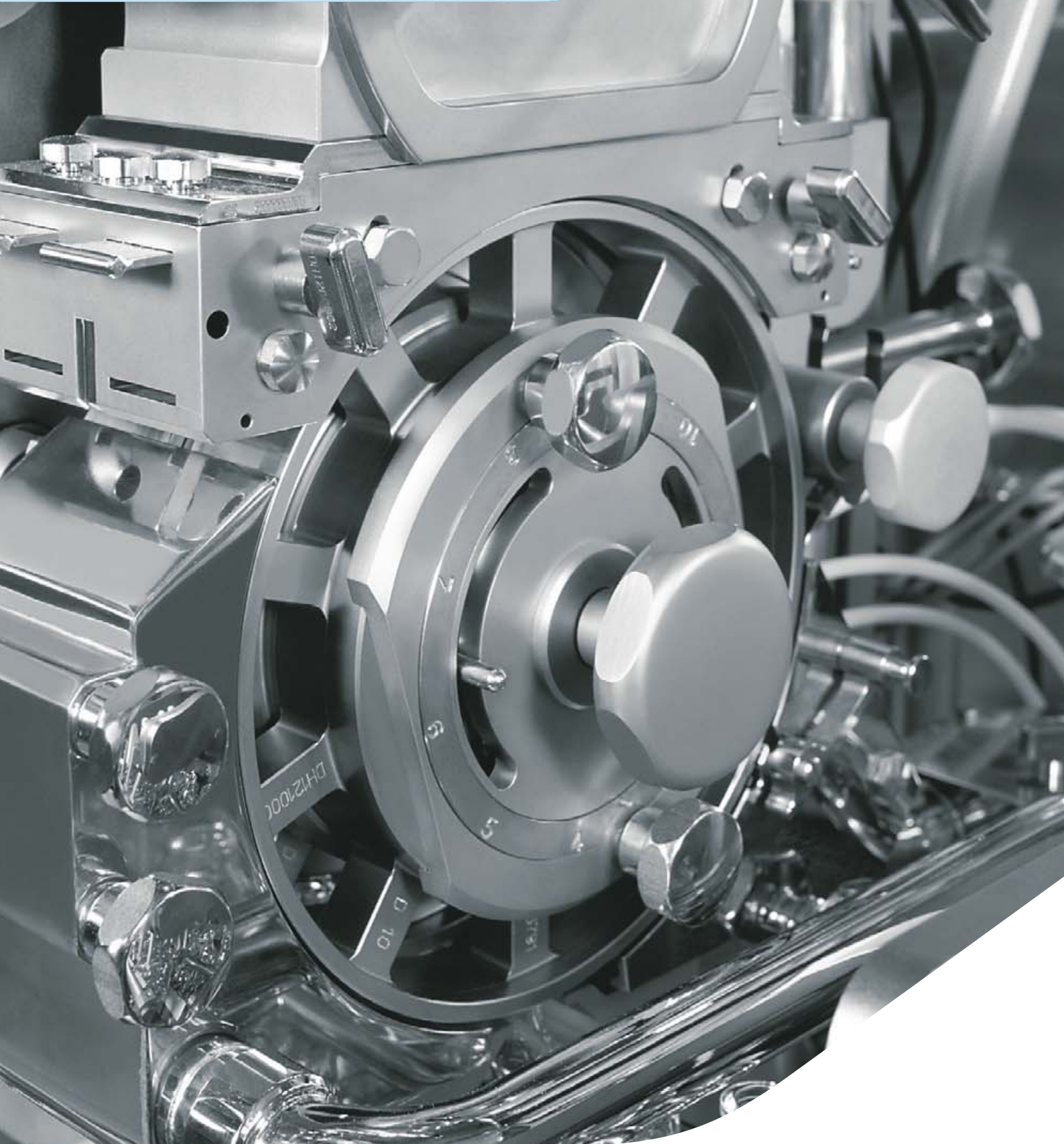


# MICRODOSING SERIES

POWDER MICRODOSERS FOR ASEPTIC ENVIRONMENTS



# MICROFILL SERIES

THE HERITAGE OF MORE THAN 40 YEARS DEDICATED TO ALL ASPECTS OF PHARMACEUTICAL POWDER FILLING, WITH HUNDREDS OF MACHINES PRODUCED AND WORKING ALL OVER THE WORLD: ALL THIS ALLOWS THE DEVELOPMENT OF THIS VERY INNOVATIVE FILLER.

