

# Cylindrical Coextrusion Die



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High quality blown film can only be produced using a high quality die. That's why Brampton Engineering places special emphasis on innovative die designs and precise die manufacturing techniques.

Whether a two or three-layer coextrusion die our advanced designs ensure that all melt distribution takes place in the spirals. Cylindrical coextrusion dies are available in sizes up to 2130mm (84") diameter. These dies can process a variety of resins with different viscosities and melt temperatures. On new or existing film lines BE cylindrical dies will meet your needs up to three layers. For up to 10 layers inquire about Brampton Engineering SCD (Streamlined Coextrusion Die).

## **Method of Operation**

The melt entering the die is divided into passages which feed the spirals (ports), one per spiral. Each port connects with a precision-machined spiral designed to minimize back pressure while maintaining excellent gauge uniformity with minimum sensitivity to changes in resin formulation. All melt distribution takes place in the spirals. Streamlined flow passages enable processing of various material types and facilitate material changeovers to avoid degradation of heat-sensitive polymers.

## **The Taper-Lock body and mandrels**

- eliminate the mechanical interference fit associated with spiral mandrels
- make disassembly very easy
- ensure excellent concentricity between the spiral mandrels and the die body.

All these factors contribute to producing film of uniform gauge.

The die can be equipped with stationery or oscillating block. The Brampton die oscillator incorporates a very compact self-storing cable system with redundant electrical safety protection to prevent cable wrap-up. The die-zone temperature-control instruments can be mounted on the extruder or at another remote location.

# Cylindrical Coextrusion Die



**Brampton Engineering**

**Quality:** Brampton Engineering Inc. World Headquarters continues to meet the ISO 9001:2000 standard which covers design, manufacture, assembly, installation and service of our products.

## Distinguishing Features

- high outputs per circumferential inch of the die orifice - up to 1.4kg/hr/mm of die diameter (25lb/hr/inch of die circumference)
- AISI-4340 alloy machine steel, (DIN 40CrNiMo6) hardened to 30 Rc and stress-relieved prior to final machining to ensure a stable steel to maintain tolerances
- inner and outer die lips hardened to 40 Rc
- hardened inserts for gauge adjustment bolts
- hardened washers for outer lip bolts
- high capacity insulated ceramic band-heaters for longer heater life and minimum heat loss
- removable top die lips with accessible lifting points, for ease of die cleaning
- tapered body/mandrel location for easy assembly and permanent concentricity registration
- internal bubble cooling available for high outputs
- nickel-plated (to 60 Rc) internal flow passages are highly polished (chrome plating optional)
- to reduce chance of accidental damage, lip edges are recessed.

## Oscillator/Rotator

- long-life ceramic heaters
- easy replacement of flexible-lip polymer seals in rotary joint
- long-life thrust and radial bearings
- oil lubrication of all bearings
- cold start protection.

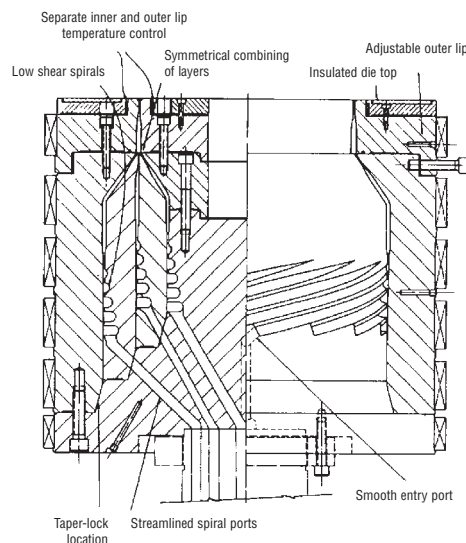
## Carriage

- heavy duty construction
- height adjusters for levelling
- steel Vee/Flat casters for ease of mobility and alignment
- compact cable storage which includes bubble inflation air line.

## Applications

- variety of resins with different viscosities and melt temperatures
- BE cylindrical coextrusion dies can be installed on new or existing film lines.

## Brampton Three-Layer Blown Film Die



## Brampton Three-Layer Feed Block

