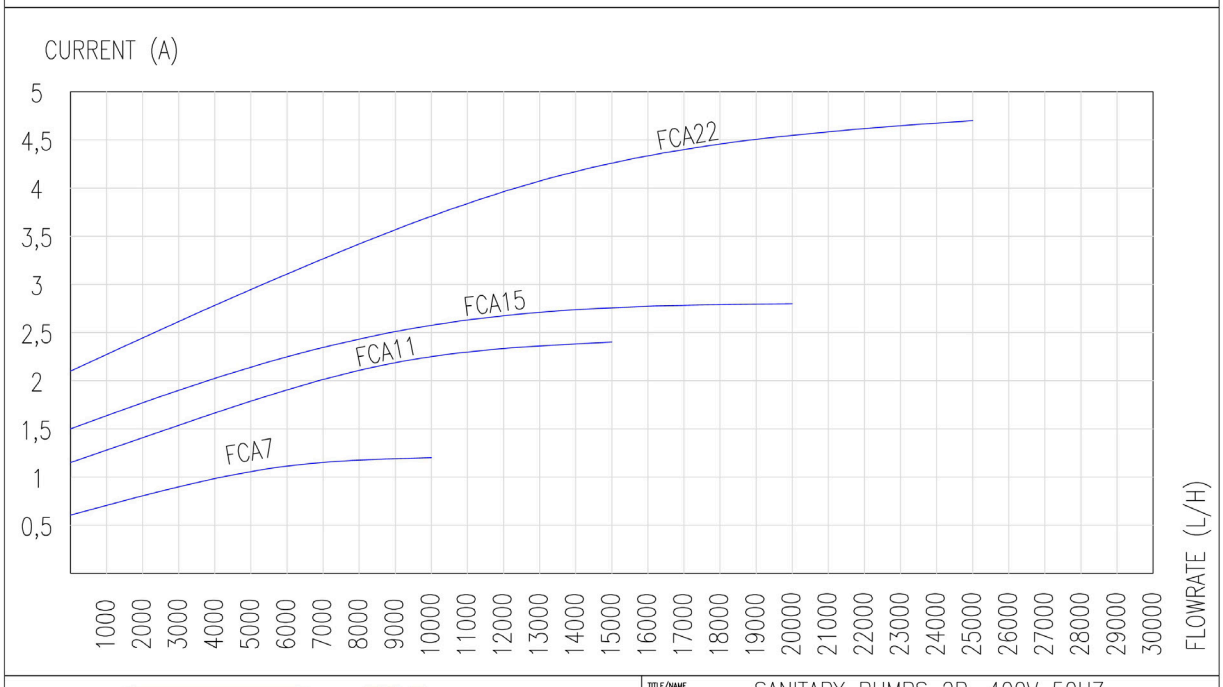

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TITLE/NAME: SANITARY PUMPS 2P. 400V 50HZ
FCA7 0,75KW – FCA11 1,1KW – FCA15 1,5KW – FCA22 2,2KW

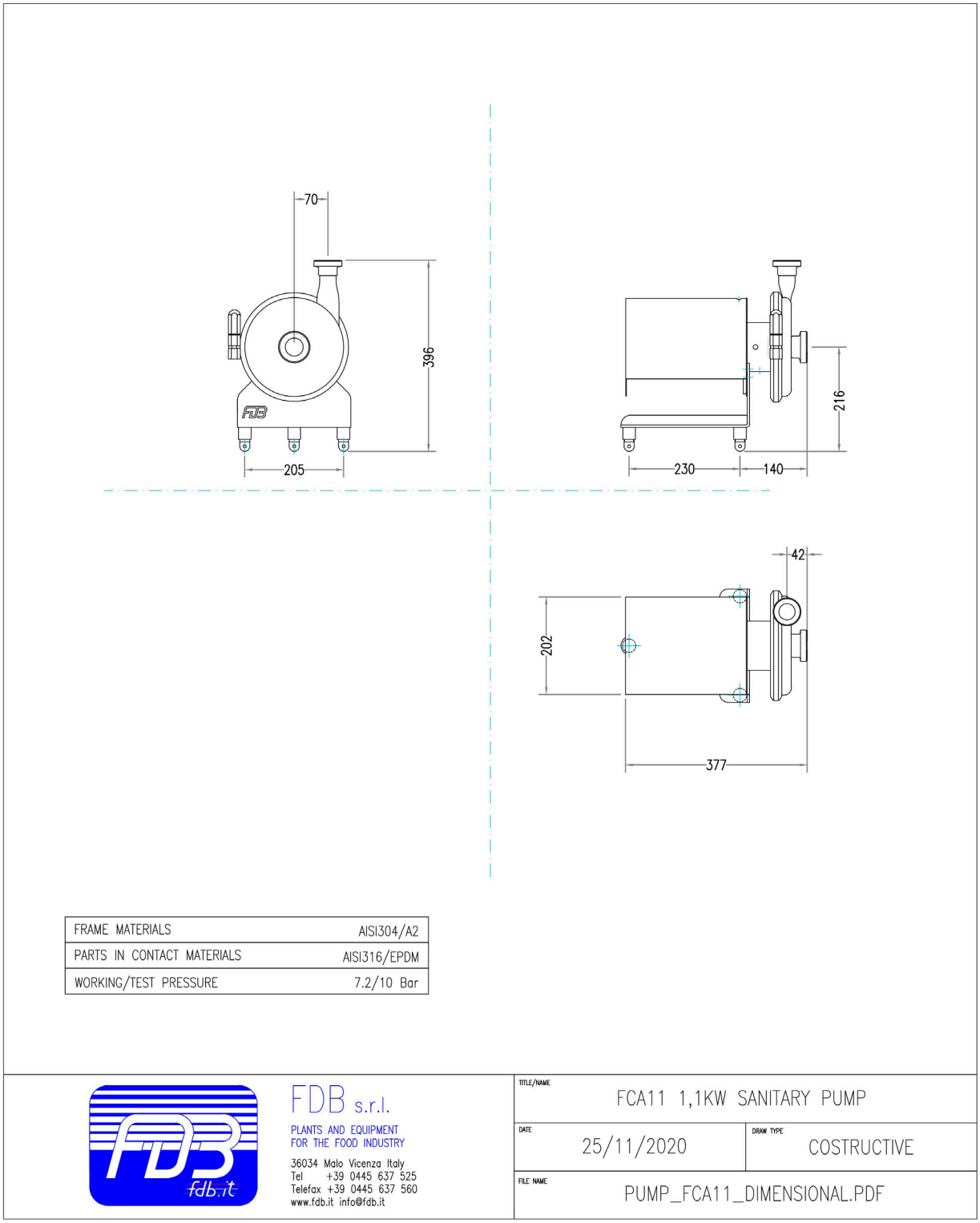
DATE: 05/02/2021

DRAW TYPE: COSTRUCTIVE

FILE NAME: PUMP_FCA7_FCA11_FCA15_FCA22_PERFORMANCE.PDF

PUMP_FCA11

Link: https://www.fdb.it/pump/pump_fca11/



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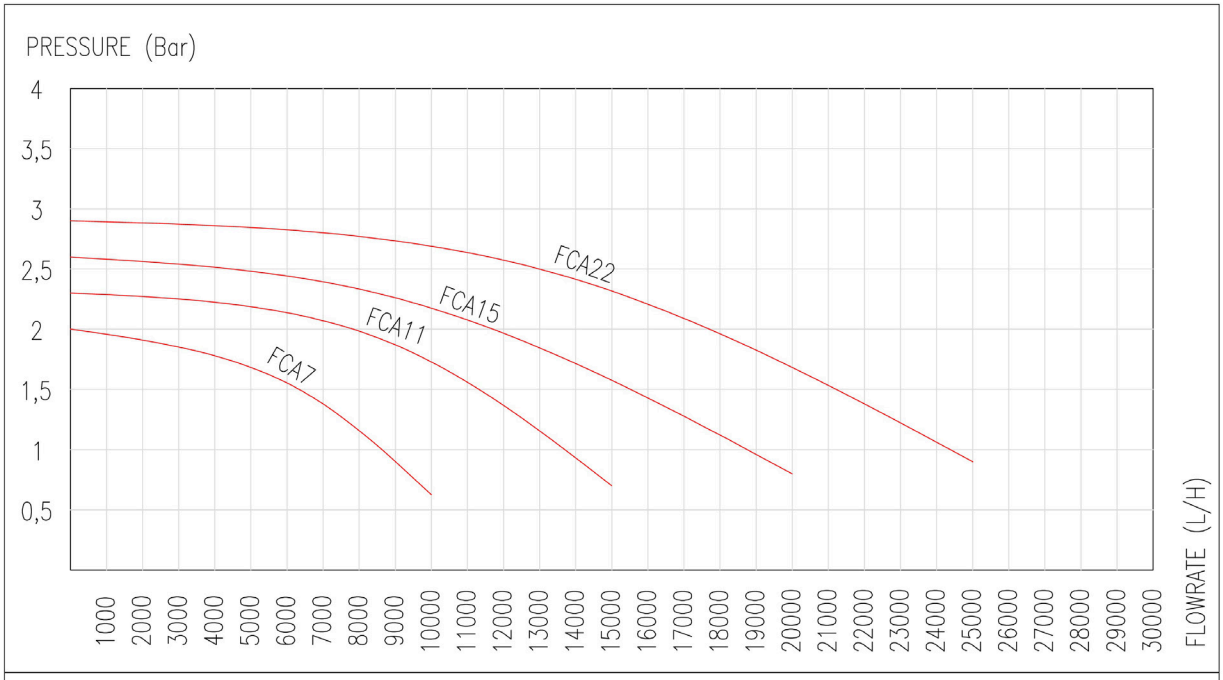

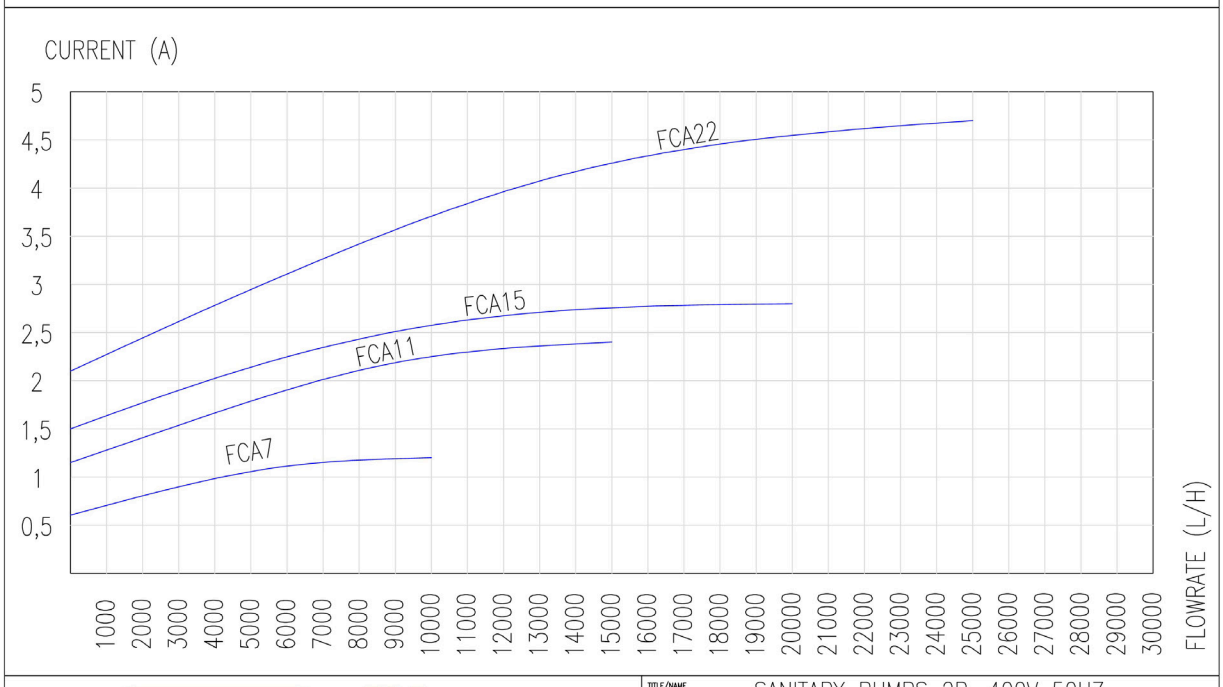

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TITLE/NAME: SANITARY PUMPS 2P. 400V 50HZ
FCA7 0,75KW – FCA11 1,1KW – FCA15 1,5KW – FCA22 2,2KW

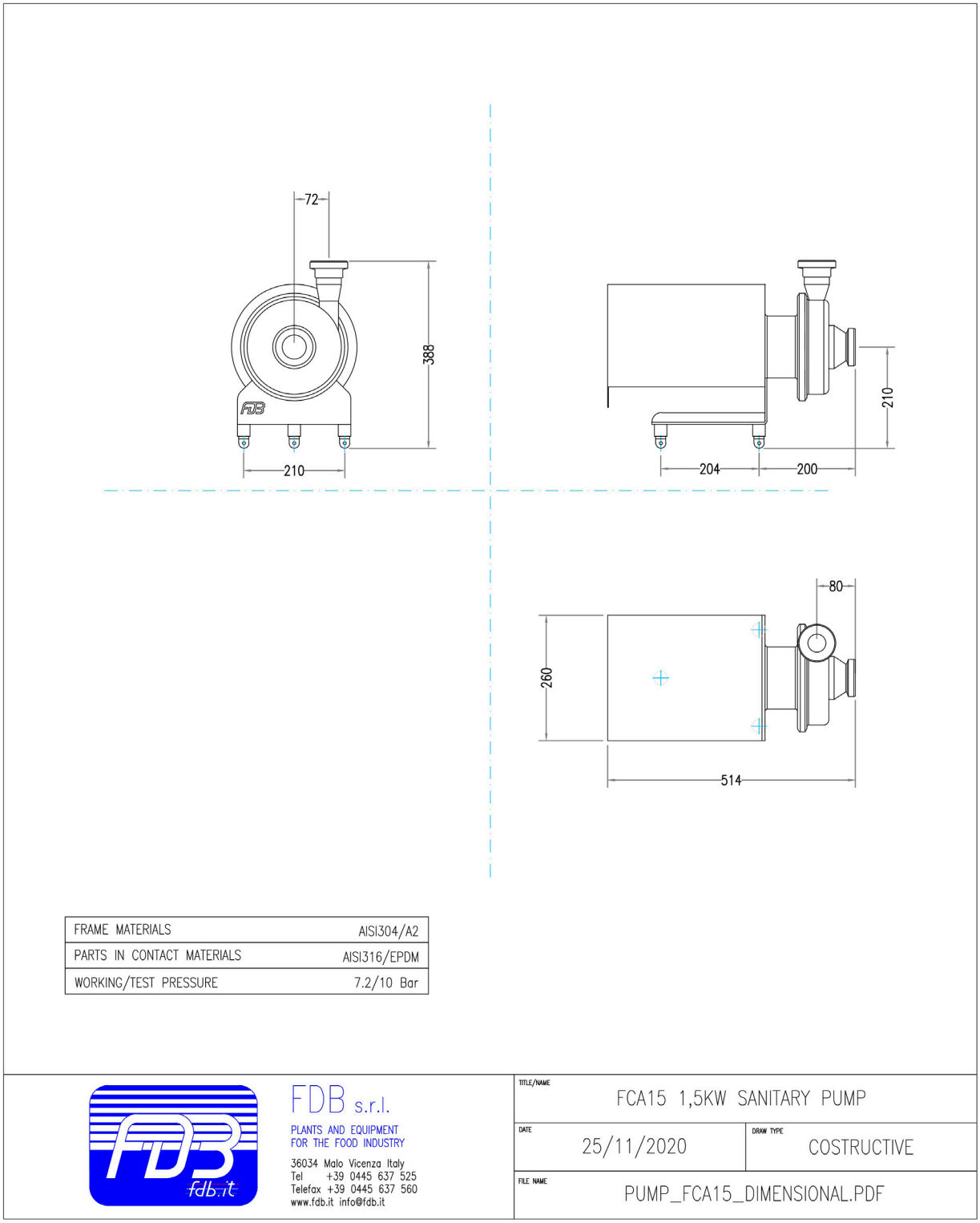
DATE: 05/02/2021

DRAW TYPE: COSTRUCTIVE

FILE NAME: PUMP_FCA7_FCA11_FCA15_FCA22_PERFORMANCE.PDF

PUMP_FCA15

Link: https://www.fdb.it/pump/pump_fca15/



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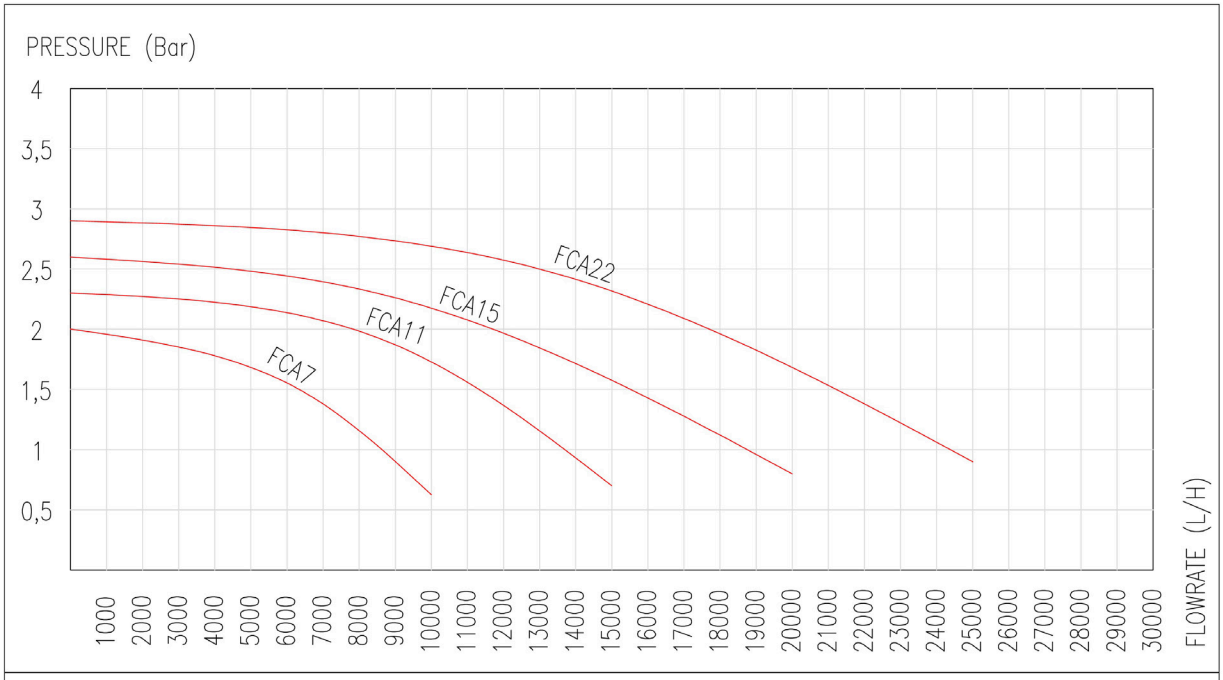

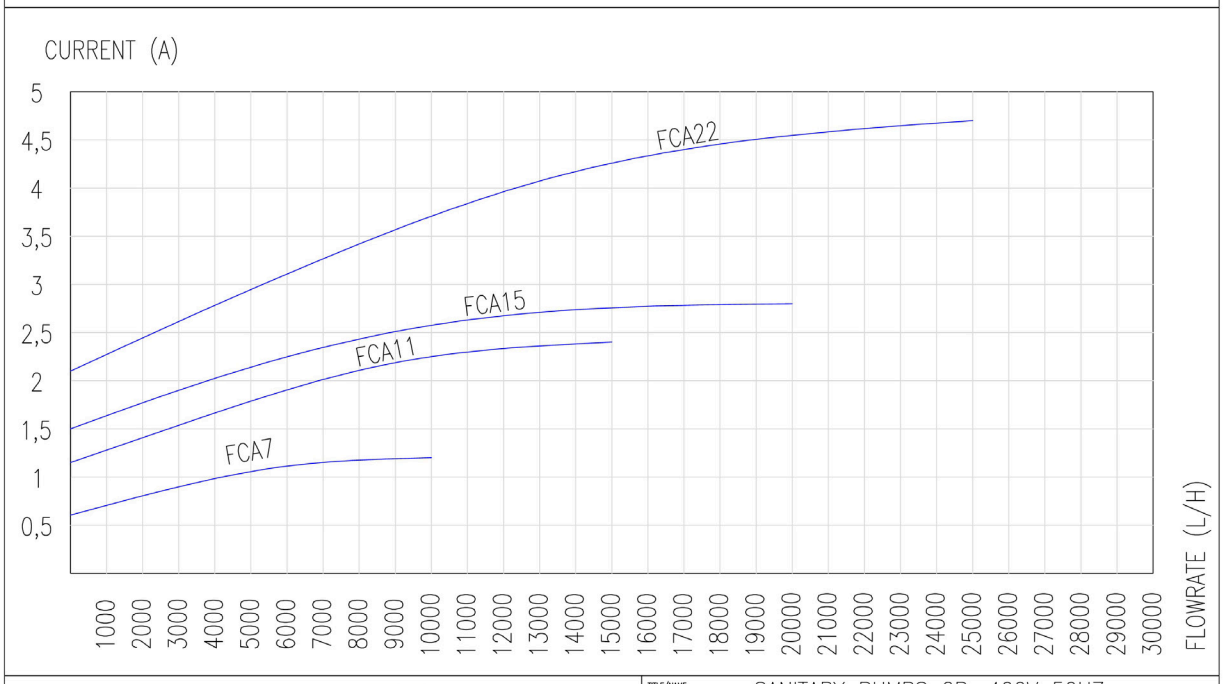

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TITLE/NAME: SANITARY PUMPS 2P. 400V 50HZ
FCA7 0,75KW – FCA11 1,1KW – FCA15 1,5KW – FCA22 2,2KW

