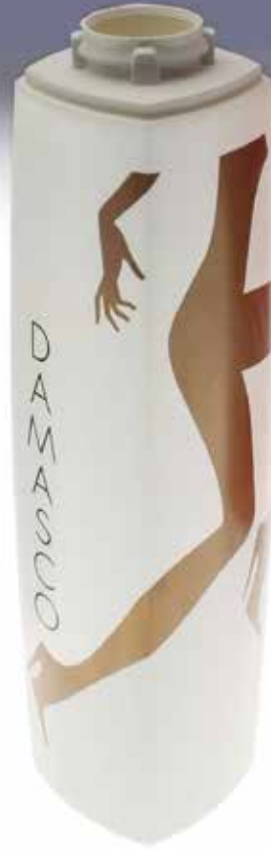


# *servobottle*



## FULLY SERVODRIVEN MACHINE FOR PRINTING

ON MULTI-FORMAT PLASTIC AND GLASS  
BOTTLES AND CONTAINERS

DECORATION IN MOTION





## PRINTING

**Decoration:** high quality on glass and plastic surfaces with full control of all print related parameters from the operator panel.

**Registration:** extremely accurate registration enabled by servo driven axis (no gear).

**Overlap:** precision UV LED curing for ink overlap when printing 360 degrees.

**Transversal print:** available with standard squeegee group.

**Neck print:** available with a simple screen adapter.

## COLORS

**Max number:** up to 10 colors, depending on machine configuration.

**Inks:** UV and thermoplastic inks with heated metallic screens.

**Graphic:** unlimited decoration possibilities with direct print, any kind of effect (metallic, relief, frost, lacquer...).

**UV:** possible final mercury lamp to be compatible with standard UV inks.

**UV LED:** In the full UV LED version up to 9 colors for ServoBottle 12 stations and up to 5 colors for ServoBottle 8 stations: an absolute market record!

## HOT-STAMPING

**Versatility:** Hot-printing station perfectly interchangeable with a screen-printing station, also compatible with the machines already installed.

**Compact:** The integration of hot printing effectively summarizes an entire decoration line in a single machine. Reducing the possibility of errors in the handling of the product and waste of material, with clear savings in terms of space and costs. Having all kinds of processing in a single machine will allow every industrial company to provide high-quality decorations, accessing new market segments.





## PERFORMANCES

**High printing speed:** reliable performances up to 90 ppm, depending on container shape and size.

**Torque motor for table indexing :** no wear parts, no maintenance, the table can freely turn by hand during changeover.

**SW & Logic:** development by Omso Group, based on success of Servotube and ServoCup; capability to follow customer's specific request (easily adaptable to specific requirements).

## USER FRIENDLY

**Simulator:** to simulate and visualize the movement of the container on all groups (print, treatment, ..); to cross check that the settings are correct, can be used even when the machine is running for next change over, or training purposes.

**Container geometry:** several preset bottle profiles, laser scanning for special profiles also manual editing feature.

**Access level:** multiple operator level access in relation to skill and password protected.

**Machine parameters:** most adjustments can be made "on the fly" for immediate results with closed guardings.

**Load/unload:** robotic control of loading & unloading with preset trajectory eliminating the need for operator programming.

