

PERFIMA

COATING PAN FOR FILM AND SUGAR PROCESSES

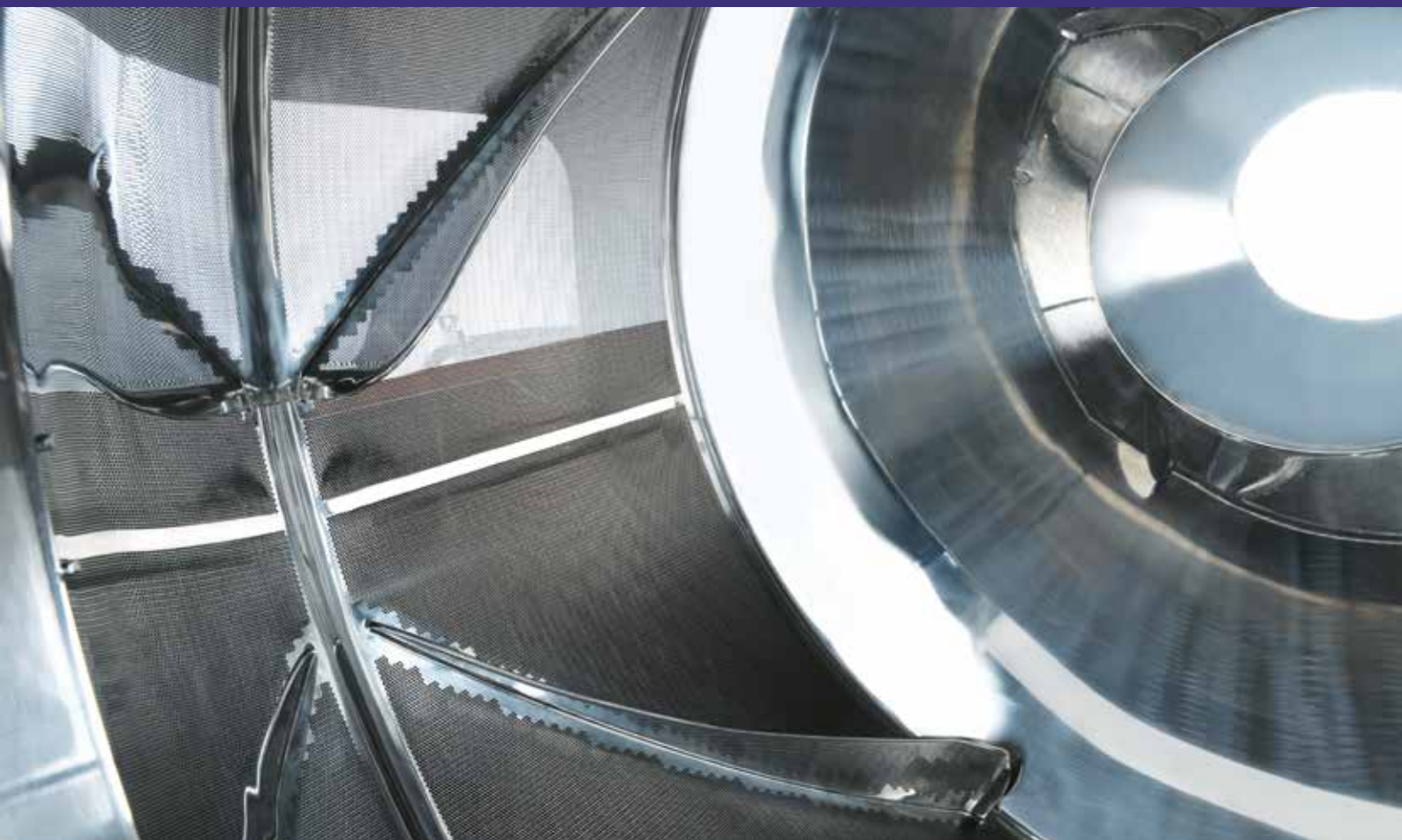


PERFIMA

PERFIMA IS A FLEXIBLE AND RELIABLE MACHINE PROVIDING THE HIGHEST EFFICIENCY IN THE FIELD OF AUTOMATIC COATING EQUIPMENT.