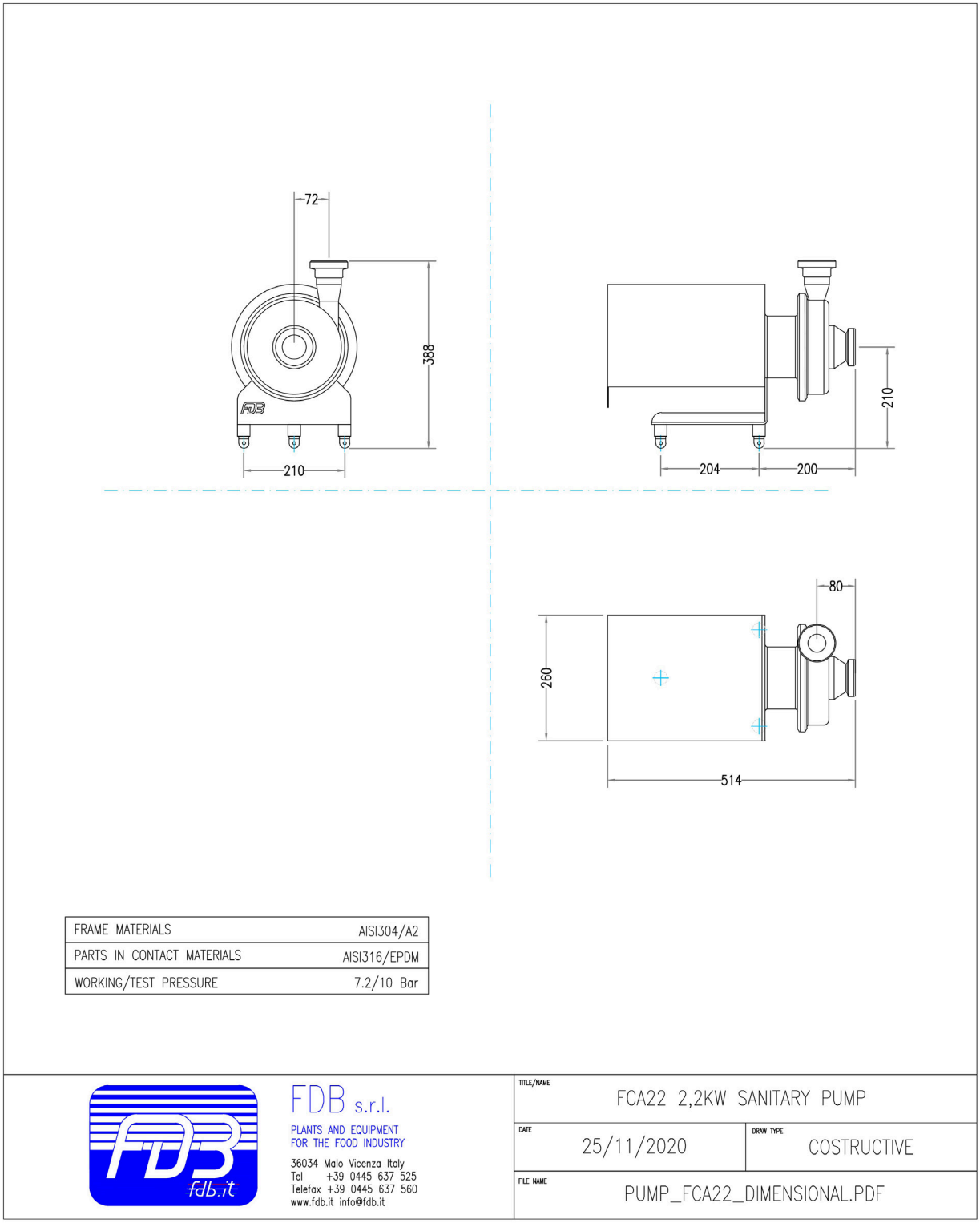
DATE: 05/02/2021

DRAW TYPE: COSTRUCTIVE

FILE NAME: PUMP_FCA7_FCA11_FCA15_FCA22_PERFORMANCE.PDF

PUMP_FCA22

Link: https://www.fdb.it/pump/pump_fca22/



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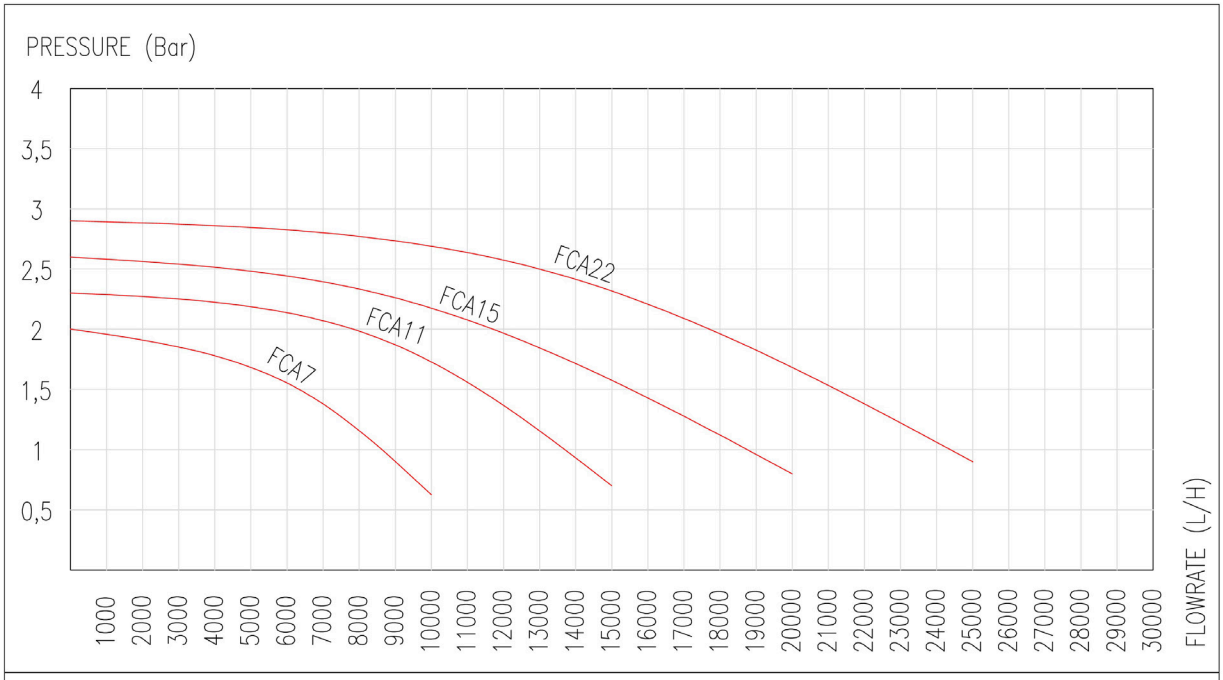

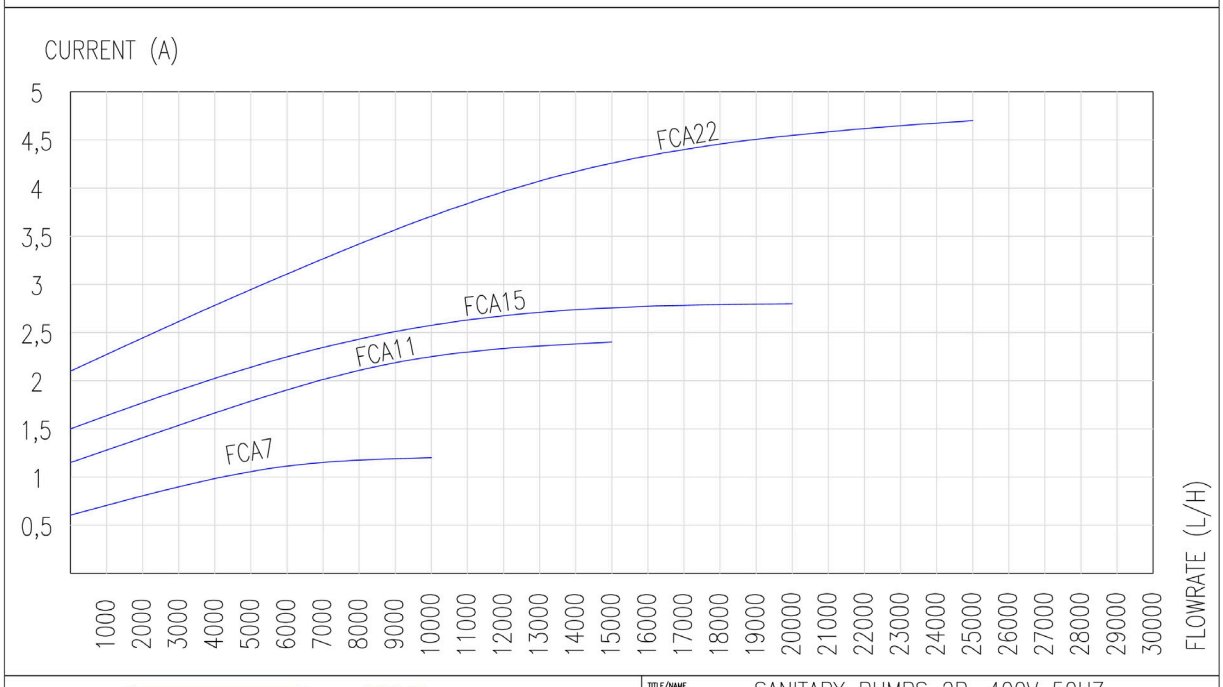

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TITLE/NAME: SANITARY PUMPS 2P. 400V 50HZ
FCA7 0,75KW – FCA11 1,1KW – FCA15 1,5KW – FCA22 2,2KW

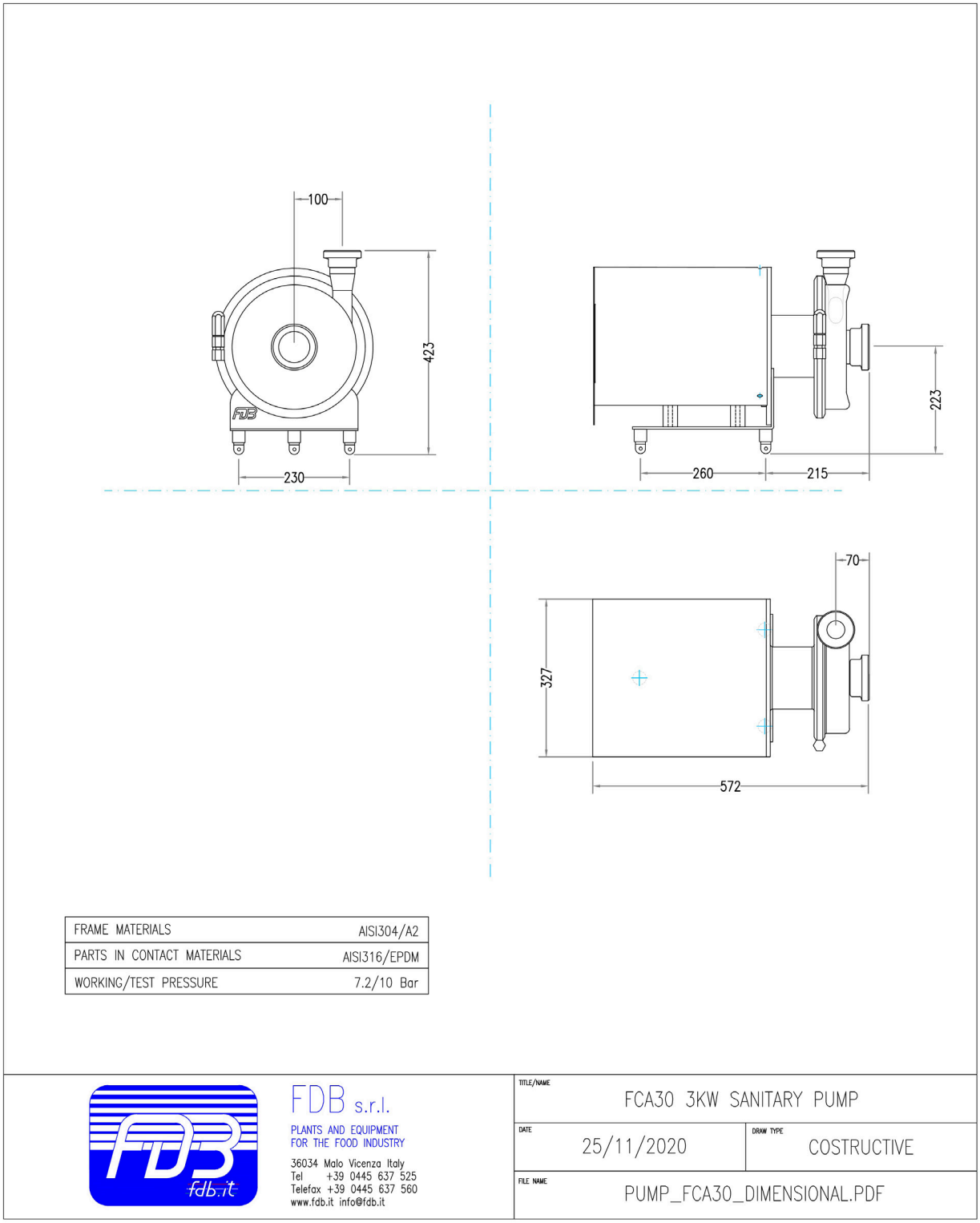
DATE: 05/02/2021

DRAW TYPE: COSTRUCTIVE

FILE NAME: PUMP_FCA7_FCA11_FCA15_FCA22_PERFORMANCE.PDF

PUMP_FCA30

Link: https://www.fdb.it/pump/pump_fca30/



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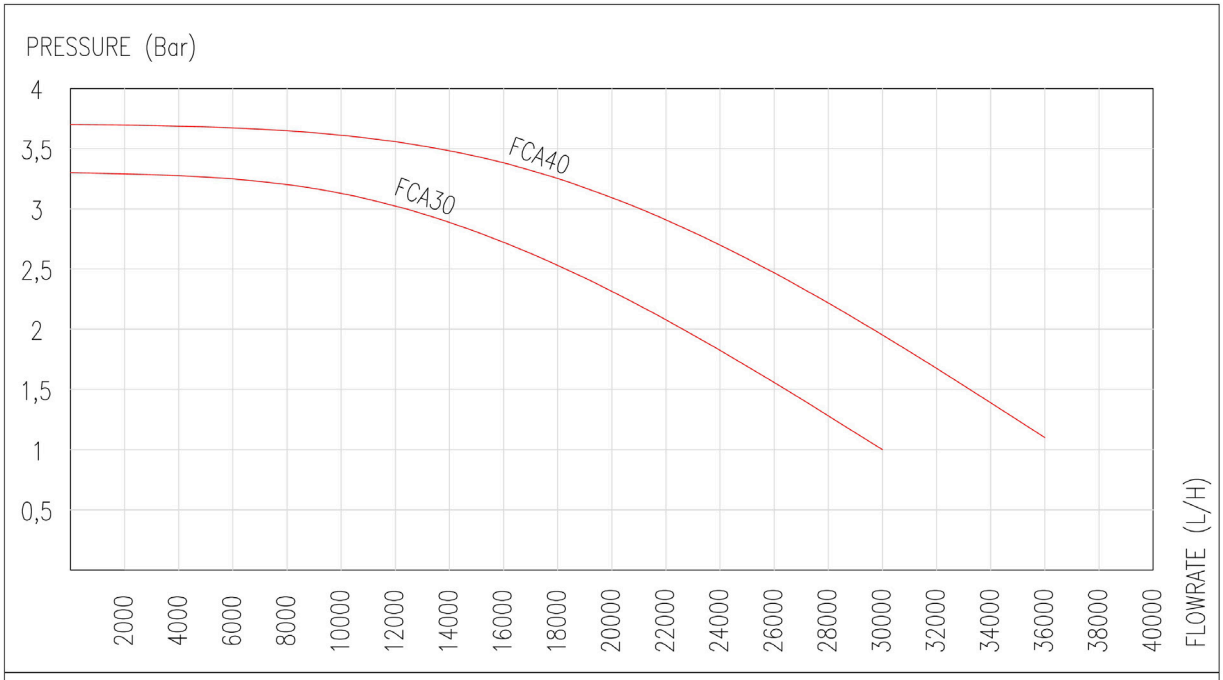

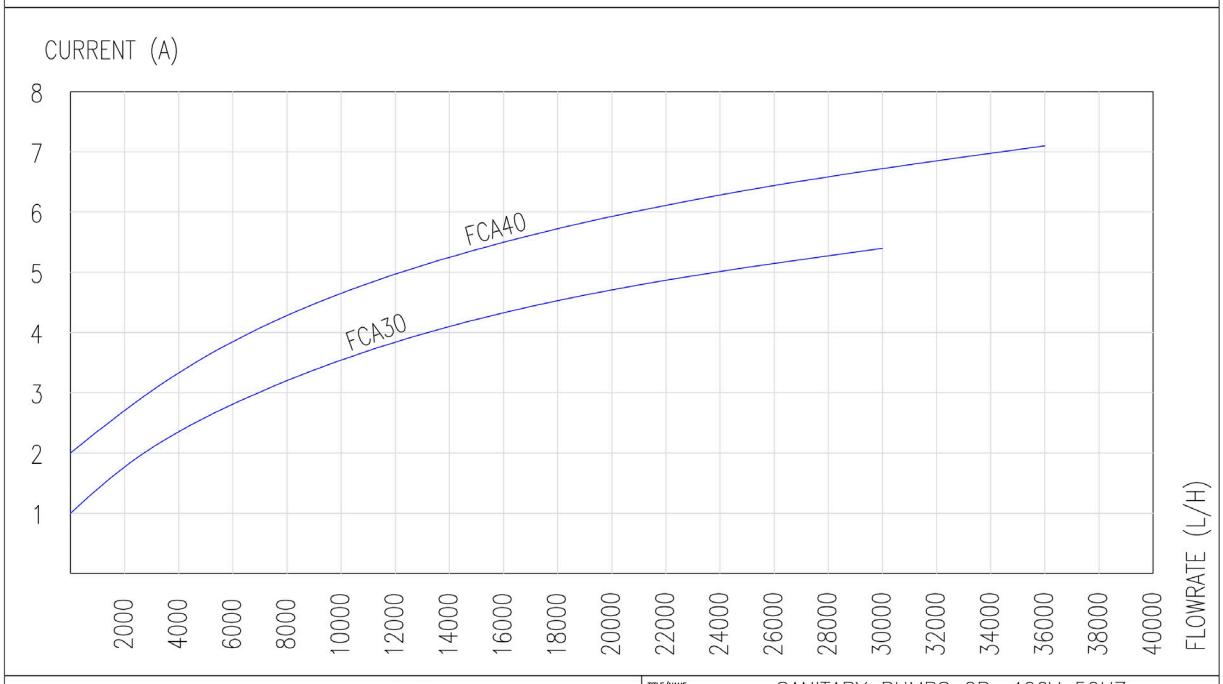

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TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA30 3KW – FCA40 4KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA30_FCA40_PERFORMANCE.PDF

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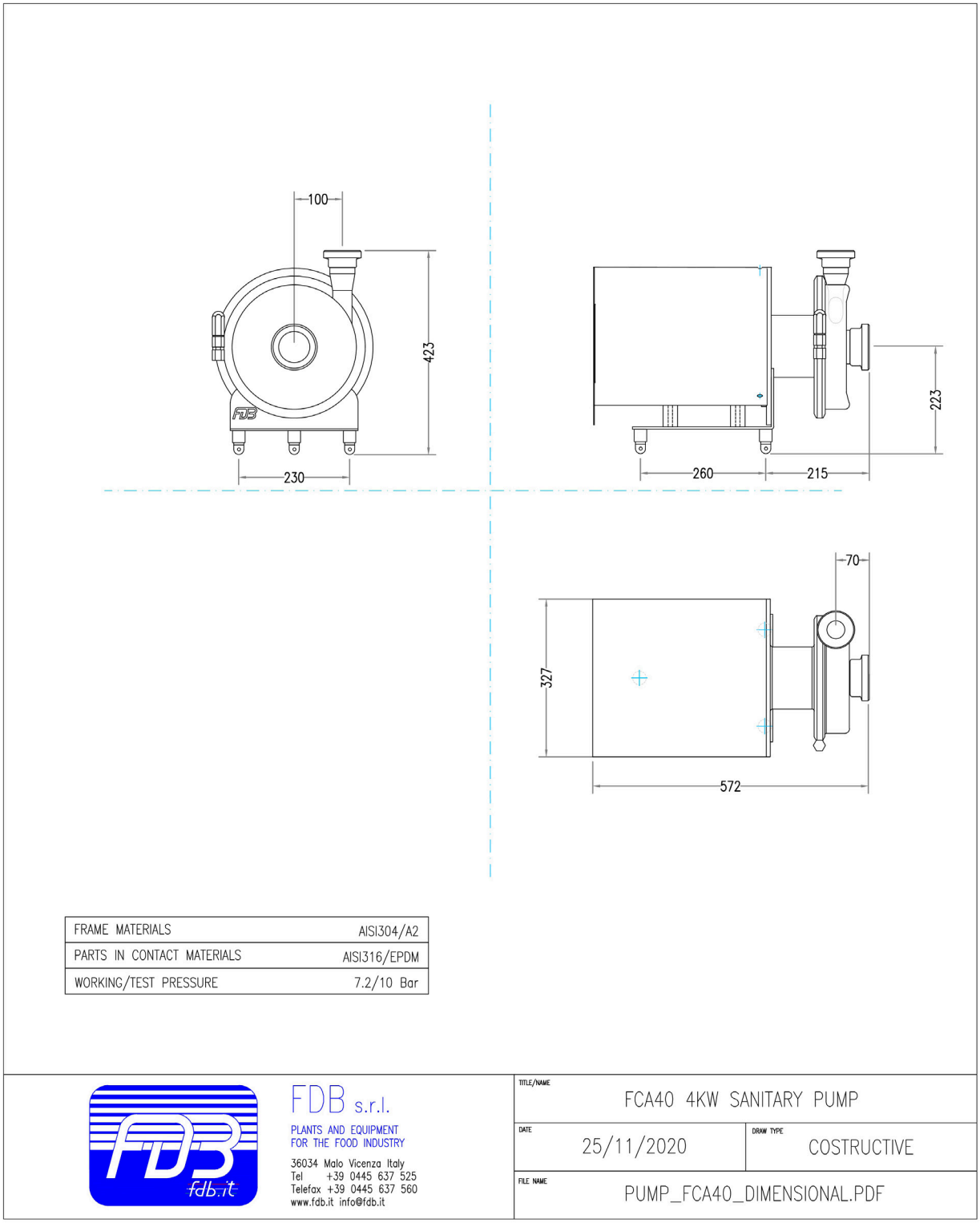
VAT: 01600920241

PUMP_FCA40

Link: https://www.fdb.it/pump/pump_fca40/



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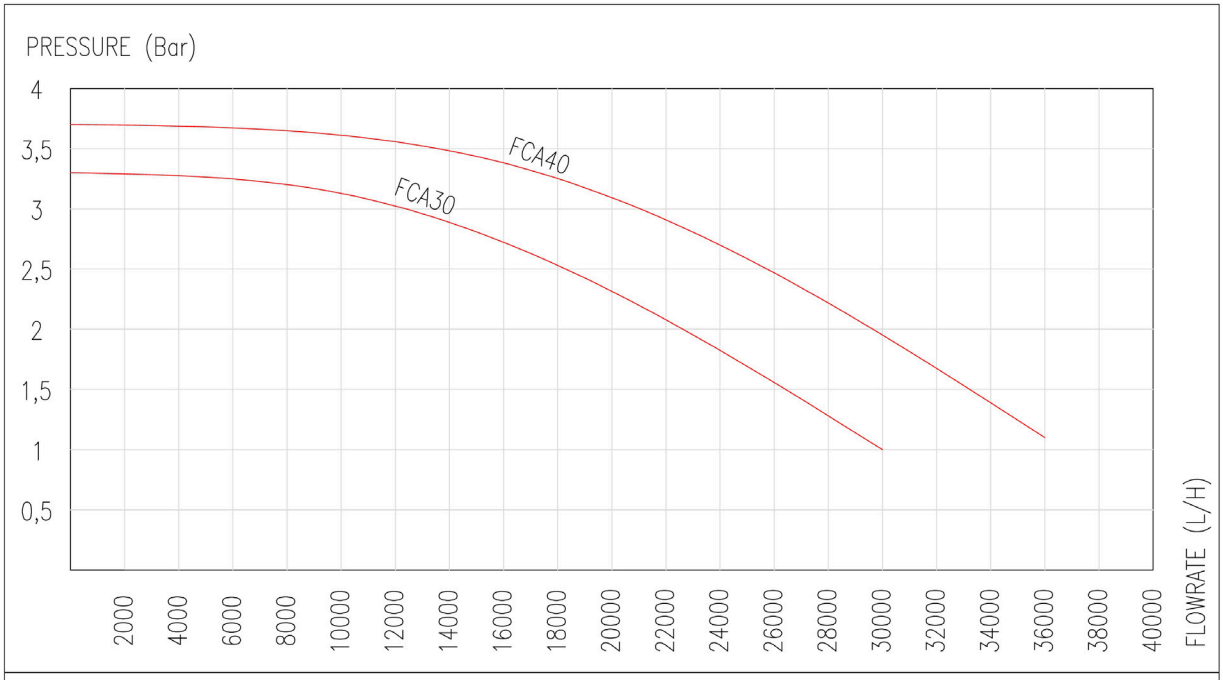

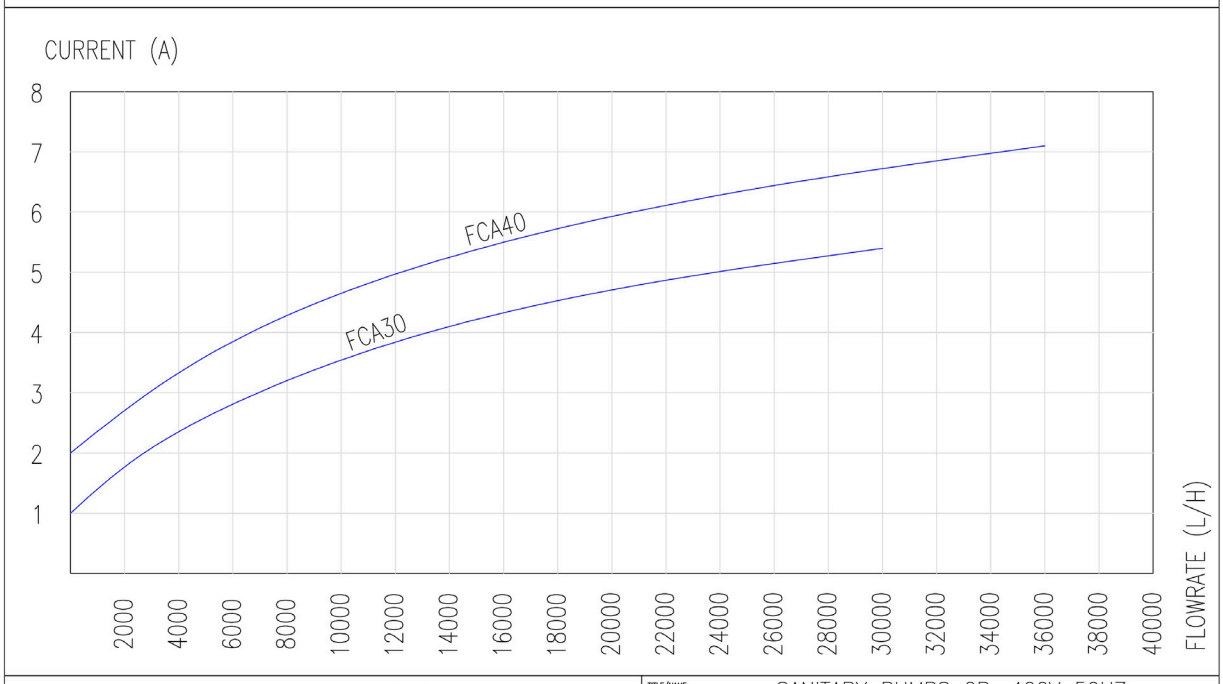

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TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA30 3KW – FCA40 4KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA30_FCA40_PERFORMANCE.PDF