**Easiness:** fully servo driven and electronic control from operator's panel.

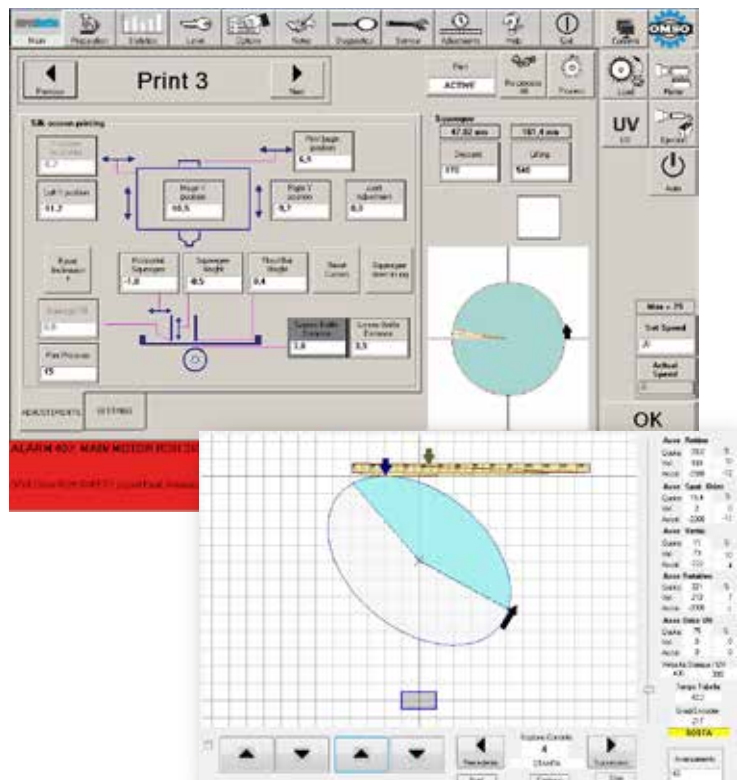
## MAINTENANCE

**Motors and reducer:** life time lubrication.

**Ball guides and screws:** every group has specific lubricating socket with distributing hose for quick operation of central lubrication.

**Statistics:** to advise maintenance team of lubrication requirements of every group.

**Mechanics:** virtually no mechanical mechanism to maintain servo technology "self protecting".





## TREATMENT

**Cleaning:** deionizing with brush and vacuum to clean surface.

**Flame treatment:** gas-air mixing and volume adjustments from operator panel.

**Silan treatment:** advisable to apply upstream before printing machine.

## LABELLING

**Labelling:** Dedicated group, capable of decorating bottles of any shape.

**Change over:** Quick with servomotor.

**Operator panel:** Auxiliary unit for maintenance functions.

**Versatility:** Installable in any position.

## REGISTRATION

**Seam:** identification of bottle seam with sensor to register the print.

**Neck thread :** reading with dedicated camera system.

**Specific feature:** any feature detected with dedicated camera system.

## ERGONOMY

**Screens:** optimal accessibility to screen, squeegee and container.

**Visibility:** full visibility of the printing groups and container 360 degree around the machine.

**Operation guide:** detailed description of all features with help guide on operator panel, "picture and a paragraph" describes each function.

## SPACE-SAVER

**UV LED:** patented and revolutionary UV LED curing systems integrated into each of 12 stations the LED lamp travels with the chuck and nosecone group.

**Layout:** very compact layout to save plant floor space.

## GREEN

**Economy:** Reduce LED lamp energy consumption (approx. 80% less than Hg lamps).

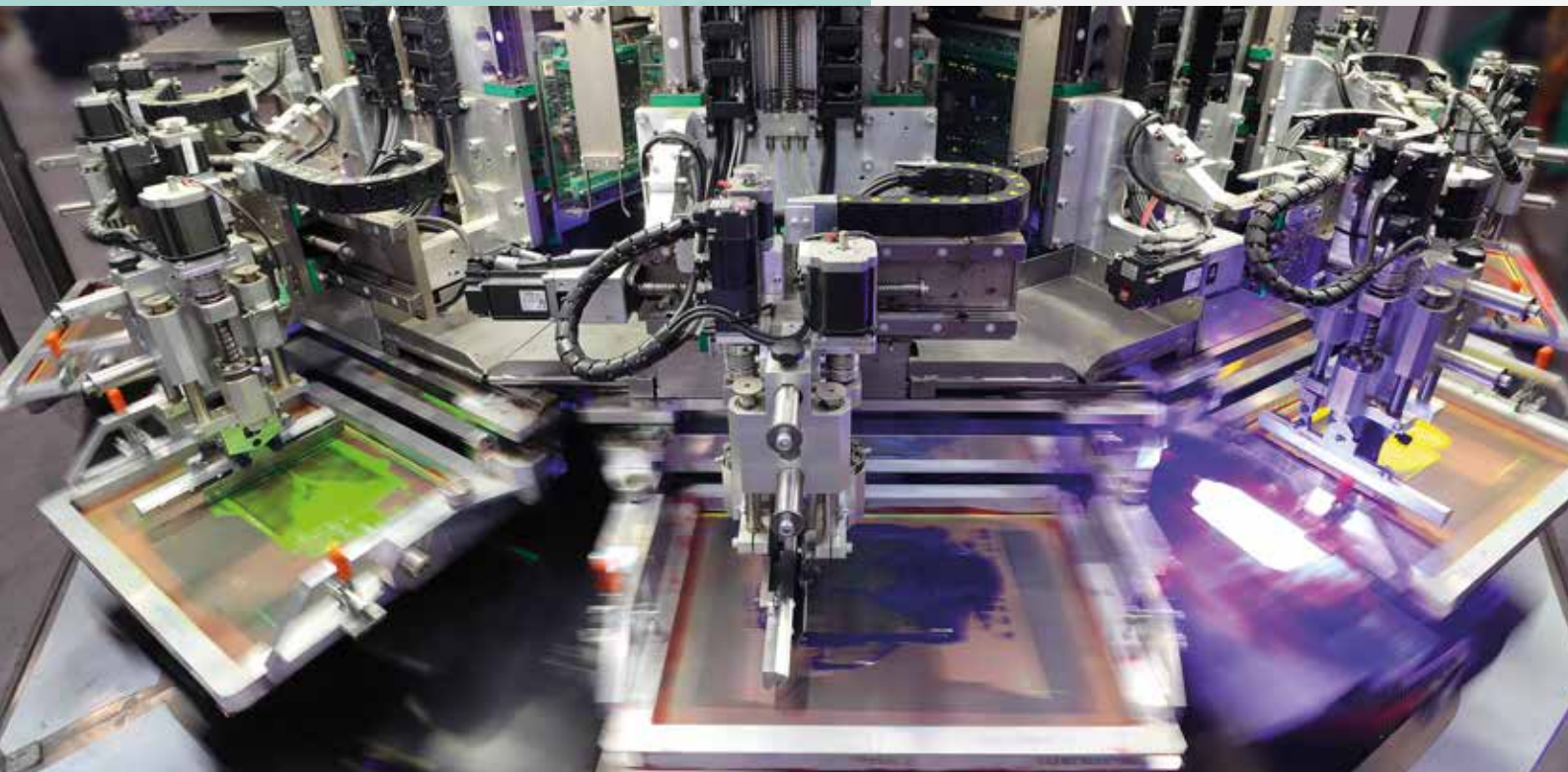
**Safety:** no ozone, no mercury, no microwaves and no dangerous visible light.