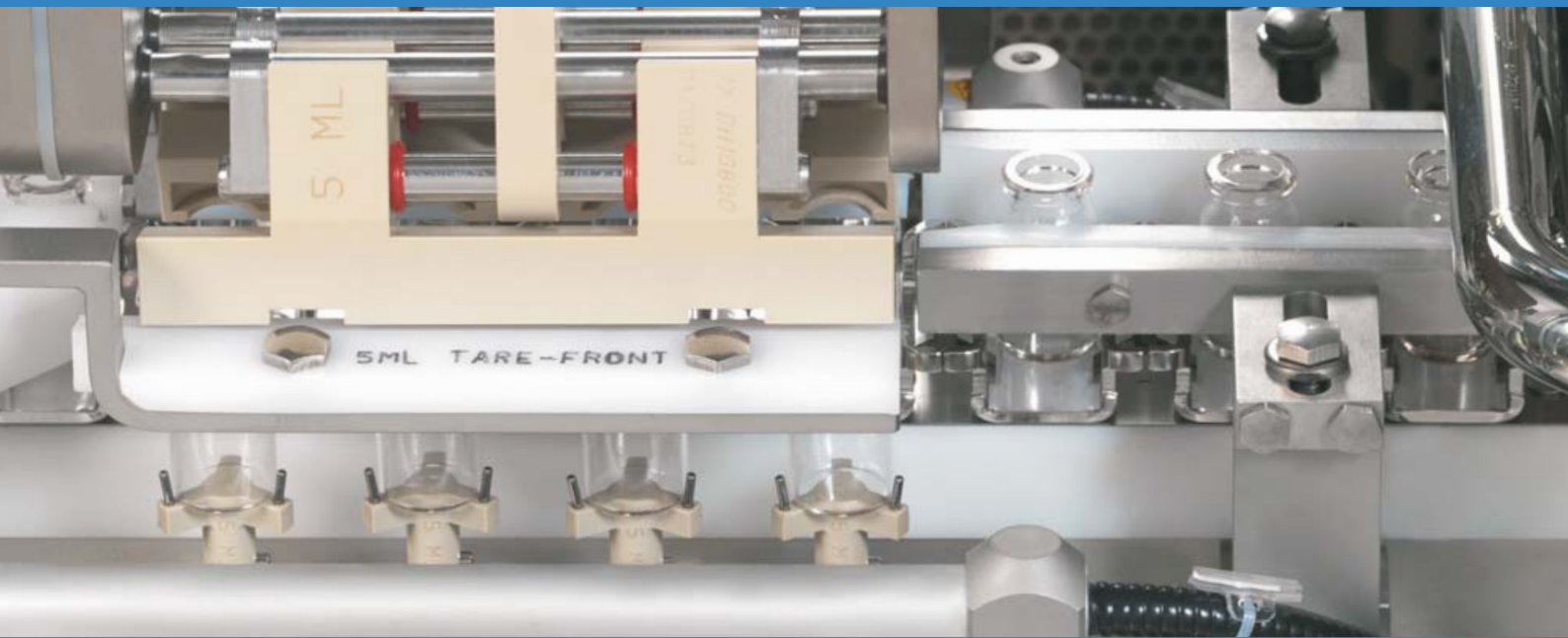
MICROFILL is the new generation of high speed microdosing machines for aseptic environments. With a positive in-line transport system, the machine guides the vials throughout the whole machine length reducing bottom friction and particle generation. Only 1 in-feed and 1 out-feed star-wheel removable without tools, with saving on size part costs. **The transport system consists of st. st. dowels provided with "quick snap release" to allow the complete replacement in a short time without tools.**

Central transport adjustment for vials ranging in a defined diameter spectrum. Very easy to dismount and clean: in situ decontamination allowed.



