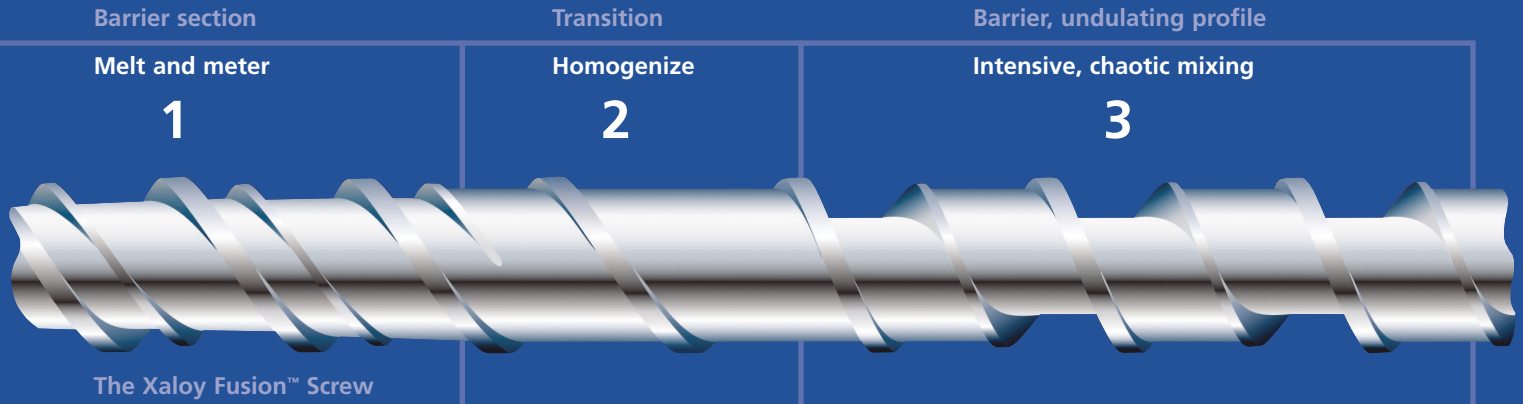


Increase Production
 Improve Product Quality
 Lower Melt Temperature
 Lower Drive Motor Load

Fusion™ Design Barrier Screw

U.S. patent no. 6,672,753, 7,014,353, and 7,156,550



Which Materials?

The Xaloy® Fusion™ screw has already proven to deliver benefits in processing:

ABS	PP
HDPE	LDPE
LLDPE	MDPE
PET	PLA

Which Processes?

The Xaloy® Fusion™ screw is available for the following processes:

- Injection Molding
- Blown Film
- Sheet Extrusion
- Blow Molding
- Profile
- Pipe

For other process applications consult us for a screw design recommendation.

The patented Xaloy® Fusion™ screw allows you to increase production and improve product quality in injection molding and extrusion process applications. Its design is the combination of proven barrier screw technology and a low shear metering section that provides chaotic mixing, reduced melt temperatures and improved throughputs.

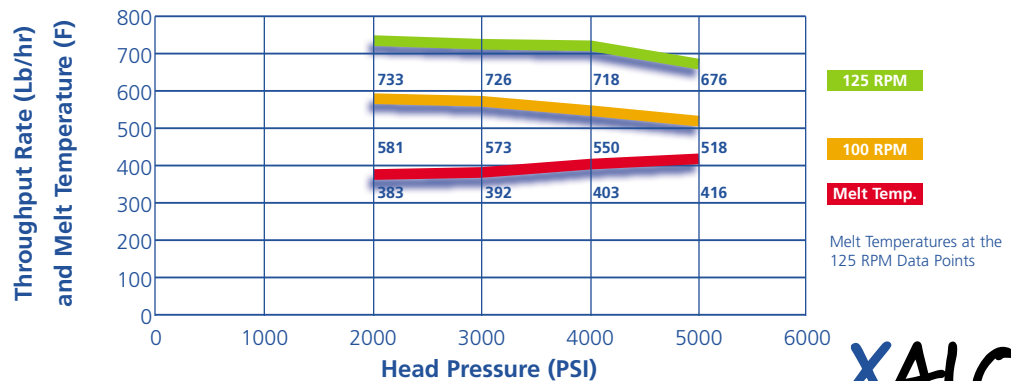
How it works; Using our proven Barrier Design Technology

1. The separation of melted polymer from unmelted resin protects the melt from additional shear.
2. Next the homogeneity of these two melt differentials re-combines in a short metering section.
3. Then the final melting is completed by means of second barrier section designed for multi-cycle chaotic mixing.