**Co2 savings:** • Lower CO2 emissions in the environment. You can see live how many Co2 Kgs are saved while the machine is running in the Statistics section.



## FEATURES AND BENEFITS

- ◎ UP TO 10 COLORS
- ◎ USER FRIENDLY
- ◎ QUICK CHANGEOVER
- ◎ UV LED CURING SYSTEMS INTEGRATED
- ◎ FLEXIBILITY
- ◎ GREEN





## LOAD/UNLOAD

**Robots:** multiple axis robots can handle any object with precision;

**Touch:** robot controlled approach and automated path clearance for fragile container;

**Station:** only one station used for load/unload allows for more print heads, parallel conveyors with no unused stations and a compact foot print of the machine.

## CONTAINER

**Bottle:** any shape of glass and plastic containers.

**Hollow container:** (glasses, jar, ..) any shape, glass and plastic.



## CHANGEOVER

**Speed:** extremely quick changeover due to servo driven adjustment from memory.

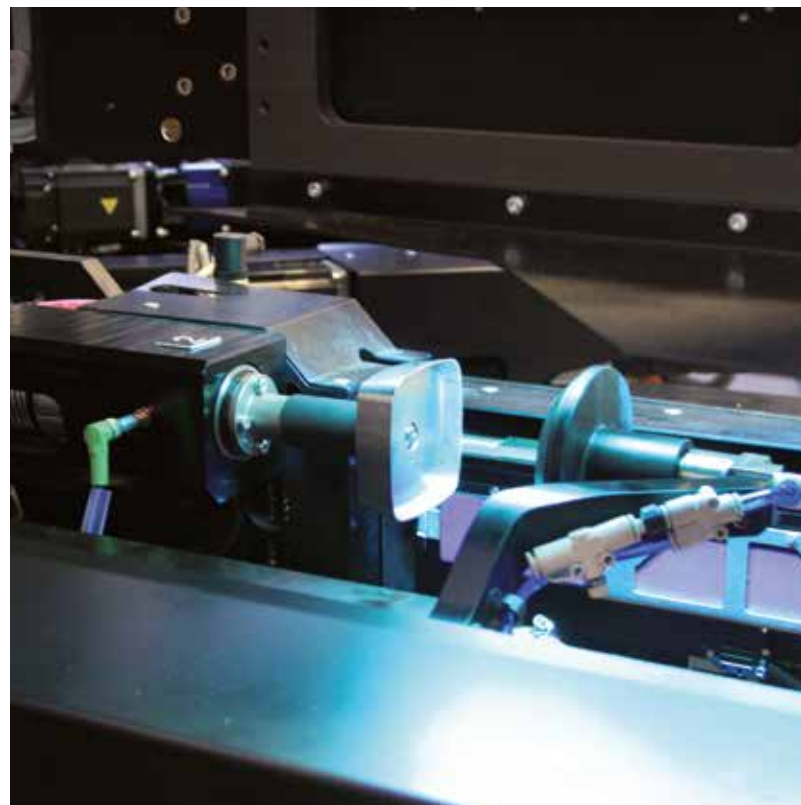
**Tools:** no tools required for tooling replacement (tool-less).