Microfill 400 general view  
with double powder feeding

# 100% IPC OF FILLED VOLUME



Self-adjusting system of dosing chamber depth allows automatic correction of powder delivery in case of out of weight dosage

100% IN PROCESS CONTROL EXTREMELY INNOVATIVE AND TECHNOLOGICALLY ADVANCED BY MEANS OF AN IPC COMPUTERISED SYSTEM.

Loading cells before and after filling. **Minimised product waste during batch start up and at batch end.** Automatic adjustment of dosing disc cavities with feedback software. Possibility to dose powder until the last vial, checking that the value stays within pre-defined tolerance limits. Final report with weight distribution in the batch.

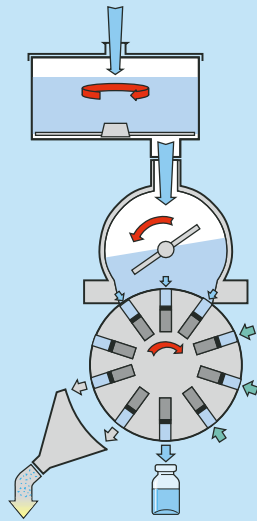


# MICROFILL SERIES DOSING SYSTEM

## Increased output and dosing range up to 400 vials/min.

Double dosing discs filling four vials at a time. Electronic multi-dosage with infinite number of dosages inside the same vial programmable directly from operator's panel.

Dosing disc chamber depth remote adjustment by servomotor.

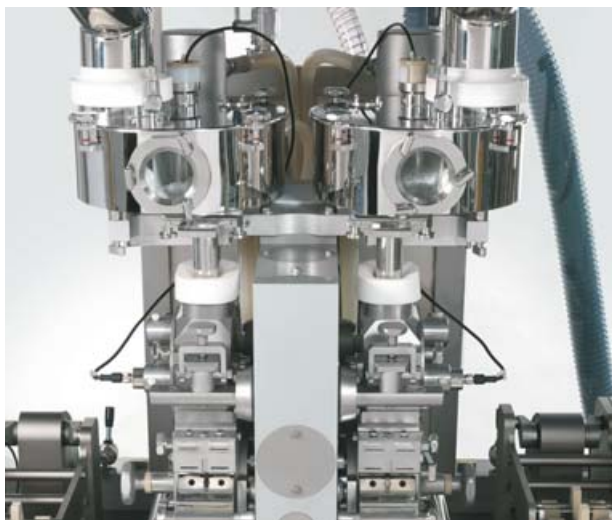


"Vacuum-pressure" filling is the name which identifies the dosing system universally acknowledged for its extreme precision and great versatility.

### The system consists of:

- Upper hopper
- Lower hopper
- Dosing discs
- Dust recovery unit
- Powder feeding unit (different options available such as cans or bags)

The dosing discs are fitted with suitable radial slots housing the dosing pistons. The powder is aspirated by vacuum from the hoppers and depressed during disc rotation. In the lower position the disc discharges the powder into the vial by means of a sterile air jet. After dosing, the slot which has delivered the powder is cleaned twice by jets of sterile air.



Possibility to dose 2 different products into the same vial.

## IMPROVED STERILITY ASSURANCE AND ACTIVE PRODUCT CONTAINMENT

Standard designed for isolator application, Microfill can be installed either under conventional laminar flow hood, cRABS and under isolator.

Microfill is completely tight sealed allowing the manual Cleaning In Place of all parts in contact with the product. The sloped machine base helps collection of washing media.

**Reduced size and weight of hoppers and discs to ease operations inside machine and isolator.**

All parts in contact with the product are built in AISI 316L st.st, Teflon or silicone rubber and can be sterilized in autoclave (121° for 1 hour).