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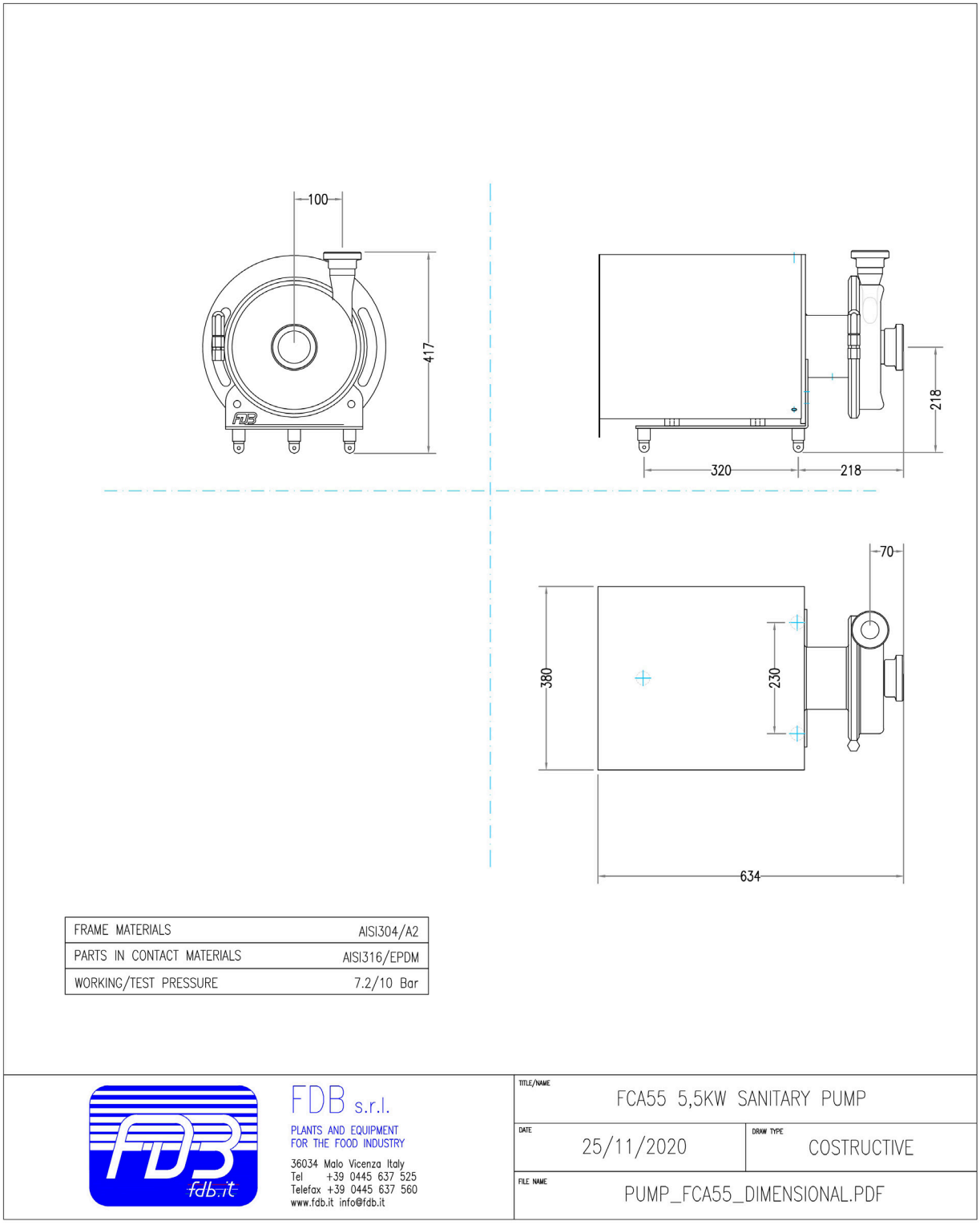
PUMP_FCA55

Link: https://www.fdb.it/pump/pump_fca55/



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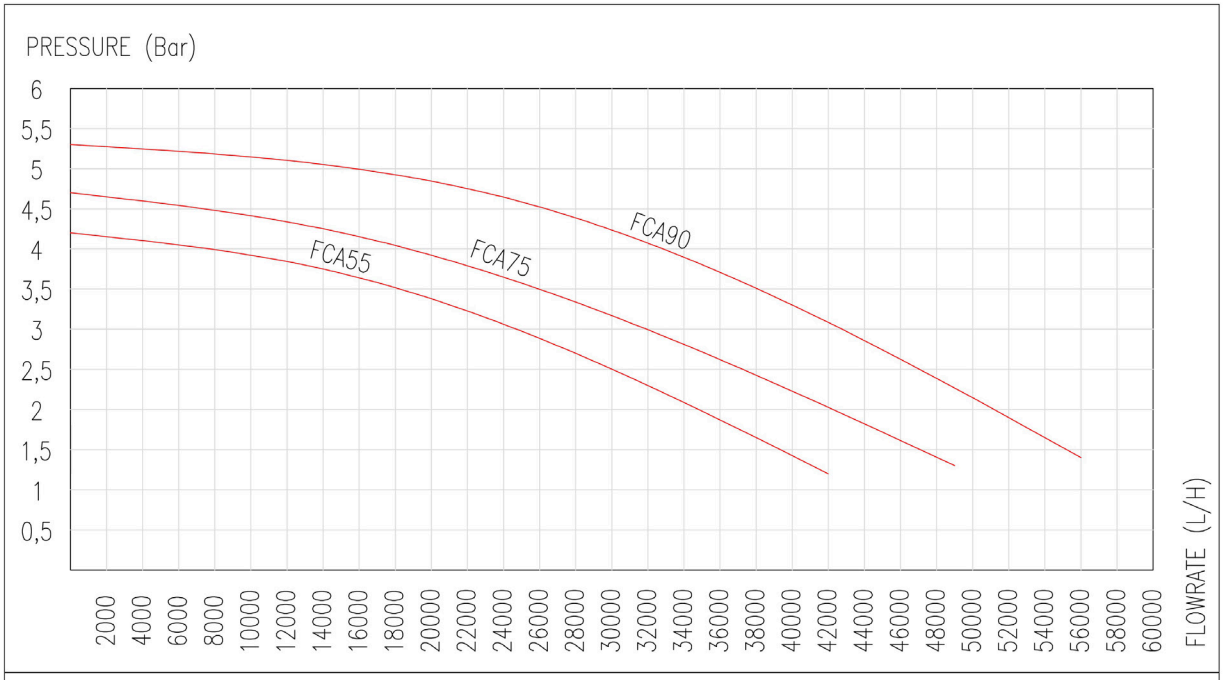

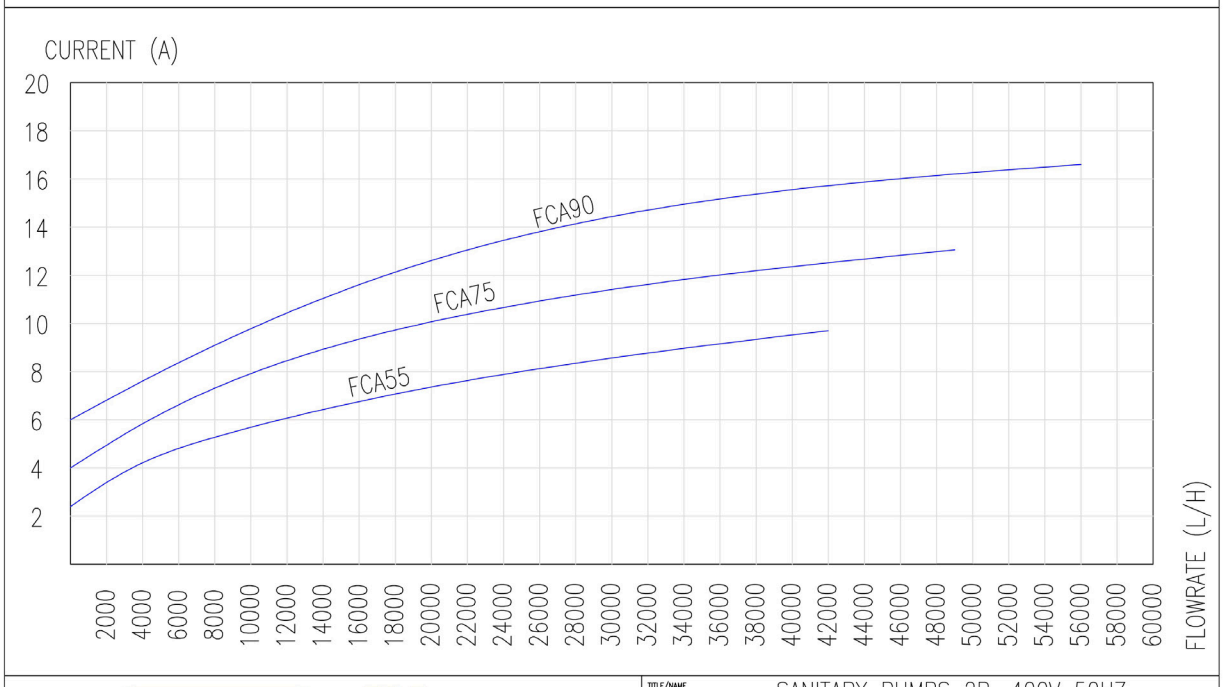

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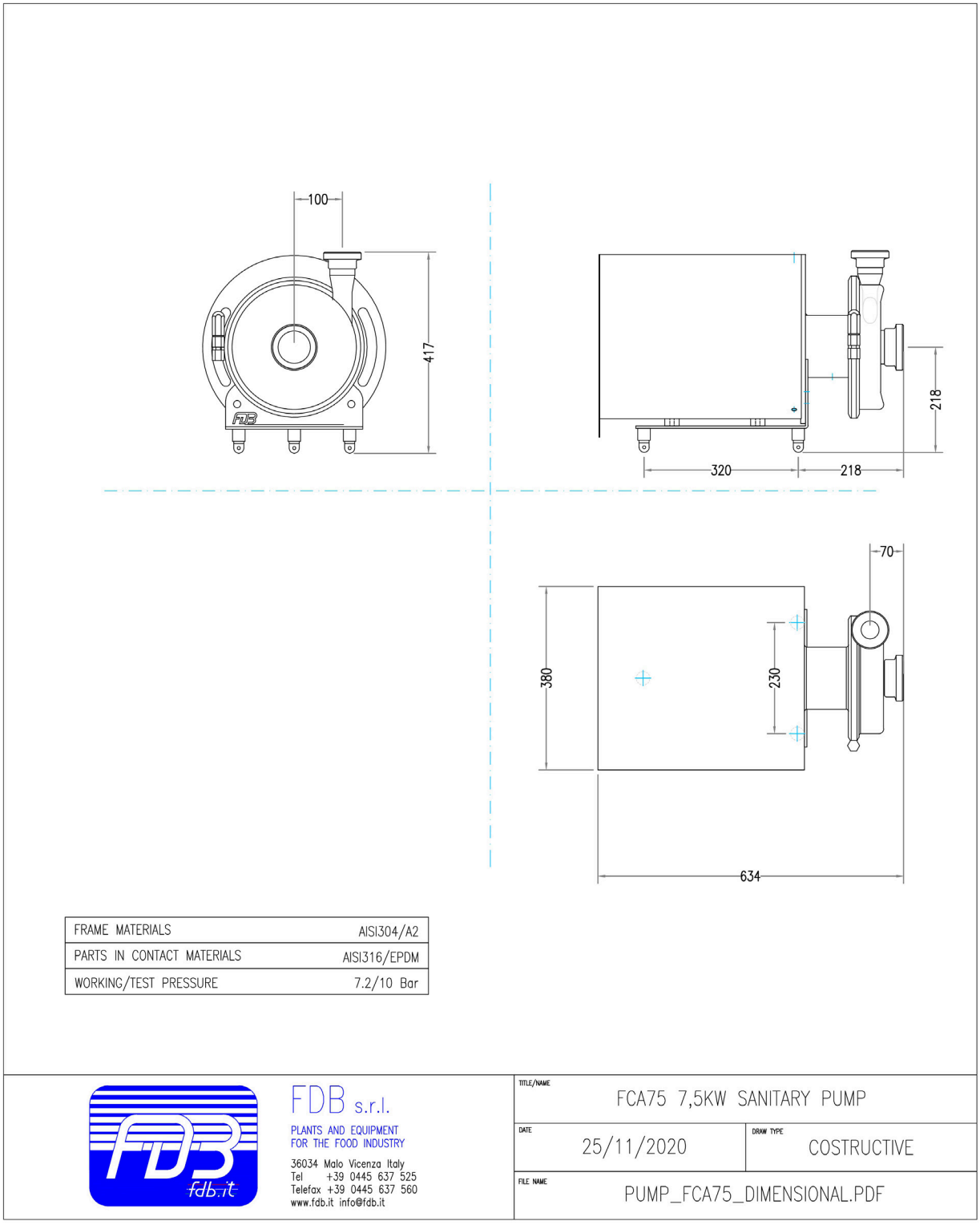
TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA55 5,5KW – FCA75 7,5KW – FCA90 9KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA55_FCA75_FCA90_PERFORMANCE.PDF

PUMP_FCA75

Link: https://www.fdb.it/pump/pump_fca75/



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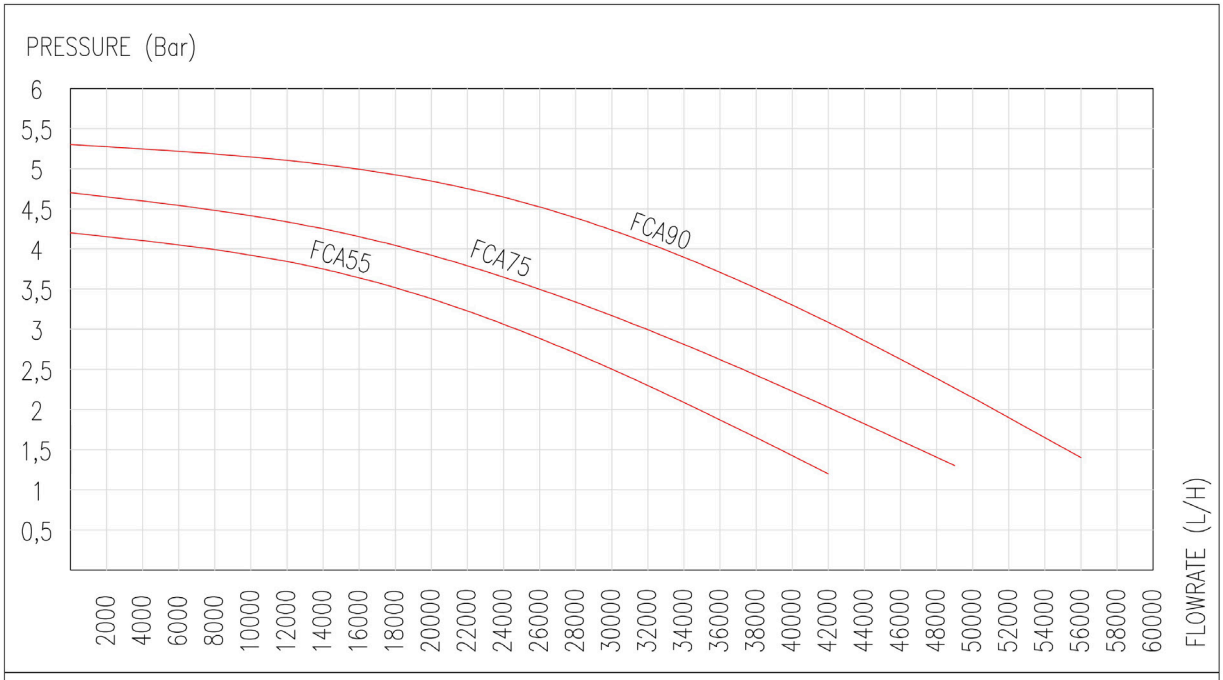

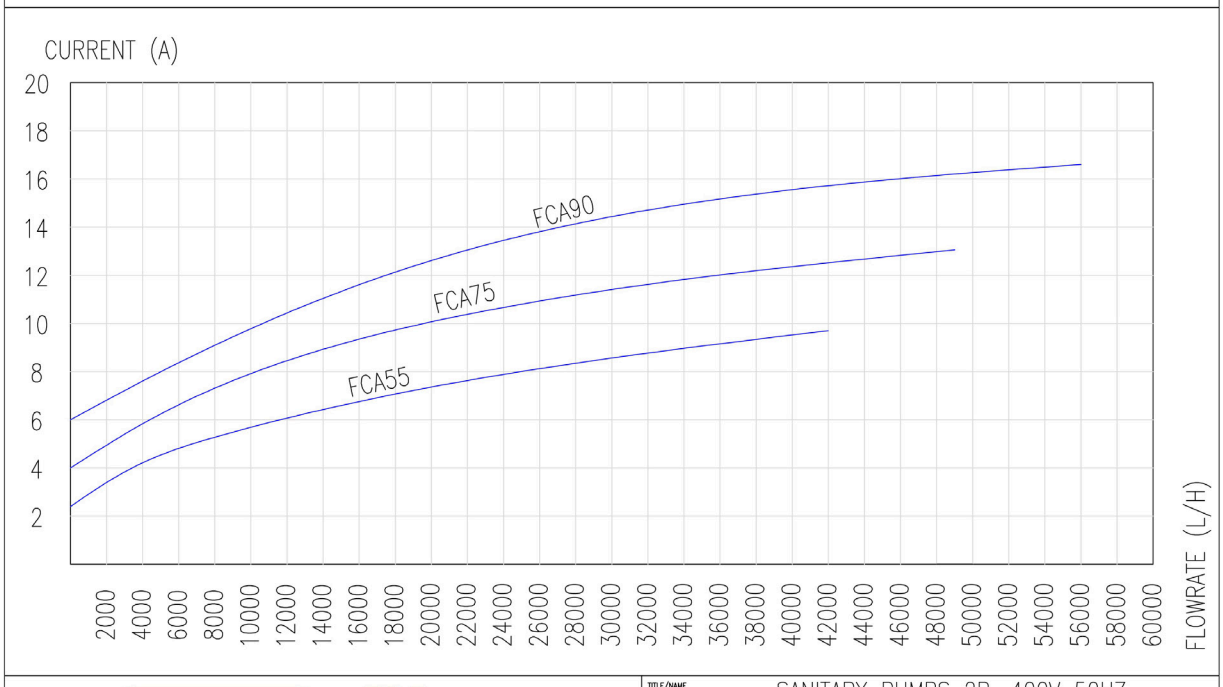

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TITLE/NAME	SANITARY PUMPS 2P. 400V 50HZ FCA55 5,5KW – FCA75 7,5KW – FCA90 9KW
DATE	05/02/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_FCA55_FCA75_FCA90_PERFORMANCE.PDF

PUMP – Closed impeller centrifugal pumps, FCE series

Link: https://www.fdb.it/pump/pump-closed-impeller-centrifugal-pumps-fce-series/

Centrifugal sanitary electropumps with closed impeller intended for the transfer of food liquids, also abrasive and corrosive.
The parts in contact with the product are made of AISI316L, while the parts not in contact in AISI304. Complete with stainless steel motor casing and height-adjustable feet.
Available with different powers to ensure the best combination of head and flow rate, depending on the customer's needs.

Contact us to know which is the best for your needs.
For a more timely response, providing us with the required product, scope and application, we will to provide you with a quotation tailored to your needs.

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OPTIONAL COMPONENTS
Version /m with flushed seal for high temperatures, and extremely abrasive, viscous and corrosive liquids
Connections with other unifications (CLAMP, SMS, RJT, UDF, BSPT, EN1092, etc.)
Polished finishes (Ra <0.8 µm)
Anti-vibration feet for floor installation
Feet with fixing plates for installation on a frame

TEMPLATE	CONNECTIONS	MAXIMUM TEMPERATURE	FINISHES
All models	DIN11851	95 ° C (higher in version / m)	Ceramic micro shot peening

MODEL	POWER [KW]	FRAME DIMENSION [MEC]	FLOW [L/H]	STANDARD CONNECTIONS [IN/OUT]
FCE11	1,1	80/90	0-25000	DN50/DN50
FCE15	1,5	80/90	0-29000	DN50/DN50
FCE22	2,2	80/90	0-33000	DN50/DN50
FCE30/FC30	3	100/112	0-35000	DN65/DN50
FCE40/FC40	4	100/112	0-40000	DN65/DN50
FCE55/FC55	5,5	132	0-45000	DN65/DN50
FCE75/FC75	7,5	132	0-50000	DN65/DN65

PERFORMANCE CHARTS

https://www.fdb.it/it/istituzionale/chart-fce/

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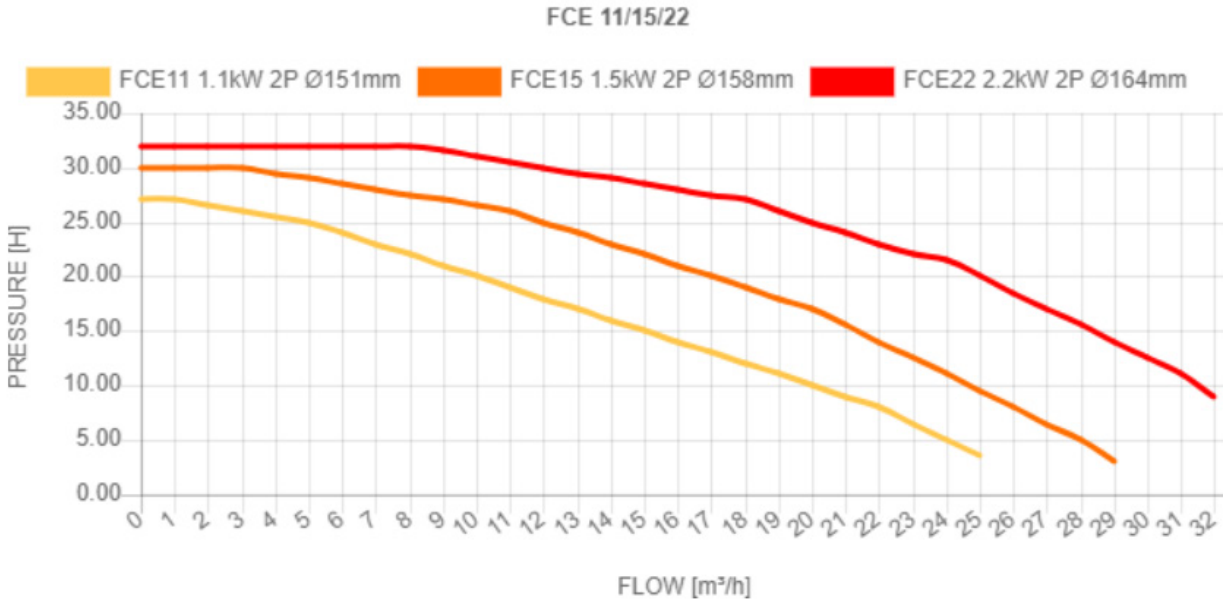

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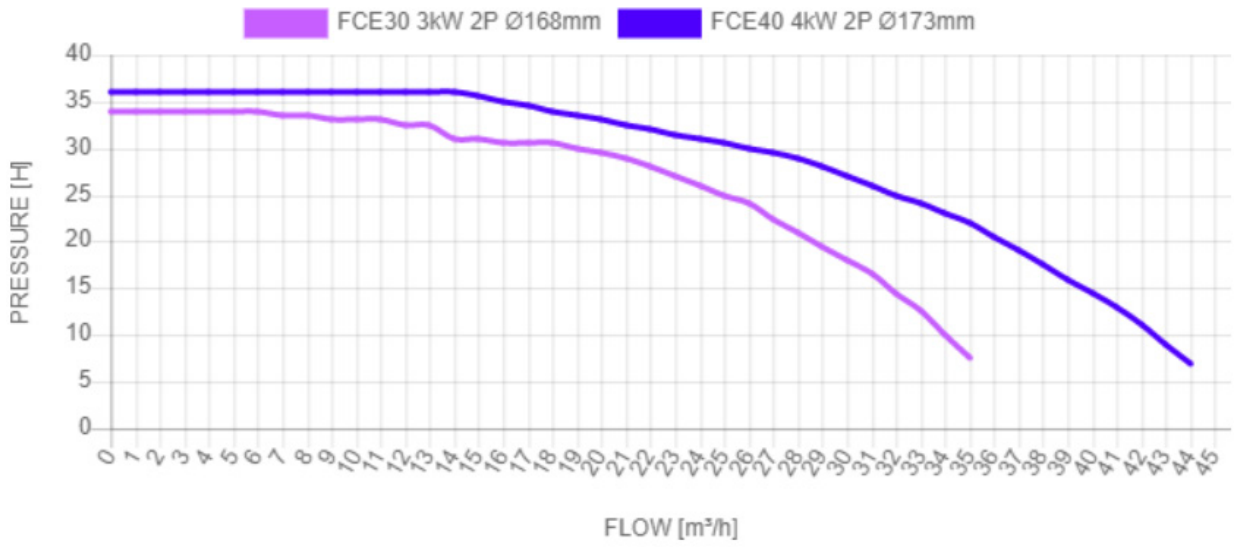
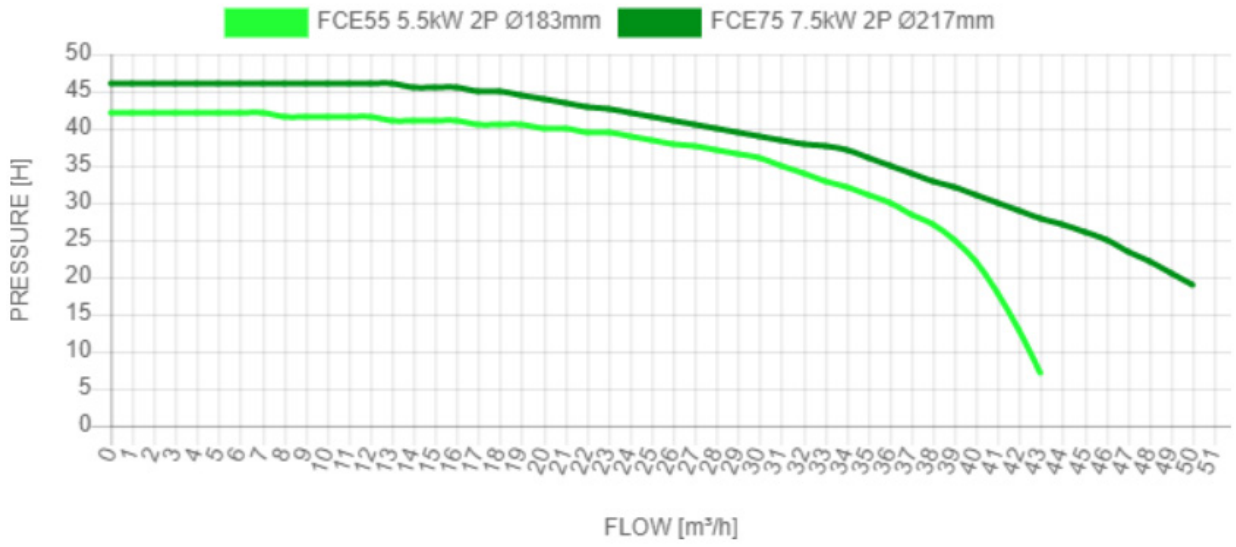
FCE 30/40



FCE 55/75



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PUMP – Self-priming sanitary pumps with open impeller, reversible, TPA series

Link:
https://www.fdb.it/pump/pump-self-priming-sanitary-pumps-with-open-impeller-reversible-tpa-series/

Reversible self-priming sanitary electric pumps with open impeller intended for the transfer of food liquids, also abrasive and corrosive.
The special construction design allows reversal of movement, therefore pumping both clockwise and counterclockwise with the consequent inversion of the suction and delivery connections.
The parts in contact with the product are made of AISI316L while the parts not in contact in AISI304.
Complete with stainless steel motor casing and adjustable height feet. Available with different powers to ensure the best combination of head and flow rate, depending on the customer's needs.