**Gears:** none, full control from operator panel on all servo driven functions.

**Product data:** complete menu for job related settings with instant recall function.

**Operator panel:** 360 degree movement all around the machine circumference outside guarding, with fully graphics for each station, adjustments can be made with closed guardings.

**Economy:** low tooling cost (only 12 chucks and 2 grippers).



## SAFETY & TROUBLE SHOOTING

**Safety:** full management of all critical situations for operator and machine.

**Diagnostic:** auto-diagnostics features built in program, fully detailed diagnostic.

**Troubleshooting:** possibility to easily remove the print group from the machine maintain offline;

**Remote assistance:** via customer's internet connection.

## QUALITY CONTROLS

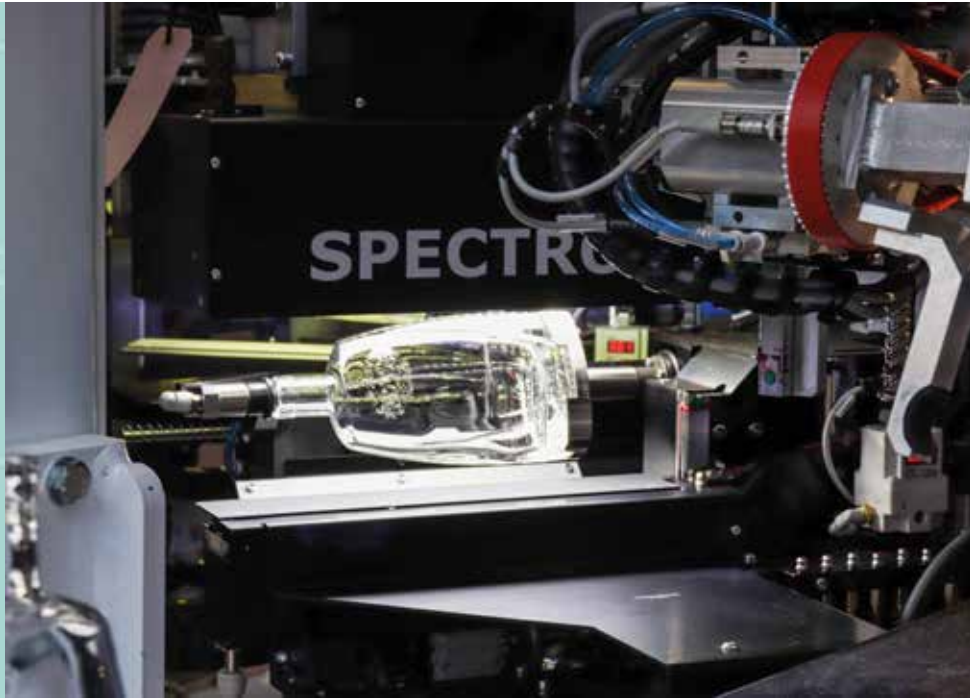
**System:** integrated linear color vision system for 100% quality assurance.

**Illumination:** both systems for opaque and clear container.

**Inspecting:** unprinted areas, defects in the substrate, shadows, pin holes, blurs, registration movement.

**Robustness:** the system tolerates normal printing deviation due to screen print.

**Statistics:** to advise operator of the number of defects, location and size.



## FLEXIBILITY

**Configurations:** high flexibility due to totally independent groups with dedicated on board electrical panels

**Investment protection:** guaranteed as it is easy to change the configuration even in the future, adding or swapping groups with future technology

**Table:** 12 or 8 stations, containers permanently held between chuck and nose cone "captured concept" enables enhanced registration and eliminates droppage



