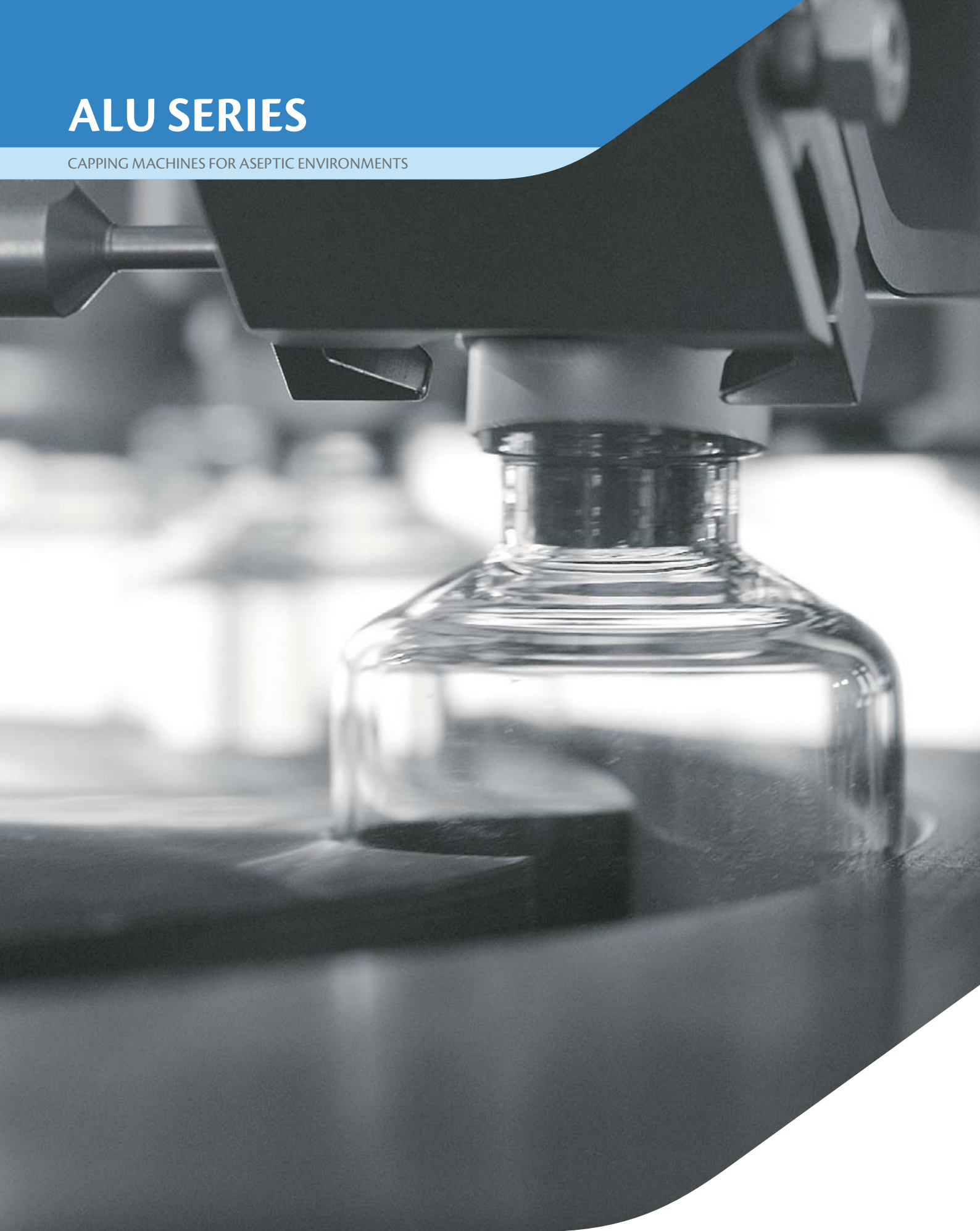


ALU SERIES

CAPPING MACHINES FOR ASEPTIC ENVIRONMENTS



ALU SERIES: GREAT VERSATILITY AND RELIABILITY



100% PARAMETERS CHECK TO ASSURE RESULTS.

CAPPING STATION FOR CUSTOMIZED SOLUTIONS

Customized solutions to handle special kind of caps, such as **add-vantage**, **bio-set** and **monovial** closures have been designed and are up and running worldwide.

Vial capping machines for injectable products are very important for the aseptic processing.

The machines must ensure a good hermetic seal to guarantee drug integrity inside the container.

The ever growing the ever growing demand for capping installations in classified areas, clean-rooms or aseptic environments makes it really important to rely on machines with very low **particle generation** to avoid product contamination.