# MICROFILL SERIES STOPPERING



To ensure maximum protection, the stoppering station has been newly designed improving air flow distribution over stopper multiple pick & place device and vial mouths. The new ergonomic design allows better manipulation and feeding of rubber stoppers on operator's side.

The machine hood can be provided with gloves and RTP ports.



THE PRE-FEEDING UNIT CAN BE INSTALLED UNDER THE MACHINE LAMINAR FLOW HOOD ALLOWING ASEPTIC MANIPULATION OF STOPPERS.

## EVERYTHING UNDER CONTROL

HMI with PC touch screen and advanced software for:

- Production parameter set-up
- Checkweighing system data and alarm recording
- Machine function diagnostics
- Recipes storage

**No product waste: to the last granule.**



# MD SERIES

Tradition coupled with consolidated vacuum pressure filling technology is the basic feature of MD series of machines. With more than 200 machines sold worldwide, the **MD series** provides for maximum precision levels and product safety, even with micronised powders and long, non-stop production cycles. MD series of microdosers still represents the highest standard in sterile powder processing worldwide, when medium output speeds are required.

## IN-LINE VIAL TRANSPORT SYSTEM

Vials cross the microdosing machine in a straight line, transferred by two parallel belts.

VIALS' STABILITY AND ELIMINATION OF ANY PARTICLES GUARANTEED BY SUCTION MOUTHS POSITIONED BETWEEN THE TWO BELTS.

Alternate vial in-feed below the different operating stations. Design facilitating cleaning operations.





MD 300 machine front view

# MD SERIES DOSING SYSTEM



THE MD SERIES DOSING UNITS ARE FITTED ACROSS THE VIAL IN-FEED DIRECTION TO FACILITATE L.A.F. ACTION.

THE SYSTEM CONSISTS OF FOUR FUNDAMENTAL COMPONENTS:

- UPPER HOPPERS
- LOWER HOPPERS
- DOSING DISCS AND COMPRESSED AIR
- VACUUM AND ASPIRATION SYSTEM

## VERSATILITY COMBINED WITH MAXIMUM PRECISION

### MD150/1

Version with a single dosing disc, can be used to fill up to 3 shots.  
Maximum speed with 1 dose: 150 vials/min.

### MD150/2

Version with two dosing discs, can be used to fill up to 6 shots.  
Maximum speed with 1 and 2 doses: 150 vials/min.

**Possibility of dosing two different products in the same vial.**

### MD300

The special patented MD300 system allows the in-feed of one or two vials at a time under the dosing discs. This allows various dosing alternatives (1-2-3-4-6-12 doses).

Maximum speed with 1 shot: 300 vials/min.

**Possibility of dosing two different products in the vials.**



# MD SERIES STOPPERING



STOPPERING STATION PROVIDING  
FOR MAXIMUM PRODUCT PROTECTION.

- Vibrating container and stopper chutes situated away from the vial path
- A Pick-Up arm collects the stopper from the chute and, by means of vacuum, inserts it in the vial mouth
- Stopper presence check
- Very reduced change over times.

STERILITY ASSURED ALONG THE  
ENTIRE PRODUCTION CYCLE.

