

# Twin Screw Extruder Glass Fiber Reinforced PA6 PA66 Compounding Machine 250-350 kg h Turnkey Line for Nylon Modification

Our Product Introduction

## Basic Information

- Place of Origin: Nanjing, China
- Brand Name: HLD
- Certification: CE, ISO 9001:2015
- Model Number: Customized
- Minimum Order Quantity: 1 Set
- Price: USD 46000-62000 / Set
- Packaging Details: Bubble wrap, stretch film and fumigation-free plywood case for sea shipment
- Delivery Time: 35-45 working days after deposit received
- Payment Terms: T/T, L/C, Western Union
- Supply Ability: 20 Sets per Month



## Product Specification

- Screw Design: Co-rotating Intermeshing Twin Screw
- Screw Diameter: 51.4 Mm
- L/D Ratio: 48:1
- Main Motor Power: 90 KW
- Screw Speed: 600 Rpm Max
- Output Capacity: 250-350 Kg/h
- Glass Fiber Loading: 20-40 Percent
- Glass Fiber Feeding: Downstream Side Feeder With Fiber Cutting
- Screw Material: Nitrided 38CrMoAlA With Hard Chrome
- Vacuum System: Two Stage Vacuum Venting
- Pelletizing System: Strand Pelletizing With Water Bath
- Suitable Materials: PA6, PA66, PBT, PP With GF Reinforcement
- Control System: Siemens PLC With Touch Screen HMI
- Highlight: **glass fiber reinforced PA66 extruder**, **twin screw compounding extruder side feeder**,



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## Product Description

**Fiber length is the product**

In glass fiber reinforced polyamide, the reinforcement only works if the fibers survive the process. Every high shear zone after the fiber inlet shortens them, and short fibers mean lower impact strength and a more brittle moulding. The design rule on this line is simple: melt the polymer completely first, then introduce rovings into an already fluid melt, then move the compound with the least shear that still gives a homogeneous pellet.

## Where the fibers enter, and why there

Rovings are fed through a downstream port roughly 60 percent along the barrel. Upstream of that port the screw does nothing but melt and homogenise PA6 or PA66. Downstream, wide pitch conveying elements move the fiber laden melt with minimum work, and only 30 degree kneading blocks are used, because 45 and 90 degree blocks cut fiber length dramatically.

## Moisture and the second vent

Polyamide absorbs water from the air, and that water turns into voids and hydrolysis during compounding. Two vacuum vents are fitted, the second deeper than the first, and the vacuum line is sized for continuous operation rather than for a demonstration. Barrel temperature control holds each zone within about two degrees Celsius, because polyamide viscosity is unusually temperature sensitive.

## Series data

| Model | Screw Diameter | L/D | Motor Power | Screen Changer | Capacity |
|---|---|---|---|---|---|
| TSE-20B | 21.7mm | 40:1 44:1 48:1 52:1 | 4/5.5/7.5KW | Hydraulic | 5-20KG |
| TSE-35B | 35.6mm | 40:1 44:1 48:1 52:1 | 18.5/22KW | Hydraulic | 60-100KG |
| TSE-50B | 51mm | 40:1 44:1 48:1 52:1 | 45/55KW | Hydraulic | 150KG |
| **TSE-65B** | **62.4mm** | **40:1 44:1 48:1 52:1** | **75/90KW** | **Hydraulic** | **250-350KG** |
| TSE-75B | 71.5mm | 40:1 44:1 48:1 52:1 | 132KW | Hydraulic | 500-650KG |

Shaded frame suits 250-350 kg/h at 30 percent glass loading; the L/D in the table is the standard build.

## Practical notes

Roving count and tex are matched to the target loading; four rovings at 2400 tex is a common starting point for 30 percent.
Strand pelletizing on a water bath is preferred, since the melt is too brittle for die face cutting in most GF grades.
Hard chrome on the screw and a nitrided barrel keep glass abrasion manageable without going to a full bimetallic build.
Dry the pellets after cutting; a moisture level below 0.1 percent protects the mechanical values the customer paid for.

## Typical programs

These frames run 30 percent GF PA6 and PA66 for power tool housings, appliance structures and automotive brackets, plus GF reinforced PBT and PET, and long fiber masterbatch concentrates. Output at 30 percent is 250 to 350 kg/h on the 51.4 mm frame.

## Before you order

Two details change the quote: whether your rovings are single end or assembled, and whether you need the pellets dried and crystallised in line. Tell us the fiber percentage, the polyamide grade and the impact target, and we will size the screw and the downstream in one proposal.

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Nanjing Henglande Machinery Technology Co., Ltd.

+86 13813377529 952615433@qq.com extrudergranulator.com

NO.11,Qinghu Road,Hushu Town,Jiangning District,Nanjing,china.