With these aspects in mind, IMA LIFE designed and built the **ALU SERIES** of cappers, ranging from medium to high speed machines, from 100 to 600 pcs/min.

THE ALU SERIES OF CAPPING MACHINE SHARE THE FOLLOWING DESIGN DETAILS:

- SUITABLE FOR CONVENTIONAL L.A.F. & ISOLATION ENCLOSURE
- LOW PARTICLE GENERATION CAPPING SYSTEM
- PNEUMATIC CIRCUIT TO KEEP CONSTANT APPLIED VERTICAL FORCE
- 100% MEASUREMENT & CONTROL OF VERTICAL COMPRESSION FORCE
- MINIMUM SIZE-CHANGE OVER AND SET-UP TIMES THANKS TO FULL ACCESS
- EASY TO DISMANTLE SIZE PARTS
- MINIMUM MAINTENANCE REQUIRED
- EQUIPPED WITH SIEMENS PLC AND WITH USER FRIENDLY OPERATOR'S PANEL
- 21 CFR. PART. 11 COMPLIANCE ON DEMAND
- LOW PARTICLE GENERATION

IN ASEPTIC CAPPING

SPECIAL EXECUTION
WITH LIFTING HOPPER
INTEGRATION, AVAILABLE
ON DEMAND



ALU SERIES



SEPARATE CONTAINMENT AREA FOR ALU CAP FEEDING

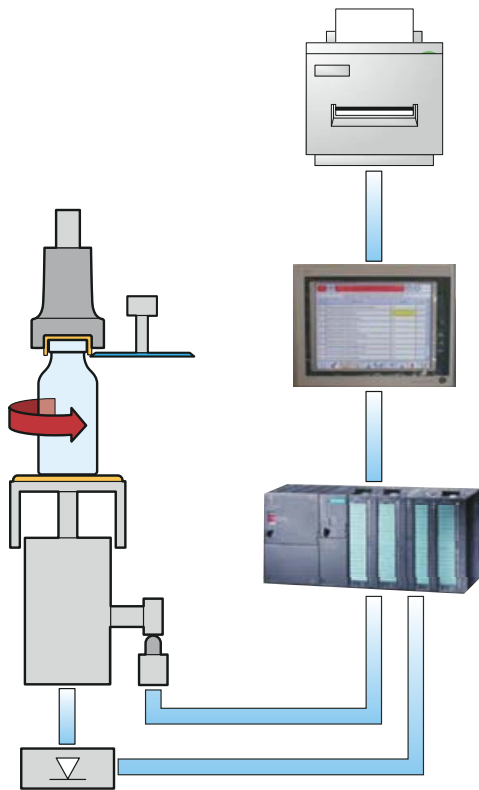
IMA LIFE: SETTING NEW STANDARDS FOR ASEPTIC PROCESSING.



ALU100/200 - UP TO 200 pcs/min.

- 2 capping-heads
- Intermittent motion rotary capper.

The crimping is performed by rotating the vial against an idle disc. The advantage offered by this system over traditional sealing methods is to **minimize particle generation on the vial mouth.**



THE VERTICAL FORCE IS KEPT CONSTANT THROUGH PNEUMATIC CYLINDERS; TOLERANCES IN VIAL HEIGHT ARE COVERED BY MEANS OF **PRESSURE REGULATION**, FOR ALL MACHINE CONFIGURATIONS.

- EASILY ADJUSTABLE VERTICAL APPLIED FORCE (ONLY AIR PRESSURE SET-UP)
- IDLE ROLLER SEALING DURING VIAL ROTATION TO REDUCE PARTICLE GENERATION
- A LOAD CELL DETECTS THE VERTICAL APPLIED FORCE TO 100% OF PRODUCTION
- VIALS WITH COMPRESSION FORCE OUT OF RANGE ARE AUTOMATICALLY REJECTED
- POSSIBILITY TO STORE OR PRINT THE DETECTED VALUES WITH 21 CFR PART 11 COMPLIANCE

FAST SIZE CHANGE OVER BY MEANS OF QUICK RELEASE CLAMP OF CAPPING CHUCKS.



ALU 400 - UP TO 400 pcs/min.

