



Reliable Productivity and Safety in Filling Machines

Optimize your productivity and safety using AiCROV's Robot Filler Series, 100% Automatic Filling Machines for Drums on Pallet and IBC

AiCROV has been the first company over the world on designing and installing the Robot Filler Series, the most Automatic Filling Machines for Drums on Pallet and IBC to fulfill the requirements of the most demanding customers, in terms of productivity, safety and environment care.

Why is AiCROV using robots?

The fact of using robots allows AiCROV to manufacture Smart Filling Machines, completely flexible for different type of containers, very easy to install, commission and adjust and allows the end user to save a lot of money in future adjustments and maintenance.

The AiCROV Robot Filler Series may be installed in any hazardous zone and environment, with ATEX Certificate if required and with any type of cover as an extra protection. It can be also installed inside a cabin with a vapors extraction system or pressurized clean room with automatic doors, always thinking on the safety of the operator, product and environment.

Forget any manual operation on filling processes and optimize your manpower on high added value tasks. The AiCROV Robot Filler Series performs all the processes for filling in the most automatic and safe way:

- **Detection of the Bungholes position:** Using a camera and a 3D scanner, the system detects where the bungholes are located and send the coordinates to the main PLC. Thanks to the 3D scanner, the machine doesn't care if the drums are not completely well positioned neither if there's any inclination on the pallet. The system can detect the bungholes in any area around the pallet, so forget to position the bungholes in a certain position before placing the pallets on the infeed conveyors.
- **Debunging of Drums and IBC:** The Robot Filler Series can be equipped also with automatic debunging heads for Drums and IBC, to avoid the presence of any operator into the filling area neither any manual operation during the process. The debunging heads for Drums and IBC keep the plug until it has to be applied again to the container, so no manual operation is required.
- **Filling Head:** The AicrovFill^R function ensures the maximum accuracy and productivity on the filling process, without any affectation on different product specifications. AiCROV configures each filling machine according to the customer and product requirements, being the following filling modes:
 - Under Bunghole: the filling is done from the top of the container, suitable for non-foaming, non-flammable, non-explosive, high density or viscosity products.
 - Below Product Surface: the filling is done below the product surface, and the filling nozzle is raising continuously with it. The operator can easily configure an offset to adjust the filling nozzle height to the



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product surface height, suitable for foaming, flammable and explosive products. With this filling mode, the filling nozzle may work from the top of the container, from the bottom or raising with the product.

The opening of the filling nozzle can be also adjusted to the customer and product requirements, being possible to open on 2 different positions (gross and fine filling) or in a proportional actuation to allow the operator to configure the opening from the operator panel, very useful for customer who are filling products with different viscosities.

After each filling cycle, the machine does a quality control to ensure that the weight is between the configured tolerances. In case that for any reason the weight is out of tolerances, the machine will inform the operator to allow him to have a decision on what to do.

- **Bunging of Drums and IBC:** The bunging heads for Drums and IBC allow the machine to close the containers automatically without the presence of any operator. The bunging heads are electrically controlled, so the closing torque may be easily adjusted on the operator panel. In case that any drum is not well capped, the machine will inform the operator and will allow him to have a decision on what to do. With this procedure, AiCROV ensures that the quality control is done, and all containers are completely uniform in terms of closing torque and capping quality.
- **Sealing of Drums:** The AiCROV Robot Filler Series may include also a sealing head for Drums, to apply plastic or aluminum seals to the drums after being capped. This procedure is also done without the presence of any operator.

All these tools are installed on the robot, so no changeover is required neither any manual operation. It's only needed to adjust the machine on the operator panel and push the Start Button.

The AiCROV Robot Filler Series, together with a conveying line, will allow your operator to work only on a forklift to place the empty containers at the beginning of the line and take them out at the outfeed, completely finalized and ready to be sent to the warehouse. If needed, the production line may integrate also Printing/Labeling Machines, Inkjet Printers, Strapping or Wrapping Machines... to automate the complete production plant.

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