Contact us to find out which can be the best pump for your needs.
For a more timely response, by providing us with the product, scope and prevalence

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necessary, we will be able to provide you with a quotation aimed at your needs.

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OPTIONAL COMPONENT
Version / m with flushed seal for high temperatures, and extremely abrasive, viscous and corrosive liquids
Connections with other unifications (CLAMP, SMS, RJT, UDF, BSPT, EN1092, etc.)
Polished finishes (Ra <0.8 µm)
Anti-vibration feet for floor installation
Feet with fixing plates for installation on a frame
Motor inverter

MODEL	CONNECTIONS	MAXIMUM TEMPERATURE	FINISHES
All models	DIN 11851	+ 95 ° C (higher in version / m)	Ceramic micro shot peening

MODEL	POWER [KW]	FRAME DIMENSION [MEC]	FLOW [L/H]	STANDARD CONNECTIONS [IN/OUT]
TPA2	0,25	71	200-2000	32/32
TPA3	0,37	71	300-3000	32/32
TPA5	0,55	80/90	1000-5000	40/40
TPA7	0,75	80/90	1000-7000	40/40
TPA11	1,1	80/90	1000-10000	40/40
TPA15	1,5	80/90	1000-15000	40/40
TPA22	2,2	100/112	1000-20000	50/50
TPA30	3	100/112	1000-25000	50/50

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TPA40	4	100/112	1000-30000	65/65
TPA55	5,5	132	2000-36000	65/65
TPA75	7,5	132	2000-42000	80/80
TPA92	9,2	160	3000-49000	80/80
TPA110	11	160	3000-56000	80/80
TPA150	15	160	3000-65000	100/100

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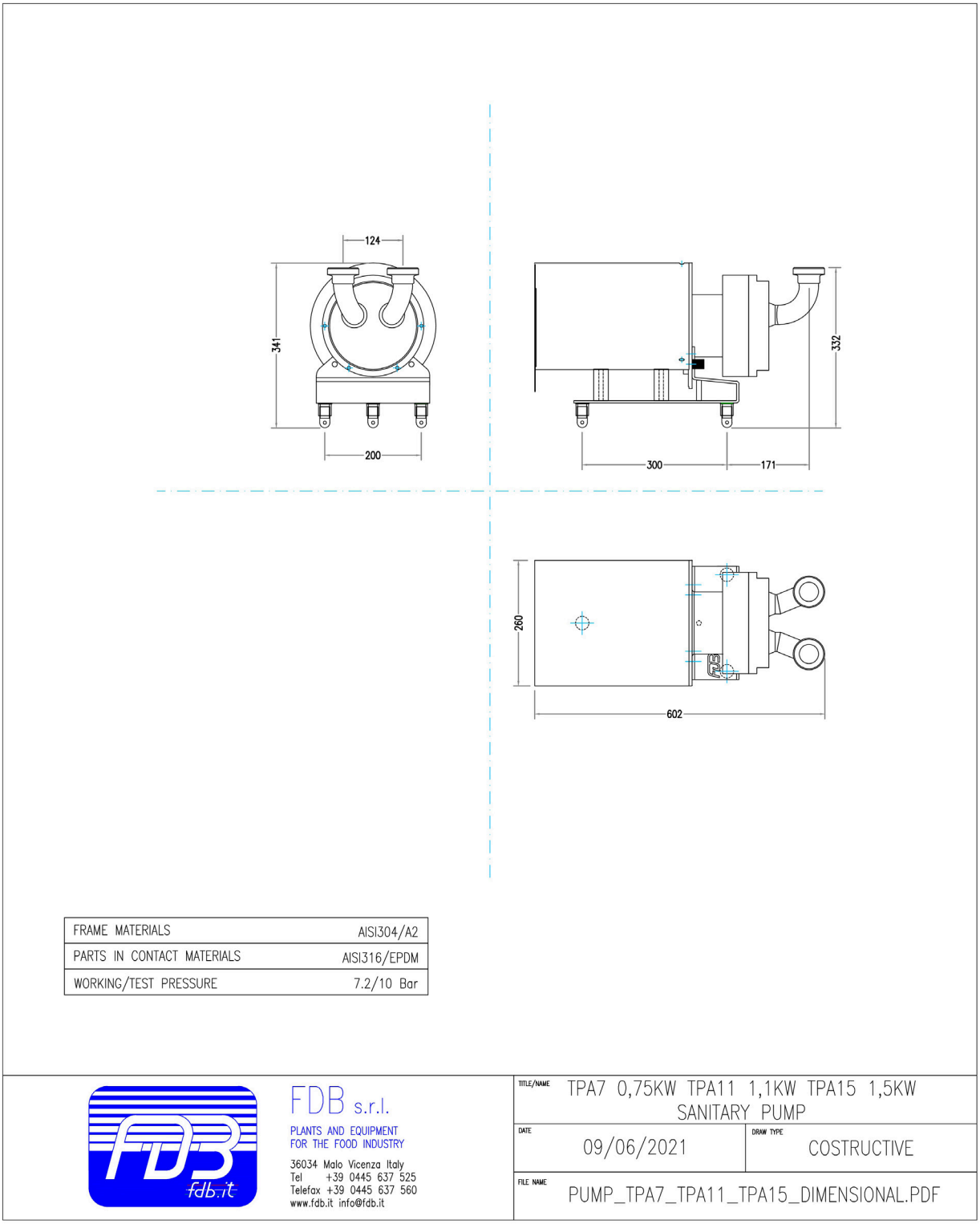
PUMP_TPA7

Link: https://www.fdb.it/pump/pump-tpa7/



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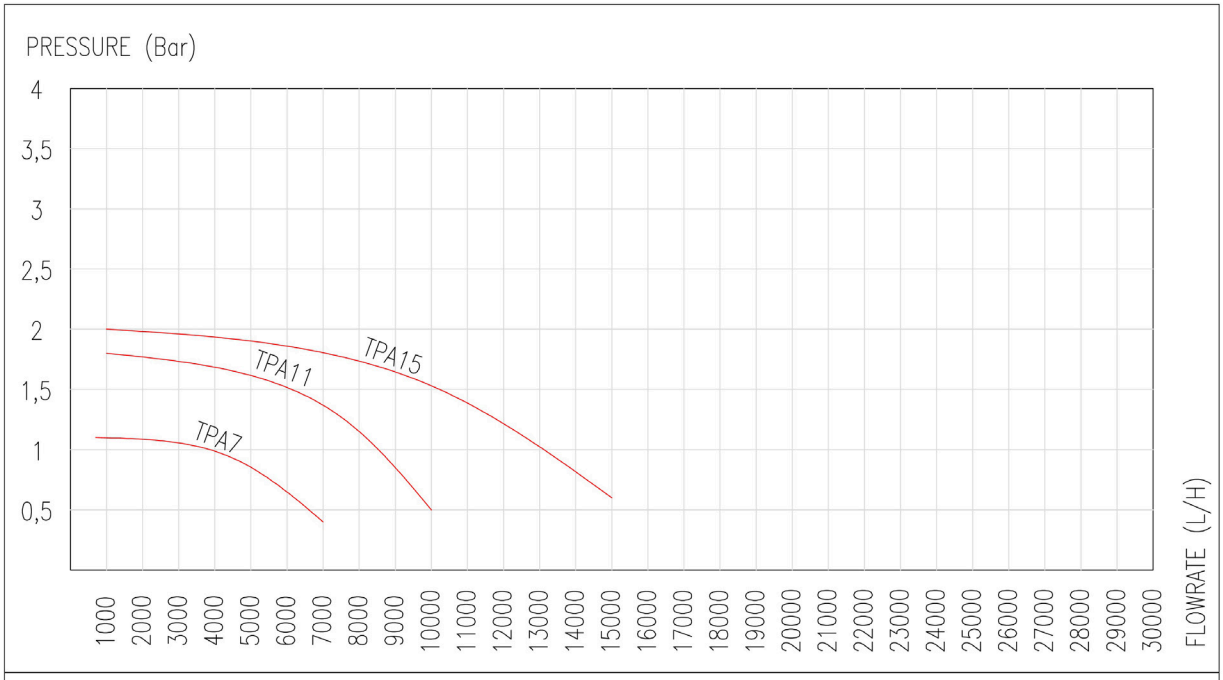

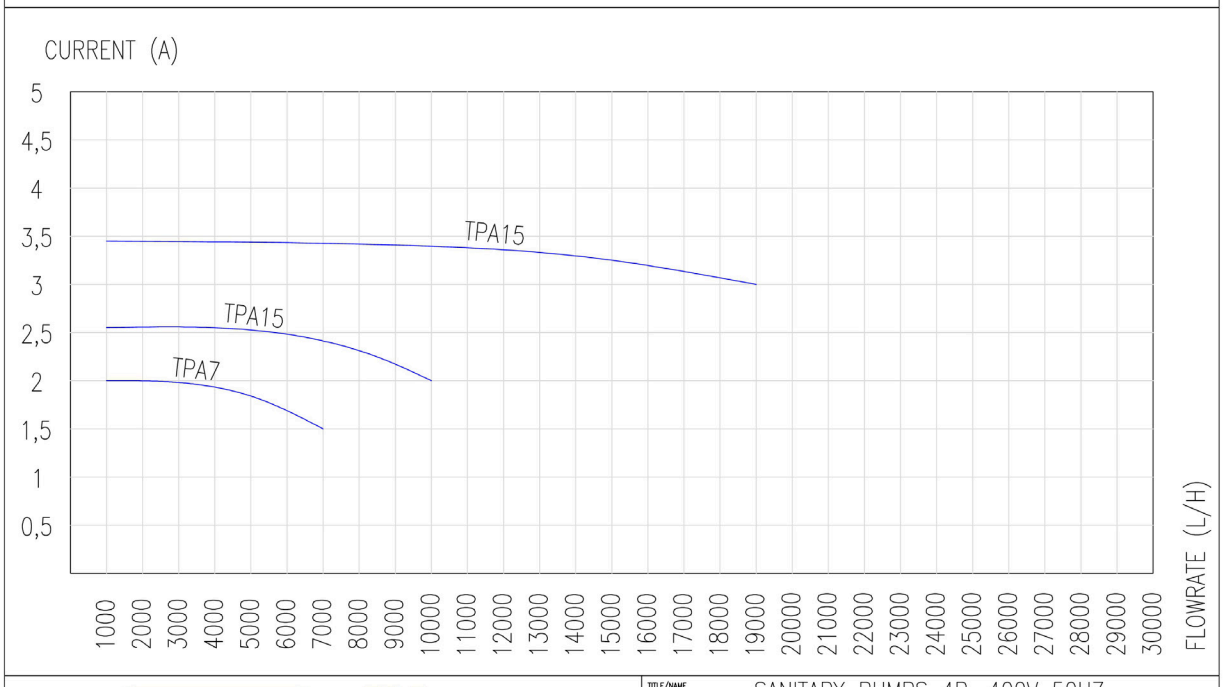

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TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA7 0,75KW – TPA11 1,1KW – TPA15 1,5KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA7_TPA11_TPA15_PERFORMANCE.PDF

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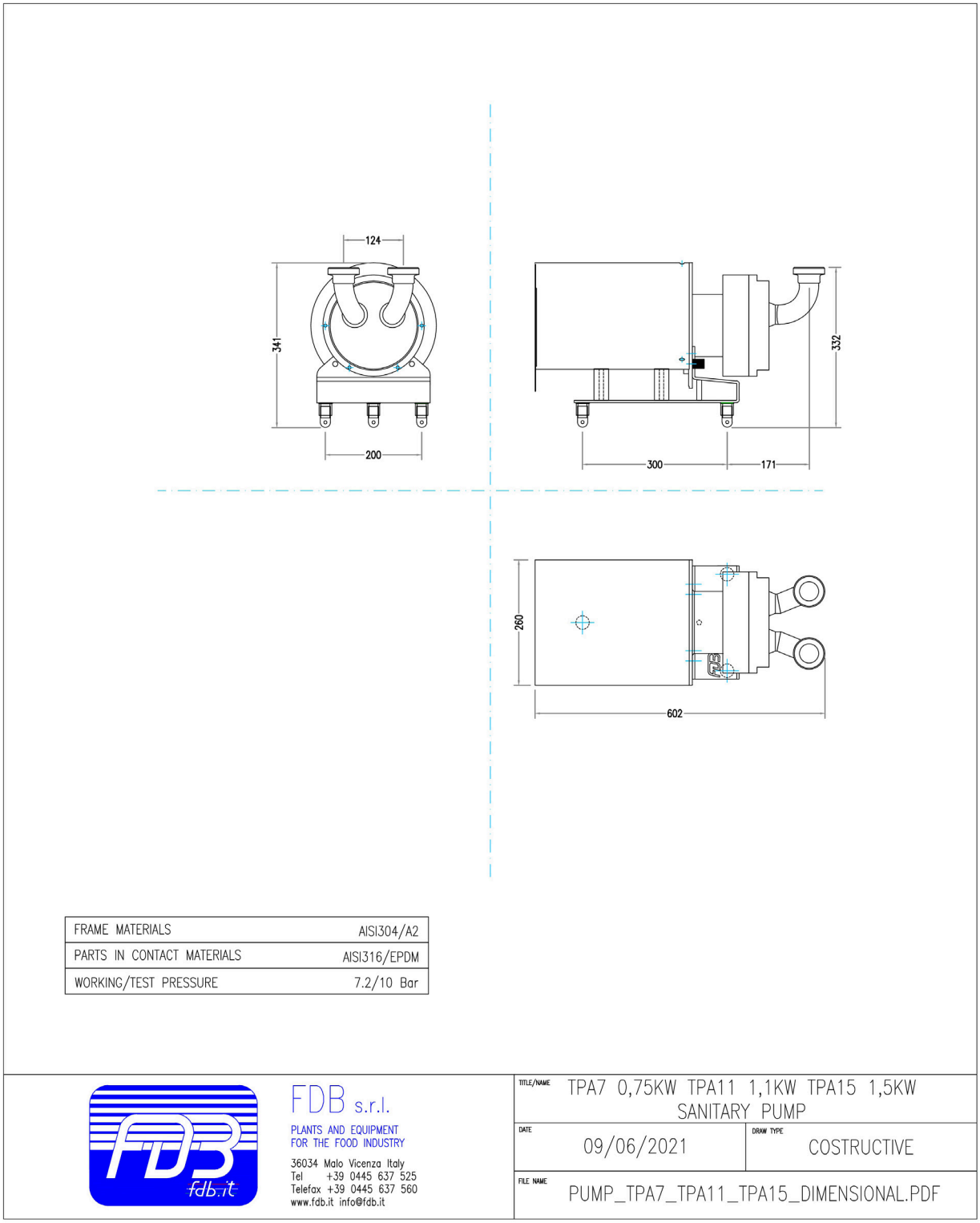
PUMP_TPA11

Link: https://www.fdb.it/pump/pump_tpa11/



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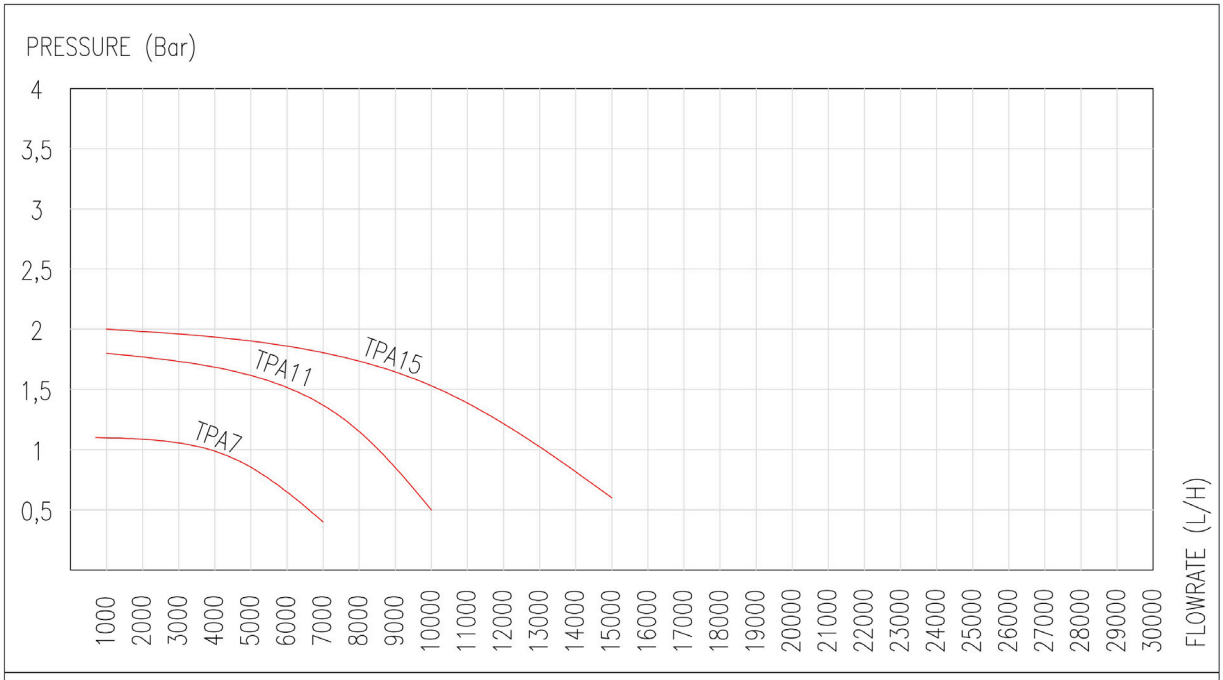

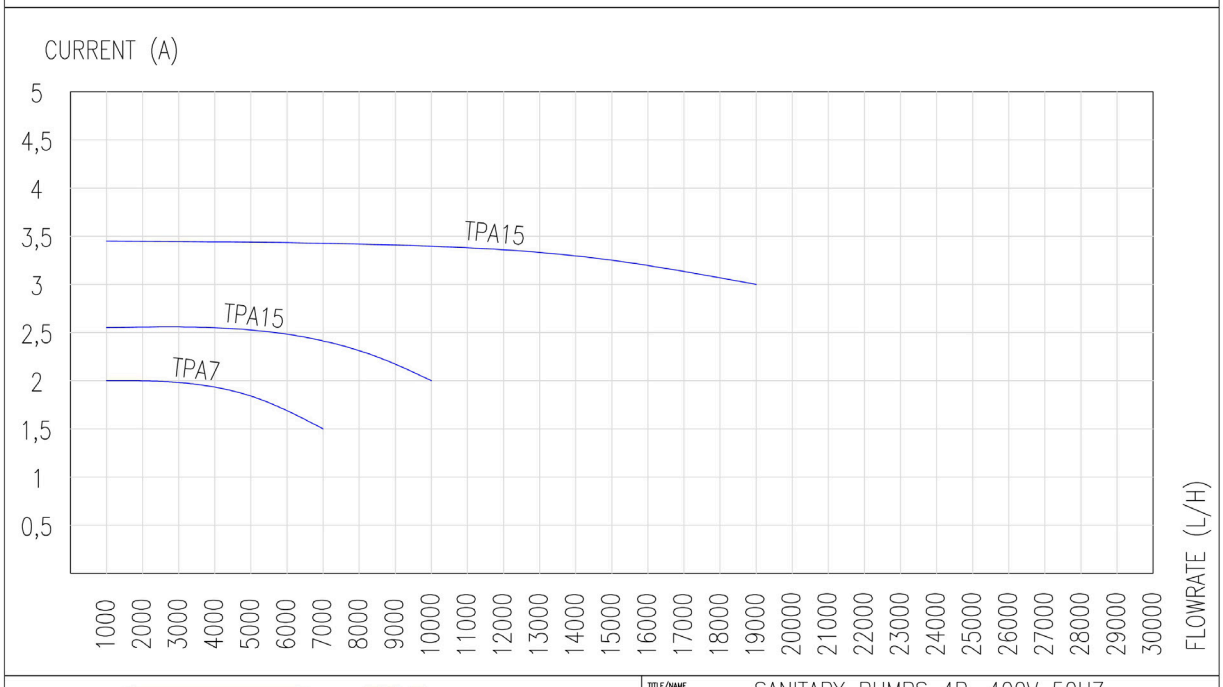

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TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA7 0,75KW – TPA11 1,1KW – TPA15 1,5KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA7_TPA11_TPA15_PERFORMANCE.PDF