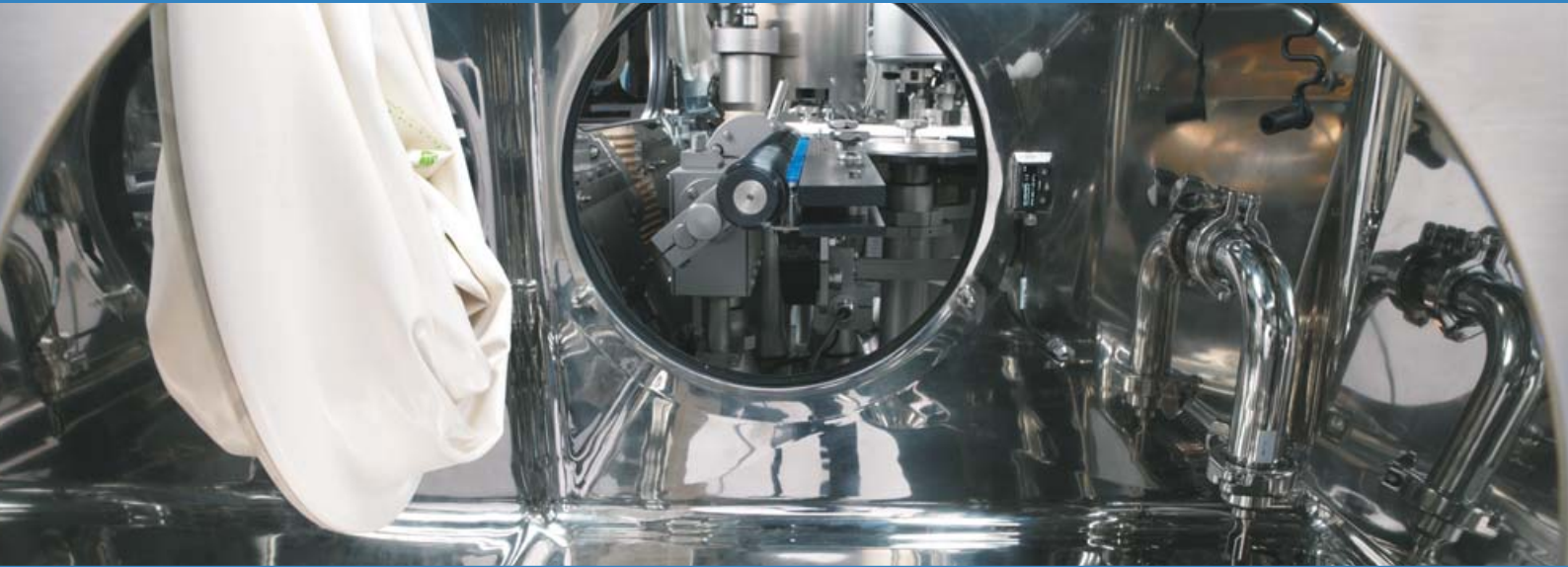
- 8 capping heads.
- Continuous motion rotary capper.



ALU600 - UP TO 600 pcs/min.

- 12 capping heads.
- Continuous motion rotary capper.

ISOLATION TECHNOLOGY & SPECIAL APPLICATIONS



BARRIER TECHNOLOGY

Special aseptic applications have been developed under open or closed RABS or isolation system. ALU 400 and ALU 600 are often the ideal completion of aseptic processing line, where a high degree of sterility assurance is required.

BOTH MACHINES ARE THEREFORE DESIGNED TO BE EASILY INTEGRATED UNDER ISOLATOR, FEATURING:

- AN INCREASED DISTANCE (325 MM) AS TO CONVENTIONAL CAPPERS, BETWEEN VIALS AND MACHINE TOP TO AVOID LAMINAR AIR FLOW TURBULENCES
- COMPLETE VHP STERILIZATION FOR ALU400 AND ALU600.
- HIGH CARE IN THE DESIGN OF PARTS INSIDE THE MACHINE ENCLOSURE
- VERY SIMPLE SIZE CHANGE OVER TO FACILITATE THE OPERATOR'S WORK
- REDUCED FOOT PRINT
- HMI FRIENDLY INTERFACE WITH EASY ACCESSIBLE LOCATION

