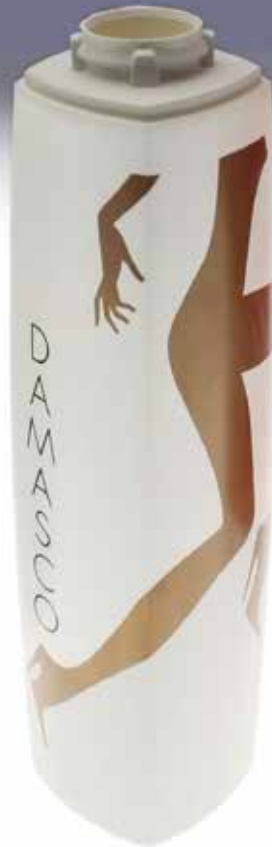


# servobottle



## 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!

## CONTAINER

- Bottle:** any shape of glass and plastic containers.
- Hollow container:** (glasses, jar, ..) any shape, glass and plastic.





## 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.

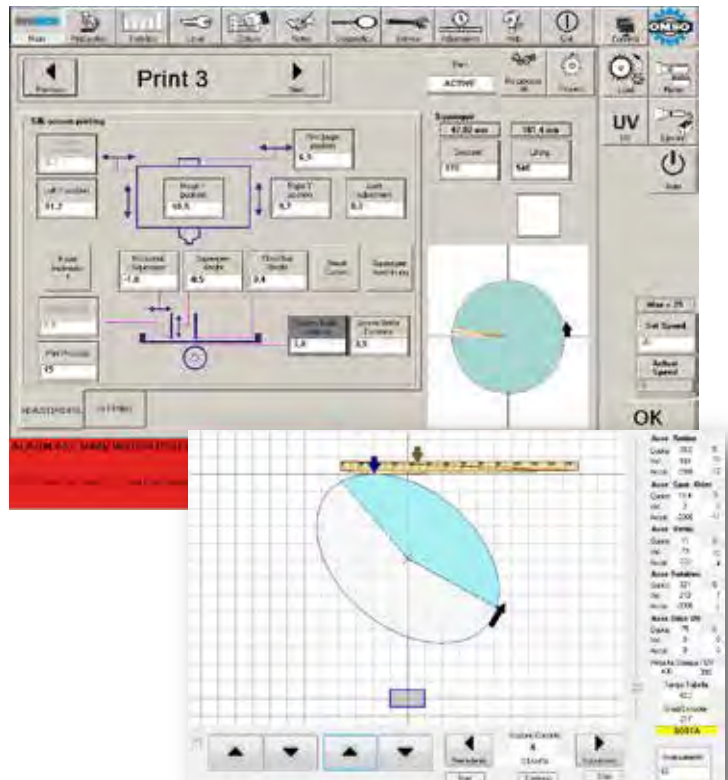
## MAINTENANCE

**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.

## LABELING

**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).

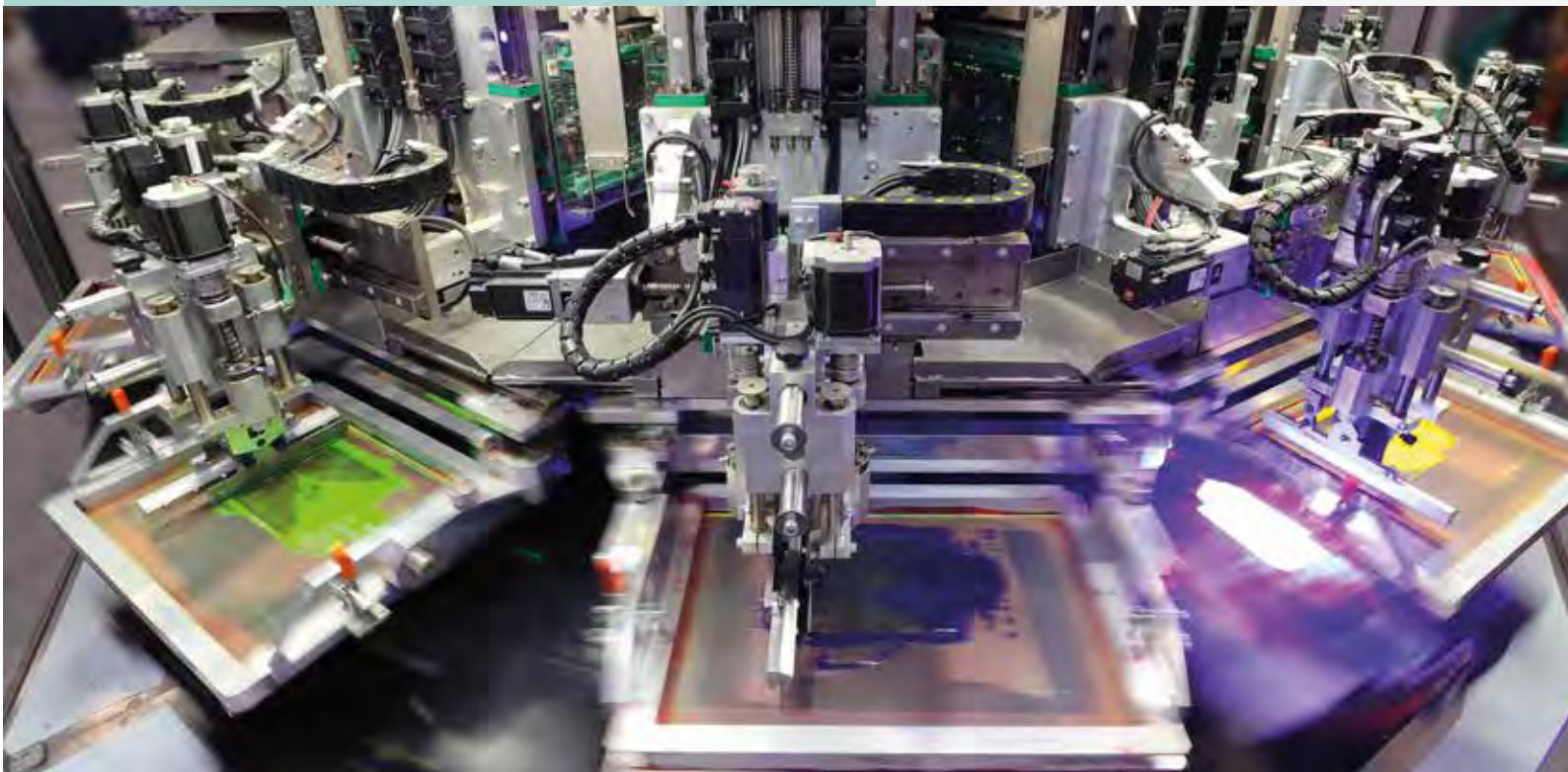
**Safety:** no ozone, no mercury, no microwaves and no dangerous visible light.