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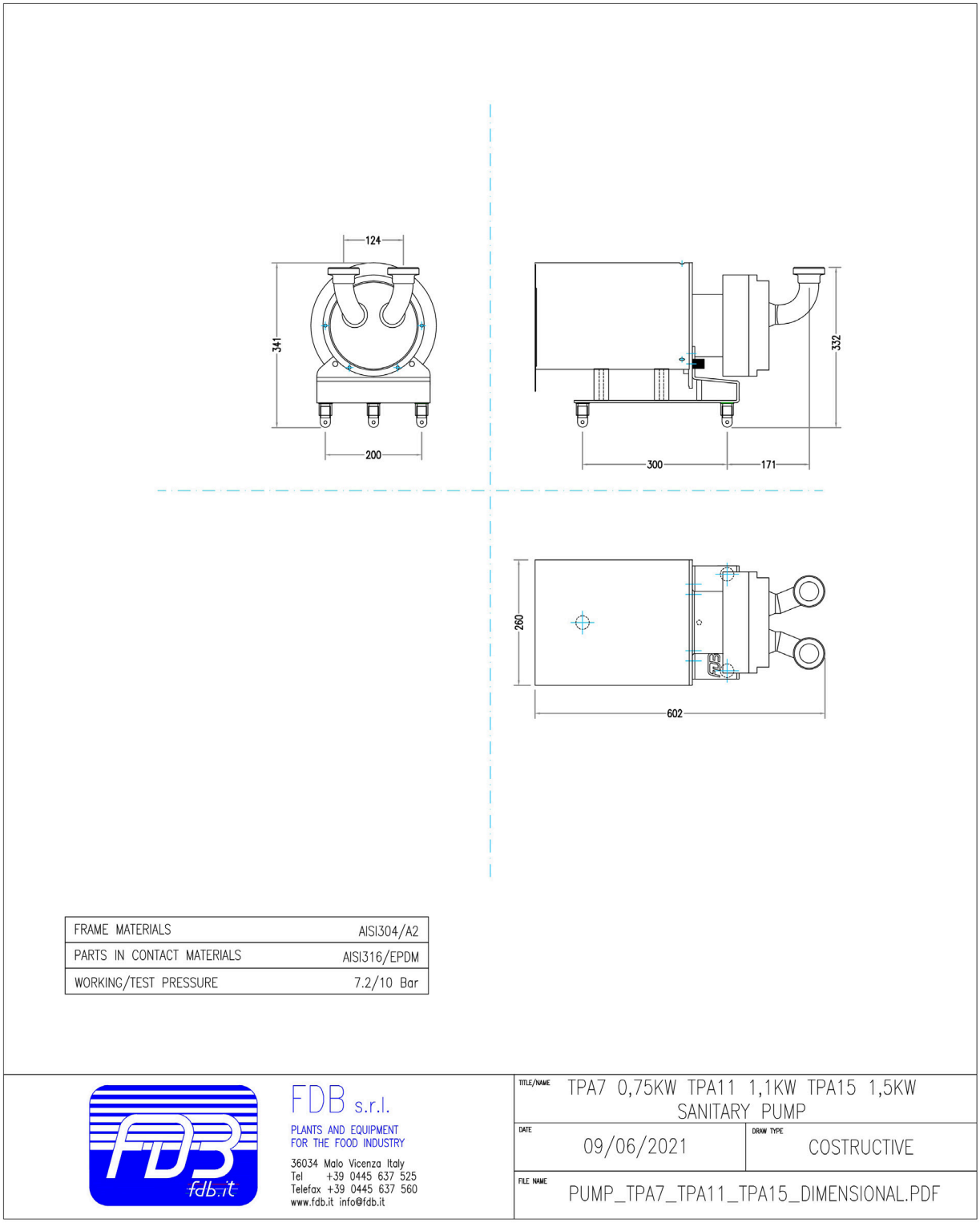
PUMP_TPA15

Link: https://www.fdb.it/pump/pump_tpa15/



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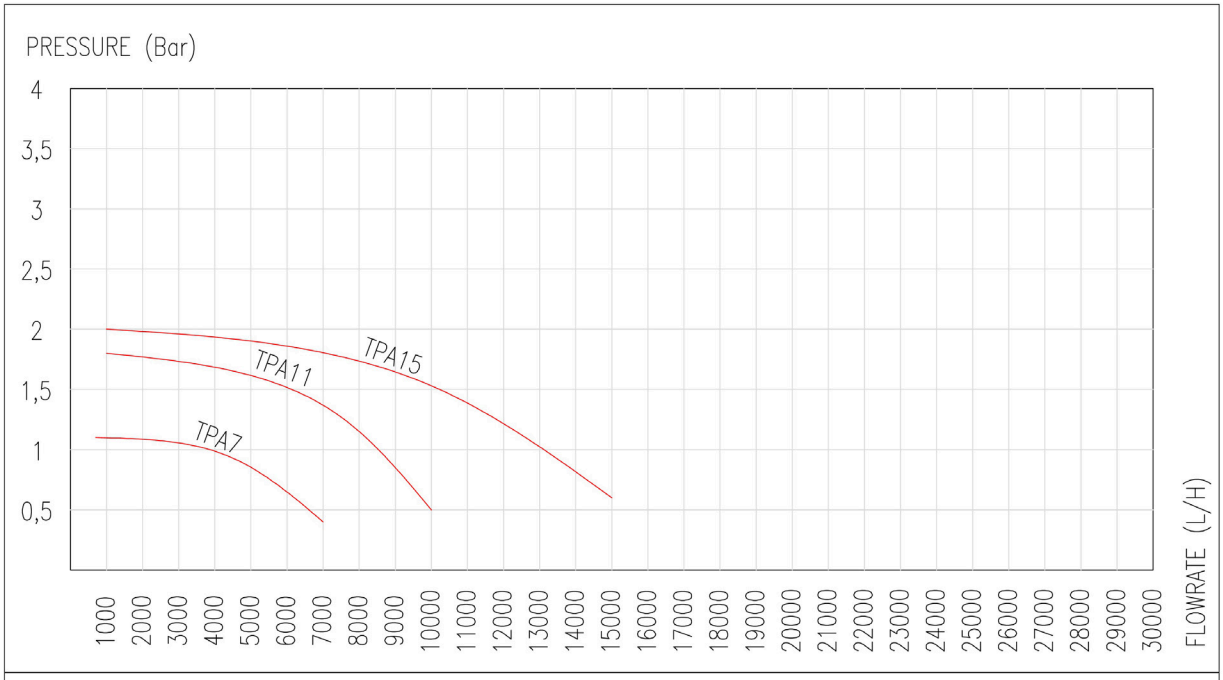

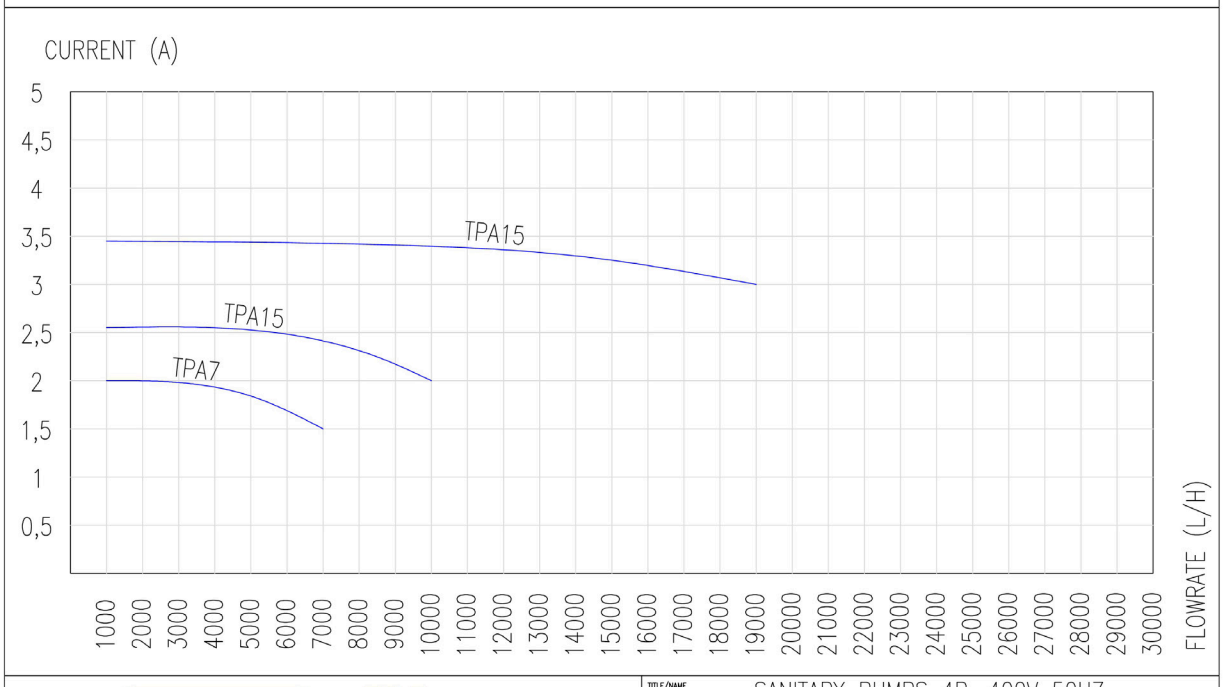

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TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA7 0,75KW – TPA11 1,1KW – TPA15 1,5KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA7_TPA11_TPA15_PERFORMANCE.PDF

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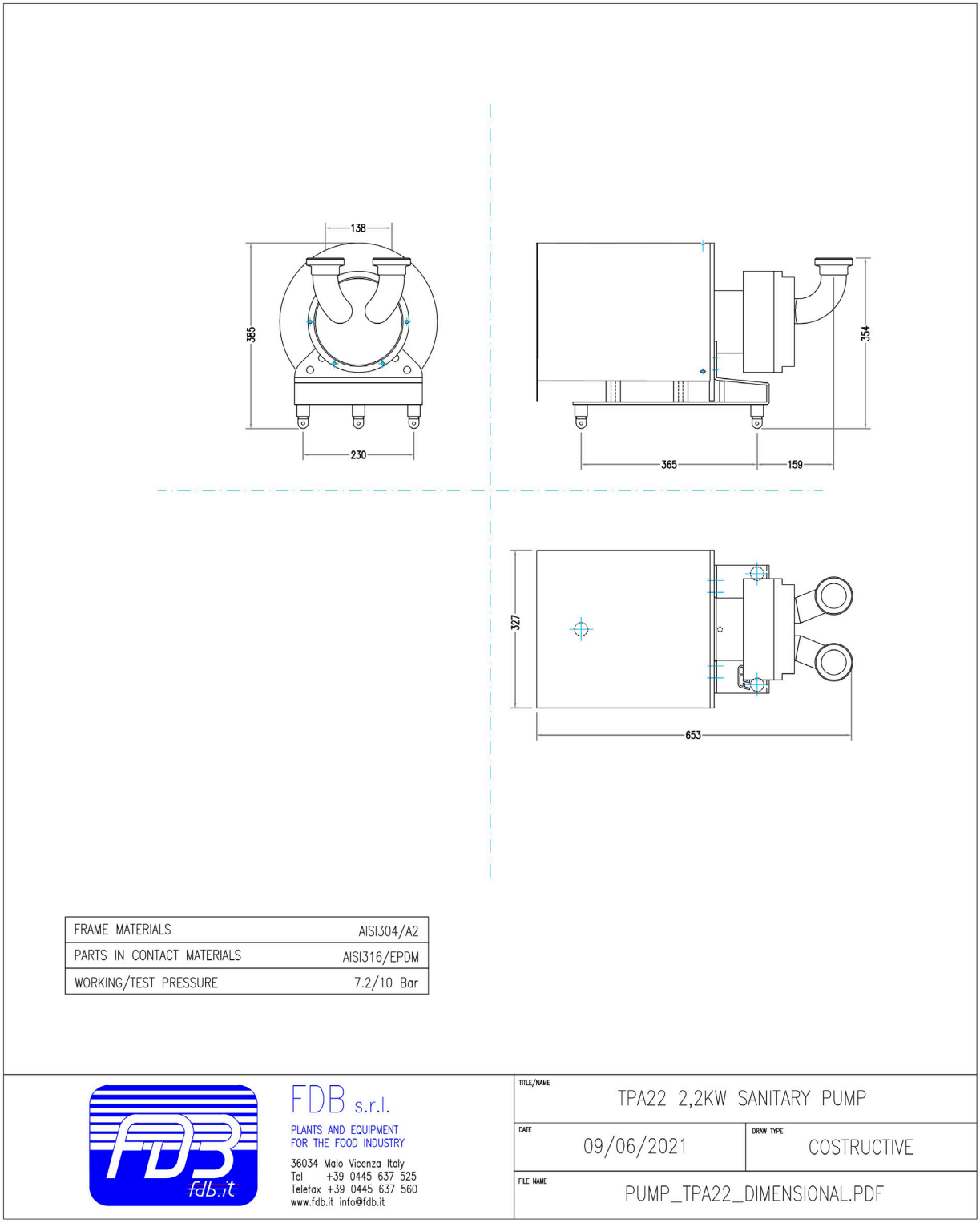
PUMP_TPA22

Link: https://www.fdb.it/pump/pump_tpa22/



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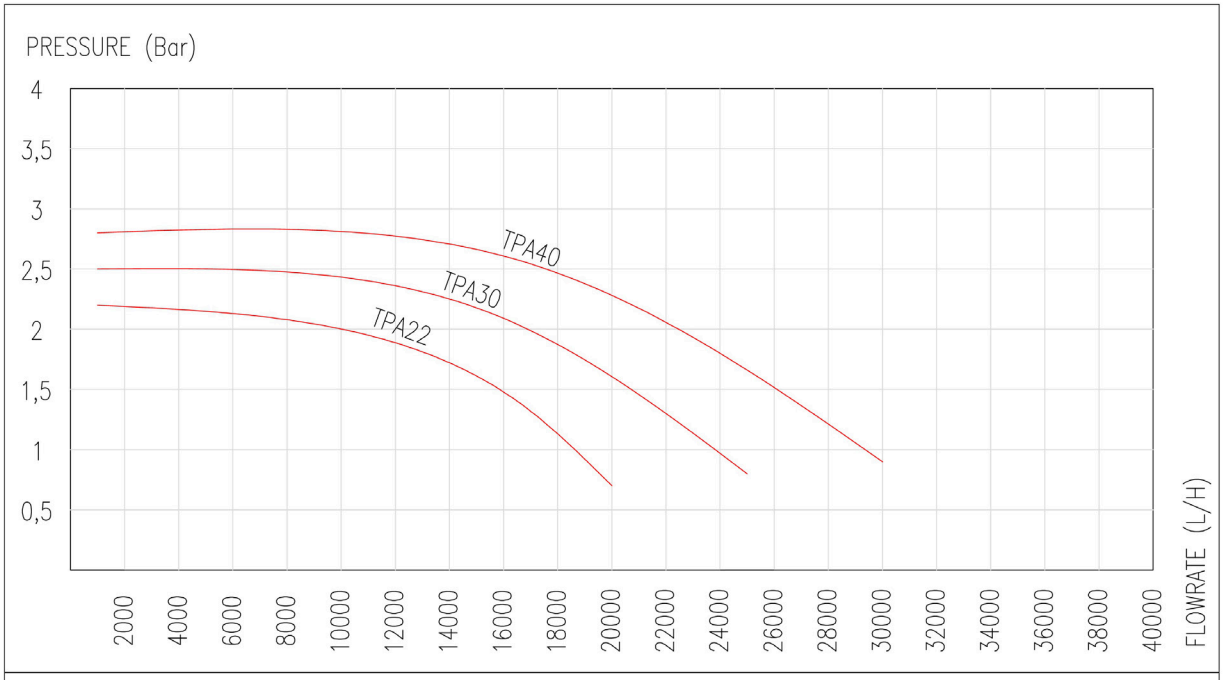

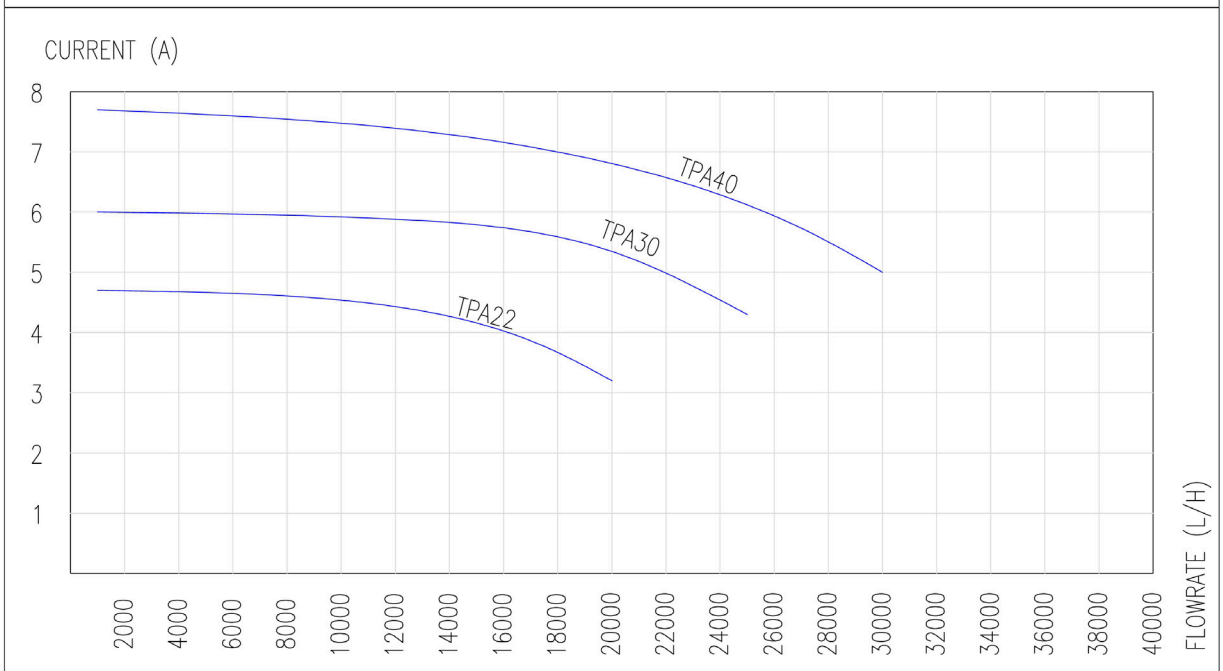

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TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA22 2,2KW TPA30 3KW TPA40 4KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA22_TPA30_TPA40_PERFORMANCE.PDF

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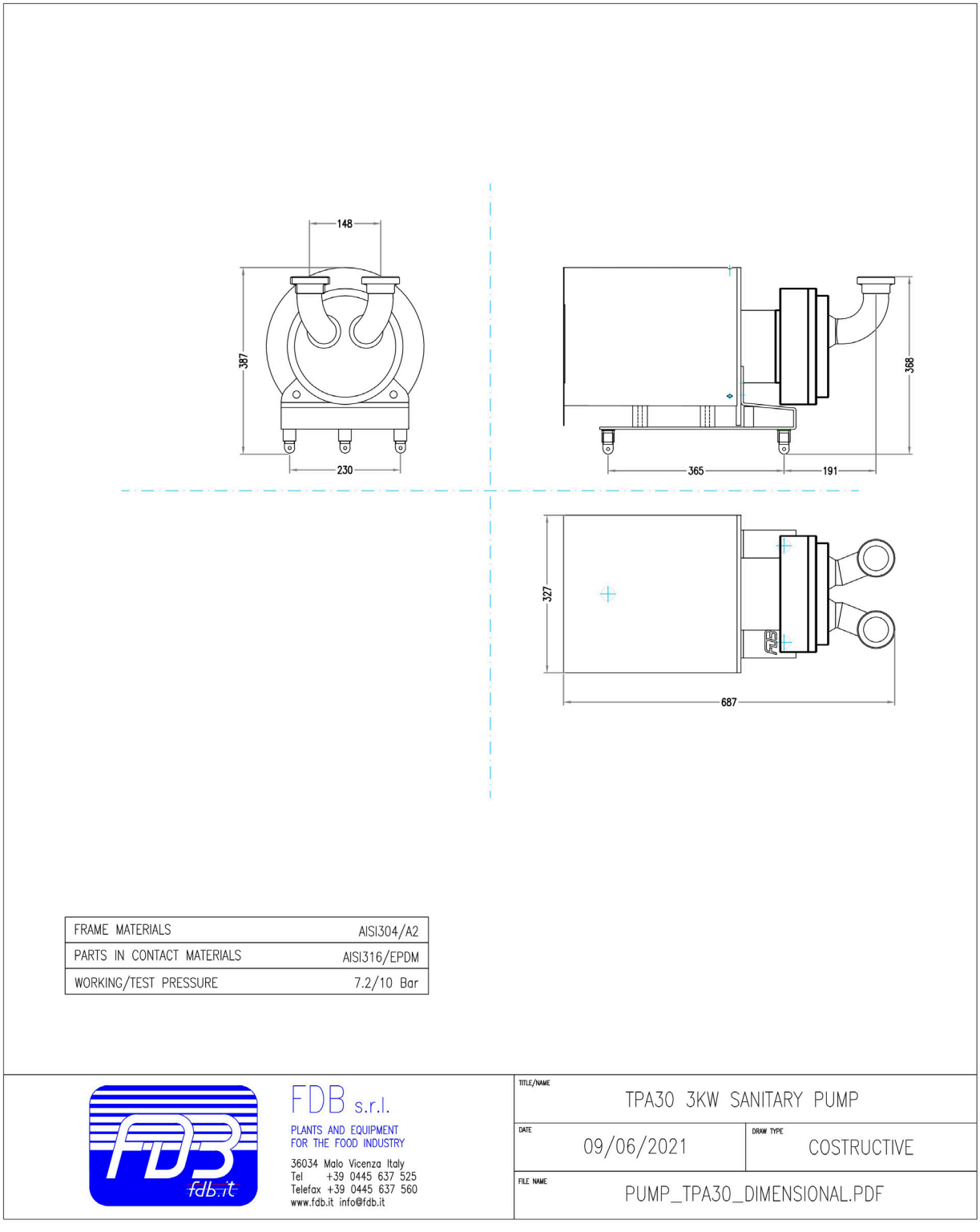
PUMP_TPA30

Link: https://www.fdb.it/pump/pump_tpa30/



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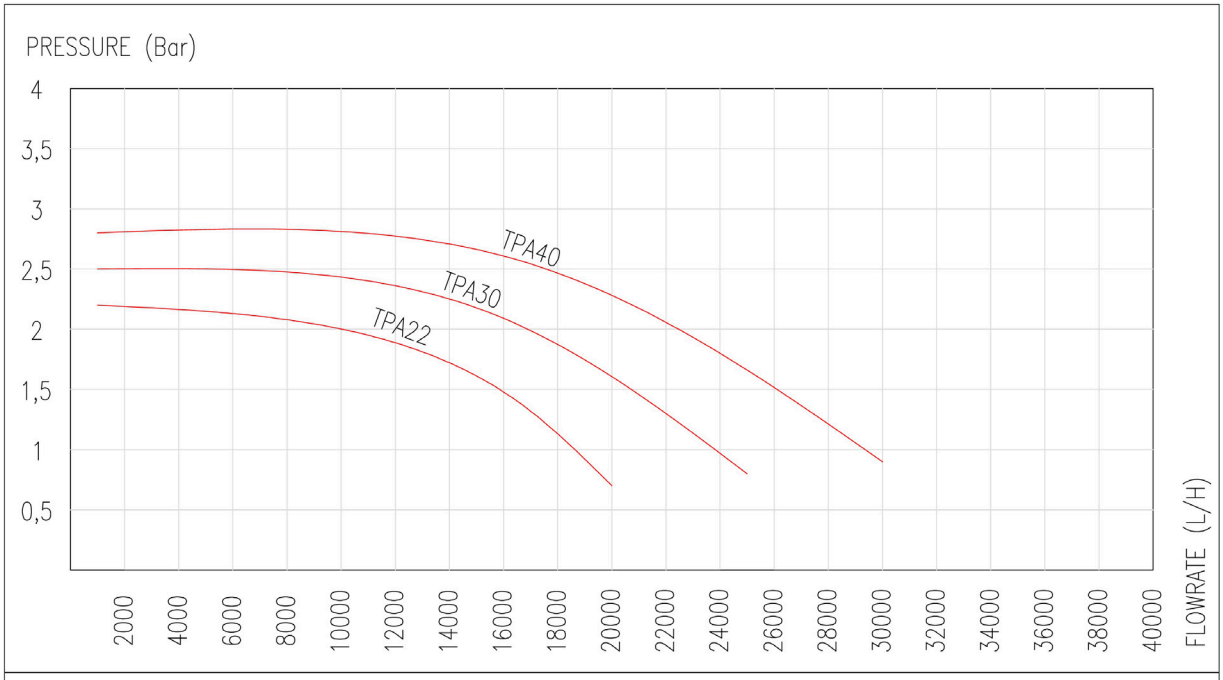

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TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA22 2,2KW TPA30 3KW TPA40 4KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA22_TPA30_TPA40_PERFORMANCE.PDF