ALSO SUITABLE FOR HIGH CONTAINMENT INSTALLATIONS, PERFIMA GUARANTEES MAXIMUM OPERATOR PROTECTION WHILE WORKING WITH HIGHLY ACTIVE PHARMACEUTICAL INGREDIENTS (HAPI).





PERFIMA IS AVAILABLE WITH THREE DIFFERENT DRUM MODELS:

- ECHO: EQUIPPED WITH WELDED MIXING BAFFLES FOR TABLET FILM AND SUGAR COATING.
- EXTRA: EQUIPPED WITH REMOVABLE MIXING BAFFLES FOR TABLET FILM AND SUGAR COATING.
- EDGE: EQUIPPED WITH WEDGE WIRE SCREEN FOR PELLET, MINITABLET AND TABLET PROCESSING.



PERFIMA ECHO

THE SHAPE OF THE DRUM COMBINED WITH THE POSITION OF THE MIXING BAFFLES ON ITS CENTRAL SECTOR ENSURE PERFECT AND UNIFORM MIXING OF THE CORES. MIXING EFFICIENCY IS MAINTAINED REGARDLESS OF PRODUCT QUANTITY, ALLOWING A WIDE RANGE OF BATCHES TO BE PROCESSED IN THE SAME MACHINE (FROM 25% TO 100% OF THE PAN CAPACITY). THE POSITION AND DIMENSIONS OF THE OUTLET AIR DUCT ARE DESIGNED TO GUARANTEE GOOD, UNIFORM PRODUCT DRYING, THUS SAVING ENERGY.





PERFIMA EXTRA



Welded bottom baffles to process batches as low as 10% of the pan capacity.



Removable fin baffles to process batches from 25% to 100% of the pan capacity.



Removable cross baffles available upon request.

PERFIMA EXTRA HAS BEEN SPECIFICALLY DESIGNED TO INCREASE MACHINE FLEXIBILITY IN TERMS OF WORKABLE PRODUCTS AND RANGE OF BATCHES TO BE PROCESSED. THE SHAPE OF THE DRUM GUARANTEES UNIFORM PRODUCT MIXING, WHILE THE REMOVABLE MIXING BAFFLES ALLOW FOR DIFFERENT MACHINE CONFIGURATIONS, ENSURING A WIDER RANGE OF BATCHES THAT CAN BE PROCESSED IN THE SAME PAN (FROM 10% TO 100% OF PAN CAPACITY).

PERFIMA EDGE





Core side

DESIGNED TO PROCESS PELLETS,
MINITABLETS AND TABLETS, PERFIMA
EDGE USES A WEDGE WIRE SCREEN DRUM,
GUARANTEEING UNIFORM MIXING AND
ACCURATE DRYING OF THE CORES.

The special design of the drum allows high process air volumes, resulting in high spray rates and economical short process times; similar to conventional perforated drum coaters. The machine ensures high flexibility in terms of workable products and can process cores > 0.8 mm.

THE UNIQUE DESIGN OF THE WEDGE WIRE
SCREEN DRUM PROVIDES A SUITABLE SURFACE,
GUARANTEEING GENTLE TREATMENT OF THE CORES
DURING COATING.

ON THE EXTERNAL SURFACE OF THE DRUM, THE
WEDGE WIRES PROVIDE A SEMI-CONICAL SHAPE
GUARANTEEING EASY REMOVAL OF THE COATING
SUSPENSION RESIDUE AND EFFICIENT CLEANING.



SPRAY GUNS

PERFIMA spray guns feature an Anti-Bearding-Cup (ABC) system, avoiding guns clogging during the film coating process.

Both film and sugar spray guns can be easily fitted on the sliding support arm and can be manually or automatically positioned and adjusted. The sliding arm can be removed from the front door of the pan allowing gun changing, calibration/adjustment, and fast and safe cleaning.



Sugar coating spray gun



Film coating spray gun





SUSPENSION DOSING UNIT

The spray system can include two spray units:

AIR: product spraying is carried out by a peristaltic pump through air jets for film coating.

AIRLESS: suspension spraying is carried out by a lobe pump and dedicated high-pressure spray guns for sugar coating.