**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.



## CHANGEOVER

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

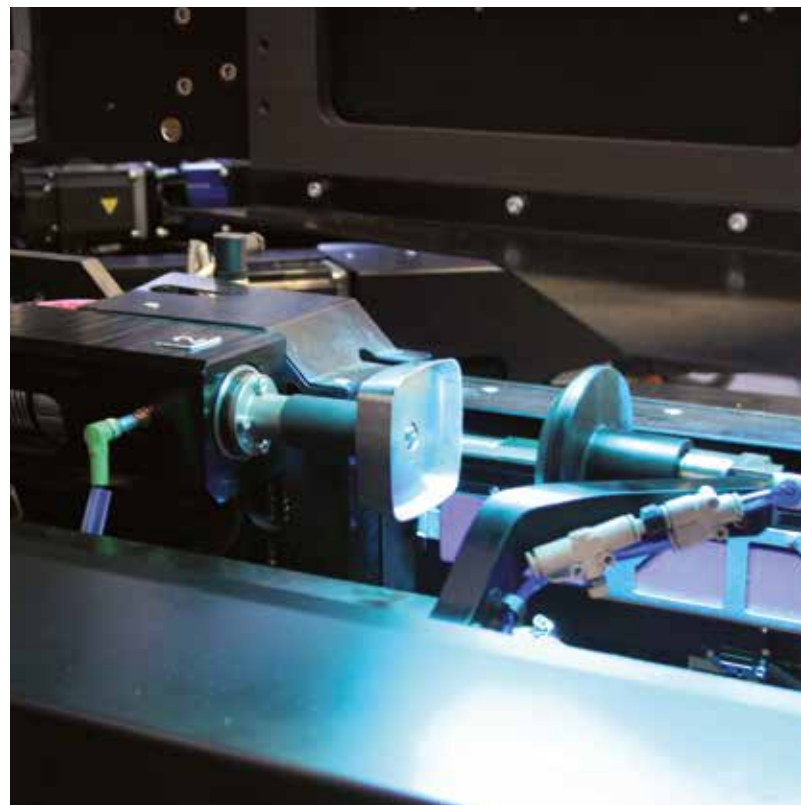
**Tools:** no tools required for tooling replacement (tool-less).