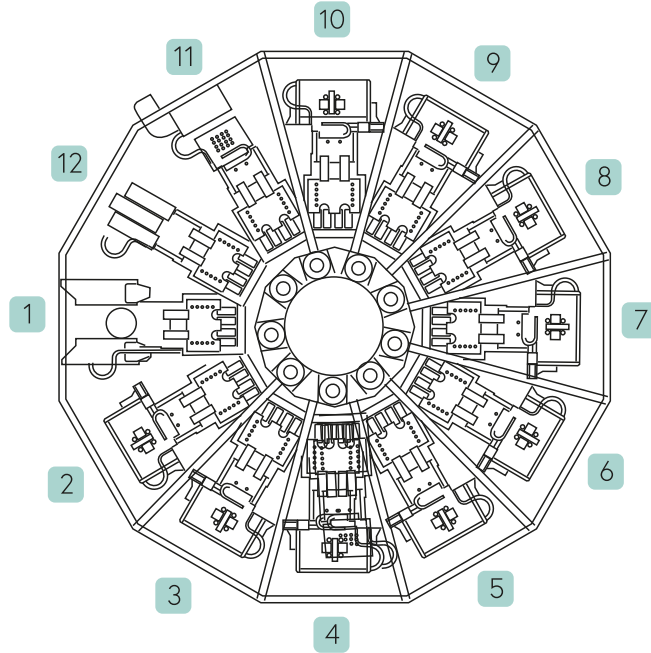
# CONFIGURATIONS

## SERVOBOTTLE -12 STATIONS

### Standard UV Inks

#### Position

- 1 Load/unload
- 2 Deio/clean/check
- 3 Surface treatment
- 4 Print 1
- 5 Print 2
- 6 Print 3
- 7 Print 4
- 8 Print 5
- 9 Print 6
- 10 Print 7
- 11 Inspection or Print8
- 12 Final UV or Print9 or Hot Stamping



### Thermoplastic Ink

#### Position

- 1 Load/unload
- 2 Deio/clean/check
- 3 Print 1
- 4 Print 2
- 5 Print 3
- 6 Print 4
- 7 Print 5
- 8 Print 6
- 9 Print 7
- 10 Print 8
- 11 Print 9
- 12 Print 10

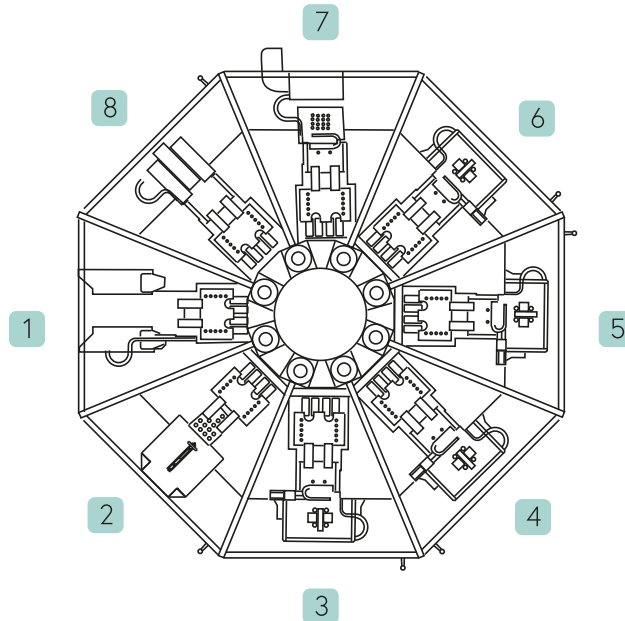
## SERVOBOTTLE8 - 8 STATIONS

### Standard UV Inks

#### Position

- 1 Load/unload
- 2 Deio/clean/check
- 3 Surface treatment
- 4 Print 1
- 5 Print 2
- 6 Print 3
- 7 Print 4
- 8 Print 5 or Final UV or Inspection or Hot Stamping

UNIQUE ON THE MARKET

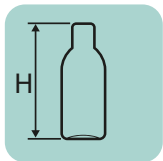


### Thermoplastic Ink

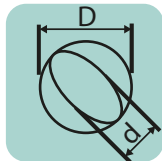
#### Position

- 1 Load/unload
- 2 Deio/clean/check
- 3 Print 1
- 4 Print 2
- 5 Print 3
- 6 Print 4
- 7 Print 5
- 8 Print 6

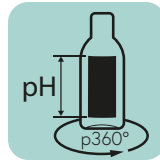
## TECHNICAL DATA



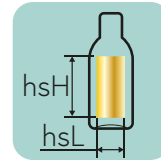
Min H: 40 mm  
Max H: 370 mm



container size:  
Round, oval or flat  
D :  $\geq 10$  mm  $\leq 125$  mm  
d :  $\geq 10$  mm



pH :  $\leq 230$  mm  
p360° :  $\leq 110$  mm



hsH:  $\leq 100$ mm  
hs L:  $\leq 125$ mm



Production speed  
90 p/m  
(depending on container  
dimension and quality)



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