



**OSWAL**  
**ENGINEERING CORPORATION**



## LAB EXTRUDER

The OEC Lab Extruders are the ideal small batch extruder giving practical and realistic solution to all industries. These Lab Extruders can process a wide variety of material and verify performance expectations from a production extruder. These are widely used for R&D testing and low-volume production requirement.



**VIDEO**

There are virtually unlimited die configurations available. These Lab Extruders can be fitted with optional control systems and cutting equipments. The customization is virtually endless when it comes to the modular OEC Lab Extruders.



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## CASE STUDY

### 1. SAME QUANTITY OF MATERIAL USED TO FOR MULTIPLE TESTS

One of our clients produce their own master batch and have a constant requirement for new formulations and colours. They used to process all this in their 45mm compounding unit, which would easily gulp up 50 kgs in order to obtain the required parameters for the compound for a single formulation or colour.

They came across our lab extruder and started using it. Their usage of materials dropped down considerably from 50 kgs to just 5 kgs, giving them ample time to adjust the parameters and try on new formulations in the same 50 kgs material.



### 2. MONEY SAVINGS

Our other client processes materials which have a cumulative average cost of around Rs. 550/kg.

Just 50 kgs of materials would cost Rs. 27,500/- for a single trial, apart from electricity required to operate and the space utilization of the machine.

With our Lab Extruder, the total cost of the same trial came to around Rs. 2,750/trial, saving around Rs. 24,750 or 90% of the cost. Apart from the material cost, the cost of processing also decreased as compared to heavy electric load requirement of 45mm extruder.





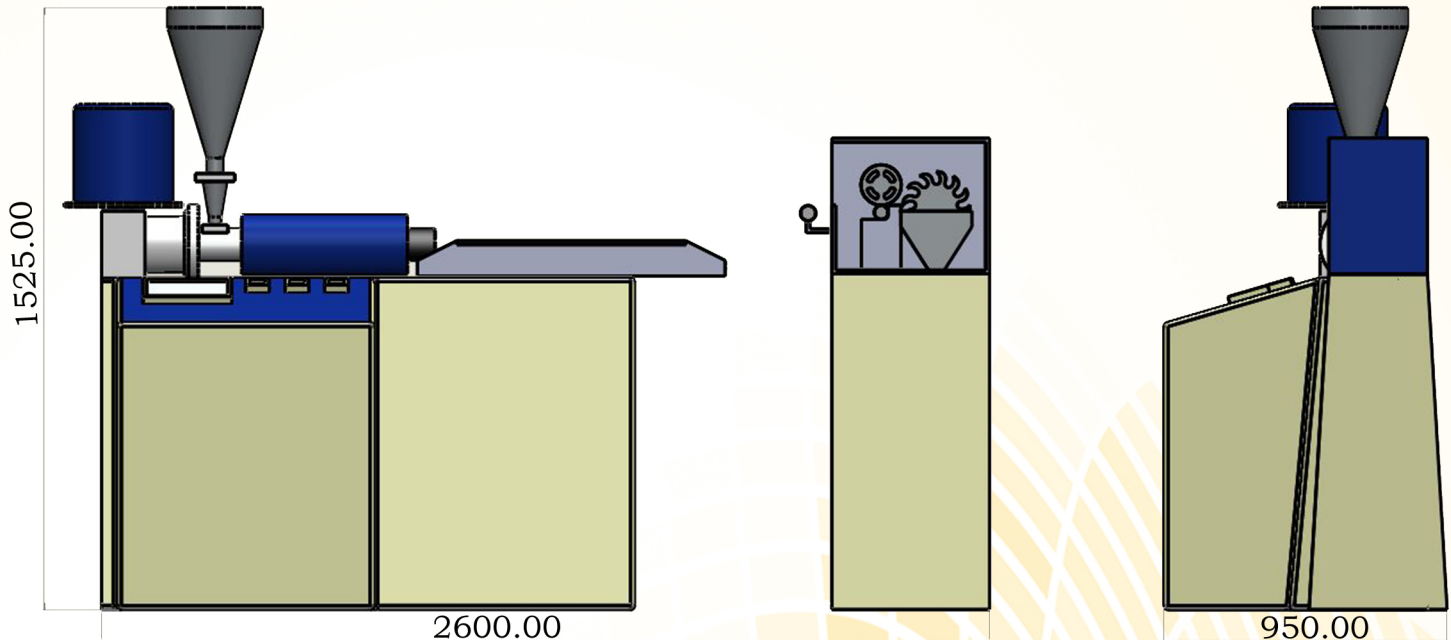
## SPECIFICATIONS

Model No.	:	OEC 1125
Screw Diameter	:	25mm
Screw L/D Ratio	:	22:1
Screw Compression ratio	:	1:3
Main Drive	:	1.5 kW A.C. Motor, with suitable A.C. Drive (ABB Make) and suitable gear box
Output	:	Up to 5 kgs/hr.
Screw RPM	:	20 to 80 RPM
Heating load	:	4 kW
1. Extruder	:	25mm single screw extruder mounted on M.S. fabricated body
(a) Screw	:	Made of SS304, polished with mirror finish
(b) Barrel	:	Made of high tensile alloy steel EN 41B, with nitride and hard chrome plating.
Heating zones	:	2 nos.
(c) Hopper	:	Fabricated from SS 304 and has 2kgs capacity
(d) Die head	:	Customizable as per customer's requirement
(e) Control Panel	:	Comes in two configurations: PLC control base or Manual PID type control base with sync cards
(f) Cooling through	:	Standard design made with SS 304 with recycling water system and stand
2. Pelletizing unit	:	Cutting rotor made from D2 material 50 mm width for 2-5 strands cutting.
a. Motor	:	A.C. motor of 372W (0.5 HP) and suitable A.C.V.F. drive. (ABB make)
b. Output	:	3 – 5 kgs/hr
3. Electric Load required	:	7kW 3 phase – 50 Hz 440V A.C.
4. Space Requirement	:	2800mm (L) x 1000mm (B) x 1500mm (H)

Other ancillaries, like coiling unit or tube cutting unit (manual or pneumatic) are also available, and can be replaced against the pelletizing unit.



### LINE DIAGRAM



### ADVANTAGES

- OEC single screw lab extruder is suitable for processing PP, PE, PP-R, ABS and many more.
- Reduction in wastage.
- Multiple batch production in less amount of time and money.
- Low changeover costs and easy cleaning.
- Determination of processing parameters for large scale production.
- It reduces the energy consumed considerably, while improving overall quality.
- Make your own master batches at fraction of the cost.
- Protect your IPR, trade secret formulation and parameters with lock-controlled PLC control systems.

### APPLICATION SCOPE

- Material melting, plasticizing and extruding parameters determination.
- Low quantity master batch production.
- Extrusion process parameters optimization.
- 3D printing rods (raw material) production.
- The production of medical extruded products and material.