iSpray
EXTERNAL TABLET LUBRICATION SYSTEM

PHARMA TECHNOLOGY

iSpray DT

Integrated dust-tight vacuum unit

A unique punch face and die wall lubrication system that continuously sprays dry lubricant onto tablet press punch tips and die walls, **iSpray** delivers a consistent, verifiable amount of dry lubricant onto the tablet outer surface.

Surplus of lubricant is eliminated by vacuum directly on the spray nozzle, then collected in a double bag discharge system.

iSpray has several innovatively-designed features, including a compact double-sided nozzle that fits most rotary table presses for optimal coverage of most tool sizes, and a back up line with a pressure sensor built into each nozzle allowing automated switching between lines that, in doing so, helps avoid costly interruptions due a potential blockage.

For recipe storage, the system is equipped with a touch screen HMI with audit trail recording, compliant with FDA.

iSpray helps reducing the amount of dry lubricant in the compression blend whilst applying an optimized amount of lubricant to the upper punch face, die wall and lower punch face.

Excess lubricant is directly vacuumed, next to the nozzle, allowing for consistent amounts of lubricant to be applied to tablets throughout a lengthy batch and from one batch to another. The amount applied can therefore be validated.

For existing hygroscopic or effervescent formulations the system helps reducing the die wall friction at the ejection stage, the lower punch face friction at the take off stage and helps prevent logo picking or stickiness issues.

This provides the added benefit of reducing wear on and extending life of tooling and ejection cams.

For new formulations, the system helps eliminate the need for dry lubricant in the blend, thus eliminating an extra step in the manufacturing process and greatly enhancing the solubility of the tablet. This solubility enhancement has been in great demand for new drugs that often have poorly soluble APIs (especially with biotech drugs).

The minimal quantity of lubricant sprayed externally onto the tablets can be accurately measured and validated as below the threshold for listing as an ingredient in the formulation under US Pharmacopiea requirements.

Dust-tight lubricant feeding


Dosing system


Spraying nozzle

Key benefits:

- Removes final blending stage from process
- Improves dissolution rate
- Consistent amount of Magnesium is sprayed onto the tablet surface through a completely dust-tight system
- Quantity of lubricant sprayed on tablets below 0.1% w/w
- Excellent spray rate precision derived from high precision feeder
- An integrated vacuum system enables elimination or reduction of lubricant addition in the tablet press
- Control of vacuum airflow is much more efficient than just control of spray rate. Excess of lubricant is removed by vacuum and does not contaminate the inside of the tablet press, allowing longer cleaning intervals
- Continuous spraying monitoring with a pressure sensor and secured backup line
- Available for single or double sided tablet press
- Optional Hepa filter on vacuum system air exhaust
- No tools required to disassemble the unit
- Compact footprint and ergonomic design for cleanability
- Highly recommended in effervescent/hygroscopic formulations
- Extends lifetime of punches, dies and ejection cams

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