

Extruders



Brampton Engineering

Extruders for all applications

Brampton Engineering manufactures a wide range of extruders covering the majority of plastics processing applications including blown film, pipe, tubing, profile and wire coating products. Standard model smooth-bore feed throat extruders are available in screw diameters from 20 to 150mm (3/4 to 6in.) and L/D ratios of 24:1 and 30:1.

One of Brampton Engineering's major strengths is its ability to customize a system to fit the user's needs—whether the requirement is for low screw speed and high torque or high screw speed and high melt throughput. BE recognizes that each application places a different demand on the extruder.

Quality: Brampton Engineering world headquarters continues to meet the ISO 9001 standard which covers design, manufacture, assembly, installation and service of our products.

Pipe and profile extruders

Brampton's standard profile extruders are air-cooled, unitized machines. All components including the power panel, temperature control and drive transformers are mounted and pre-wired on one base for fast, easy installation. The air-cooled design with cast aluminum heaters provides accurate temperature control for quality products. Liquid-cooled extruders are also available.

Blown film extruders

Air and liquid-cooled film extruders are designed for a wide range of applications, from simple monolayer lines to sophisticated multilayer coextrusion lines incorporating computer-controlled gravimetric blender systems. These hopper systems provide optimum control of gauge thickness and layer-to-layer ratios.

Brampton Engineering's air and liquid-cooled extruders are the most economical, energy-efficient, and easy-to-service machines on the market today.



50 mm (2 in), 30:1, air-cooled extruder with ITALYCS gravimetric hopper and distributed control

Insert shows clam-shell heater cover and deep-finned cast aluminum heater

Cooling systems

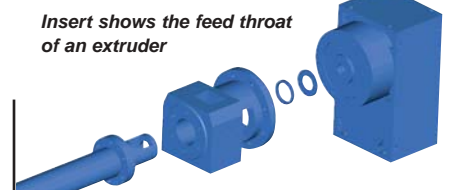
Air-cooled extruders feature

- heat/cool system with deep-finned cast aluminum heaters enclosed by insulated shrouds
- fins provide optimum heat transfer through high surface area
- aluminum heaters extend the full length of each barrel zone ensuring total zone coverage, minimizing heat/cool stress and increasing heating/cooling efficiency
- precision-machined internal diameter
- clam-shell heater covers provide easy maintenance for minimum downtime
- dual-impeller blower for each zone further maximizes air flow.

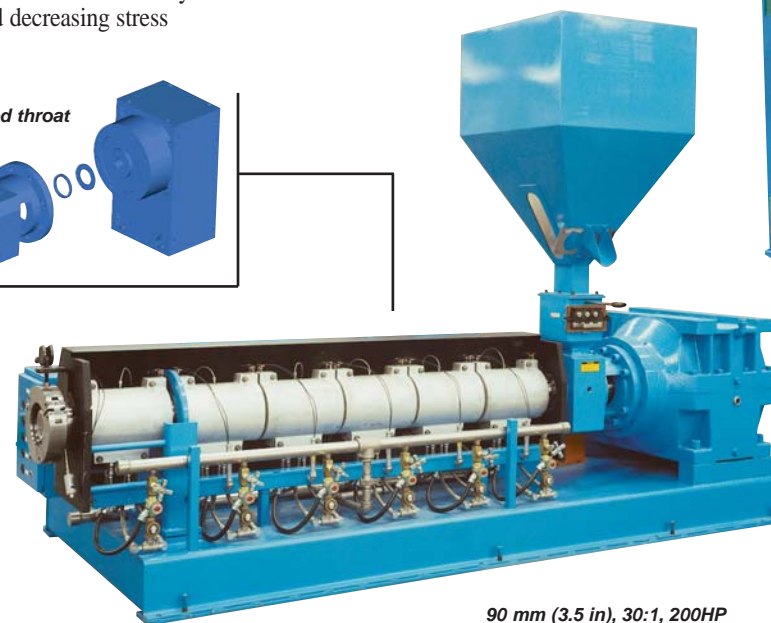
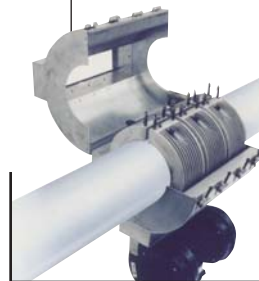
Liquid-cooled extruders feature

- stainless steel piping on the hot, closed-loop side
- stainless steel manifolds run the length of the barrel and are connected to the individual solenoid-operated flow-control valves for each heat/cool zone
- valves connected to the heaters use a flexible hose system of high temperature resistant, non-corrosive PTFE (Teflon) tubing.

