

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.





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).





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.

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.

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.

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.

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.

GREEN



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

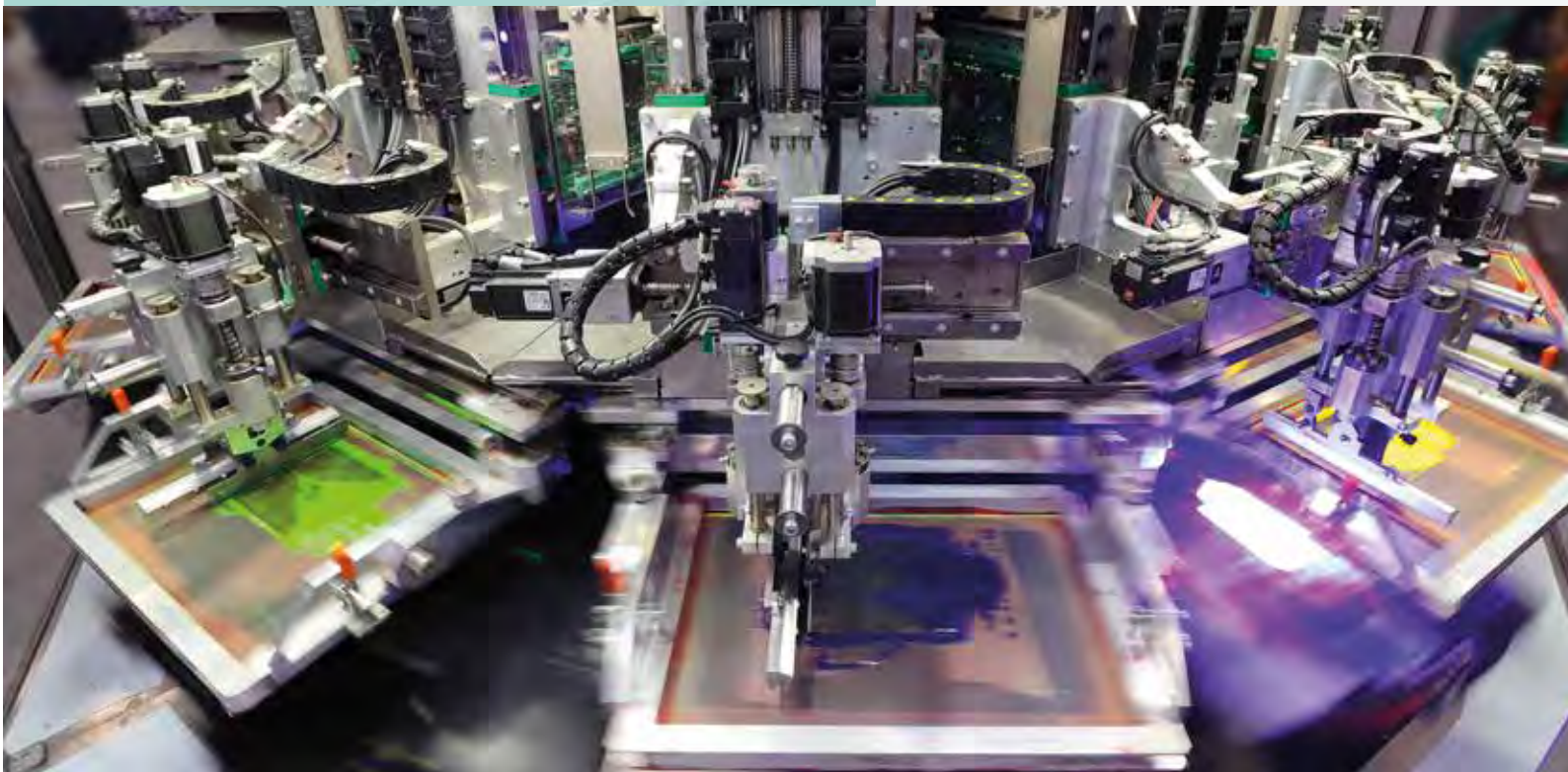
Safety: no ozone, no mercury, no microwaves and no dangerous visible light.

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





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).

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".

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.