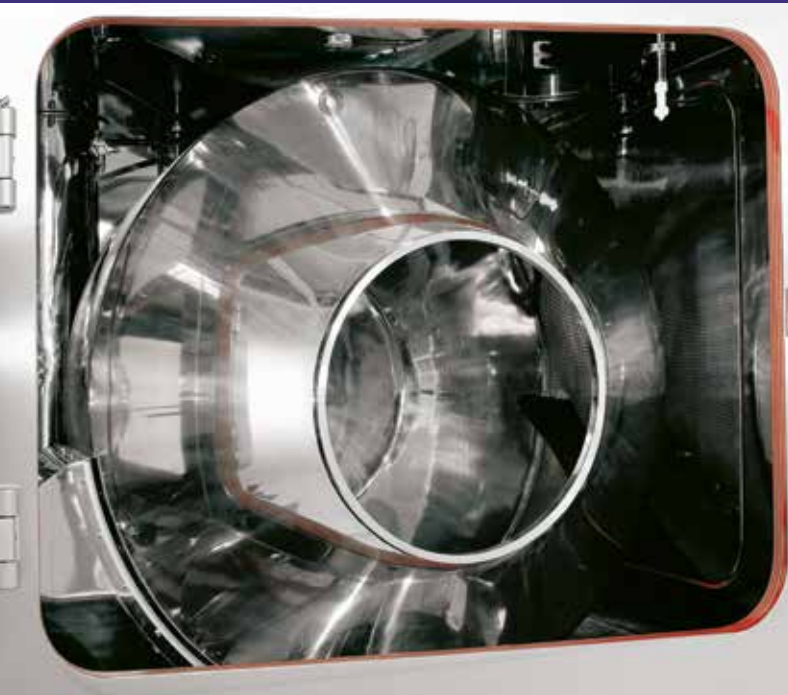
FILM

The film system (air) is fitted with either a peristaltic pump (with single or multiple heads) and is completed with in-line product pressure control and air spray guns.

SUGAR

The sugar system (airless) features a lobe pump and suspension recirculation system.

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INSPECTION

The doors placed on the front and side of the coater allow the machine to be fully accessible for inspection.



ISOLATION

All parts of the machine in contact with the product are completely isolated. All openings are fitted with inflatable seals and the entire coating process can be achieved without contamination of the external environment.

OPERATOR INTERFACE AND EQUIPMENT MANAGEMENT

Perfima is fitted with MAX the latest generation of IMA HMI, created paying maximum attention to User Experience. Based on Visual Design to enhance User Interaction, MAX ensures prompt responsiveness, enhanced predictability and easy learning. MAX HMI is based on iFix SCADA, IoT ready.



CLEANING

The machine is equipped with a completely automatic Clean-In-Place system validated in collaboration with the University of Parma (Italy). Cleaning nozzles and spray balls cover all the machine areas to be cleaned and are always in position so that a cleaning cycle can start immediately after the process without any need to install additional devices. Water discharge occurs by means of a valve placed on the bottom part of the coater.



PRODUCT LOADING AND DISCHARGE

A lifting column to elevate the IBC containing the cores for gravity loading can be provided on request.

The loading chute inclination and the position of the drum guarantee safe product management.

By reversing the drum rotation, automatic product discharge can be achieved thanks to the welded spirals fitted on the front conical part of the drum.

The product is conveyed to the container by means of the unloading port located in the front side, without opening the door, thus ensuring 100% product discharge.

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PERFIMA coating equipment is available for high containment configurations, up to OEB 5 category request.



