



FILLING

ARROW SERIES



Over 30 year's experience.

We provide our customers with innovative technical solutions. We provide comprehensive advice and professional needs analysis. Our devices, created by a team of experienced engineers are working on the success of many businesses around the world.

Comprehensive solutions.

Open your production on the latest technologies. Explore innovative technical solutions, which guarantee the overall process – production, bottling and packaging all kinds of drinks and other liquids.

World class quality and perfect service availability.

The machines are designed in compliance with European safety standards and they are CE-marked. In their construction are used the highest quality components of world-recognized companies: ThyssenKrupp, Metal Work, System Plast, Bonfiglioli, Festo, BERNECKER.

Well-known components and fast supports service guarantee actions in same time.

Professional Management

The system is made to suit any requirements. We consider each of the options we manufacture in the best way possible. During the whole process of project implementation – from engineering design to full production readiness approval.

1

ANALYSIS

We investigate client's needs and expectations, taking into account infrastructure and future production plans.



2

CONSULTING

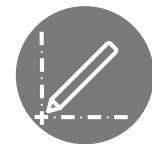
Congeneric consulting, including machines sitting and choice of particular elements.



3

ENGINEERING

Design of chosen solutions.



4

PRODUCTION

Assembly and machine's testing.



5

TRANSPORT AND START UP

Worldwide shipping. Final installation.



Arrow MACHINES Series

Filled with Innovation

STM thanks to its innovation is ready to implement ambitious and innovative dedicated projects around the world.

Arrow Series Machines are perfectly suited to most kinds of industrial applications.

The highest quality and simplicity of operation of the machines allow them to be used in different climate zones and implemented to process a variety of liquids, packaging units, capping types and hygiene levels.

All machines in their standard versions are adapted to support CIP. They have a bottle-neck-gripping assembly that allows packaging formats to be changed easily. They are also fitted with a PICK&PLACE system that allows packaging units to be capped in a highly precise manner.

Depending on the version Arrow Series can be adapted to process PET and GLASS packaging units and they are available as three-blocks (RFC) and mono-blocks (FC).



Arrow CAN SERIES	Arrow ISO SERIES
Arrow NC SERIES	Arrow WM SERIES
Arrow BIG SERIES	Arrow FlowM SERIES
Arrow NL SERIES	Arrow G SERIES

Advantages:

- Maximum hygiene with Arrow Purity System APS®
- Rapid size changeover, up to 10 minutes
- Reduced maintenance
- PET bottle transfer – neck-handling – with no need for the height adjustment
- Quick changeover for packages with different diameters
- Customer friendly operator touch panel with auto diagnostic software
- Precise bottle positioning

Arrow

CAN SERIES

Unique flexibility in closure, filling and efficiency.

CAN series machines feature devices equipped with isobaric filler valves or overflow filler valves or electronic filler valves designed for filling and seaming of PET or aluminium cans of regular cylindrical shape.

Seamers are suitable to seam a wide range of round containers filled with soft drinks, beer and carbonated soft drinks.

Filler and seamer are mechanically synchronized, with only one drive, which can smoothly drive the filled containers to the seamer without spillage.

Output:

Fillers are from 16 to 48 valves, with speed from 7.000 to 40.000 b/hour.





Advantages:

- Easy and fast size changeover, also in closing system
- Very small number of gaskets and seals
- The structure consists of plates, which are made of stainless steel AISI 304 and AISI 316L in the work zones



Application:

Beverages containing CO₂, beer, non-carbonated liquids, HOT FILL process, Ice Tea in PET or aluminium cans.

Volumes:

200 ml-500 ml.

Packaging:

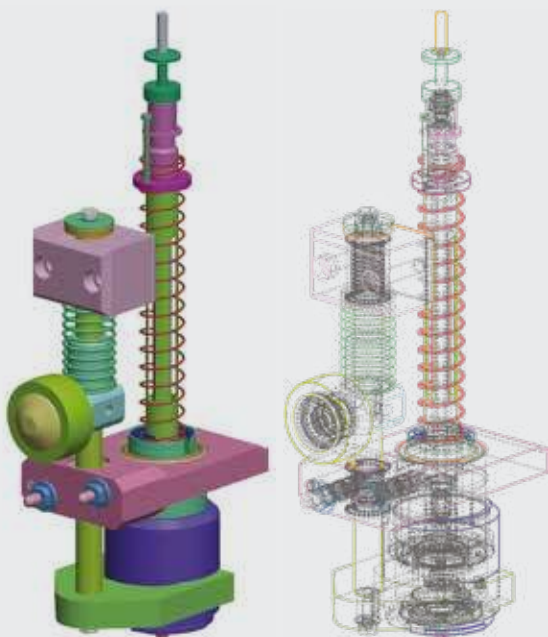
PET, aluminium cans.