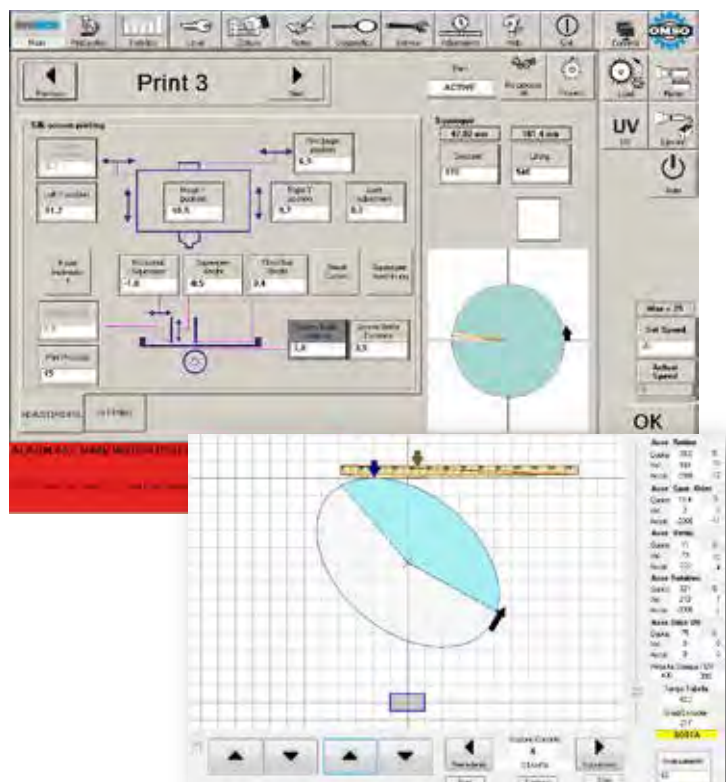
Container geometry: several preset bottle profiles, laser scanning for special profiles also manual editing feature.

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.



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

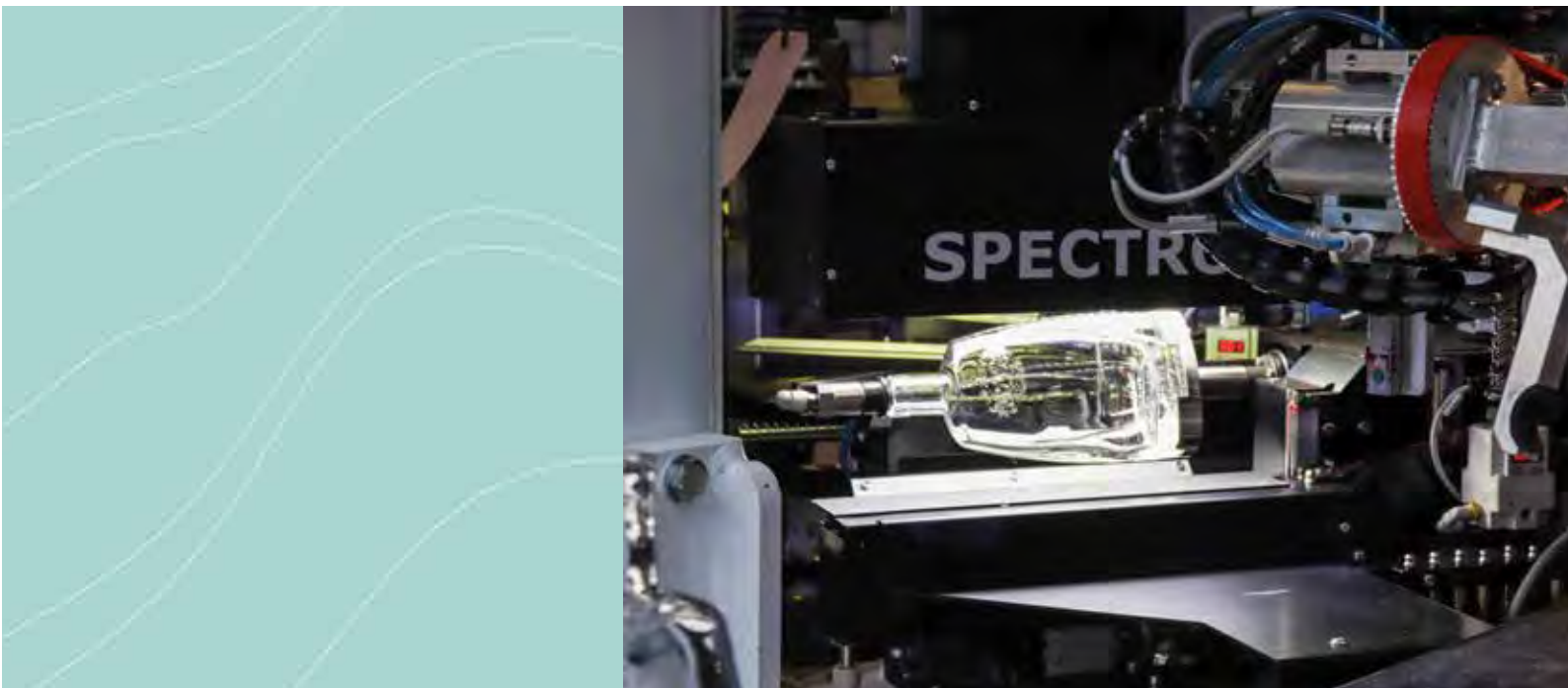
System: integrated linear color vision system for 100% quality assurance.

