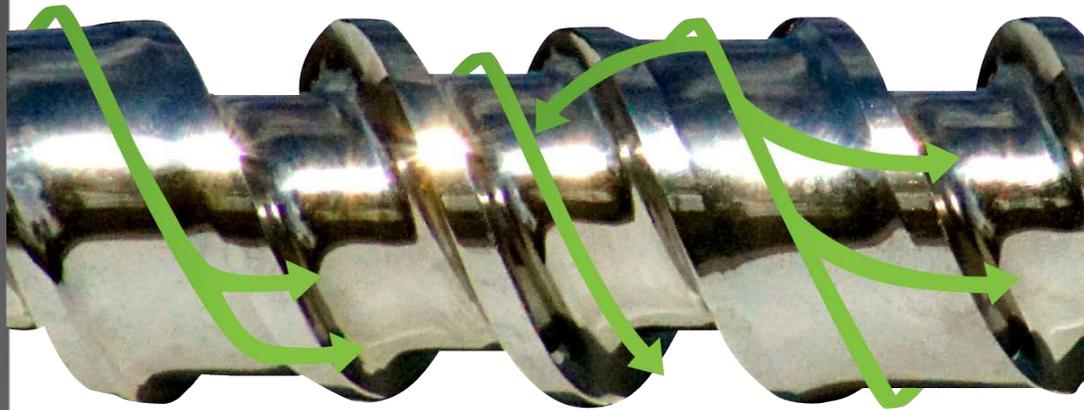


DM2™

The Distributive Mixing and Melting Screw

You don't pay extra for high performance at Glycon. Now you can get superior mixing, maximum melting, and better product quality overall with the DM2™ feedscrew.



15–20% more output with 25% less shear

The DM2 screws produce 15-20% more output than a typical barrier screw with 25% less shear. The DM2 name refers to the distributive mixing and melting action that takes place. Taking advantage of the latent heat in already-melted polymer to help raise the temperature of unmelted pellets, this

low-shear approach gives molders and extruders some key advantages:

- less shear-induced degradation
- faster recovery rates
- better color mix
- lower melt temperatures
- reduced scrap rates
- elimination of splay
- more uniform melt

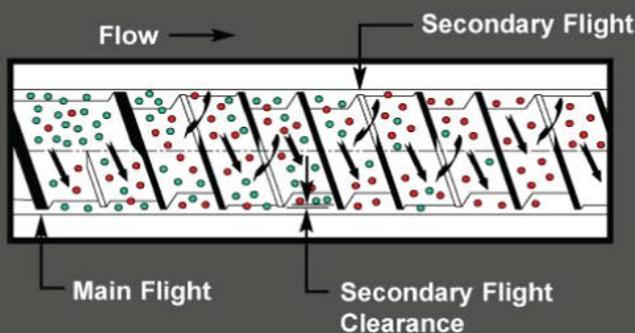


Less shear. Superior mixing. Maximum throughput.

Conventional feedscrews, and even barrier screws, use a melting mechanism based on high shear between the barrel wall and the unmelted pellets, commonly referred to as "dissipative melting". Since approximately 90% of the polymer is melted by high shear, melt temperatures are correspondingly high, especially at high throughput rates. This is both inefficient and potentially damaging to heat-sensitive materials. The DM2 screw, on the other hand, has a thermal "crossover zone" that is positioned along the screw at a point where 70-80% of the polymer is melted. This unique configuration of channels and undercut flights allows melt, as well as pellets, to interact without excessive pressure build-up. As the plastic crosses over the undercut flights, it tumbles into the next channel. The crossover is repeated several times, resulting in an unwinding effect

such that the inner or core layer in one channel becomes the outer or skin layer in the other. This yields homogeneity in melt properties as well as melt temperature. Unmelted pellets are continuously mixed with melted material so that thermal energy is transferred from the molten polymer to any unmelted pellets. This crossover effect has two results: first, pellets are heated and eventually melted with much less shear than is normal in conventional screws; and second, by transferring heat out of the molten material, there is less chance of degradation or hot spots in the melt as it is moved further downstream. Throughput is actually improved by the fact that virtually every unmelted pellet is surrounded by molten material. More pellet surface area is exposed to melting temperatures than would ever be possible with a conventional screw.

Distributive Mix-Melt Design



The toughest materials run better on a DM2 screw

- High Melt PP
- Polyethylene Terephthalate (PET)
- HMWPE
- Liquid Colorants
- Polycarbonate
- PPO
- PC/PBT
- Copolymers
- EVOH
- PBT
- TPE
- PC/ABS
- TPOs
- PVC, Flexible
- Nylon
- UHMWPE
- Recycled PET
- PC/PET
- PVC, Rigid
- ABS
- LLDPE

Glycon

Glycon offers molders and extruders a unique combination of standard screw products, proprietary designs, custom engineering capabilities, and support services. We help processors increase material throughput, shorten cycle times, improve mixing of color and additives, and generally enhance product quality and plant productivity