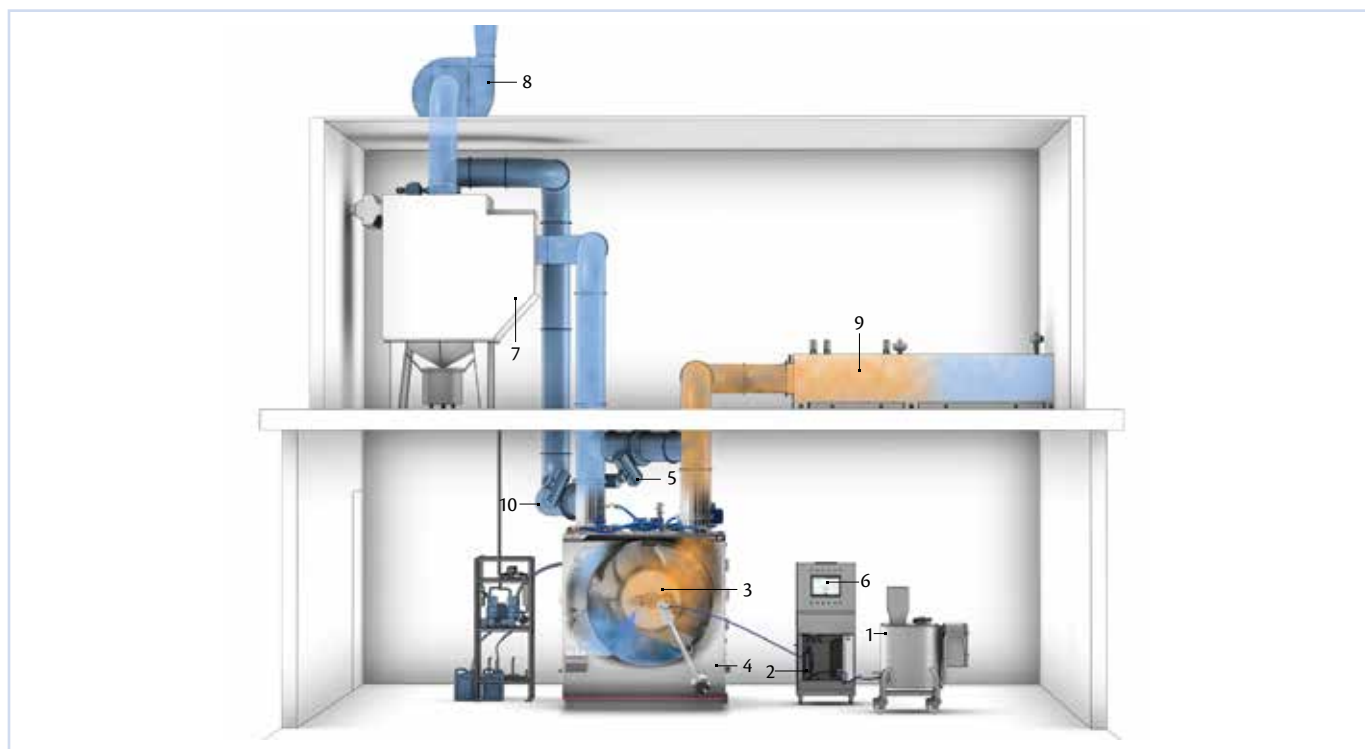


The laboratory coating equipment uses the same highly advanced technology as those developed for the production range. The same process and washing efficiency combined with user-friendly control systems, guarantee easy and replicable scale-up.



PERFIMA LAB can be considered not only as a laboratory coater but also for small production batches. Thanks to its interchangeable drum (three drums available) it is possible to work a wide range of capacities: from 3 to 70 litres, providing maximum flexibility and easy scale-up.

TECHNICAL DATA



- | | | | |
|----------------------------------|-------------------------------|-------------------|----------------------------|
| 1) Suspension tank with agitator | 3) Spray guns and sliding arm | 6) HMI | 9) Inlet air handling unit |
| 2) Suspension dosing unit | 4) Perforated drum | 7) Dust collector | 10) Dust collector bypass |
| | 5) Coater bypass | 8) Exhaust fan | |

	PERFIMA					
Model	PERFIMA LAB*	200 (120)	200	500 (360)	500	800
Minimum/maximum capacity (litres)	6 (1.5-6) 10 (3-10) 30 (8-30) 70 (18-70)	30-120 (12-120)**	60-250 (25-250)**	90-360 (36-360)**	140-550 (55-550)**	240-950 (95-950)**
Pan diameter (mm)	715 (for 6 L drum) 765 (for 10 L drum) 865 (for 30 L drum) 985 (for 70 L drum)	1,200	1,360	1,516	1,716	1,985
Pan mouth diameter (mm)	474	540	540	580	580	732
Pan motor power (kW)	1.5	4	4	5.5	5.5	7.5
Process air delivery (m³/h)	1,100	2,500	4,000	5,000	6,000	8,000

* Interchangeable drum

** Available with removable baffles in Extra drum



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