**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

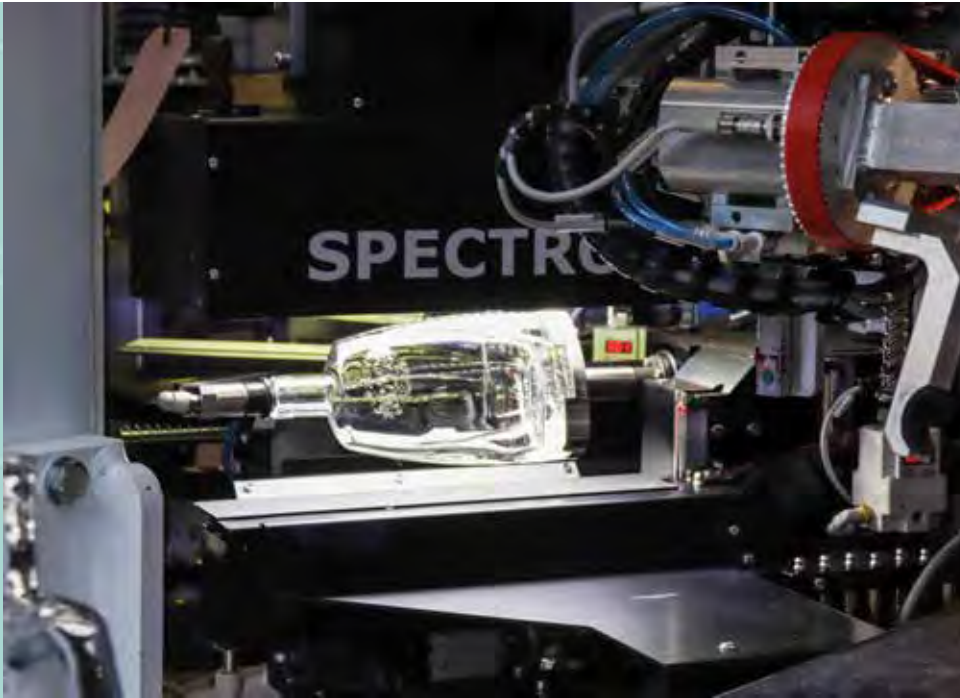
**System:** integrated linear color vision system for 100% quality assurance.

**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



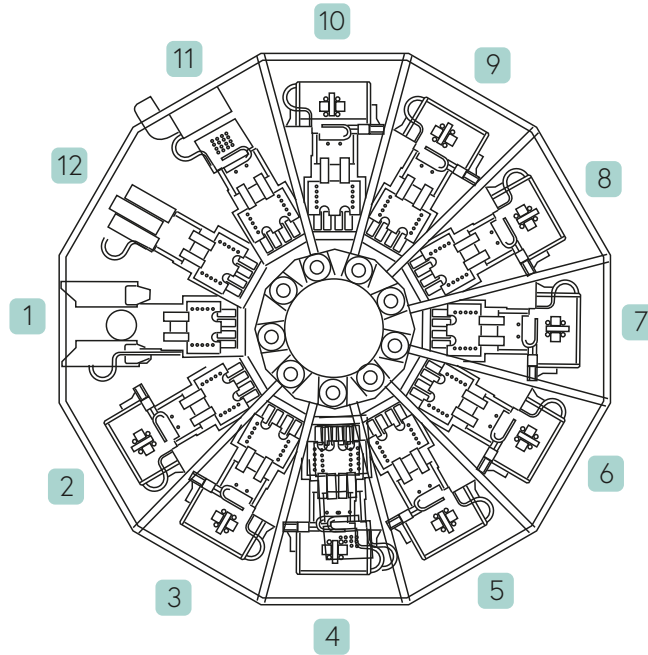
# CONFIGURATIONS

## 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

## SERVOBOTTLE -12 STATIONS

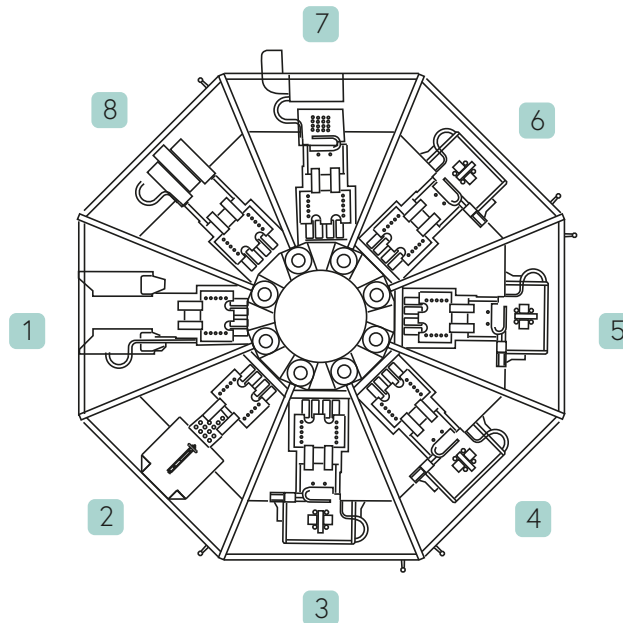


## Thermoplastic Ink

### 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

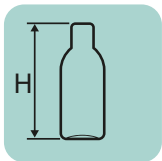
UNIQUE ON THE MARKET

## Standard UV Inks

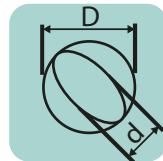
### Position

- 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

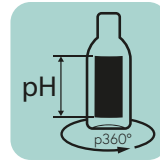
## TECHNICAL DATA



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



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



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