

# MAGNUM

THERMOFORMER AND TRIM PRESS



----- MODELS -----  
**36, 44, 50**

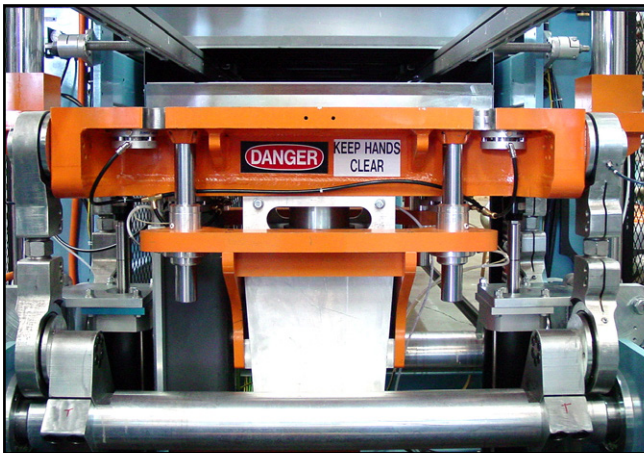
 **Irwin**  
Research & Development, Inc  
**THE ORIGINAL TECHNOLOGY**  
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# MAGNUM

## THERMOFORMER AND TRIM PRESS

**T**he Irwin Research and Development Magnum is the highest tonnage model in our line of Thermoformers, designed in the late 1970's to deliver the performance and reliability of an "Irwin" to deep-draw rigid product manufacturers.



The Model 50 Magnum can accommodate a 48" wide mold for production in-line with an extruder and a 50" wide mold for roll-fed applications. The Model 36 and 44 Magnum were created as narrower options, 40" wide sheet and 38" mold width, or 46" wide sheet and 44" mold width respectively, with the same forming tonnage as the Model 50 Magnum. A product depth of 7.5" can be formed in material gauges of up to .090". Products are formed quickly and consistently via independent platen motions accomplished by powerful AC Brushless motors that deliver accurate following of the motion profiles for consistent processing. Full pressure and vacuum forming capabilities are incorporated as well as sheet clamp driving via a mechanical/pneumatic linkage system. An optional servo

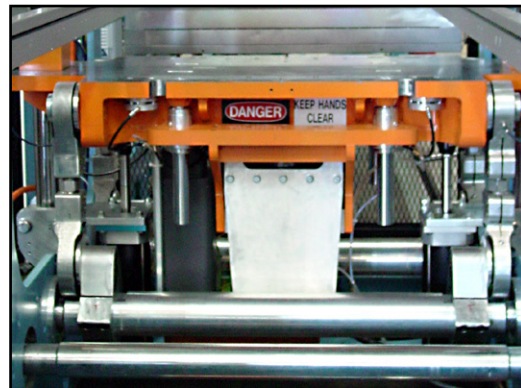
Since its introduction the Magnum has proven its versatility as an in-line and roll-fed HIPS cup processor as well as a choice for deep and shallow draw products in other solid sheets, including: OPS, CPET, PP, Filled PP and HDPE. For the ultimate in a solid sheet thermoformer the Magnum delivers high volume production, fast cycle speeds, and reliable service for all your products.

driven plug assist (3rd motion) ensures fast and accurate entering of the plugs into the sheet resulting in deep draw products with uniform wall thickness and minimum product weight providing a reduction in resin costs.

While deep draw products are its forte the Magnum is equally adept at producing shallow

products such as HIPS plates, OPS lids, and PET hinged-lid containers at speeds up to 35 cycles per minute.

The Magnum heat tunnel is available in lengths ranging from 80" to 240" with standard tubular heaters as well as the optional combinations of tubular and quartz, or all quartz heating elements. The heat tunnel control is via Ballerina through a B&R X20 Control System that provides precise PID control of up to 120 thermo couple zones and total of 180 heaters zones. The PID system allows you to "soft zone" your heat tunnel giving you the option as to which heaters are attached to which thermocouples. Temperatures are maintained at +/-2 degrees Fahrenheit, providing the consistency required for the most difficult of resins. A multiple color display of heat zone configuration provides the operator with a clear view of the heat profile.