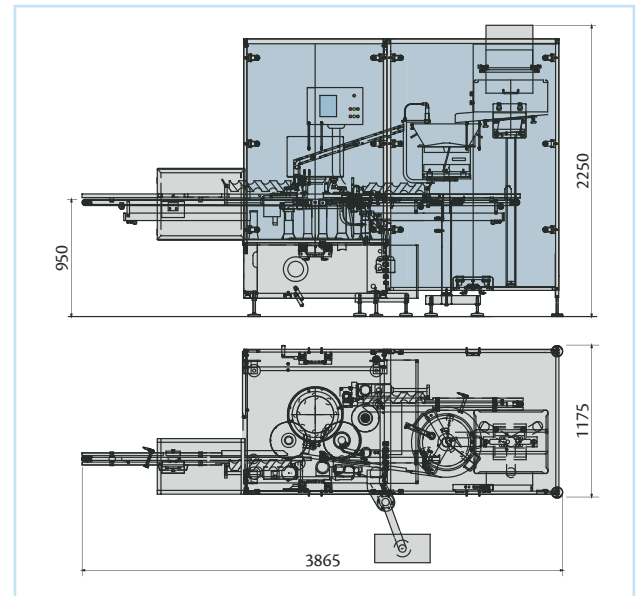


ALU SERIES TECHNICAL DATA

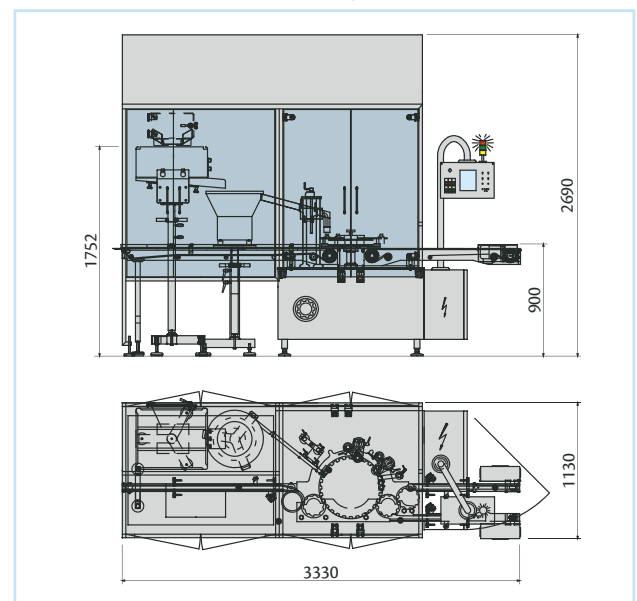
OPTIONAL UNITS

- STOPPER PRESENCE & POSITION
DETECTION BY SENSOR OR VISION SYSTEM
- GOOD CRIMP QUALITY CHECK BY
SENSOR OR VISION SYSTEM
- PRODUCTION PARAMETER PRINT-OUT
OR STORING WITH 21 CFR PART 11 COMPLIANCE
- ALU-CAP BATCH DATA
WITH 21 CFR PART 11 COMPLIANCE
- INK-JET PRINTER
WITH 21 CFR PART 11 COMPLIANCE
- ALLEN BRADLEY PLC
AVAILABLE ON DEMAND
- SERVO-ASSISTED ADJUSTMENT
OF VIAL HEIGHT
- ALU CAP LIFTING HOPPER INTEGRATED
IN SAFETY HOOD ON DEMAND
- AUTOMATIC FEEDERS FOR
UNSTABLE VIALS
- VIAL TRAY COLLECTING FACILITY
- REJECTION BEFORE AND AFTER CAPPING
OPERATION

ALU 400/600

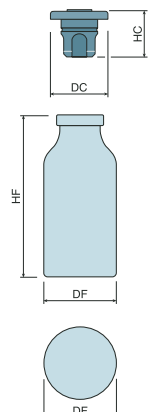


ALU 100/200



Machine layouts are indicative of general overall sizes only.

| | ALU 100 | | ALU 200 | | ALU 400 | | ALU 600 | |
|-----------------------|--|--|--|--|--|--|---|---|
| | Intermittent motion 1 capping heads Min. | Intermittent motion 1 capping heads Max. | Intermittent motion 2 capping heads Min. | Intermittent motion 2 capping heads Max. | Continuous motion 8 capping heads Min. | Continuous motion 8 capping heads Max. | Continuous motion 12 capping heads Min. | Continuous motion 12 capping heads Max. |
| Vial diameter (mm) DF | 14 | 90 | 14 | 55 | 14 | 52 | 14 | 52 |
| Vial height (mm) HF | 35 | 180 | 35 | 110 | 35 | 110 | 35 | 110 |
| Cap diameter (mm) DC | 13 | 33 | 13 | 33 | 13 | 33 | 13 | 33 |
| Cap height (mm) HC | 6 | 16 | 6 | 16 | 6 | 16 | 6 | 16 |
| Output | Up to 100/min. | | Up to 200/min. | | Up to 400/min. | | Up to 600/min. | |
| Standard voltage | 400V - 50 Hz | | 400V - 50 Hz | | 400V - 50 Hz | | 400V - 50 Hz | |



www.ima-pharma.com



IMA S.p.A.

IMA LIFE division

Via Emilia 428-442 - 40064 Ozzano dell'Emilia (Bologna) - Italy

Tel. +39 051 6514111 - Fax +39 051 6514666

mktg.life@ima.it - www.ima.it



Certificate
N. IT00/0415