

Powder Layering

Powder layering is the new **pelletization** range that builds on the proven Umang technology and its operational benefits. Similar design of loss in weight **twin screw feeder**, rotating plate and spray gun for liquid ensures that process and validation wise there is no difference to the **layering process** from a **laboratory scale** to a production scale. This unique design of **twin screw feeder**, plate and spray nozzle makes the not only a perfect **powder layering** machine but also an ideal machine suited for **fast pelletization**.

The outstanding feature of the **powder layering** range is the integrated and CIP optimized design. Connections, cabling and supplies are completely integrated, covered and sealed so the outside of the machine is smooth and very easy to clean. The innovative discharge valve design and optimized seals inside the bowl allow for CIP. As a result of this the our **Powder layering** is highly flexible, quick product changeover increases productivity and cost effectiveness.

The **Powder layering** capacity ranges from 500 gms to 120 Kgs./batch featuring through the wall design and movable head, allowing operation with platform and dust-free discharging via a linked mill directly into an IBC. The **Powder layering** can be stand-alone or linked to a **fluid bed processor** for further sustained release coating or enteric coating to form an integrated **pelletization** system.



Standard Features for Powder layering :

- Twin screw feeder configuration.
- CIP entry from top cover
- Perfect cGMP-design: smooth covering, no external tubing and piping allowing easy cleaning
- Completely integrated full opening side discharge: perfect discharge of difficult products
- Through the wall installation: minimum space required in GMP area
- User-friendly operator-machine interaction via graphical operator panel 12" Industrial PC software with PROCESS + range of software which helps interlinking all plant equipments to a single system.
- Flexibility (processes and products) for wet granulation.

Standard Features for Powder layering :

- Explosion proof design
- Automatic cleaning (WIP/CIP) of entire system

- 21 CFR part 11 certified controls.
- ADVANCE PROCESS + for easy and automated granulation control
- Jacketed / insulated bowl
- Total containment through up- and downstream split valves and flexible isolation systems.
- Integration with mill and/or fluid bed possible: perfect closed link for dust-free operation
- Video monitoring of the process
- Liquid addition system (peristaltic pump / pressure vessel)
- Product feeding both by gravity or vacuum loading system directly from the containers
- Validation documentation and assistance based on GAMP

Technical Specifications for Powder layering :

Model	Powder layering 380	Powder layering 500	Powder layering 700	Powder layering 900	Powder layering 1100	Powder layering 1300
Batch capacity (Ltrs.)	7	22	70	130	260	520

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