By incorporating these features, Brampton Engineering's liquid-cooled extruders minimize maintenance and increase life by reducing corrosion and decreasing stress on fittings.



Insert shows the feed throat of an extruder



90 mm (3.5 in), 30:1, 200HP water-cooled extruder

Feed screws

Brampton Engineering specifically selects each screw to match a particular process to provide high extrudate quality at optimum throughput rates. BE screws feature

- custom-designed melt channel or compression screws for excellent melt temperature control and high output rates
- square cut screw shank with keyway gives solid contact without wobble.

For more information see Brampton Engineering Melt Channel Screw product sheet.

Control

- barrel temperature zone regulated by a microprocessor-based instrument for accurate temperature control
- full PID programs and alarms for common heater problems
- solid state contactors to reduce both current cycle times and maintenance
- customized control panel to fit operating position and equipment layout.

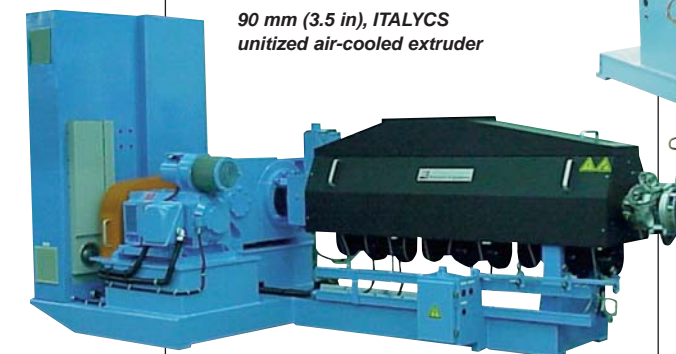
Available supervisory control packages include remotely programmable and fully integrated line control systems.

Gear boxes

- rugged design gearboxes provide horsepower and torque ratings that surpass the usual standards
 - hardened and precision-ground gears feature a helical design to ensure years of non-stop production
 - integrally-mounted thrust bearing assures precise alignment to ensure that the bearing achieves a long working life
 - oil-circulation pump standard on some models.
- Optional: oil cooling, filter, circulation system.

Plug and play

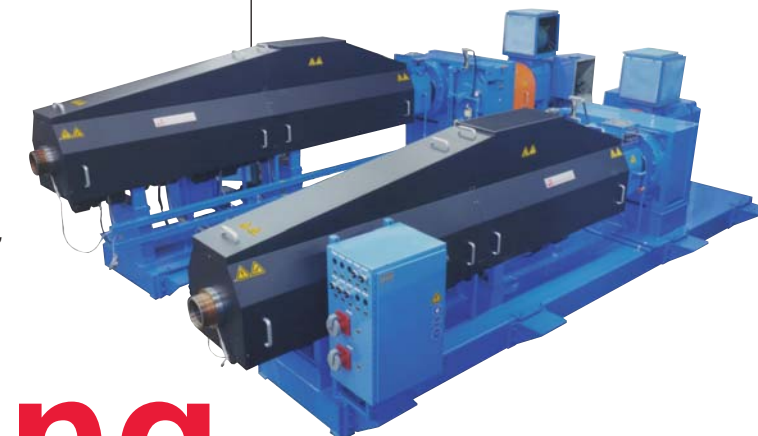
- Unique unitized construction option (available with ITALYCS) eliminates field control wiring
- each pre-wired extruder is attached as a node on the network
 - each pre-wired unit is checked at Brampton prior to shipping
 - installation time and costs are reduced significantly.