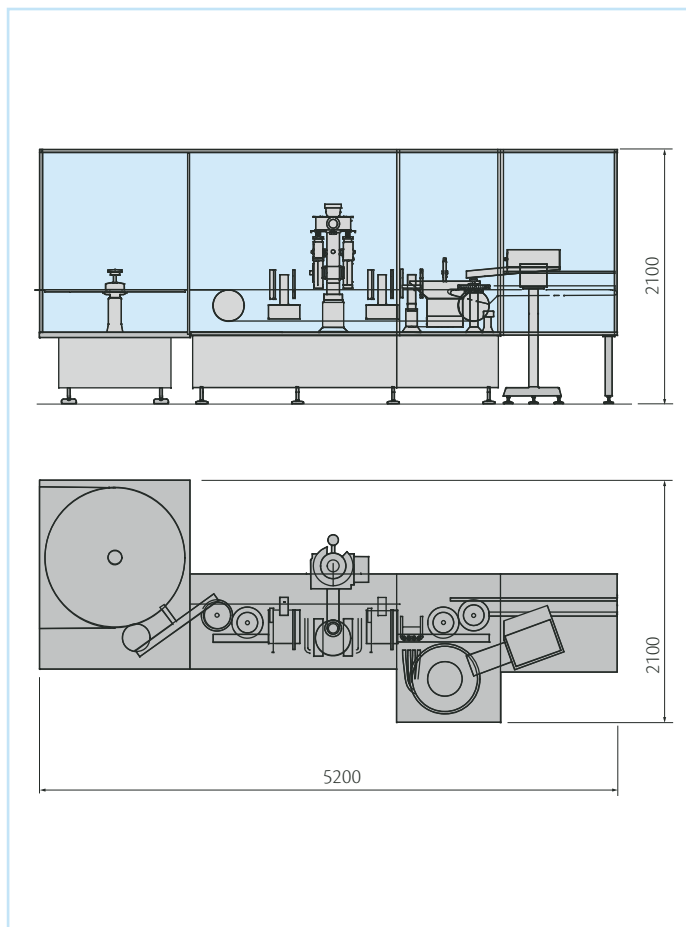
The machines of the **MD series** are standard designed for installation under:

- **horizontal laminar flow** or **vertical laminar flow**, thus ensuring class 100 conditions around the vial;
- cRABS
- **isolator**, for a complete segregation of the machine working area.

All parts in contact with the products are built in AISI 316L st. st., Teflon or silicone rubber and can be sterilized in autoclave (121° for 1 hour).

# MICROFILL TECHNICAL DATA

MICROFILL



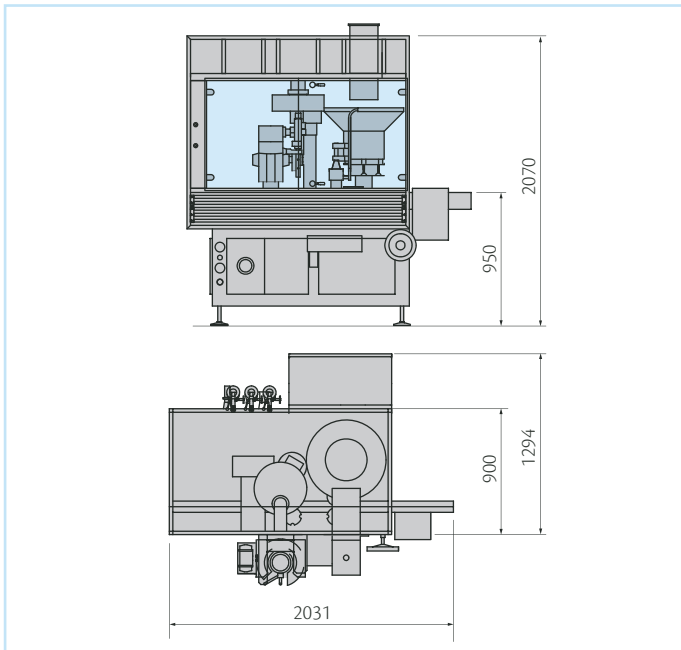
## OPTIONAL UNITS

- DOSING DISC CHAMBER DEPTH REMOTE ADJUSTMENT BY SERVOMOTOR
- SELF-ADJUSTING SYSTEM OF DOSING CHAMBER DEPTH
- NITROGEN GAS FLUSHING BEFORE STOPPERING
- LIQUID DOSING GROUP FOR MEDIA FILL TESTS
- MULTIPLE DOSAGE UNIT
- VERTICAL RECYCLE TYPE L.A.F. UNIT
- DE-HUMIDIFICATION SYSTEM INSIDE MACHINE HOOD
- DE-HUMIDIFICATION SYSTEM WITH COMPRESSED AIR AND SNAG EJECT
- UNIT FOR DIRECT POWDER IN-FEED
- REJECTED VIAL ACCUMULATION ON TRAY

