

FLEX 500

PHARMACEUTICAL TABLET COATER WITH EXCHANGEABLE DRUMS



FLEX 500

MANUFACTURING SOLUTION

The Thomas Processing LLC FLEX 500 is a highly efficient tablet coating system designed for the special needs of the pharmaceutical industry, which features our patented exchangeable drum design. Standard configuration allows for all aqueous tablet coating processes including film, sugar, functional, and active multi-layer coatings. Optional features allow for organic solvent coating and various OEL containment levels for potent compound processing. The Thomas Processing LLC patented exchangeable drum design allows each coating drum to be easily removed and can be immediately exchanged with any of the six (6) available drum configurations. Every drum includes removable and adjustable exhaust plenum change parts with fitted seals. The cabinet and plenum design provides stable and turbulence free air flow for the spray zone. This ensures maximum thermodynamic efficiency of the coating process and industry-leading tablet coating quality.

FLEXIBILITY

- 6 exchangeable drum configurations available
- Process batch loads from 25% to 100% of drum capacity
- Dedicate drums to product classes or to contract manufacturing clients
- Easy to use graphic HMI with multiple languages
- Adapt easily to future needs

CLEANABILITY

- Optimized chamber design for enhanced cleanability
- Faster and more effective cleaning
- Reduced cleaning validation expense
- Range of affordable WIP options

INNOVATION

- Enhanced coater utilization
- Removable drum for inspection and cleaning
- Exchangeable drums for unmatched flexibility
- Interchangeable mixing baffles
- Patented Thomas Processing LLC spray bar
- Available external gun positioning with spray bar and gun to bed adjustments

VERSATILITY

- Aqueous and solvent coating
- Functional, modified release and active coatings
- Coating with one or more drug layers
- Sugar coating



INNOVATIVE DRUM EXCHANGE

Thomas Processing LLC is the originator of the fully perforated side-vented drum. Today, Thomas processing LLC continues our legacy of imaginative and practical coater design with the FLEX 500. The compelling simplicity of the design makes routine drum exchange fast and easy.

- Choose a drum configuration and mixing baffles to best suit requirements of the process
- Dedicated drums to specific drug compounds or to individual clients
- Reduce risk of cross-contamination
- Faster cleaning and product changeover for enhanced utilization
- Reduce facility improvement costs and operating expenses – build and staff one coating suite for the FLEX 500 instead of two or more suites for ordinary tablet coaters



FLEX 500

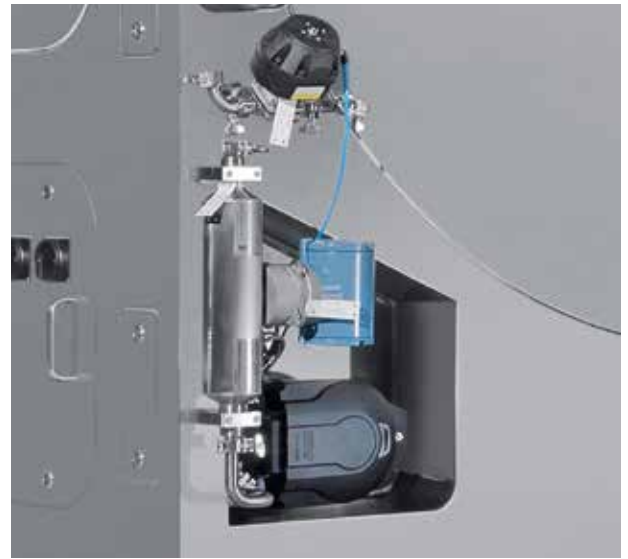


FLEXIBILITY

- Routine exchange of drums within the coating suite
- Wide turndown volume of 40 to 920 liters in same machine - 6 drum sizes available
- Process batch loads from 25% to 100% of drum capacity
- Externally position spray bar for optimal angle and distance to bed
- Exchangeable mixing baffles
- Install Through-the-Wall, Front or Rear Flush, or Free Standing
- Adapt easily to future manufacturing needs

DRUM EXCHANGE

- Choose a drum to best suit the process
- Reduce cross contamination; lower costs for cleaning validation studies
- Dedicated drums to product families or contract manufacturing clients
- Faster batch-to-batch changeover time
- More throughput with fewer coaters
- Enhanced utilization - higher productivity



SOLUTION DELIVERY

- Peristaltic pump with single or dual element head
- Recirculation to reduce settling of solids in solution lines
- Choice of volumetric or mass flowmeter
- Automated solution switching





CLEANABILITY

- "Total Access" design for swabbing and routine inspection
- Optimized chamber design for enhanced cleanability
- Continuously welded interior with rounded corners
- Smooth chamber surface finishes throughout
- Water-tight inflatable seals on access doors



MIXING BAFFLES

- Exchange and select baffles to best suit a process
- Designed for tool-less removal and assembly
- Choice of Thomas Processing LLC helical or plow baffles



INTEGRATED PERIPHERALS

- Range of affordable WIP executions
- Optional devices for assisted loading using IBCs or drums
- Purpose-built dollies for drum exchange and storage
- Solution preparation equipment and delivery tanks

FLEX 500

MANUFACTURING FLEXIBILITY

No longer will a coater set limitations on your process. With the FLEX 500, the coating platform is readily configured to exactly match your processing needs.

