

# Hot Melt Extrusion

Hot Melt Extrusion is the new mixer extrusion range that builds on the proven Umang technology and its benefits. Similar design of the twin screws, extrusion die and cutting mechanism in the process and validation, so that there is no difference to the extrusion process. This unique design of segmented twin screws, mixing attachments and cutting makes the not only a perfect hot melt extrusion granulator but also an ideal machine for performing one stop operations.

The outstanding feature of the Hot Melt Extrusion range is the the twin screw segmented barrel and twin screw feeders attached to it for uniform and continuous product feeding. Connections, cabling and supplies are completely integrated, covered and sealed so the outside of the machine is smooth and very easy to clean. Our system Hot Melt Extrusion is a result of high level of engineering expertise and product technology knowledge, quick product changeover increases productivity and cost effectiveness.

The Hot Melt Extrusion capacity ranges from few 100 gms. to 150 kgs. / hr. 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 Hot Melt Extrusion can be stand-alone or linked to a Cone Mill or Multi Mill to form an integrated system.



## Standard Features for Hot Melt Extrusion :

- Twin segmented screws and barrels.
- No seals in direct contact with the product
- 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.
- Machine with variety of processing screws like mixing, kneading, processing, cooling and extrusion.
- Various size of dies possible.
- Cutting assembly for strands.
- Precise temperature control including both water cooling and heating to the individual process zones.
- Different L/D ration from 1 : 20 to 1 : 60 possible as per product and process requirements.
- Hinged processing barrel ensuring faster processing.

## Optional Features for Hot Melt Extrusion :

- Explosion proof design
- 21 CFR part 11 certified controls.
- ADVANCE PROCESS + for easy and automated granulation control
- 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

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