90 mm (3.5 in), ITALYCS unitized air-cooled extruder



65 mm (2.5 in), 24:1, water-cooled extruder for production of PVC profiles



150 mm (6 in), 30:1, L/D extruders

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Floor Plan

Extruders for all applications



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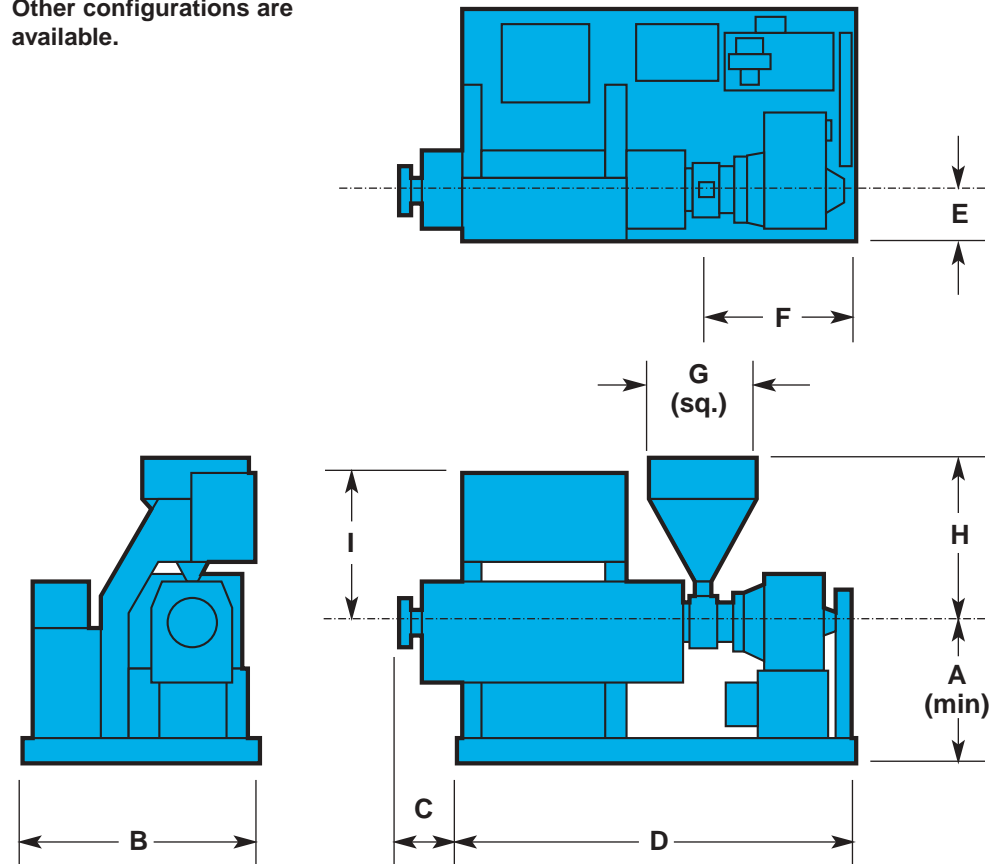
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This configuration applies to Brampton unitized extruders. Other configurations are available.



