# PRECISION DIESYSTEMS CORP.



FLAT PLATE STYLE BLOWN FILM DIE PRODUCT LINE INCLUDING:

- ADAPTER PIPES
- DIE CARTS
- IBC SYSTEM
- ADUSTABLE DIE GAP SYSTEM

#### SUBSTANTIAL PAYBACK CAPABILITIES

Outstanding Minimal Thickness Variation Without Additional Gauge Control

#### Amplified Production Rates from Reduced Down Time

Streamlined flow channel design minimizes the total flow path length per layer Higher efficiency material transition
Simplified and fast assembly and disassembly
Quicker purge times and reduction in polymer residence time
Reduced time for color change overs

Optimizing Temperature Control and Quicker Heating Abilities Through a Central Pin Integrating Internal Heaters

#### Low Leakage and Maintenance Issues

Eliminating port holes Removing slip-fit components Incorporating tight sealing surfaces on flat faces

Process Materials with Very Different Thermal Properties Together for a Longer Period of Time by Isolating the Temperature of Different Layers

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MADE IN THE U.S.A.

#### Flat Disk Die Flow Design

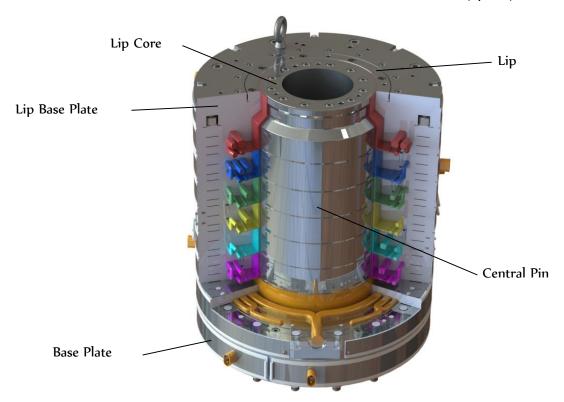
The Pancake Blown Film Die design integrates sets of three round plates that offer uniform gaps to minimize flow variations. Each Plate in the three-plate layer arrangement is aligned with precision via special tapered expanding pins. This pin design allows for repeatable precise alignment of all parts.

Top Plate (Flow Splitting)



Middle Plate (Flow Splitting and Spirals)

Bottom Plate (Spirals)



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Polymer is circulated around the flow splitting channels located between the top and middle plate. These channels direct the polymer from the die entrance location to each of the spirals. The flow follows round cross-section flow splitting passages up to the spiral dispersion zone to avoid dead zones and hang-up locations. The flow splitting is executed in such a manner that the length of the channel is the exact same for each individual spiral.





The spiral distribution zone, located between the second and third plates, is designed to provide improved mixing, thermal consistency and polymer dispersion. The polymer flows across the spiral distribution zone toward the central pin. The polymer reaches the central pin and turns 90 degrees upward to the next layer or die lip. The central pin has internal heaters to assistance in start-up and preserve process control.

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