Filler Masterbatch Twin Screw Extruder 85 Percent CaCO3 600-800 kg h CE Certified for Vietnam Compounding Plants

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 86000-118000 / 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: 71.5 Mm
- L/D Ratio: 44:1
- Main Motor Power: 200 KW
- Screw Speed: 500 Rpm Max
- Output Capacity: 600-800 Kg/h
- Filler Loading: Up To 75 Percent CaCO3
- Screw Material: Bimetallic Wear Resistant Alloy
- Barrel Liner: Tungsten Carbide Inserted Liner
- Side Feeder: Twin Screw Side Feeder For Filler
- Pelletizing System: Die Face Pelletizing With Water Ring
- Suitable Materials: CaCO3, Talc, Kaolin, PE Carrier Resin
- Control System: Siemens PLC With Gravimetric Control
- Filler Loading: Up To 85 Percent CaCO3 (twin Screw), 93 Percent On Triple Screw



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Product Description

Cost per kilogram is the real specification

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Nobody buys a filler masterbatch line because they enjoy compounding. They buy it because every percent of calcium carbonate that replaces polymer reduces cost per kilogram, and because film and bag converters in Vietnam, Indonesia and India keep asking for higher loaded compounds. On this frame 85 percent loading is a production number, not a demonstration number. Beyond 85 percent the process moves to a triple screw platform, where 93 percent has been achieved in regular production.

Why the ceiling exists at all

Three constraints set the maximum loading. The first is feeding: dry powder above roughly 80 percent stops flowing predictably in a gravity throat, so it has to be side fed into a melt that can already wet it. The second is torque: the compound becomes a stiff paste, and screw speed has to drop to stay inside the gearbox rating. The third is wear: calcium carbonate is mildly abrasive, and at high loading the screw flights see it continuously rather than intermittently.

What we change to reach 85 percent

Bimetallic screw elements with a hardened surface, matched to tungsten carbide inserted barrel liners.

A twin screw side feeder with forced conveyance, mounted two thirds down the barrel.

A kneading sequence that first wets the powder then disperses it, rather than trying to do both at once.

Die face pelletizing, because the melt strength at 85 percent will not hold a strand.

Torque feedback control that trims the feed rate automatically when powder bulk density drifts between deliveries.

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**

The 71.5 mm frame shown is the usual choice for 600-800 kg/h at high loading; the triple screw platform is quoted separately.

Vietnam, in practical terms

Most of our high filler installations in Southeast Asia ship to Vietnamese masterbatch plants serving film, woven bag and injection converters. Those customers compare lines on three numbers: loading percent, output per hour, and how often the screen has to be changed. A line that runs 85 percent at 700 kg/h with a two second screen change beats a line that runs 85 percent at 800 kg/h and stops every four hours.

Buyer questions

Do I need a pre-mixer? Not for powder that arrives dry and free flowing. If your CaCO3 is stored in a humid shed, add a dryer rather than a mixer.

What wears first? The conveying elements immediately after the side feeder. Keep one spare set of those and the rest of the screw lasts considerably longer.

Send the target loading, the powder source and the required tonnage, and we will confirm frame, wear package and pelletizer in one pass.

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