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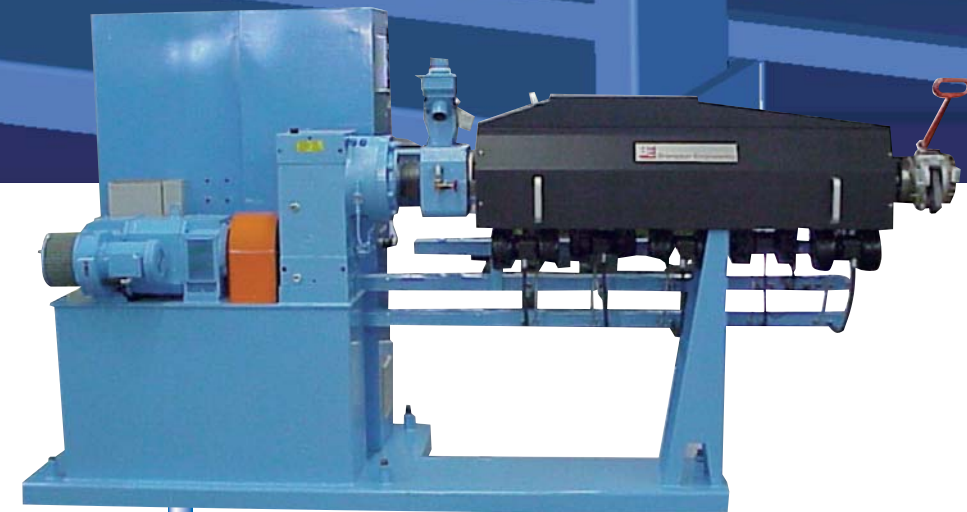
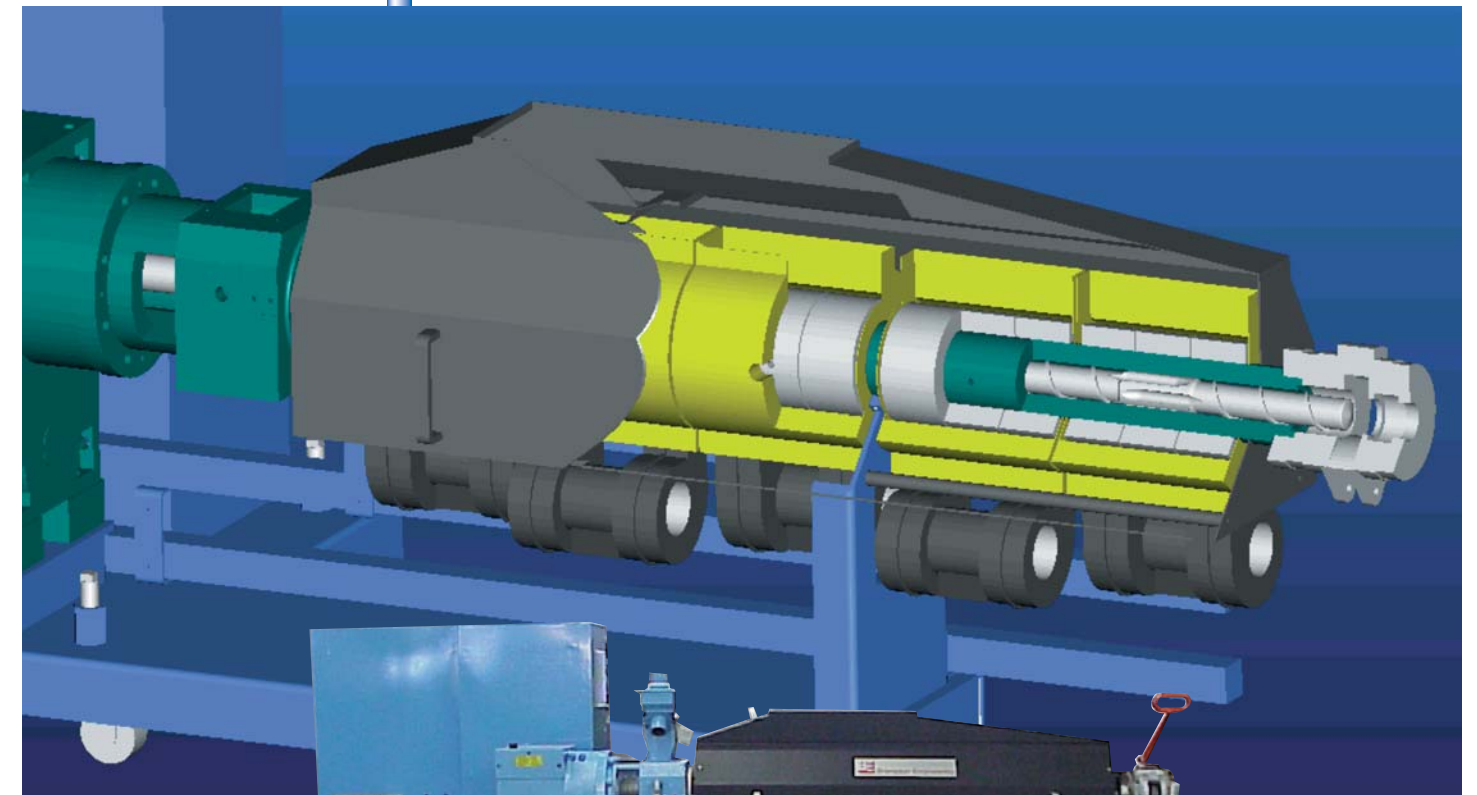


Table of Models and Dimensions for Blown Film Extruders

Model	Screw ø mm (in)	L/D	HP Max	mm (in)									
				A	B	C	D	E	F	G	H	I	
200	50 (2)	24 30	30	610 (24)	1370 (54)	390 (15 1/4)	1500 1810	(59 1/2) (71 1/2)	230 (9 1/8)	710 (27 7/8)	560 (22)	1000 (39 3/4)	1270 (50)
250	65 (2 1/2)	24 30	75	610 (24)	1370 (54)	65 (2 1/2)	2400 2770	(96) (109)	300 (12)	850 (33 3/4)	630 (25)	960 (38)	1270 (50)
350	90 (3 1/2)	24 30	150	670 (26 1/2)	1680 (66)	390 (15 1/2)	2945 3320	(116) (130 3/8)	380 (15)	1170 (46)	810 (32)	1170 (46 1/4)	1370 (54)
450	120 (4 1/2)	24 30	250	760 (29 7/8)	1930 (76)	560 (22)	3660 4380	(144) (172 1/4)	460 (18)	1380 (54 1/2)	1020 (40)	1545 (60 3/4)	1680 (66)
600	150 (6)	30 Direct coupled 30	500	875 (34 5/8)	1870 (74)	640 (25 1/4)	5050 5230	(198 3/4) (206)	531 (21)	1020 (40)	1020 (40)	1600 (63 1/4)	1680 (66)

Dimensions shown: mm (in), subject to change without notice.