Capping:

200, 202.

Filling valve:

Due to the low number of mobile parts and total absence of dynamic seals, wear problems and maintenance operations have been reduced to a minimum and an extremely efficacious sanitation cycle has been made possible requires very little maintenance.



Arrow
CAN
SERIES



Arrow

ISO SERIES

Compact design for high foaming liquids.

ISO series machines feature devices equipped with isobaric filler nozzles, designed for filling carbonated fluids such as carbonated beverages and water, beer.

It has an innovative design and is equipped with special features for both filling and moving the bottles, which guarantee great advantages in terms of performance and operating flexibility. The valve is also able to fill non-carbonated products.

Filler nozzles feature simple design that ensures high level of hygiene and ease of use. Parts in contact with the filled product are made of AISI 316L stainless steel.

Machines in their standard version are suitable for CIP.

Depending on the model, ISO series machines can be prepared for PET containers as well as GLASS containers.

Output:

Fillers are from 12 to 72 valves, with speed 2.000 to 24.000 b/hour.



Advantages:

- Modular design and central tank
- Last Generation Neck Handling Solutions for PET bottles
- Available as Filler + Capper or Rinser + Filler + Capper
- Separate air return reducing potential product foaming



Arrow

ISO SERIES

Application:

Soft drinks, beverages containing CO₂, beer.

Volumes:

0.2l-2.5l.

Packaging:

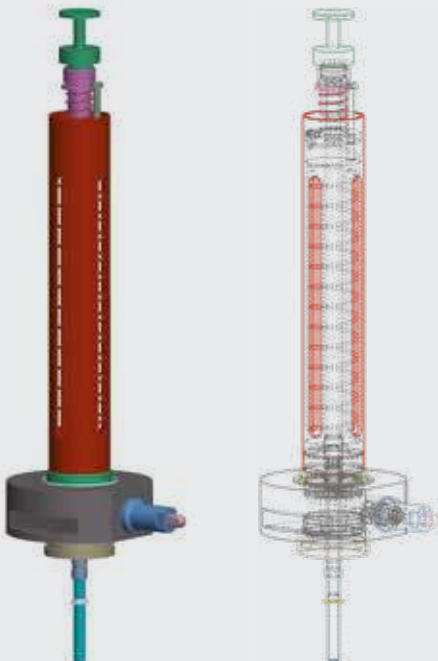
GLASS, PET bottles.

Capping:

Plastic with screw thread, aluminium cap, crown cap, sport cap.

Filling valve:

It is made of stainless steel and are easily accessible for cleaning purposes. The special mechanical type is dedicated to high foaming products and beer as well. It is equipped with innovative air evacuation system (single or double).



Arrow

NC SERIES

Perfect mechanics in diversification of production.

NC series machines feature devices equipped with "overflow" filling valves, for non-carbonated fluids, such as non-carbonated water and beverages, process fluids (including foamy fluids), oils.

Filler nozzles feature simple design that ensures high level of hygiene and ease of use. In case of NC series machines the bottle always remains at the same height, which provides smooth transfer of the bottle.

Machines in their standard version are suitable for CIP. NC series machines in their standard version feature intermediate tank with circulation pumps.

Depending on the model, NC series machines can be prepared for PET containers as well as GLASS containers and HDPE containers.

Parts in contact with the filled product are made of AISI 316L stainless steel.

Output:

Fillers are from 9 to 72 valves,
with speed 4.000 to 30.000 b/hour.



Advantages:

- Reliable, simple and easily sanitized valve
- High production output
- Reduced changeover down-times, up to 10 minutes
- Valves made entirely of AISI 316L stainless steel
- Very small number of gaskets and seals
- Overfilling with high accuracy



Arrow

NC SERIES

Application:

Non-carbonated liquids, Ice Tea, still water, juices, liquids poured into containers at temperatures reaching up to 88°C.



Volumes:

0.2l-2.5l.

