



AUTEMI



PLATE FILTER  
PRESSES  
LIBRA AND DRAGON  
PUMPS SERIES



## OUR HISTORY

Autemi Srl was born as a natural evolution of a simple engineering company founded in 1981 and operating in the field of wastewater treatment and civil, industrial and process sludges. Thanks to this considerable expertise - more than thirty years - acquired on the ground, Autemi Srl is now able to design, build and install lines of machines for the **filtration and dewatering of sludge and process water**.

Our strength is represented by the great ability to solve the problems and needs expressed by our customers; thanks to the technical and design skills of our team we are able to develop not only machines, but real solutions. Born in the field of civil and industrial purification, over time we have increasingly moved into the chemical and process sectors, where the technical specifications and problems to be solved are more severe and demanding.

**THANKS TO OUR TECHNICAL APPROACH  
WE ARE ALWAYS ABLE TO PROVIDE  
NEW SOLUTIONS IN RESPONSE TO THE  
MOST DIFFERENT NEEDS OF OUR TARGET  
MARKETS.**





## OUR RANGE

Our company's flagship products are **plate filter presses** and **positive displacement pumps (piston or diaphragm)** specifically designed for feeding of the filter presses and pressure transfer of viscous and abrasive fluids.

The technical features of our filter presses and pumps depend on the kind of fluid to be filtered, the technical specifications required and the sector of application.

Thanks to our state-of-the-art laboratory and **filtration station**, we are able to study each application with the best technology available at the moment. It is possible to carry out accurate **filtration tests** and to monitor the progress of all the main parameters in real time thanks to our pilot plant equipped with all the installed options and **4.0 technology** for monitoring the progress of the test. What we have tested experimentally is used as a basis to translate the solutions validated in the laboratory to industrial scale.

**OUR MACHINES ARE DESIGNED AND MANUFACTURED WITH A PARTICULAR FOCUS ON HUMAN-MACHINE INTERFACE, STRENGTH, ERGONOMICS AND DESIGN.**



## MODELS

# AUTEMAI



### MANUAL FILTER PRESS

**MOD. MPF**

This kind of filter press is the completely manual version without any kind of automatism installed. The opening and closing of the hydraulic cylinder is achieved by means of a small hydraulic unit activated by a manual pump actuated by the operator.

The opening of the filtering plates, once the filtration cycle is ended, is also completely manual. In order to carry out the filtration cycle, the process valves must also be controlled by the operator.



### SEMI-AUTOMATIC FILTER PRESS

**MOD. SAPF**

This model represents the basic version of our automated filter presses. The opening and closing of the filtering pack is managed by acting on the electrical panel, thanks to the specific button that controls the movement of the hydraulic cylinder operated by a hydraulic power unit.

The individual plates are opened manually by one or more operators depending on the size of the machine. The remaining functions for opening the process valves and controlling any auxiliary devices for the correct execution of the filtration cycle are automatically managed by the PLC of the machine. The filtration cycle proceeds automatically, but the opening of the plates is manual.



## AUTOMATIC FILTER PRESS ONE BY ONE OPENING SYSTEM

### MOD. APF

This model of filter press automatically manages all the filtering cycle.

The presence of probes and sensors that measure the most important values of the filtration phase allows the total automation of the process. It is also possible to modify and customize the operating parameters in order to obtain the best filtration cycle for the kind of sludge being processed: the PLC together with the HMI interface allows rapid changing of the process variables.

The opening of the individual filtering plates at the end of the cycle is automatic too and allows the picking up of a single plate at a time together with the shaking step. This kind of machine is particularly suitable for difficult- to-filter sludge with long filtration times.



ONE-BY-ONE AUTOMATIC  
PLATE OPENING SYSTEM



AUTOMATIC PLATE  
WASHING UNIT

## AUTOMATIC FILTER PRESS MULTIPLE OPENING

### MOD. SPF

Also in this model of filter press, the filtration cycle is automatically controlled by the PLC of the machine and also in this case it is possible to modify the process parameters to obtain the best final result. The opening of the pack is simultaneous, so that the filtering plates open all together at the same time. A plate shaking device is included as standard.

This machine can be made with a single filtering pack or a multiple filtering pack, depending on the volume of sludge to be treated. The SPF model is particularly suitable for sludge that is easier to filter and has a short filtering time.



