Sheet Extrusion Die

GMA design and develop the sheet extrusion die with custom manifold design specifically for your production requirement. The multi-manifold design, automatic lip adjustment (thermo-bolts) can be selected as optional, interchangeable die lip for lip gap adjustment, quick lip gap adjustment system, and width adjustment system to best serve your need, further, to help reduce material waste.

Multi-manifold Die

GMA design the manifold according to 30 years of experience plus data base analysis. Moreover, the data will be plug into the CAE simulation software to showcase the flow characteristics. (Work with distributor/feedblock for the making of multi-layer configuration.)

- Two-layer, three-layer, and five-layer multi-manifold design.
- Independent geometry manifold design provides the best co-extrusion interface.
- Viscosity difference, flow rate difference, can be used with flow control valve design.
- Thermal insulation design for big range resin temperature difference between layers is still perfectly integrated.
- 0.25mm adjustment screw per turn, apply to more severe product thickness requirements.
High Precision Thickness Control System

With high precision differential screw (0.25mm/rev), the operator is capable of doing the very fine tuning during the production.

Automatic Control System

Once the die is equipped with our automatic control system, the thermo bolts will synchronize with the thickness gauging system. The automatic system will do the fine tuning of the die gap. It will help to reduce the tuning time and defect loss greatly, especially for long time production control.

Lip Adjustment

- Push only
- Push & Pull
- Differential
- Quick lip gap adjustment

- 1.25mm per rotation adjustment.
- Screw spacing 2.0mm.
- Apt for most sheet production lines.
- External deckle system for different width products.
- Deckle width should be within 1/3 slot width.

- 0.5mm per rotation adjustment.
- Screw pitch 25mm.
- Apt for most sheet production lines.
- External deckle system for different width products.
- Internal deckle system available for specific spec.

- Quick gap range ±2mm.
- Lip gap adjustable during production to save resin.
- Special lip polishing process.
- Apt for optical sheet of variety of thickness.
- Die width within 2500mm recommended.
發泡模具
Foam Sheet Dies

魚尾型流道設計，塑膠可被均勻的展開，可減少熱敏性塑膠在押出過程中的裂解，上模
腔可調，下模腔可更換，垂直流量調節閥裝置，可滿足不同塑膠、不同厚度的製品需求，
特殊模腔溫度控制裝置，可確保複合生產不同發泡製品，達到製品板斷切面密度均勻，板
面平整光滑無機械紋，共擠表層分配均勻，不易焦糊。
厚度規格：3 - 3.5 mm

Special coat-hanger type manifold design
reduce heat sensitive polymer cracking in the
extrusion process. Suitable for foam sheets of
different polymers and thicknesses
Adjustable upper die lips, replaceable lower lip, vertical
flow restrict bar. Special die lip temperature
control design. Enable making of different
foaming rate in coex production. Glossy and
smooth surface of sheet.
Thickness: 3 - 3.5 mm

節流閥 Restrict Bar

- Replaceable die lip
  Interchangeable die lip

- Suitable for variety of thick sheet products.
  All kinds of adjustment screws.
  Interchange die lip for big range thickness
  of sheet products.

- Differential screw restrict bar
  Push & Pull screw restrict bar
  Push only screw restrict bar

  - For thick sheet products, especially for those high output, different flow
    speed and regrind resin.
  - Not suitable for thermo-sensitive resin.
模脣替換調整系統
Interchangeable Die Lip
針對生產板材厚度範圍超過 ±2 mm 以上的客戶，改以模脣替換調整方
式，以上模脣做為調整開口基準，配合可替換下模脣，讓模脣開口調整
範圍可達 50 mm。(本系統需在停機狀態下進行模脣替換)

快速大幅模脣開口調整系統
Quick Lip Gap Adjustment
在生產過程中無需停機，可根據生產製品厚度變化，
直接調整模脣開口，開口調整幅度可達 ±2 mm。可縮
短製程工程，提升產線效能。
The die lip can be adjusted within ±2mm during running
production for increasing production efficiency and saving
resin waste.

免停機寬度調整
Non-stop Width Adjustment
生產過程無須停機，可根據生產製品寬幅變化，直接調整
模具出料寬幅，大幅降低調整時間，減少原料耗損。
For diversity of end-product, GMA offer various devices for quick
and convenient width adjustment during running production.
折模機台  Die Carts

- 專用模具支撐架，方便模具從機台上移動至支撐架，避免拆卸模具時損傷模具。
- 運用支撐架輕鬆定位，模具拆開清潔完畢可以直接組裝，無須重新校正位置。
- 配置簡易操作驅動系統，可迅速拆開模具本體，節省人力以及時間。
- Easy to move extrusion die from machine to die carts to avoid die damage.
- Die support positioning design for easy assemble and disassemble die body when channel cleaning.
- Quick open the die body to save manpower and time by the drive system.

高精密加工製程  High Precision Machining

透過超精密研磨、拋光等加工，使流道金屬表面不易沾黏流體，造成流痕，增加良率，提高光學板製品光滑與平坦。
The optical sheet is flat and smooth due to the high precision grinding, polishing, and machining on the extrusion dies.

適用原料  Suitable Polymer

PC、PE、PP、EVA、MS、PVB、PVC、TPU、ABS、PLA、GPPS、HIPS、APET、GPET、PMMA、PI等各種塑料。

運用領域  Application

可廣泛應用於文具用品、餐具、建築、汽車、工業、航空、各式光學薄板(導光板、擴散板、偏光板)及3C產業(電腦、電視、手機、背光模組)等領域。

Stationery, food-grade container, constructions, automobile, industrial, aviation industry, Optoelectronics (light guide sheet, diffusion plate, polarizer) Backlight module, and panel display.

<table>
<thead>
<tr>
<th>產品規格</th>
<th>產品寬度範圍 Product width</th>
<th>50~7000 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>產品厚度範圍 Product thickness</td>
<td>0.15~50 mm</td>
</tr>
<tr>
<td></td>
<td>適用押出量 Extrusion capacity</td>
<td>1~3500 kg/hr</td>
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政鈺機械股份有限公司
GMA MACHINERY ENTERPRISE CO., LTD.

43547台中市梧棲區永興路二段362巷28號  
No.28 Lane 362, Sec. 2, Yung Hsing Rd., Wu Chi Dist., Taichung, Taiwan, R.O.C

+886-4-26303228  
gma@gma.com.tw  
+886-4-26303208  
www.gmatw.com