Diameters available: 1.5" to 10"

3.5" x 24:1 Rates and Melt Temperatures at 100 and 125 RPM at Various headpressures while processing 65% Virgin / 35% Regrind of a .35 MI HDPE

Note: Suggested Barrel Temperature Profile: Z1=350F, Z2=420F, Z3=400F, Z4=380F, Z5=360F



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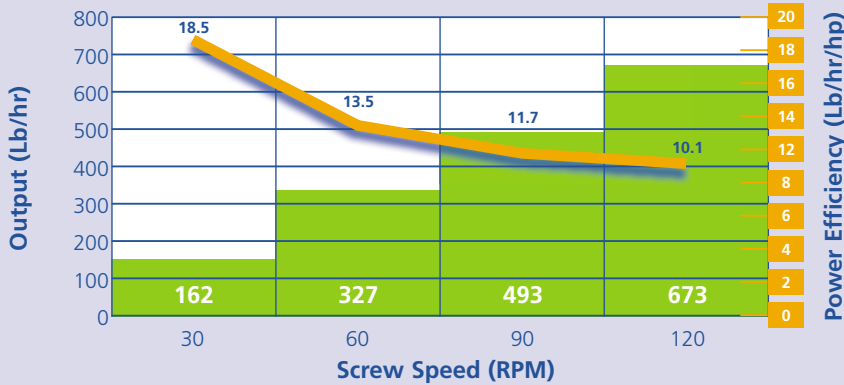
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Power Efficiency Performance Benefits

Output and Power Efficiency on 3.5" x 24:1 L/D
(90% LDPE and 10% LLDPE)



Our worldwide presence includes sales and service offices located in the United States, Europe, Thailand, Japan, China and India and a global network of agents geographically positioned to serve customers throughout the world.

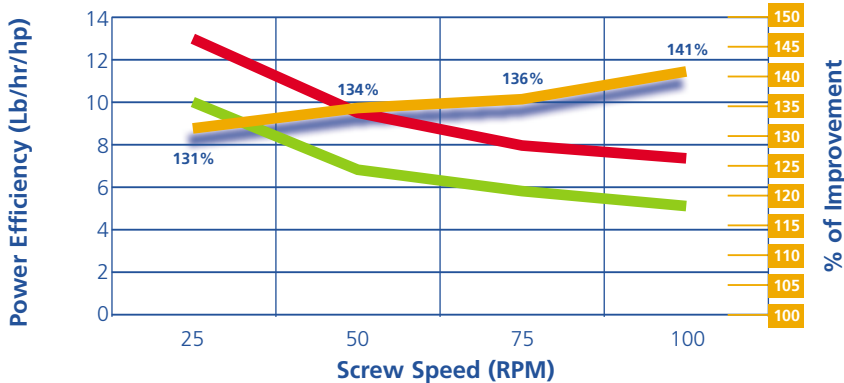
Rate

Typically, .5 to 1.0 MI LD/LLDPE blends require 7 to 8 lb/hr/hp to process effectively.

LB/HR/HP

The Fusion™ Screw was able to process slightly more than 10 lb/hr/hp due to the efficient use of available HP.

Power Efficiency Comparison



Fusion™ Screw

The Fusion™ Screw also features the added benefit of energy cost savings through more efficient use of available horsepower.

Barrier w/UCC

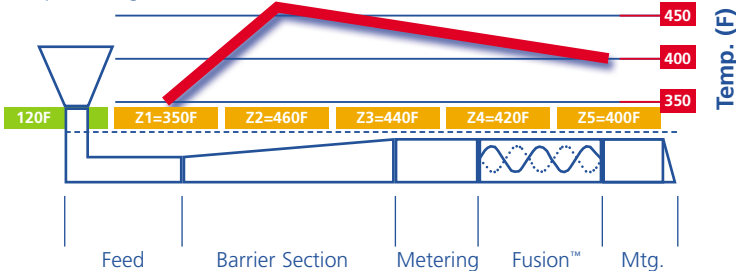
Resulting Overall Benefits

- More lbs/hr/hp
- Controllable melt temperatures
- Reduced energy costs

% of Improvement

Temperature Profile

(for processing a .35MI HDPE)



Note: This profile typically will produce a 410-420F Melt against a 3500 PSI headpressure.

Xaloy recommends that a "hump" type barrel zone temperature profile be used to optimize the performance of the Fusion™ Screw. Make sure that you request the best temperature profile from your Xaloy representative for your resin and process.



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