Packaging:

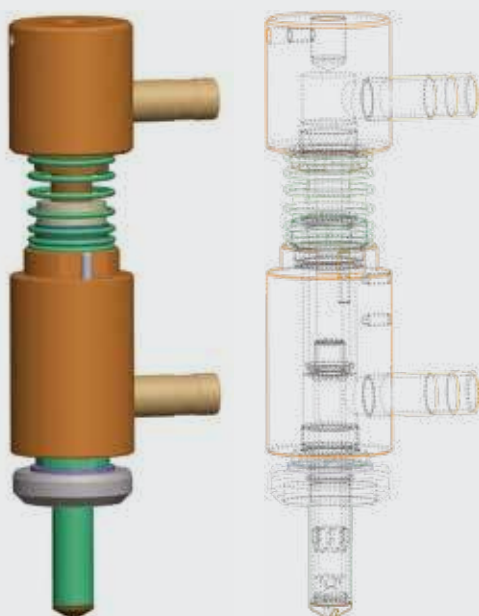
GLASS, PET.

Capping:

Plastic with screw thread, aluminium cap, crown cap, sport cap.

Filling valve:

The high flow capacity filling valves are reliable, easy to disassemble and extremely comfortable design.



Arrow

WM SERIES

The highest accuracy class of filling of valuable products.

The filling machine is designed to fill PET bottles, glass and HDPE packagings. The machine series utilises weight filling providing a perfect product weight. The filling is carried out by gravity or supported by pressure rise in a container.

Output:

Filler from 9 up to 48 nozzles.

Capacities from 3.000 up to 22.000 b/hour.





Advantages:

- Lasting extra high filling accuracy.
- Insignificant valuable product losses during precise electronic weight/portion determination.
- All machine elements in contact with products are made of AISI 316L steel.
- High filling precision (from ± 0.2 to 2g per 0.2l – 2.0l of volume).
- Elimination of deadlocks in the machine with a higher risk of product contamination.
- Two-phase filling prevents product foaming.
- Intuitive, coloured control panel facilitating the co-operation between the operator and the machine.



Application:

Dense products, oils, dairy products with pieces of fruit.

Volumes:

0.2l–3.0l.

Packaging:

Glass, PET, HDPE bottles.

Capping:

Plastic with screw thread, aluminum, twist off.

Filling valve:

Weight filler nozzle can fill various products of different properties, aerated products do not affect the accuracy of net weight filling. It does not affect the temperature, viscosity and foaming as well.



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BIG SERIES

High quality components for bigger bottles.

BIG series machines feature devices equipped with "overflow" filling valves, for non-carbonated fluids, such as non-carbonated water and beverages, process fluids (including foamy fluids), oils.

Filling system ensures high level of hygiene and ease of use. In case of BIG series machines the bottle always remains at the same height, which provides smooth transfer of the bottle.

Machines in their standard version are suitable for CIP. BIG series machines in their standard version feature intermediate tank with circulation pumps.

Components in contact with the filled product are made of AISI 316L stainless steel.

Output:

**Fillers are from 9 to 40 valves,
with speed 1.000 to 8.000 b/hour.**



Advantages:

- High production output
- Reduced changeover down-times
- Valves made entirely of AISI 316L stainless steel
- Very small number of gaskets and seals



Arrow

BIG SERIES

Application:

Non-carbonated liquids, natural water, juices.

Volumes:

3.0l-7.0l.

Packaging:

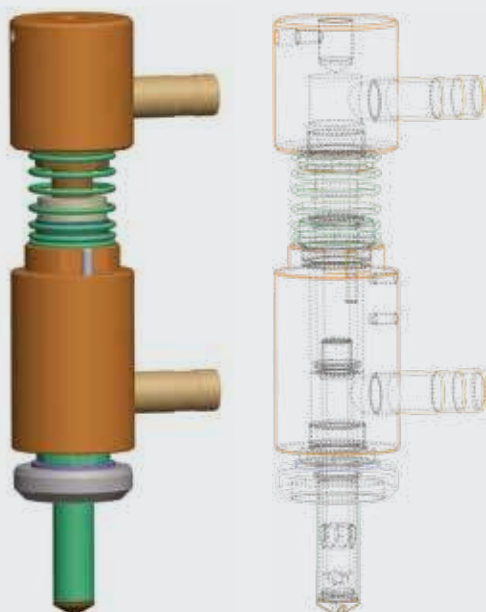
PET.

Capping:

Plastic with screw thread.

Filling valve:

Reliable, simple and easily sanitized valve.



Arrow

FlowM SERIES

High hygienic standards for challenging products.

FlowM series machines feature devices equipped with electronic filler valves, fitted with electrostatic flow meters manufactured by Endress+Hauser, that are designed for filling with non-carbonated, clear liquids and increased hygienic sensitivity, such as milk and natural juice.