SELECT A DRUM

- Drum volume to match batch size, or to reduce sub-batching
- Aspect ratio to suit bed depth and bed length
- Scale-up to increase batch size with a larger drum in the same machine

CHOOSE THE MIXING BAFFLES

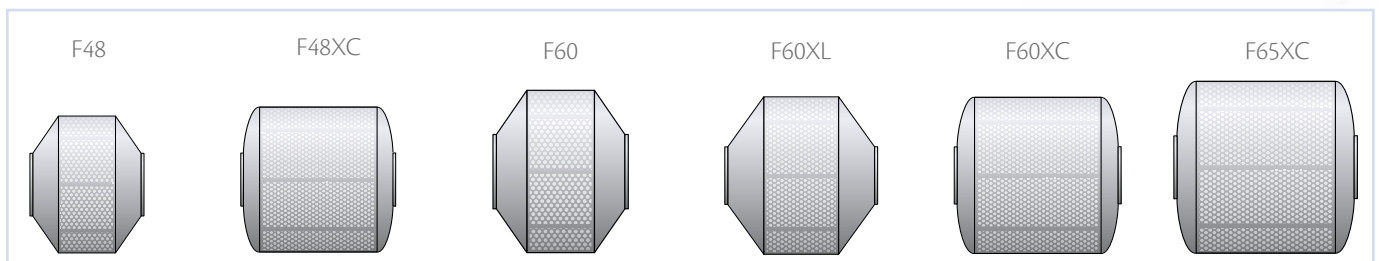
- Baffle heights to match range of desired bed depth
- Choice of profiles for efficient mixing of delicate tablet cores
- Legacy baffles available for product transfers from other coaters

THOMAS SPRAY BAR - FLEXIBLE BY DESIGN

- Suitable for many applications without specialized change parts
- Useful for high weight gain processes and long coating runs
- External positioning between stages in multiple-stage coating operations
- Independent control of atomizing and pattern air for spray zone optimization



DRUM OPTIONS



MODEL	F48	F48XC	F60	F60XL	F60XC	F65XC
Drum Diameter	48" (1,220 mm)	48" (1,220 mm)	60" (1,525 mm)	60" (1,525 mm)	60" (1,525 mm)	65" (1,650 mm)
Max Drum Capacity	170 liters	300 liters	440 liters	500 liters	700 liters	920 liters
Min Drum Capacity	40 liters	75 liters	110 liters	125 liters	175 liters	230 liters
Spray Guns (Thomas Spray Bar)	4	6	5	6	7	7
Machine Dimensions	Width 81" [2,058 mm] x Depth 102" [2,591 mm] x Height 91" [2,311 mm]					



WASH OPTIONS

Thomas Processing LLC offers a range of wash options for the FLEX 500. Depending on customer requirements, wash configurations are available to clean more than just the coater. Systems may be configured to wash the solution tank and delivery system, solution preparation station, partial ductwork, and the WIP tanks and piping. The wash systems are based upon spray nozzles built into the equipment along with associated piping, fittings, valves, instrumentation, and control devices.

Automated wash systems are available with a range of options to provide the right level of wash to precisely fit the customer needs:

- Pre-configured executions for manual, assisted, and automated wash
- Automated wash with recipe control
- Step-by-Step HMI prompts for manual and recipe wash procedures
- WIP systems may use plant utilities, dedicated buffer tanks, or shared buffer tanks for water supplies

THE FLEX 500 IS DESIGNED WITH CLEANING IN MIND

- Optimized chamber to permit fast and effective cleaning with or without the drum in place
- Innovative exhaust plenum design for washing without removal from the coater if desired
- Fully welded and polished interior with rounded corners throughout
- Excellent access for swabbing and visual inspections
- No blind corners, ledges or dead legs

PROCESS VERSATILITY

The FLEX 500 is a versatile coating platform that accommodates a wide range of coating applications. Some processes may use just a single spray solution. More complex matrices may require a series of cycles or stages - often with widely varied fluid properties - to develop functional layers, or layers containing active drugs. While there can be many processes all with their own unique variables, they all have one demand in common - they need to be implemented on a tablet coater that is efficient, highly available, easy to clean and capable of delivering consistently good product quality. That coater is the FLEX 500.