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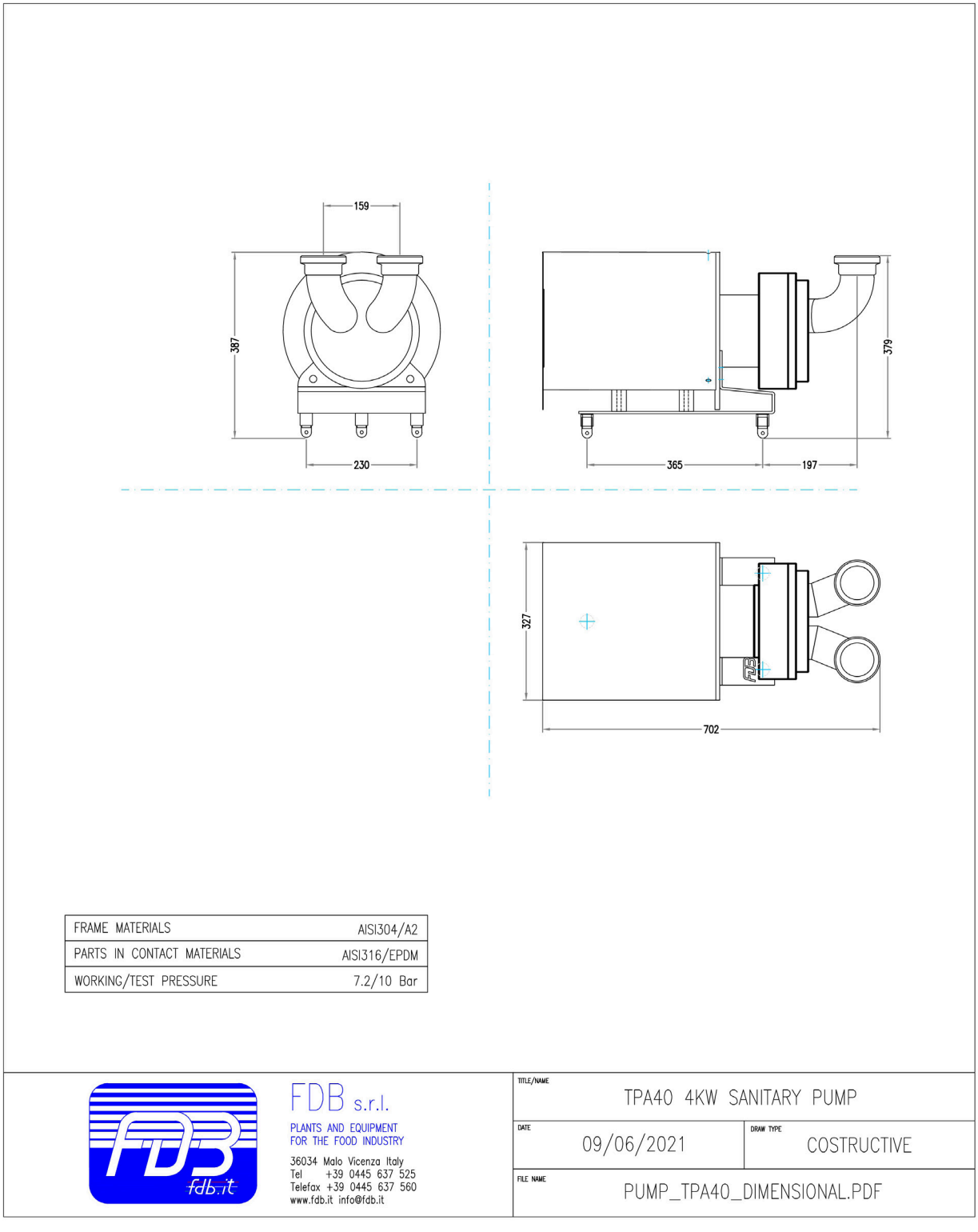
PUMP_TPA40

Link: https://www.fdb.it/pump/pump_tpa40/



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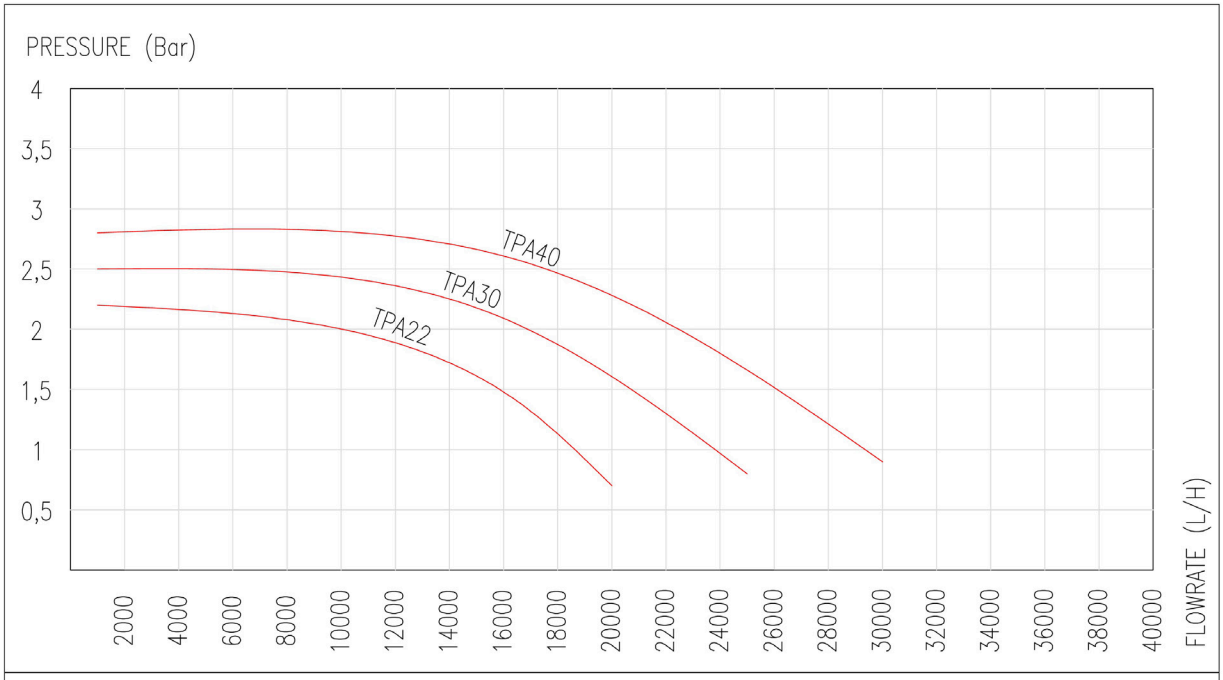

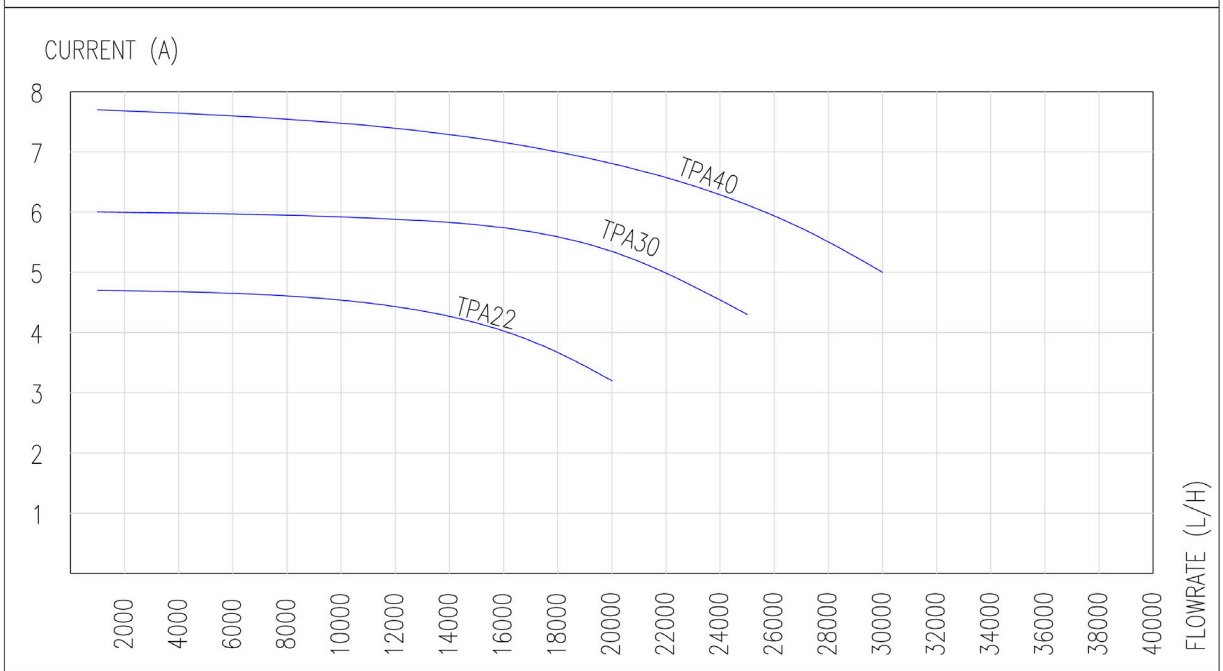

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TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA22 2,2KW TPA30 3KW TPA40 4KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
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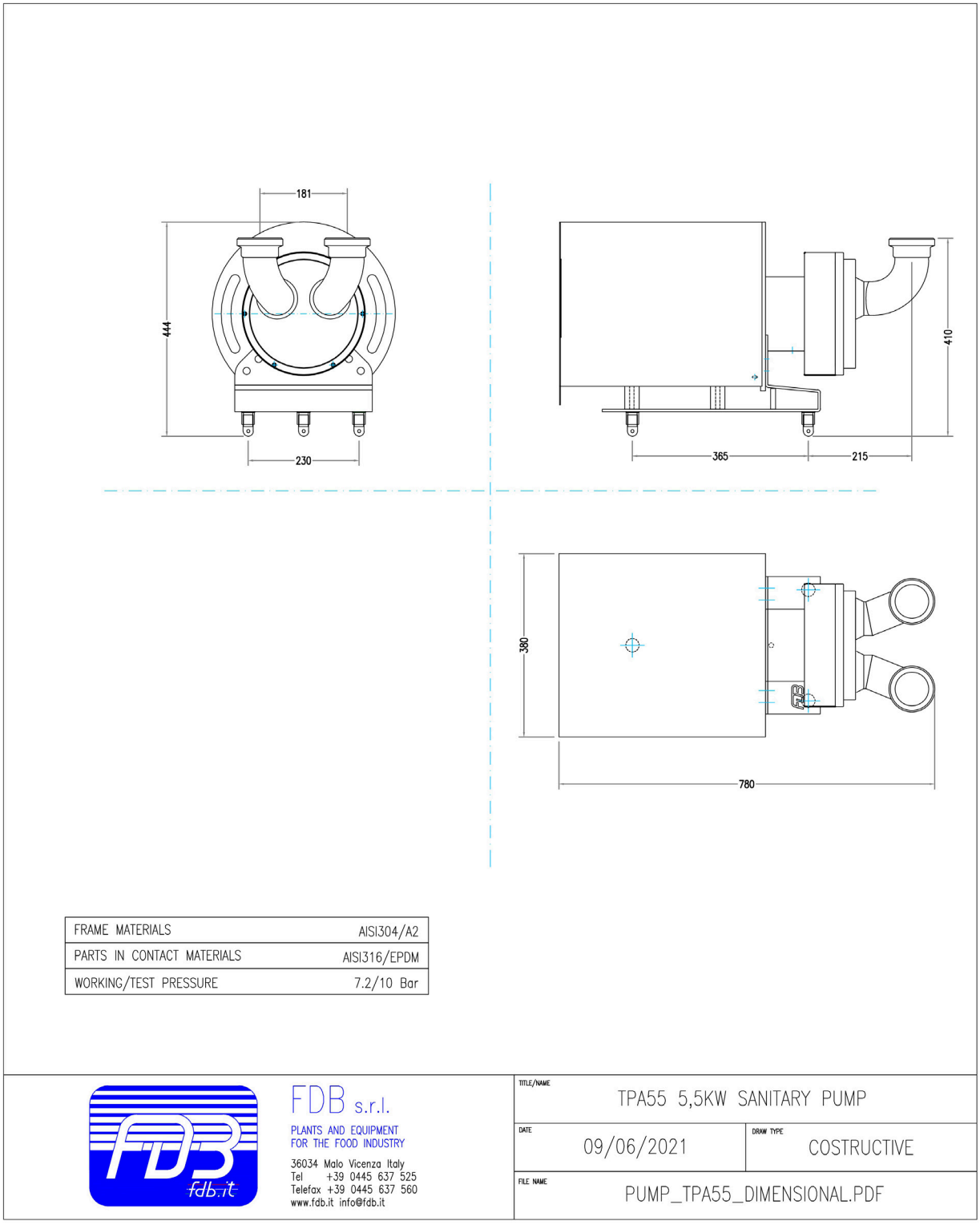
PUMP_TPA55

Link: https://www.fdb.it/pump/pump_tpa55/



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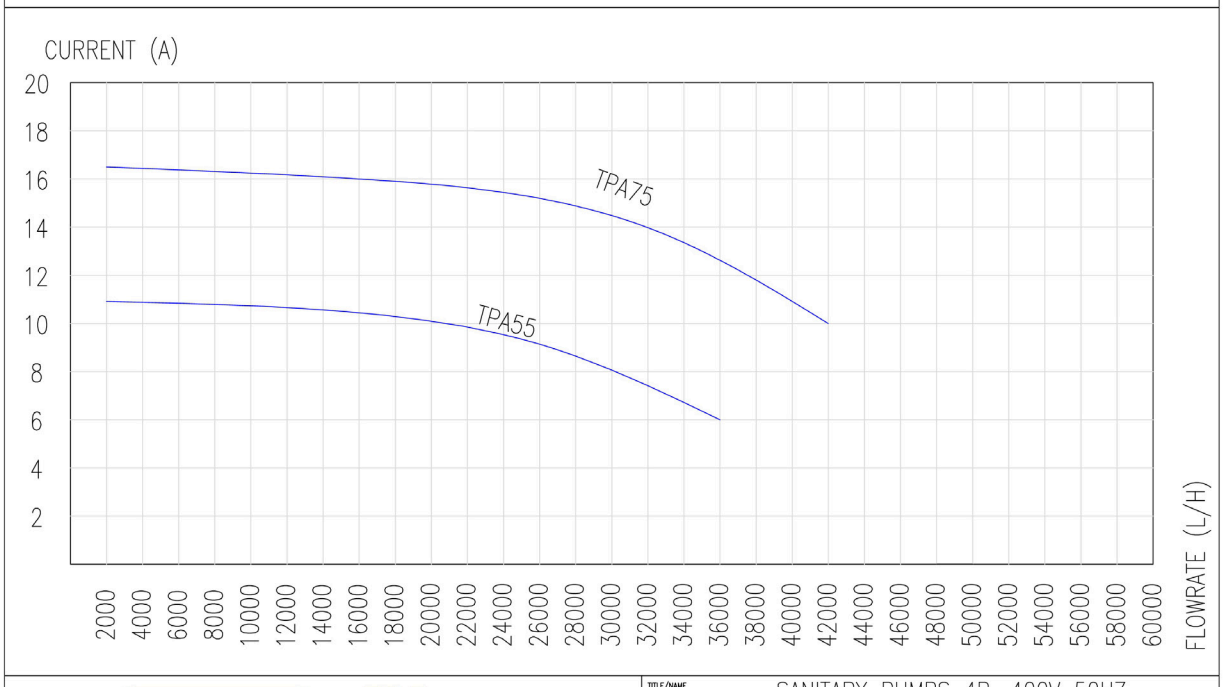

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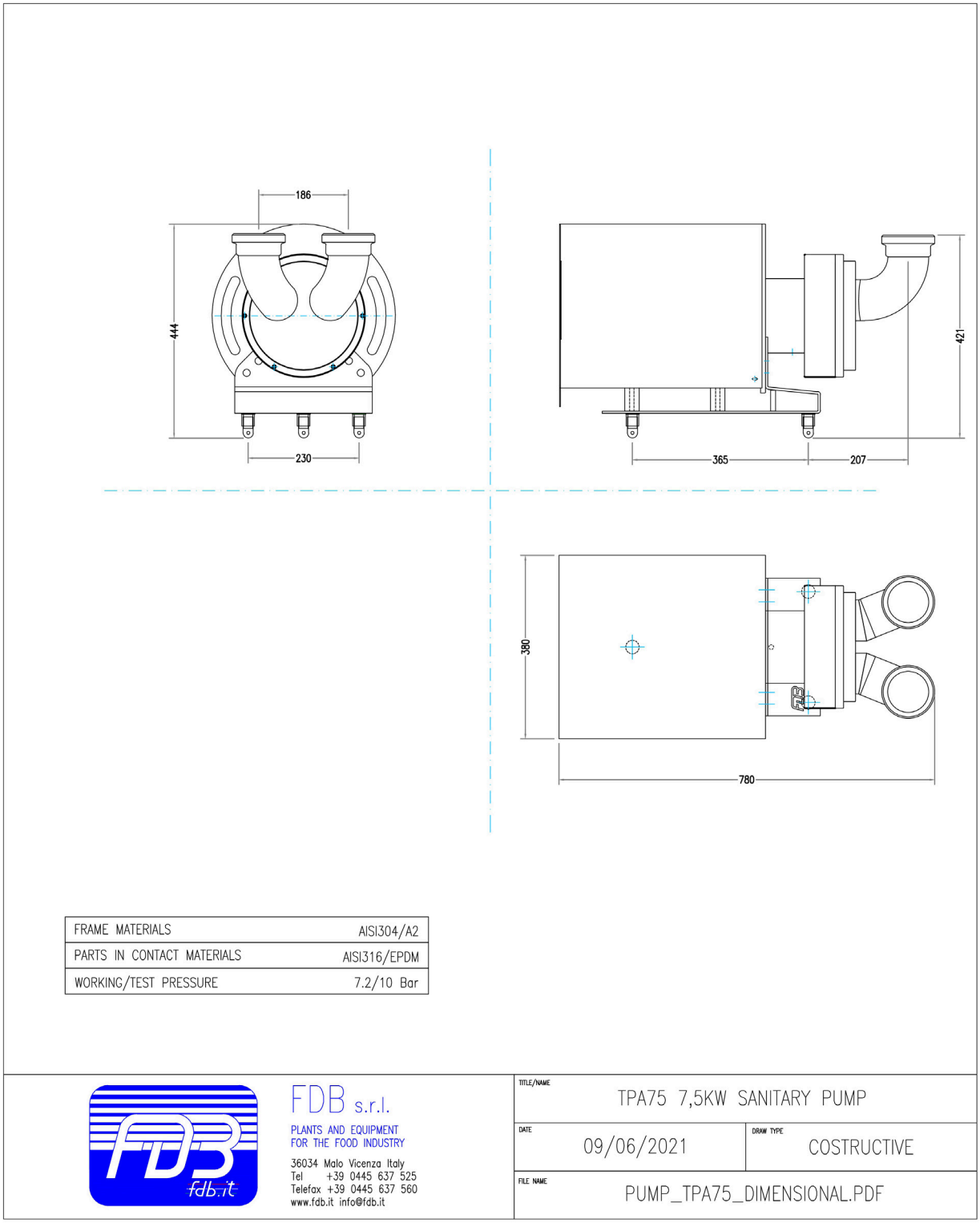
TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA55 5,5KW TPA75 7,5KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA55_TPA75_PERFORMANCE.PDF

PUMP_TPA75

Link: https://www.fdb.it/pump/pump_tpa75/



FRAME MATERIALS	AISI304/A2
PARTS IN CONTACT MATERIALS	AISI316/EPDM
WORKING/TEST PRESSURE	7.2/10 Bar

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TITLE/NAME: TPA75 7,5KW SANITARY PUMP
DATE: 09/06/2021
DRAW TYPE: COSTRUCTIVE
FILE NAME: PUMP_TPA75_DIMENSIONAL.PDF

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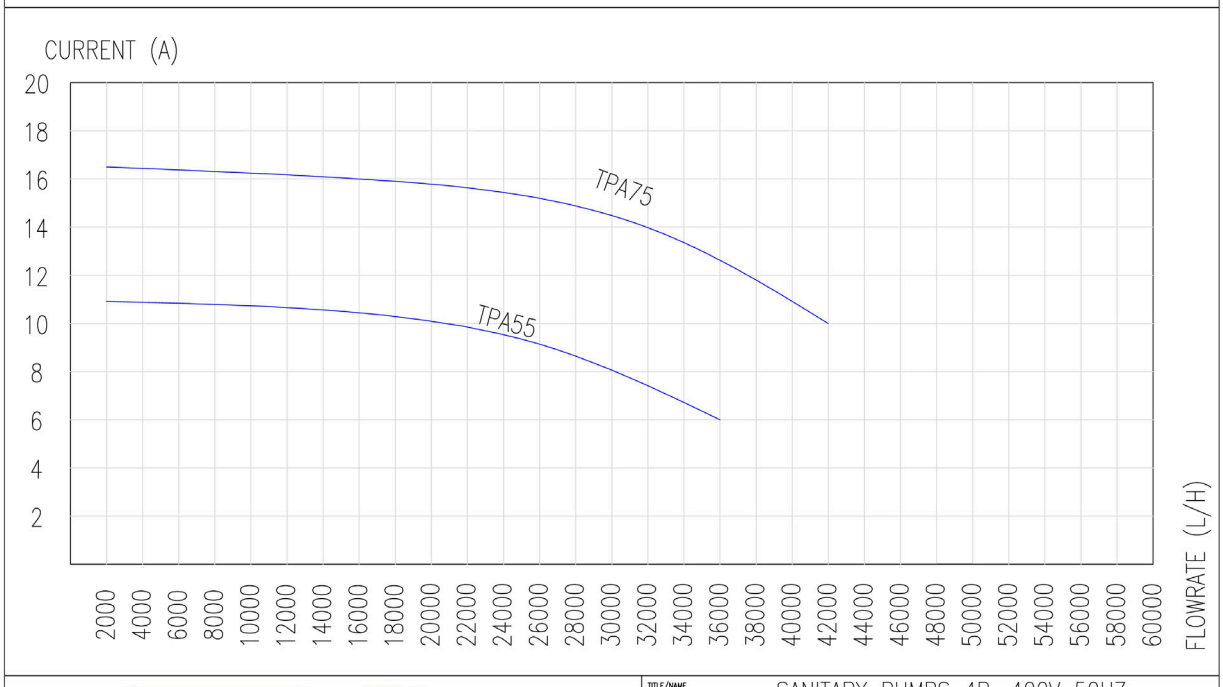

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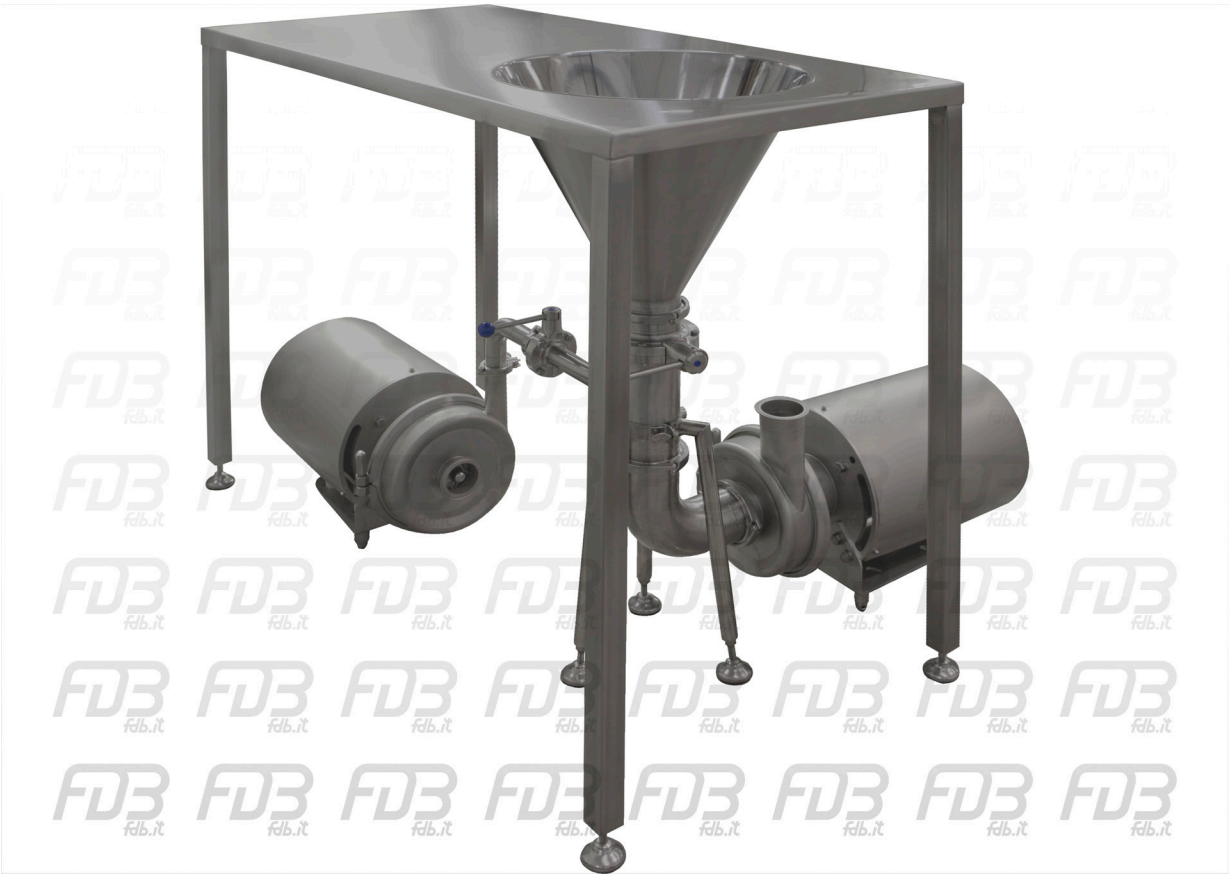
TITLE/NAME	SANITARY PUMPS 4P. 400V 50HZ TPA55 5,5KW TPA75 7,5KW
DATE	09/06/2021
DRAW TYPE	COSTRUCTIVE
FILE NAME	PUMP_TPA55_TPA75_PERFORMANCE.PDF

PUMP – Sanitary centrifugal dissolvers Triblender with semi-open impeller, TFCA series

Link:
https://www.fdb.it/pump/pump-sanitary-centrifugal-dissolvers-triblender-with-semi-open-impeller-tfca-series/



Sanitary centrifugal triblenders with semi-open impeller intended for mixing in recirculation of powders with food liquids, including abrasive and corrosive ones. The parts in contact with the product are made in AISI316L while the parts not in contact are in AISI304. Complete with stainless steel motor casing and height-adjustable feet.