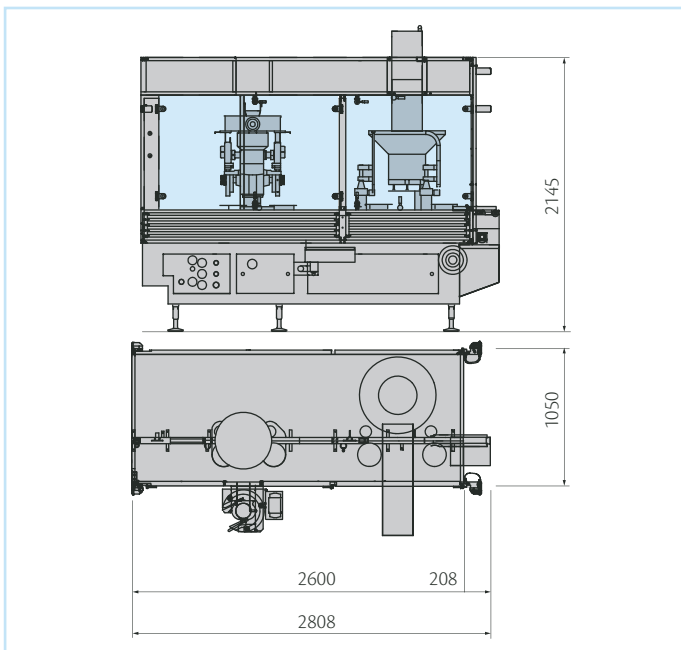
	MIN.- MAX.	MIN. - MAX.
Output	Up to 400/min. up to 32 mm vial diameter (4 vials at a time)	Up to 200/min. with diameter 32-52 mm (2 vials at a time)
Vial diameter (mm)	20 - 32	32 - 52
Vial height (mm)	40 - 75	75 - 110
Stopper diameter (mm)	20	20 - 31
Standard voltage	400V - 50Hz - 3 Phase	
Installed power	20 - 22 Kw	
Dosing unit compressed air consumption	35 Nm <sup>3</sup> /h (0,2 μ - dew-point - 40°C)	

# MD SERIES TECHNICAL DATA

MD150



MD300



## OPTIONAL UNITS

- DOSING DISC CHAMBER DEPTH REMOTE ADJUSTMENT BY SERVOMOTOR (FOR MD 300 ONLY)
- SELF-ADJUSTING SYSTEM OF DOSING CHAMBER DEPTH (FOR MD 300 ONLY)
- NITROGEN PURGING BEFORE OR AFTER DOSING
- LIQUID DOSING GROUP FOR MEDIA FILL TESTS
- VERTICAL OR HORIZONTAL RECYCLE TYPE L.A.F. UNIT
- DE-HUMIDIFICATION SYSTEM INSIDE MACHINE HOOD
- DE-HUMIDIFICATION SYSTEM WITH COMPRESSED AIR AND SNAG EJECT
- STATISTICAL WEIGHT CHECK (FOR MD 300 ONLY)
- UNITS FOR DIRECT POWDER AND STOPPER IN-FEED (DRUM LIFTING AND POSITIONING UPON REQUEST)
- REJECTED VIAL ACCUMULATION ON TRAY (FOR MD 300 ONLY)

MODEL	MD150	MD300
Output	Up to 150 vials/min.	Up to 300 vials/min.
Vial diameter (mm)	20 - 52	20 - 52
Vial height (mm)	35 - 110	35 - 110
Dosing possibilities	1 - 2 - 3 - (4 - 6)	1 - 2 - 3 - 4 - 6 - 12
Standard voltage	400V - 50 Hz - 3 Phase	400V - 50 Hz - 3 Phase
Installed power	1,3 Kw	2 Kw
Dosing unit compressed air consumption	35 Nm <sup>3</sup> /h (0,2 μ - dew-point - 40°C)	35 Nm <sup>3</sup> /h (0,2 μ - dew-point - 40°C)

[www.ima-pharma.com](http://www.ima-pharma.com)

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