Single-Layer Blown Film Die

Brampton Engineering

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Shown with lift truck carriage option.

High quality blown film can only be produced using a high quality die. Brampton Engineering's innovative die designs and precise die manufacturing techniques make us the world's leading solution provider for blown film. Brampton Engineering bottom-fed, spiral mandrel dies are available up to 2130mm (84") in diameter.

Method of Operation

The melt is divided into four or more equal flows. Each passes through its own port at the base of the mandrel. Each port connects with a precision-machined flow channel cut into the mandrel taking the melt in a spiral path up the outer surface of the mandrel. The spirals are 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 die can be equipped with stationery, rotating 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.

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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

Die

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

Oscillator/Rotator

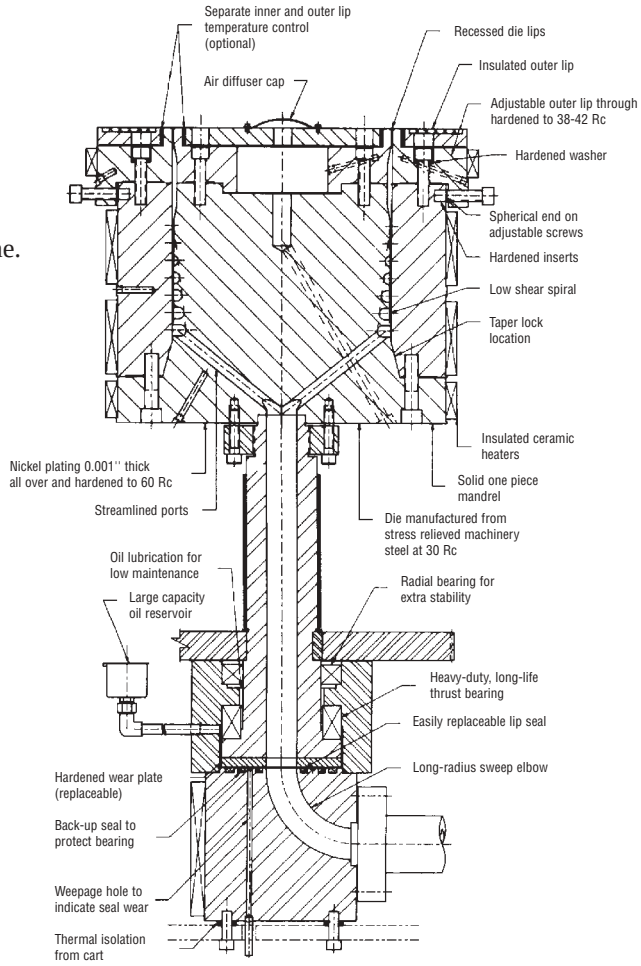
- long-life ceramic heaters
- easy replacement of flexible-lip polymer seals in rotary joint
- long-life thrust and radial bearings
- oil lubrication of all bearings
- cold start protection.

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.

Options

A full range of die carriages is available to suit different die configurations. Whether the film is blown upwards or downwards, we have a rugged die carriage to suit the application.
Also available: Internal Bubble Cooling, heated lips.



Typical Specifications					
Die			Oscillator/Rotator		
Size mm (in)	# of Zones	Wattage	Osc Size	# of Zones	Wattage
150 (6)	2	8000W	#1	2	1600W
200 (8)	3	10000W	#2	2	3600W
300 (12)	3	17000W	#2	2	3600W
400 (16)	4	20000W	#3	2	4000W
600 (24)	5	36000W	#3	2	4000W
750 (30)	5	54000W	#3	2	4000W