Available with different powers to guarantee the best combination of powder extraction and head, according to the customer's needs.

PRINCIPLE OF OPERATION
The powders are introduced into the hopper while the liquid enters the upper part of the mixing chamber, giving the flow a cyclonic movement.
The impeller creates a depression such that the powders are sucked into the volute. The inlet flow rate and powder drop are adjustable via two sanitary butterfly valves.

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Contact us to find out which triblender can best suit your needs.
For a more timely response, providing us with the required product, aspiration and prevalence, we will be able to provide you with a quotation that meets your needs.

OPTIONAL COMPONENTS
Version/m with flushed seal for high temperatures, and extremely abrasive, viscous and corrosive liquids
Connections with other unifications (CLAMPS, SMS. RJT, UDF, BSPT, EN1902, etc.)
Polished finishes (Ra<0.8µm)
Anti-vibration feet for floor installation
Feet with fixing plates for installation on a frame
Inverter motor
Circular conical hopper 30 liters, 50 liters
Square conical hopper 40 liters
Hopper table

MODEL	CONNECTION	MAXIMUM TEMPERATURE	FINISHES
All models	DIN11851	+95°C (higher on request)	Ceramic micro blasted

MODEL	POWER [KW]	FRAME DIMENSION [MEC]	FLOW WITH CLOSED / OPEN HOPPER [L/H]	POWDER SUCTION CAPACITY [KG/H]	STANDARD CONNECTIONS [IN/OUT]
TFCA30	3	100/112	~4200	700/ 800	DN40(DN100) /DN50
TFCA40	4	100/112	~4900	900/ 1000	DN40(DN100) /DN65

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TFCA55	5,5	132	~5600	1100/ 1200	DN50(DN100) /DN65
TFCA75	7,5	132	~6400	1300/ 1400	DN50(DN100) /DN80
TFCA90	9	132	~7200	1600/ 1700	DN50(DN125) /DN100
TFCA110	11	160	~8100	1900/ 2000	DN50(DN125) /DN100
TFCA150	15	160	~9200	2100/ 2200	DN65(DN125) /DN100

MODEL	POWER [KW]	FRAME DIMENSION [MEC]	FLOW WITH CLOSED/OPEN HOPPER [L/H]	POWDER SUCTION CAPACITY [KG/H]	STANDARD CONNECTIONS [IN/OUT]
FCA15+ TFCA30	4,5	80/90 100/112	30000/ 20000	1600/ 1700	DN50(DN100) /DN50
FCA22+ TFCA40	6,2	80/90 100/112	36000/ 25000	1900/ 2000	DN50(DN100) /DN65
FCA30+ TFCA55	8,5	100/112 132	42000/ 30000	2300/ 2400	DN65(DN100) /DN65
FCA40+ TFCA75	11,5	100/112 132	49000/ 36000	2600/ 2700	DN65(DN100) /DN80
FCA55+ TFCA90	14,5	132 132	56000/ 42000	3300/ 3400	DN80(DN125) /DN100
FCA55+ TFCA110	16,5	132 160	64000/ 42000	3800/ 3900	DN80(DN125) /DN100
FCA75+ TFCA150	22,5	132 160	72000/ 42000	4300/ 4400	DN80(DN125) /DN100

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SPAR – Spare parts

Link: https://www.fdb.it/spar/spar-spare-parts/

SPARE PARTS REQUEST FORM:
All request for spare parts must be sent via e-mail to: info@fdb.it
By following these simple steps:

1. Recognition Machine:
The first thing to do is to recognize the machinery throught the appropriate FDB plate, then indicate in the e-mail: model , serial number, job order reference. Or attach a photo of the plate in the e-mail.

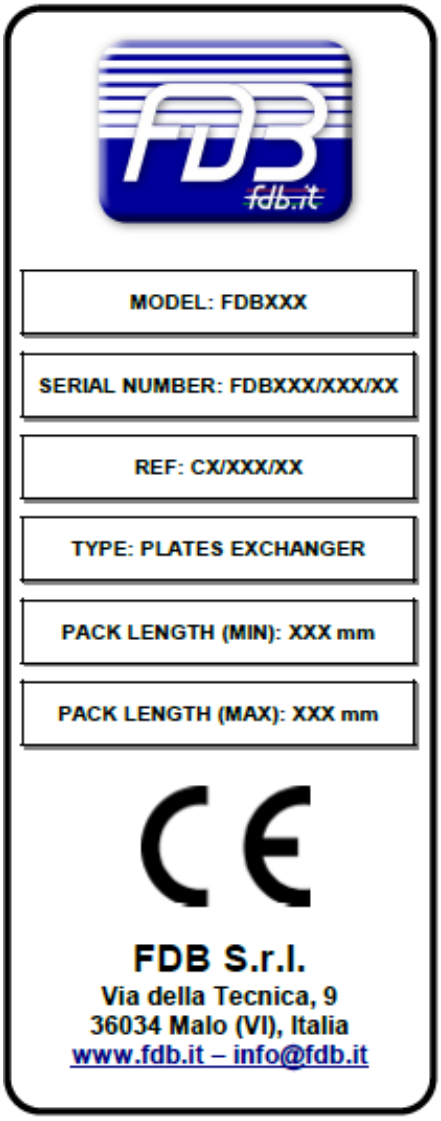

PLATE PHOTO-TYPE

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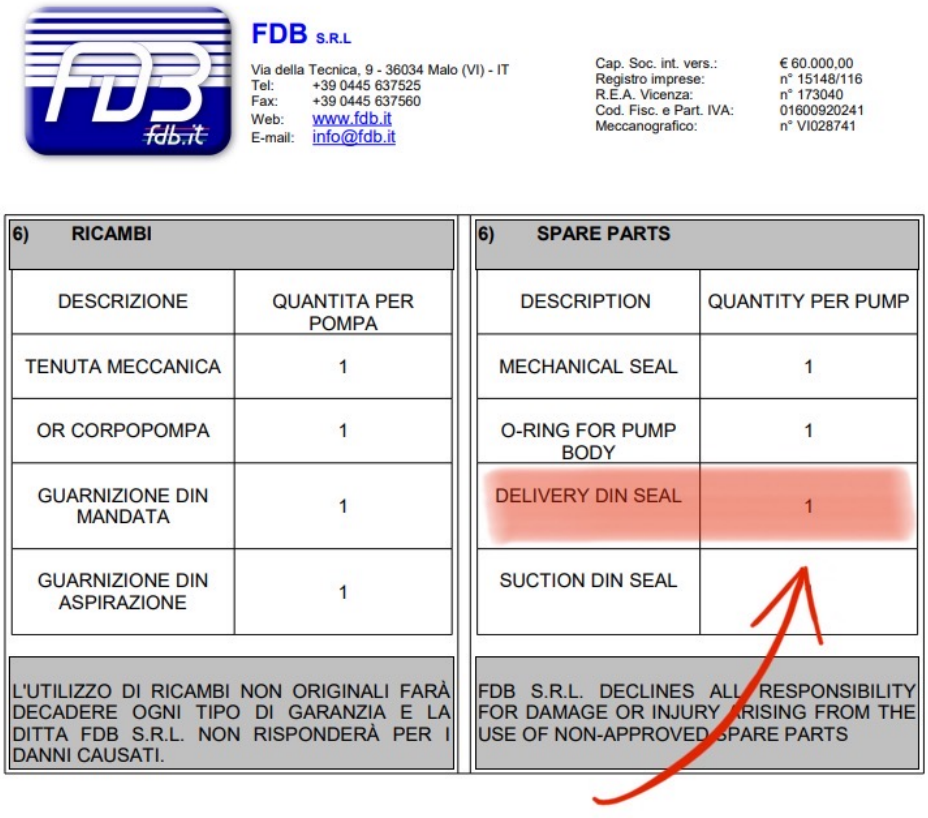
2. Description of malfunction / problem:

- Is needed a description of the machine problem, and if you have an idea of which component could be damaged, please also indicate that.
- In the event that the origin of the problem or the problem itself is not known, a video can be sent for a minimun duration of 4-5 minutes in which you film what happens in the machine, describing how the significant data in the indicators vary, for example: change in pressure, temperature etc.

3. In the case of older machinery that has already identified the damage component to be replaced, it is recommended to attach a photo of the component to the request, flanked by a metric cord so that is it possible to understand its dimensions.

4. Manual and flow chart:
If possibile, it would be useful to provide an indication of the component to be replaced in the machinery manual and in the flow chart available to you, as shown in the photo below.



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Fax: +39 0445 637560
Web: www.fdb.it
E-mail: info@fdb.it

Cap. Soc. int. vers.: € 60.000,00
Registro imprese: n° 15148/116
R.E.A. Vicenza: n° 173040
Cod. Fisc. e Part. IVA: 01600920241
Meccanografico: n° VI028741

6) RICAMBI	
DESCRIZIONE	QUANTITA PER POMPA
TENUTA MECCANICA	1
OR CORPOPOMPA	1
GUARNIZIONE DIN MANDATA	1
GUARNIZIONE DIN ASPIRAZIONE	1
L'UTILIZZO DI RICAMBI NON ORIGINALI FARÀ DECADERE OGNI TIPO DI GARANZIA E LA DITTA FDB S.R.L. NON RISPONDERÀ PER I DANNI CAUSATI.	

6) SPARE PARTS	
DESCRIPTION	QUANTITY PER PUMP
MECHANICAL SEAL	1
O-RING FOR PUMP BODY	1
DELIVERY DIN SEAL	1
SUCTION DIN SEAL	
FDB S.R.L. DECLINES ALL RESPONSIBILITY FOR DAMAGE OR INJURY ARISING FROM THE USE OF NON-APPROVED SPARE PARTS	

Example of the spare parts page of an FDB manual

TANK – Tanks

Link: https://www.fdb.it/institutional/tank-tanks/

•BT constant level tanks

https://www.fdb.it/tank/bt-constant-level-tanks/

•MT Maturations tanks

https://www.fdb.it/tank/mt-maturations-tanks/

•Multi-purpose Bath

https://www.fdb.it/tank/multi-purpose-bath/

•ST Storage tanks

https://www.fdb.it/tank/st-storage-tanks/

•Vertical Tanks

https://www.fdb.it/tank/vertical-tanks/

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BT constant level tanks

Link: https://www.fdb.it/tank/bt-constant-level-tanks/

Constant level tank made of AISI304 stainless steel, sanitary execution, polished interior and fine satin surface.

See below a table with standard and optional components.

BASIC COMPONENTS
Hatch
Side entrance
Side discharge “to slipper”

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OPTIONAL COMPONENTS
Hatch with insect-proof air vent
Float input complete with SIC shutter
C.I.P.washing inlet on divosphere
Input with pneumatic valve on level probe with continuous signal

Useful capacity table

MODEL	USEFUL CAPACITY [Liters]
BT100	100 L
BT150	150 L
BT200	200 L
BT300	300 L
BT400	400 L
BT500	500 L
BT600	600 L

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DT Constant level tanks

Link: https://www.fdb.it/tank/dt-constant-level-tanks/

Constant level tank made of AISI304 stainless steel, sanitary execution, polished interior and fine satin surface.

See below a table of the basic and optional components.

BASIC COMPONENTS
Three levels of visual level control and inspection
Entrance with product distribution system with tangential inclination
C.I.P.washing inlet on divosphere
Central drain

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OPTIONAL COMPONENTS
Float sanitary level probe, with continuous signal
Pressure transmitter for vacuum reading
Removable vortex breaker on drain

The DT constant level tanks work at a pressure of -0.9 / + 6 [bar].
Useful capacity table

MODEL	USEFUL CAPACITY [Liters]
DT50	50 L
DT100	100 L
DT150	150 L
DT200	200 L
DT300	300 L
DT400	400 L
DT500	500 L

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MT Maturations tanks

Link: https://www.fdb.it/tank/mt-maturations-tanks/

MT maturation tanks are heat insulated tanks with hot / cold heat exchange, they give the possibility to heat or cool your product.

Cylindrical tanks with vertical axis, flat roof and inclined bottom, with “Trapcold” cavity and insulation.
All parts in contact with the product are in AISI304, insulation with high density ecological polyurethane foam ISO5708, EN13732B2.
The insulation cover is made of AISI304, satin finishes.

Depending on the product you want to use, the type of stirrer installed changes, there are three variants:

- Simple propeller shaker
- Shaker with anchor propeller
- Agitator with emulsifying propell

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Below is a table of standard and optional components.

BASIC COMPONENTS
Hatch with micro-switch
C.I.P.washing inlet

OPTIONAL COMPONENTS
Control panel with hot or cold thermoregulator, or hot / cold together
Continuous level probe
Temperature probe

Useful capacity table and some indicative data.

MODEL	USEFUL CAPACITY [Liters]	SIMPLE AGITATOR [kW]	STIRRER AGITATOR [kW]	EMULSIFYING AGITATOR [kW]
MT300	300 L	0,37 kW	0,55 kW	
MT600	600 L	0,55 kW		
MT1200	1200 L		1,5 kW	
MT2400	2400 L		2,2 kW	
MT3000	3000 L		2,2 kW	
MT4000	4000 L	1,5 kW		
MT5000	5000 L	2,2 kW		
MT6000	6000 L			

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Multi-purpose vat

Link: https://www.fdb.it/tank/multi-purpose-vat/

The Multipurpose vat allows to obtain a cheese from fresh milk. Both pasteurization and cheese production are carried out in the same vat.

Fresh milk is heated to 72 ° C for milk pasteurization. Then the milk cooling starts at 36 ° C where the cheese production process takes place. The multi-purpose vat is made of AISI304 with an air space all around the tank to heat or cool the milk. The interspace is thermally insulated to increase energy efficiency. All the different process steps can be automated and controlled through the control panel. The shape is cylindrical with a flat bottom. There is the possibility of having a flag stirrer that works thanks to an inverter that controls the rotation speed. An automatic loading, unloading, washing and heating / cooling system can be provided so as to have a complete, automated and optimized plant for cheese production.

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FDB provides different sizes of the multipurpose vat shown in the following table.

Capability of the Multi-purpose vat
300L
600L
1200L
2000L

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ST Storage tanks

Link: https://www.fdb.it/tank/st-storage-tanks/

ST storage tanks are heat insulated tanks with cooling / refrigeration, they give the possibility to cool or refrigerate your product

Cylindrical tanks with vertical axis (STV version) and horizontal axis (STH version), with “Trapcold” jacket and insulation.
All parts in contact with the product are in AISI304, insulation with high density ecological polyurethane foam ISO5708, EN13732B2.
The insulation cover is made of AISI304, satin finish.

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See below a table of the basic and optional components.

BASIC COMPONENTS
Hatchway with micro-switch
C.I.P. washing inlet
Simple propeller agitator
Acces ladder

OPTIONAL COMPONENTS
Control panel with thermoregulation of the cooling temperature
Weighing system with precision load cells
Control panel with thermoregulation of the cooling temperature and automatic washing unit C.I.P. in recirculation
As an alternative to the refrigeration system, it is possible to install a cooling system with cold water

Useful capacity table and some indicative data.

MODEL	USEFUL CAPACITY [Liters]	AGITATOR [kW]	REFRIGERATION UNIT (R404A/R449A)
STH2000	2000 L	0,55 kW	3/5HP
STH2500	2500 L	0,55 kW	3,5/6,5 HP
STH3000	3000 L	0,55 kW	4/8,5 HP
STH4000	4000 L	0,75 kW	5/10 HP
STH5000	5000 L	1,1 Kw	6,5/13 HP

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*The STH models are tanks with horizontal axis while the STV models are tanks with vertical axis

MODEL	USEFUL CAPACITY [Liters]	AGITATOR [kW]	REFRIGERATION UNIT [R404A/R449A]
STV1000	1000 L	0,37 kW	2,3/3 HP
STV1200	1200 L	0,37 kW	2,3/3,5 HP
STV1400	1400 L	0,37 kW	2,3/4 HP
STV1600	1600 L	0,55 kW	2,3/4 HP
STV1800	1800 L	0,55 kW	3/5 HP
STV2300	2300 L	0,55 kW	3,5/6,5 HP
STV2600	2600 L	0,55 kW	4/8,5 HP

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Vertical Tanks

Link: https://www.fdb.it/tank/vertical-tanks-2/

FDB design and produce vertical tank that can stock the milk or food liquid.

It is a good solution for storing milk before the start of cheese production, powdered milk, etc. The tank can be thermally insulated to maintain the temperature inside the tank itself and a stirrer can be inserted to mix the milk inside. It allows you to save space on your production site.
All parts in contact with the product are made of AISI304, the tank is equipped with height-adjustable feet.

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The table shows the various capacities of the standard vertical tank supplied by FDB

Capability of Vertical Tank
1000 L
2000 L
3000 L
4000 L
5000 L

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THEX – Tube heat exchangers

Link: https://www.fdb.it/thex/thex-tube-heat-exchangers/

The important information for sizing a tubular exchanger are:

- The fluids involved in the exchange and therefore their physical specifications: density, specific heat, conductivity and the dynamic viscosity.
- The flow rates and the inlet / outlet temperatures of the product (internal side) and of the exchange fluid (shell side).

Structure, diameters, lengths, exchange surface and number of modules depend on the application and performance required.
The tubular exchangers are entirely made of stainless steel and are intended for food use.
We design and optimize the tubular exchangers specifically for your application, other customizations can be added.

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Below is a table of the basic components and the optional of the tube heat exchangers.

STANDARD COMPONENTS
Frame in stainless steel AISI304, complete with slots for N° modules and with feet in AISI304 with adjustable height
Series of tubular modules with corrugated surface

OPTIONAL COMPONENTS
Insulation for tubular heat exchanger lined with stainless steel

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UHTS – Sterilizers UHT

Link: https://www.fdb.it/uhts/uhts-sterilizers-uht/

UHT stands for ultra high temperatures, sterilization is a process with the purpose to reduce the bacterial load through a treatment at high temperatures maintained for short periods of time.

Managed by PLC on HMI with 12 “color touch-screen LCD screen from which it is possible to check the status of the valves, the status of the pumps, the percentage of opening of the modulating valves, the temperatures, the pressures in real time on P&ID. instantaneous flow rate, processed product volumes, tank level, plc status, etc. 10 production recipes are available. In each recipe it is possible to set the temperatures, the instant flow rate, manage any bypass (optional), alarms and many other parameters.

The operator has the possibility of configuring the sterilizer in sanitizing with hot water in recirculation, in temperature stabilization before production, in production with automatic request of the product, at the end of production with total emptying of the product, in cooling / shutdown and in wash.

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The end-of-production sequence provides for total emptying by pushing with water, designed to reduce product losses to a minimum. 1 washing recipe is available (remotely).

In each recipe it is possible to set the temperatures, the instant flow rate and manage any bypass. Furthermore the system can be controlled in “manual / semi-automatic” mode, in which the operator can force / activate / deactivate / modify the P&ID components.

This mode is mainly used to act as appropriate in the event of unforeseen events but allows an experienced operator to conduct completely independently of automation.

Moreover with the following features:

- U.H.T. (ultra high temperature) sterilizer with indirect exchange steam/water/product
- Sterilization stage with multi-tubes heat exchanger.
- Water/product recovery >76%
- Digital recording and automatic adjusting of sterilization temperature
- Digital recording and automatic adjusting of outlet temperature, cooling
- Digital recording of pressure and automatic adjusting of back-pressure
- Digital recording and automatic adjusting of flow
- Automatic leel on tank, with remote pump control

STANDARD COMPONENT
Costant level tank
Centrifugal sanitary pump
Plates / plates + multi-tubes / multi-tubes heat exchanger
Automatic unit for sterilization and outlet temperature control
Automatic unit for flow and back-pressure regulation
Rectilinear holding pipe
Automatic unit for hot water circulation and heating through steam
Automatic unit for cooling with water
Automatic unit for potable water loading, for plant preparation and total emptying
Command and control board

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Stainless steel skid with height-adjustable feet
Structure with housed connections

OPTIONAL
High pressure homogenizer
Connection line for fixed / variable flow homogenizer with automatic sterilizer
Vacuum degasser
Automatic group automatic washing unit for recirculation
HMI web server, remote management

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VARI – Various machinery

Link: https://www.fdb.it/institutional/vari-various-machinery/

•Semi-professional centrifugal separators

https://www.fdb.it/vari/semi-professional-centrifugal-separators/

•Butter churns

https://www.fdb.it/vari/butter-churn/

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Semi-professional centrifugal separators

Link: https://www.fdb.it/vari/semi-professional-centrifugal-separators/

Semi-professional cream separators for the skimming of milk and cream intended for the production of traditional butter.

The hopper and the parts in contact with the product are made of AISI304 / AISI316 stainless steel, polished.
The frame is covered in stainless steel (plastic on CS130 model), plastic feet with shock absorbers.
All models have no useful pressure on cream and milk outlet slides.

The CS130 is a table version and is available also with food grade plastic hopper and slides.

STANDARD COMPONENTS
Maintenance tools kit

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OPTIONAL COMPONENTS
Working table
Butter churn BC32/100

TECHNICAL CHARACTERISTICS TABLES:

MODEL	FAT RESIDUAL ON SKIMMED MILK [%]	CREAM CONCENTRATION [%]	SEPARATION TEMPERATURE [°C]	BOWL SPEED [RPM]
All	0.05 ÷ 0.09 %	8 ÷ 12 %	+35 ÷ +55 °C	8000 rpm with soft-start

MODEL *	HOPPER VOLUME [L]	CAPACITY [L/H]	INSTALLED POWER [kW]
CS130	12 l	Up to 130 l/h Up to 200 l/cycle	0.07 kW
CS350	22 l	Up to 350 l/h Up to 500 l/cycle	0.25 kW
CS600	50 l	Up to 600 l/h Up to 900 l/cycle	0.40 kW

* The CS130 model is suited to work on a table

The CS350 and CS600 are floor versions

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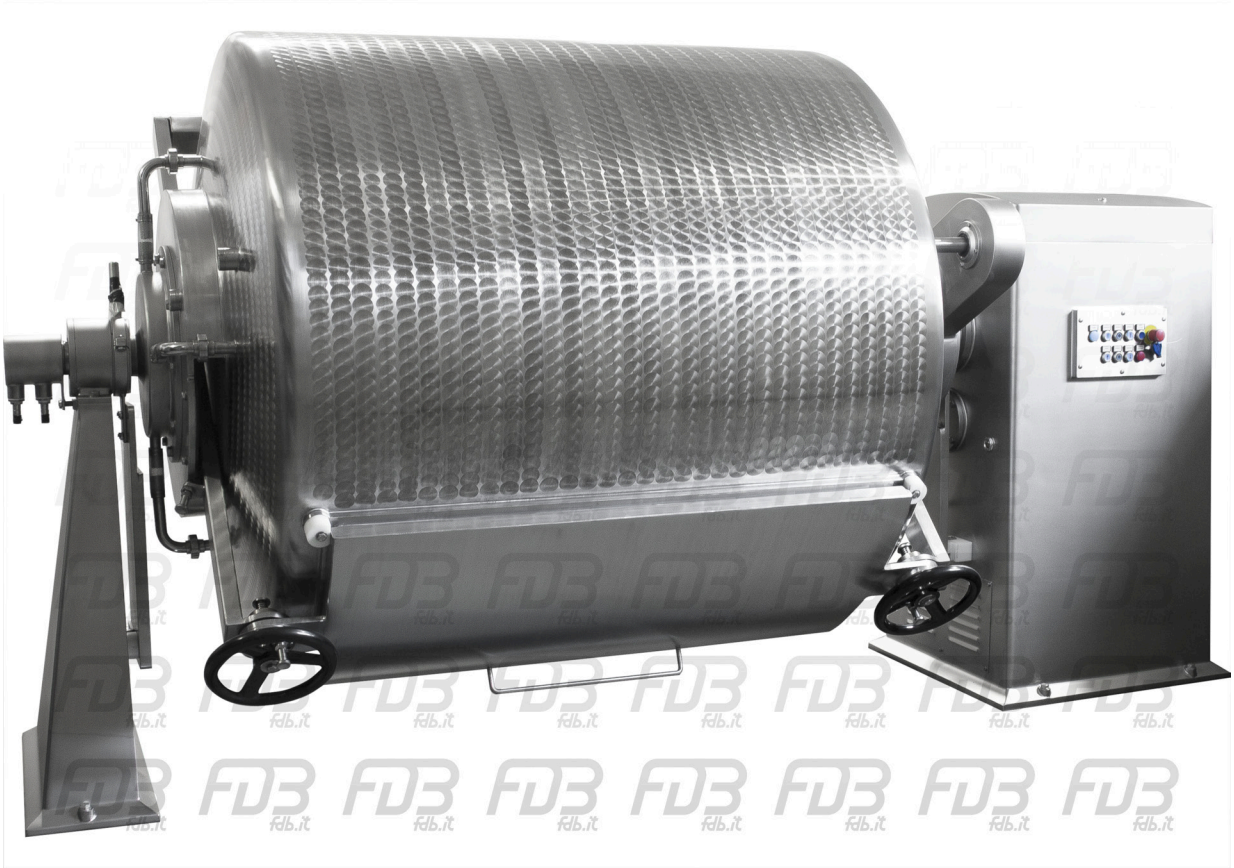
Butter churn

Link: https://www.fdb.it/vari/butter-churn/



Buttern churns for the production of traditional butter from outcrop, centrifugal separation or concentrated cream.
The barrel and the parts in contact with the product are made of AISI304 / AISI316 stainless steel, polished and treated internally.
The structure is made of painted carbon steel or covered in stainless steel.
All models have a removable hatch with quick closure, the BC32 and BC100 versions are table versions that do not have optional extras while the larger versions (BC200/440, BC550/600 etc.) are classic churns equipped with dough rollers and various options.