AQUEOUS FILM



SUGAR



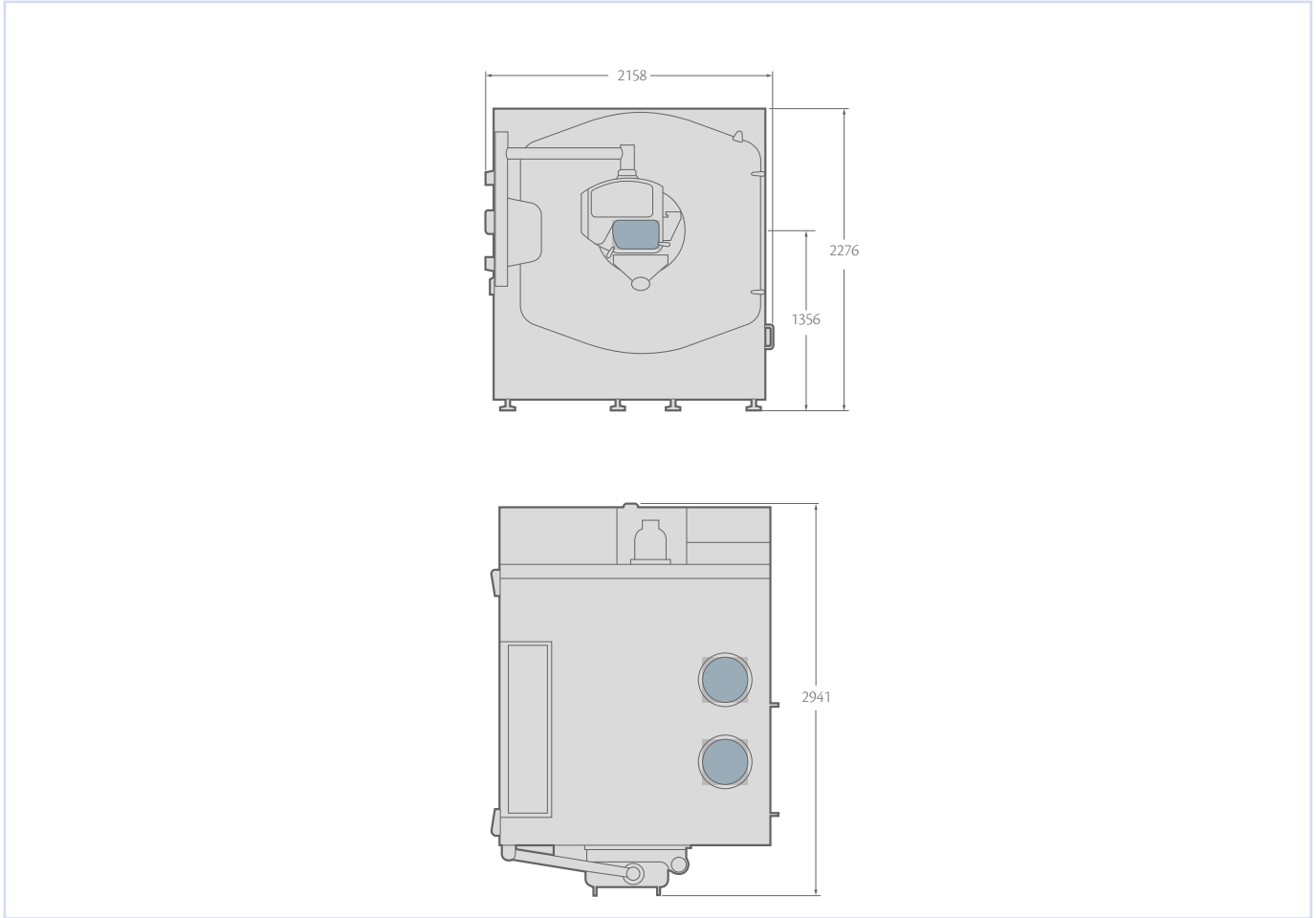
FUNCTIONAL



DRUG LAYER

TECHNICAL DATA

FLEX 500



FLEX 500	
Overall dimensions	24" x 36" x 30" high [610 mm x 815 mm x 760 mm]
Drum volume	Up to 5 liters; ½ liter with divider plate
Drum diameter	12 in. [305 mm]
Drum speed	5 - 40 RPM
Air flow and temperature	20 – 100 CFM (45°C maximum bed temp) [35 - 170 m³/h]
Spray nozzle	Schlick™ 970 ABC
Solution delivery	Watson-Marlow peristaltic pump
Atomizing/Pattern air	20 – 45 psi at 12 SCFM [1.4 – 3.0 bar at 20 m³/h]
Controls	PLC and touch panel HMI
Electrical	8 kW @ Full Load
Compressed air supply	50 psi [3.3 bar]
Weight	280 lbs. [130 kg]

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