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



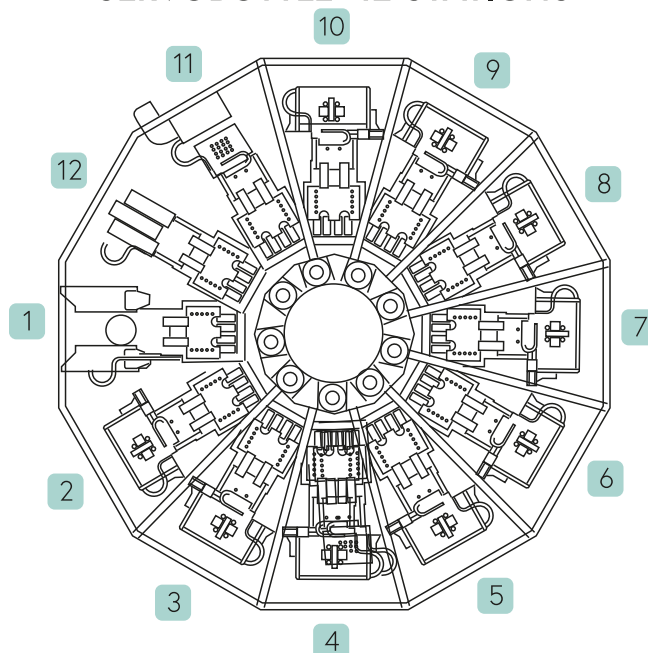
CONFIGURATIONS

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

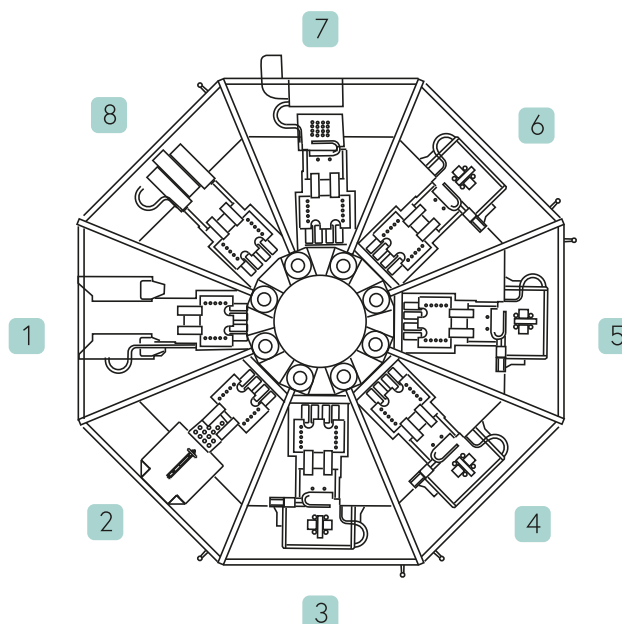


Thermoplastic Ink

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

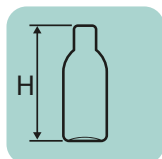
Standard UV Inks

Position

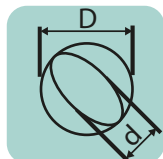
- 1 Load/unload
- 2 Deio/clean/check
- 3 Print 1
- 4 Print 2
- 5 Print 3
- 6 Print 4
- 7 Print 5
- 8 Print 6

UNIQUE ON THE MARKET

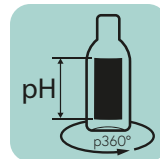
TECHNICAL DATA



Min H: 40 mm
Max H: 370 mm



container size:
Round, oval or flat
D : ≥ 10 mm ≤ 125 mm
d : ≥ 10 mm



pH : ≤ 230 mm
p360° : ≤ 110 mm



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



OFFICINA MACCHINE PER STAMPA SU OGGETTI

OMSO S.p.A.
42124 REGGIO EMILIA
Via Adige, 11/E
ITALY

Phone +39 0522 382696
Fax +39 0522 301618
info@omso.it
www.omso.it