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STANDARD COMPONENT
Three-rod safety guard

OPTIONAL COMPONENT
Barrel with cooling circuit with machinery off
Barrel with cooling circuit with machinery in motion
Structure covered in stainless steel (machinery entirely made of stainless steel)
Stainless steel butter collection tray / trolley
Accident prevention protections in stainless steel

TECHNICAL CHARACTERISTICS TABLES:

MODEL	BARREL VOLUME [L]	RECOMMENDED LOAD CAPACITY * [Kg]	INSTALLED POWER [kW]
BC32	32L	From 4,5Kg to 16Kg	0.37 kW
BC100	100L	From 15Kg to 50Kg	1.5kW

* The BC32 and BC100 models work at a brewing temperature from 15 ° to 18 ° with cream from 22% to 40%.

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MODEL	BARREL VOLUME [L]	RECOMMENDED LOAD CAPACITY * [Kg]	INSTALLED POWER [kW]
BC200/400	200L/400L	From 30Kg to 100Kg From 60Kg to 200Kg	0.75kW
BC500/600	500L/600L	From 75Kg to 250Kg From 90Kg to 300Kg	1.1kW
BC700/800	700L/800L	From 105Kg to 350Kg From 120Kg to 400Kg	1.5kW
BC1000	1000L	From 150Kg to 500Kg	2.2kW
BC1200	1200L	From 180Kg to 600Kg	3kW
BC1500	1500L	From 225Kg to 750Kg	4kW
BC1800/2000/2500	1800L/2000L/2500L	From 270Kg to 900Kg From 300Kg to 1000Kg From 375Kg to 1250Kg	5.5kW
BC3000	3000L	From 450Kg to 1500Kg	7.5kW
BC3600	3600L	From 540Kg to 1800Kg	11kW

* Models from BC200 to BC3600 work at a brewing temperature from 4 ° to 18 ° with cream from 22% to 78%.

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GSCO – General Sales Condition

Link: https://www.fdb.it/institutional/gsco-general-sales-condition/

•UE/IT

https://www.fdb.it/gsco/ue-it-eng/

•NON UE

https://www.fdb.it/gsco/not-ue/

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General sales conditions – EU/IT

Link: https://www.fdb.it/gsco/general-sales-conditions-eu-it/

INTRODUCTION

The present general sales terms and conditions are considered to be known to all buyers and constitute an integral part of the contract.
The supply is provided in accordance with the following general sales conditions, if other is not specified in the contract.

CONTRACTING PARTS

Supplier: FDB S.r.l.
Via della Tecnica, 9
36034 Malo (VI) Italia
P.I. & C.F. 01600920241

Customer: The parts identified by the data introduced in the order confirmation issued by FDB S.r.l.

OFFERS

Each offer made by the Supplier is without obligation and is not binding.
All offers are valid for a period specified therein, in case of acceptance received after the expiry term the Supplier reserves the right to confirm or not.
The supply referred to the offer includes only services, machinery, materials and quantities indicated therein.
All data and e specifications contained in catalogues, price lists, figures, drawings and promotional material are only indicative and are not binding.
Dimensions, weights, power consumption and performance data must be considered as approximate.
Times of installation, start-up and technical support must be considered as approximate.
The Supplier reserves the right to make improving modifications that think necessary without prior notice to the Customer, as long as the functionality and the safety of the product are not altered.

ORDER, ORDER CONFIRMATION AND CONTRACT AMENDMENT

Any changes or amendments to the order will not be accepted by the Supplier upon the receipt of a related order confirmation. If such changes were to be agreed, the related cost is charged to the Customer.
The transmission of the order by the Customer implies full acceptance of all conditions contained in the offer and in the present general sales conditions.
In any case the contract must be considered finalized only after the written confirmation of the order by the Supplier.

DELIVERY TERMS, PACKAGING, DELIVERY AND TRANSPORT

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The delivery of goods will be made in the way specified in the order confirmation.
The delivery terms, unless otherwise specified, has to be considered “ex works” (EXW according Incoterms 2020).
The goods are packed as expressly indicated and valued in the order confirmation, that in case of discrepancies shall prevail.
Any request for special packaging must be agreed.
Goods are transported at the risk of the Customer, even for supplies delivered at destination place.
On receiving of goods, the Customer is required to check that correspond to the ordered and/or it has not been damaged during transport.
Each complaints should be reported immediately to the carrier and the Supplier (the latter by fax), signing with reserve the Delivery Note and indicating the nature of the damages and/or defects.

DELIVERY DATE
The delivery date will be indicated in the order confirmation.
The delivery period begins only after written order confirmation by the Supplier or, if an advance payment is agreed, upon the receiving of the amount.
In any case, the delivery date must be considered indicative and not binding.
Any delay in delivery won’t attribute to the Customer the right to terminate the contract or to claim reimbursement for any damage depending from this delay.
The delivery means complied with the notification by the Supplier of goods ready for dispatch.

TERMS OF PAYMENT – EXPRESSED RESOLVED CLAUSE
The payment for the supply must be made, net of any expenses, discounts, taxes or charges, according to the terms, deadlines and the way specified in the order confirmation.
About goods not withdrawn, in order to commence the payment terms, the date of invoice is assumed as date of delivery.
Supplier has the right to charge to customer the immediate application of interests on arrears to the extent and under the conditions of D. lgs. n. 231/2002 implementation of Directive 29.06.2000/35/CE and further changes and additions, in the event of failure, even partial, or delayed payment of one instalments on the agreed dates.
Supplier has the right to cancel contract, likewise suspend or cancel any other contract with the Customer, in case of failure, even partial, or delayed payment of one instalments on the agreed dates,
The Customer, if defaulter on payment obligation, shall not advance any claim or action through the court or compensation, reimbursement or refunds of any kind and is obliged to pay reimbursement for all damages (property and non-property) arising from his non-fulfilment.

TRANSFER OF PROPERTY AND RISKS – RETENTION OF TITLE
Pursuant to and in accordance with Articles 1523 et seq. Italian Civil Code, the Customer

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shall acquire ownership of the goods subject of the supply only with the full payment of its amount and its additional costs, while assumes all risks inherent to it, including the perishing, from the time of delivery.
Until full payment of the amount of the supply, the goods remain under the property of the Supplier who can claim them even if joned or embedded to other properties owned by the client or third parties, wherever they are, as defined and with effects of Article 1523 et seq. Italian Civil Code.
Transcription expenses are charged to the customer, as defined in Article 1524 et seq. Italian Civil Code.
According to Art. 1526 paragraph 2 Italian Civil Code, in the event of cancel of the contract for non-fulfilment of the Customer, the Supplier will withhold the payments by Customer as refund.

WARRANTY
The Supplier guarantees that the goods correspond with the specifications and will be free from defects in material and construction.
Do not assume, however, no liability for applications thereof.
The warranty is void in case of modifications or use of the goods in a different manner than specified.
In any case, the warranty is excluded for incorrect operations and/or non-conformity of the goods due to:

- transport activities;
- improper storage, inadequate or negligent keeping and custody;
- Failure to perform the required maintenance;
- Failure to follow instructions and warnings regarding the installation and/or the use provided by the Supplier;
- Tampering, dismantling, operations or maintenance performed by unqualified personnel or unauthorized by the Supplier;
- Anomalous or improper use of the goods, failure to comply with the purpose and scope;
- Burden of damage caused by the continued use of the goods after the malfunction;
- Use of spare parts, components or accessories are not original or not authorized by the Supplier and damages caused by them;
- Incorrect or anomalous operation of the power supply or hydraulic;
- Damage caused by machinery interconnected;
- Corrosion, fouling or ruptures caused by stray electrical currents, improper water hardness, scale deposits, sludge deposits, condensation, aggressive or acidity of water, descaling treatments;
- Unforeseeable circumstances or force majeure such as, without limitation and not exhaustive, freezing, overheating, fire, lightnings, acts of vandalism etc…
  Parts subject to normal wear are not subject to warranty.
  In the case of recognized operation of the guarantee, the liability of the Supplier shall be deemed limited to repair and/or replacement of damaged goods, and the

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Customer can't advance any claim of compensation for production stop, damage to equipment or others, nothing excluded, and the Customer can't act to obtain the termination of the contract, for that reason.

INSTALLATION, START-UP, TECHNOLOGICAL ASSISTANCE AND OTHER EXPENSES

If the installation, start-up, and technological assistance are included, the customer must ensure that the premises are completed, equipped with doors and windows, heating, electricity and lighting, that all the foundations are dry and, for the handling of commodity, there is free access both inside and outside the premises as well as proper equipment and tools is available.
Unless otherwise specified, shall mean excluded visa fees, taxes, travel, meals and lodging, transfers and various that the Suppliers reserves to provide documentation and to charge the cost the customer.
The Supplier reserves to document and charge the Customer transfers with its vehicles, the cost per kilometer.
If time of installation, start-up, technological assistance will be extended for necessity, request or impediment by the Customer and not for cause or choice of the Supplier, the Supplier reserves the right to charge the Customer for the additional costs to the current prices.
If materials for installation, start-up and technological assistance will be increased for necessity, request or impediment by the Customer and not to cause or choice of the Supplier, the Supplier reserves the right to charge them to the Customer.

CLAIMS

Upon receipt of the goods, the customer is required to check that correspond to those ordered and loses the right to challenge the compliance portion after 08 (eight) days of receipt.
Any goods in dispute, that has to be replaced, prior consent of the Supplier, shall be delivered by the Customer to the Supplier's factory within 10 (ten) days from the date of the formal complaint.
If the complaint is founded, following the ascertainment of the Supplier, the Supplier's obligation is limited to the replacement of the goods recognized mismatch.
The notification of eventual hidden defects must be made by fax within 08 days (eight) from the discovery.
Any delay in the notification of the complaint, not agreed with the Supplier, will automatically not recognize the non-compliance.
In any case, complaints and protests do not give the customer the right to suspend payment of the supply and/or other supplies, to request the termination of the contract and/or other contracts and/or compensation for any damage and/or reimbursement of any expenses incurred for any reason.
The customer has no right to claim and, therefore, the replacement of the goods, if not immediately stops the use of the item in dispute.

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IMPROPER USE
Customer does not have the power ,and expressly disclaims, to request to Supplier damages or expenses resulting from improper use or modifications unauthorized by the Supplier, exempting the Supplier from any kind of liability resulting from claims and, even by third parties.

TERMINATION OF THE CONTRACT
Supplier reserves the right to terminate the contract with immediate effect if he becomes aware about situations in charge of Customer about protests, seizures, foreclosures or other harmful acts, the situation of liquidation, controlled administration, extraordinary administration, arrangement with creditors, bankruptcy.

APPLICABLE LAW AND JURISDICTION
The contract is governed and interpreted in all respects by Italian law.
For any dispute arising from the execution or interpretation of the contract, is recognized the exclusive jurisdiction of the Court of Vicenza.

The Supplier
(Date, Stamp and Signature)

_____

The Customer
(Date, Stamp and Signature)

_____

Pursuant to and for the purposes of Article 1341 and 1342 of the Italian Civil Code, the customer declares to endorse fully the terms of the contract.

The Customer
(Date, Stamp and Signature)

_____

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General sales conditions – NOT EU

Link: https://www.fdb.it/gsco/general-sales-conditions-not-eu/

INTRODUCTION

The present general sales terms and conditions are considered to be known to all buyers and constitute an integral part of the contract.

The supply is provided in accordance with the following general sales conditions, if other is not specified in the contract.

CONTRACTING PARTS

Supplier: FDB S.r.l.

Via della Tecnica, 9

36034 Malo (VI) Italia

P.I. e C.F. 01600920241

Customer: The parts identified by the data introduced in the order confirmation issued by FDB S.r.l.

OFFERS

Each offer made by the Supplier is without obligation and is not binding.

All offers are valid for a period specified therein, in case of acceptance received after the expiry term the Supplier reserves the right to confirm or not.

The supply referred to the offer includes only services, machinery, materials and quantities indicated therein.

All data and e specifications contained in catalogues, price lists, figures, drawings and promotional material are only indicative and are not binding.

Dimensions, weights, power consumption and performance data must be considered as approximate.

Times of installation, start-up and technical support must be considered as approximate.

The Supplier reserves the right to make improving modifications that think necessary without prior notice to the Customer, as long as the functionality and the safety of the product are not altered.

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ORDER, ORDER CONFIRMATION AND CONTRACT AMENDMENT

Any changes or amendments to the order will not be accepted by the Supplier upon the receipt of a related order confirmation. If such changes were to be agreed, the related cost is charged to the Customer.

The transmission of the order by the Customer implies full acceptance of all conditions contained in the offer and in the present general sales conditions.

In any case the contract must be considered finalized only after the written confirmation of the order by the Supplier.

DELIVERY TERMS, PACKAGING, DELIVERY AND TRANSPORT

The delivery of goods will be made in the way specified in the order confirmation.
The delivery terms, unless otherwise specified, has to be considered "ex works" (EXW according Incoterms 2020).
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Any request for special packaging must be agreed.
Goods are transported at the risk of the Customer, even for supplies delivered at destination place.
On receiving of goods, the Customer is required to check that correspond to the ordered and/or it has not been damaged during transport.
Each complaints should be reported immediately to the carrier and the Supplier (the latter by fax), signing with reserve the Delivery Note and indicating the nature of the damages and/or defects.

DELIVERY DATE

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The delivery period begins only after written order confirmation by the Supplier or, if an advance payment is agreed, upon the receiving of the amount.

In any case, the delivery date must be considered indicative and not binding.
Any delay in delivery won't attribute to the Customer the right to terminate the contract or to claim reimbursement for any damage depending from this delay.
The delivery means complied with the notification by the Supplier of goods ready for dispatch.

TERMS OF PAYMENT

The payment for the supply must be made, net of any expenses, discounts, taxes or

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charges, according to the terms, deadlines and the way specified in the order confirmation.

About goods not withdrawn, in order to commence the payment terms, the date of invoice is assumed as date of delivery.
Supplier may suspend or cancel the contract, or any other contract in progress with the Customer, in the event of failure, even partial, or delayed payment of one instalments on the agreed dates.

The Customer, if defaulter on payment obligation, shall not advance any claim or action through the court or compensation, reimbursement or refunds of any kind and is obliged to pay reimbursement for all damages (property and non-property) arising from his non-fulfilment.

WARRANTY

The Supplier guarantees that the goods correspond with the specifications and will be free from defects in material and construction.
Do not assume, however, no liability for applications thereof.
The warranty is void in case of modifications or use of the goods in a different manner than specified.
In any case, the warranty is excluded for incorrect operations and/or non-conformity of the goods due to:

– transport activities;
– improper storage, inadequate or negligent keeping and custody;
– Failure to perform the required maintenance;
– Failure to follow instructions and warnings regarding the installation and/or the use provided by the Supplier;
– Tampering, dismantling, operations or maintenance performed by unqualified personnel or unauthorized by the Supplier;
– Anomalous or improper use of the goods, failure to comply with the purpose and scope;
– Burden of damage caused by the continued use of the goods after the malfunction;
– Use of spare parts, components or accessories are not original or not authorized by the Supplier and damages caused by them;
– Incorrect or anomalous operation of the power supply or hydraulic;
– Damage caused by machinery interconnected;
– Corrosion, fouling or ruptures caused by stray electrical currents, improper water hardness, scale deposits, sludge deposits, condensation, aggressive or acidity of water, descaling treatments;
– Unforeseeable circumstances or force majeure such as, without limitation and not exhaustive, freezing, overheating, fire, lightnings, acts of vandalism etc…

Parts subject to normal wear are not subject to warranty.
In the case of recognized operation of the guarantee, the liability of the Supplier shall be

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deemed limited to repair and/or replacement of damaged goods, and the Customer can't advance any claim of compensation for production stop, damage to equipment or others, nothing excluded, and the Customer can't act to obtain the termination of the contract, for that reason.

INSTALLATION, START-UP, TECHNOLOGICAL ASSISTANCE AND OTHER EXPENSES

If the installation, start-up, and technological assistance are included, the customer must ensure that the premises are completed, equipped with doors and windows, heating, electricity and lighting, that all the foundations are dry and, for the handling of commodity, there is free access both inside and outside the premises as well as proper equipment and tools is available.
Unless otherwise specified, shall mean excluded visa fees, taxes, travel, meals and lodging, transfers and various that the Suppliers reserves to provide documentation and to charge the cost the customer.

The Supplier reserves to document and charge the Customer transfers with its vehicles, the cost per kilometer.
If time of installation, start-up, technological assistance will be extended for necessity, request or impediment by the Customer and not for cause or choice of the Supplier, the Supplier reserves the right to charge the Customer for the additional costs to the current prices.
If materials for installation, start-up and technological assistance will be increased for necessity, request or impediment by the Customer and not to cause or choice of the Supplier, the Supplier reserves the right to charge them to the Customer.

CLAIMS

Upon receipt of the goods, the customer is required to check that correspond to those ordered and loses the right to challenge the compliance portion after 08 (eight) days of receipt.

Any goods in dispute, that has to be replaced, prior consent of the Supplier, shall be delivered by the Customer to the Supplier's factory within 10 (ten) days from the date of the formal complaint.
If the complaint is founded, following the ascertainment of the Supplier, the Supplier's obligation is limited to the replacement of the goods recognized mismatch.

The notification of eventual hidden defects must be made by fax within 08 days (eight) from the discovery.
Any delay in the notification of the complaint, not agreed with the Supplier, will automatically not recognize the non-compliance.

In any case, complaints and protests do not give the customer the right to suspend

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payment of the supply and/or other supplies, to request the termination of the contract and/or other contracts and/or compensation for any damage and/or reimbursement of any expenses incurred for any reason.

The customer has no right to claim and, therefore, the replacement of the goods, if not immediately stops the use of the item in dispute.

IMPROPER USE

Customer does not have the power ,and expressly disclaims, to request to Supplier damages or expenses resulting from improper use or modifications unauthorized by the Supplier, exempting the Supplier from any kind of liability resulting from claims and, even by third parties.

TERMINATION OF THE CONTRACT

Supplier reserves the right to terminate the contract with immediate effect if he becomes aware about situations in charge of Customer about protests, seizures, foreclosures or other harmful acts, the situation of liquidation, controlled administration, extraordinary administration, arrangement with creditors, bankruptcy.

APPLICABLE LAW AND JURISDICTION

The contract is governed and interpreted in all respects by Italian law.
For any dispute arising from the execution or interpretation of the contract, is recognized the exclusive jurisdiction of the Court of Vicenza.

The Supplier **The Customer**

(Date, Stamp and Signature) (Date, Stamp and Signature)

Pursuant to and for the purposes of Article 1341 and 1342 of the Italian Civil Code, the customer declares to endorse fully the terms of the contract.

The Customer

(Date, Stamp and Signature)

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Contacts

Link: https://www.fdb.it/institutional/contacts/

FDB S.r.l.

Via della Tecnica, 9 – 36034 MALO (VI) – ITALIA

Tel: +39 0445 637525

Fax: +39 0445 637560

Website: www.fdb.it

E-mail: info@fdb.it

PEC: fdb@pec.it

VAT N.: 01600920241

ATECO N.: 28.93

Share Capital: € 60.000,00

FDB ITALIA – Company Profile

Link: https://www.fdb.it/fdb-italia-company-profile/

Our company

FDB ITALIA is a longstanding Italian company that has been operating since 1976 in the design, construction and installation of machinery and complete systems for the dairy and beverage sector. The passion, professionalism and know-how acquired over the years have made FDB ITALIA a leader in the sector. Since 90s it has expanded its markets by exporting the “Made in Italy” all over the world and establishing itself with professionalism and competitiveness.

Always attentive to improvement and technological research, FDB ITALIA can boast high quality standards in the construction of its machinery and guarantees the customer an efficient and reliable service. With a complete service in the design phase, FDB ITALIA builds single machines, parts of plants or complete “turnkey” systems for the production of fresh milk, UHT milk, yoghurt, cheeses, mozzarella, ricotta, cream, butter, semi-artisan and industrial ice cream, from the simplest to the automatic solutions, even with remote management systems and integration with the factory supervisor for Industry 4.0.

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OUR HISTORY

Year 1976

The FDB ITALIA company took its first steps producing sanitary pumps, food tanks and heat exchangers. It immediately started a collaboration with leading companies in the sector, in which FDB ITALIA oversaw the installation of numerous plants at important Italian manufactures.

Year 1978

The production of FDB pasteurizers started, as well as a close collaboration with other companies in the sector that began to sell this product under their own brand. In the following years the construction of the first complete FDB heat treatment lines began, more and more accompanied by additional machines both of internal production and supplied by partner companies.

Year 1986

The first complete FDB “turnkey” system was created for the treatment of 10,000 liters / shift of milk and for the production of various dairy products, such as fresh milk, mozzarella, ricotta and other types of cheese, cream, butter. It immediately began selling FDB complete plants with even higher capacities to the Italian, European and world markets, as well as to the companies in the sector that started reselling them under their own brand.

Year 1992

It was developed the first complete FDB HTST heat treatment line of high capacity, able to treat up to 50,000 liters / hour, then expanded to 60,000 liters / hour and beyond, for an important Italian manufacturer, with which there is now a collaboration.

Year 1996

The technical team of FDB ITALIA was strengthened to meet the community directives and this allowed the improvement of existing products and the development of new products, such as UHT sterilizers, special tanks, rotating filters, deaerators, flow meters, centrifugal mixers, presses, tube bundle exchangers etc., with particular attention to optimizing energy consumption.

FDB S.r.l. - Via della Tecnica, 9 - 36034 Malo (VI) - ITALIA
Tel: +39 0445 637525 - Fax: +39 0445 637525 - https://www.fdb.it - info@fdb.it
VAT: 01600920241

Year 1999

Company FDB ITALIA received a prestigious recognition from the European Community for technological innovation aimed at energy effifiency.

Year 2002

Faced with
the high demand from the foreign market, the
offer of complete “turnkey” FDB systems was also extended
with the export of technological knowledge for the production of products with Italian quality abroad. Among the various plants delivered in Europe and North Africa, one of the most successful was a plant for the production of up to 6,000 pieces of “Grana Padano” type cheese in South America, a 4,000 liter / shift plant for milk , yogurt, cheeses, ricotta, whey-based drinks, ice cream and butter and an 8,000-liter / shift plant for the production of European yoghurt in Central America. The export of pasteurisers and complete FDB heat treatment lines in the Russian countries was also consolidated. In the following years Russia turned out to be a strategic and stable market, with an average of over 30% of turnover.

Year 2003

The production of FDB packaging machines was launched, first semi-automatic with small capacity, then, in the following years, automatic, for bottles, cans, pouches, presenting itself on the market with solid and efficient machinery, destined for small and medium production.

Year 2004

There were introduced the first machines with automation for medium and large industries with increasingly growing demands and with the necessity to optimize further consumption, to reduce human error and product waste. There were made the first aseptic tanks for UHT milk with automatic control.

Year 2006

Energy efficiency technology was also introduced in the process lines of ice cream mixtures.

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Year 2007

The first pasteurizers complying with the Australian market directives and solutions for the production of spreadable cheeses were made.

Year 2008

The first completely automatic heat treatment lines with remote management, the first automatic packaging machines and aseptic tanks for fermented products were built.

Year 2010

The first pasteurizers complying with the 3A guidelines for the US market were made.

Year 2011

The first automatic pasteurizers for high density products, such as custard, cream, fermented products, curd, syrups with a high solids content were produced.

Year 2013

Since the beginning of its history FDB ITALIA has produced machinery for the wine sector. However, the first high-capacity UHT automatic sterilizer for wines and must was created, intended to process 20,000 liters / hour in 20-hour continuous shifts.

Year 2014

In collaboration with a market leader in dairy products, an automatic line with high energy efficiency was produced to process the milk for concentration and concentrated milk.

Year 2019

The first butter continuous production plant with remote management systems and integration for the factory supervisor for Industry 4.0 were produced.

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VAT: 01600920241