SIMULTANEOUS OPENING SYSTEM  
AND MEMBRANE SQUEEZING  
SYSTEM



PLATE SHAKING BAR  
AND SQUEEZING  
SYSTEM

## OPERATOR PANEL:

ALL OUR FILTER PRESSES (EXCEPT MANUAL ONES), ARE EQUIPPED WITH A HUMAN-MACHINE INTERFACE (HMI) WITH TOUCH-SCREEN PANEL AND INTUITIVE GRAPHICS SO THAT THE OPERATOR CAN EASILY INTERACT WITH THE MACHINE ITSELF.





## PILOT STATIONS AND MICROFILTER PRESSES

### MOD. LAB200

When the characteristics and filtering properties of the sludge are not known and it is necessary to carry out preliminary tests before identifying the best type of machine, an excellent solution is to build a small laboratory filter press which operates as a pilot station. On this equipment you can carry out all the filtration tests you want, changing all the variables involved. These miniature filter presses are also the perfect solution for all those companies or laboratories

that have micro-productions and do not need a real industrial machine, but a compact and complete system to meet their requirements. They can be configured with most of the options available for standard machines, with or without power supply.

## PISTON AND DIAPHRAGM PUMPS - MECHANIC DRIVE

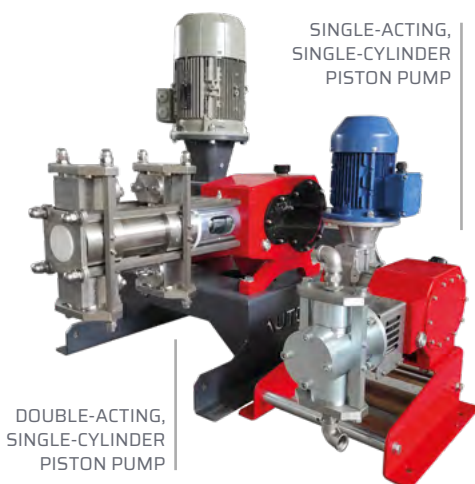
### LIBRA SERIES

The LIBRA series of pumps is the ideal solution for the pressure transfer of liquids with a high percentage of suspended solids, resulting from the most common industrial processes (e.g. must, wine lees, beer, dairy products, etc.). They are also suitable for the transfer of dense sludges of civil and industrial origin, moderately abrasive and as an essential part of the feeding for plate filter presses. Reliability and strength are at the heart of the project behind these innovative pumps. A wide range (in terms of materials and flow rates) is available, allowing you to select the pump that best suits your operating

requirements. Flow rates up to 10 mc/h and pressures up to 15 bar. The range is completed by the LIBRA ME pump series, which represents the evolution of the LIBRA pump series with the addition of the membrane part useful for pumping highly abrasive liquids, where the normal pumping piston alone would be inefficient. The design and construction of these pumps was done to make maintenance as easy as possible.



DOUBLE-ACTING,  
DOUBLE-CYLINDER  
PISTON PUMP



DOUBLE-ACTING,  
SINGLE-CYLINDER  
PISTON PUMP

SINGLE-ACTING,  
SINGLE-CYLINDER  
PISTON PUMP



SINGLE-ACTING,  
SINGLE-CYLINDER  
DIAPHRAGM PUMP

LIBRA



## E.S.S. "ENERGY SAVING SYSTEM"

The "E.S.S." regulation system, that is equipped on the pumps of the Dragon series, allows **to save a considerable amount of energy thanks to the intelligent management of the filtration phase.** The modulation of the process parameters such as pressure and flow rate, is controlled according to the real needs of the filter press, thanks to a logic entirely managed by PLC.



## PISTON PUMP – HYDRAULIC CONTROL

### DRAGON SERIES

The DRAGON series of pumps represents the top of the range of pumps under the AUTEMI brand. When we designed this series of pumps, we did so around two concepts: operational flexibility and structural strength. To achieve this, the pumps have been equipped with a proportional hydraulic valve and a variable flow hydraulic pump capable of constant power regulation: this represents the core of our "E.S.S." energy saving system.

The DRAGON series pumps are particularly suitable for feeding filter presses and for pressure transfer of very viscous, moderately abrasive fluids even at high temperatures.

With flow rates of up to 80 mc/h and pressures of up to 25 bar, we have a wide range of materials available that provide perfect resistance to even the most severe environments.

The pump is supplied with an electrical panel and PLC with the possibility of interfacing with the electrical panel of the filter press or the plant. It is equipped with two inductive switches for limit adjustment and two switches for starting the acceleration/deceleration ramps to reduce water hammer.

It is equipped with air-oil or water-oil heat exchangers as required, a thermostat and a safety level switch. The DRAGON pump can be easily built and configured according to customer requirements.



**DRAGON**





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