Fillied bottle is never in direct contact with the filler valves. Parts in contact with the filled product are made of AISI 316L stainless steel.

Machines in their standard version are suitable for CIP.

FlowM series machines is used to equipped with **Arrow Purity System APS®** with HEPA filters H13, which stop 99,97% contaminations. And also other microbiological isolators, such as laminar flow cabinet, container and cap sterilization system and washing balls.

Output:

Fillers are from 9 to 72 valves,
with speed 4.000 to 30.000 b/hour.





Advantages:

- Extremely clean filling: no contact between valve and bottle and external environment
- High content precision
- The air in the bottle does not come into contact with the product feeding circuit
- All components in contact with the product are made of AISI 316L steel
- High Hygienic Standards for challenging products
- Highly precise filling performance ($\pm 0.5\%$ of rated volume)



Application:

Milk, juice, natural water, products requiring high hygiene.

Volumes:

0.2l-2.5l.

Packaging:

GLASS, PET.

Capping:

Plastic with screw thread, aluminium cap, crown cap, sport cap, twist off.

Filling valve:

Extremely clean valve is perfect for cold filling of sensitive products. This is controlled by individual flow rate gauges, each fitted to its respective delivery valve, through which the quantity of product to be poured into the bottle is dosed with extreme precision.



Arrow



Simple solution for small batches.

NL series machines are process line devices designed for low-capacity production lines. A line to fill, cap and label packages of liquid products with an increased capacity, it works with various types and shapes of packages and a wide range of liquids that may be filled.

NL series machines are the perfect solution for plants that process many types of packaging units.

Output:

Filling valves from 4-8 units,
speed max. 25 units/hour.

Application:

Any beverages, chemical liquids, cosmetics.

Volumes:

0.2l-20l.

Packaging:

GLASS, PET.

Capping:

Flip-tops, pumps, sprays, triggers, push-pull, plastic with screw thread, aluminium cap, crown cap, sport cap, twist off.

Filling valve:

Depending on type of filling machines could be equipped with over-flow filling nozzles, or flow-matic system.





Advantages:

- Universal application – an ideal machine for short production batches
- Quick and easy product changeover time
- All components in contact with the product are made of AISI 316L steel
- Various shapes and packages
- High dosing precision

Arrow



G series are devices for packaging water into 3 and 5 gallon packaging units. They are fully automatic devices with capacities of 200, 400 or 600 bph. These machines are made entirely of AISI 304 steel. High quality of cleaning is ensured by a multi-stage system. Its operation covers the phases of soaking, hot washing, rinsing and disinfection.

The entire process is controlled by a BERNECKER controller.

Output:

200, 400 or 600 b/hour.

Application:

Still water.

Volumes:

5 gallon.

Packaging:

PET, PC.

Capping:

Press on caps.

Filling valve:

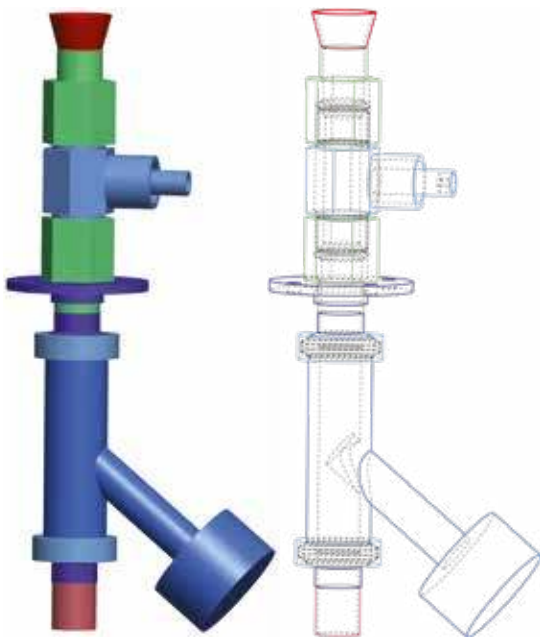
Reliable mechanical filling valve.





Advantages:

- The washer and filler is "in block" in order to avoid the potential contamination of the clean bottles travelling from the washer outlet to the filling area
- The filling process avoids the contact between the valve and the neck of the bottle (risk of contamination transfer)
- The filling process is electronically controlled to ensure into the bottle the predetermined volume of water
- The filling valve and all the piping, valves etc. in contact with the product have a sanitary design and are made of AISI 316L steel
- The press on capper is a linear machine used for caps applied on the bottle by pressure





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