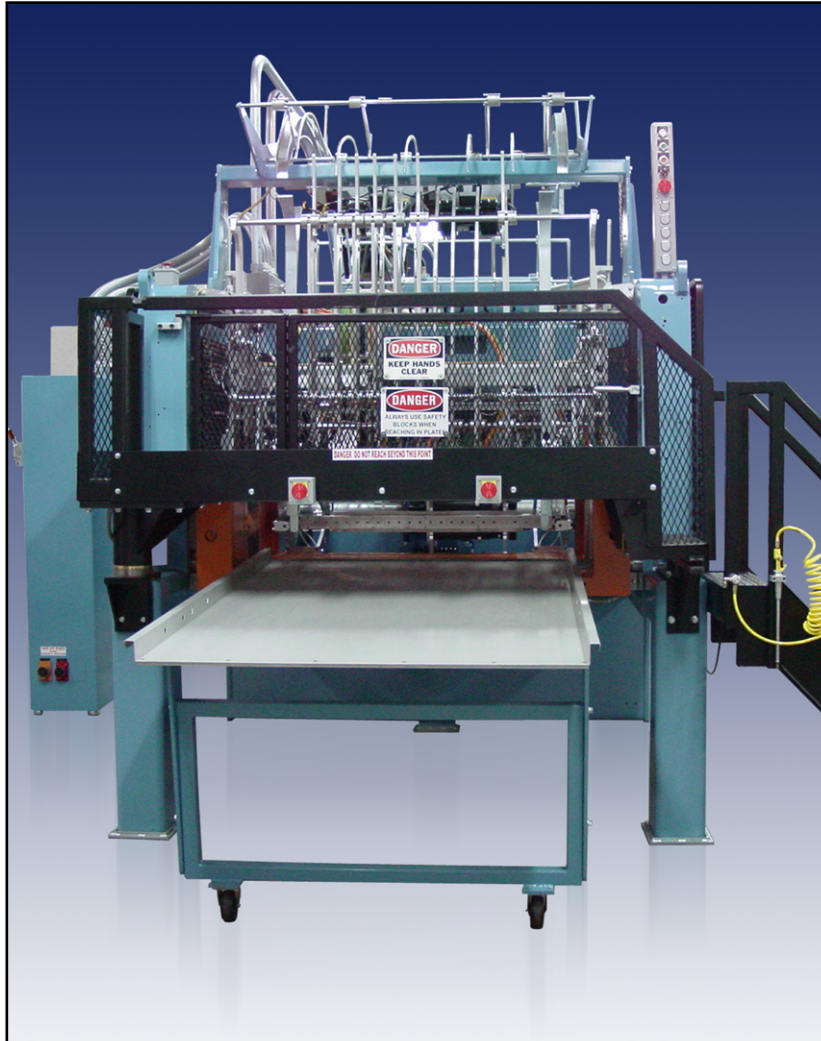




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### *Trim Press*



The Magnum Trim Press is solidly and ruggedly designed to handle the shock incurred when trimming tough solid sheet products such as those from PET. However, do not let its intimidating size trick you into underestimating the speed capabilities of the Magnum Trim Press as it is fully capable of trimming shallow draw products at speeds of 130 RPM plus. The Magnum Trim Press is available in standard or reverse trim configurations depending upon your requirements. The Model 50 and Model 36 Magnum Trim Presses are available with the patented NT drive system for added strength and speed. For cup production you can opt for a Servo Drive Ejector over a pneumatic version giving you a fast and consistent part ejection with a lower maintenance requirement. The option of Servo Pick gives you fast and accurate method of indexing each container into trimming position via servo driven wheels and fiber optic sensing for product registration. The Servo Pick adds to your production rates while reducing change over times between tools by limiting stroke and timing changes to a few parameters in the Ballerina Control.

Platen motion, chain indexing, 3rd Motion, Servo Pick, and Servo Eject axes are all driven by AC brushless motors and multi-axis servo drives. Brushless servo motors provide powerful and consistent execution of the motion profile for every axis, guaranteeing full control of the process, giving you a distinct advantage over pneumatic or hydraulic based systems.

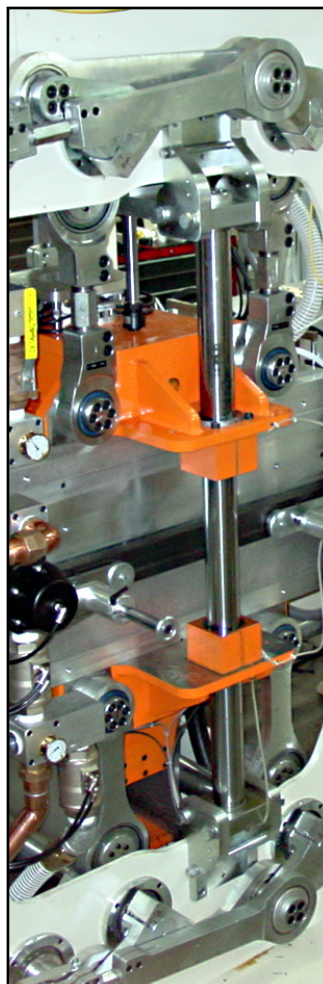
All machine functions are implemented and synchronized by "Ballerina's" Windows®-based operating system and unique motion profile control give you a PC based control that can remain a powerful and flexible process tool that improves as technologies change.

Irwin Research and Development Field Service Department, the fastest, most responsive support team in the industry, back the Magnum. In the event of any system failure, Irwin Research and Development will work with you to provide fast, effective solutions, minimizing down time and returning your machine to production.

Count on Irwin Research and Development to continue our long history of using innovative technologies to engineer and manufacture reliable and innovative Thermoformers from our home in Yakima, Washington (USA). Serving our Customers IS our Business.

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## SPECIFICATIONS



### Thermoformer Specifications

<b>Material Index</b>	<b>Max. Chain Speed</b>	200"/sec.(3734mm)
	<b>Sheet Width</b>	
	<b>Model 50</b>	52" (1321mm) Roll Stock, 50" (1270mm) Inline
	<b>Model 44</b>	46" (1168mm) Roll Stock, 44" (1117mm) Inline
<b>Heat Tunnel</b>	<b>Model 36</b>	40" (1016mm) Roll Stock, 38" (965mm) Inline
	<b>Length</b>	120"-250" (3048-6350mm)
	<b>Heating Element</b>	Standard: Cal Rod Optional: Quartz
	<b>Temperature Control</b>	Standard B&R X20 PID Control System: +2 at 600°F +1 at 316° C
<b>Former</b>	<b>Max Mold Size</b>	
	<b>Model 50</b>	50" (1270mm) wide x 50" (1270mm) long
	<b>Model 44</b>	44" (1117mm) wide x 50" (1270mm) long
	<b>Model 36</b>	38" (965mm) wide x 50" (1270mm) long
	<b>Depth of Draw</b>	Max.: 7.50" (191mm)
	<b>Press Rating</b>	250,000 pounds (1112KN)
	<b>Shut Height</b>	Standard: 25" (635mm)
	<b>Platen Travel</b>	Max.: 8.5"(216mm) Min. 3.5" (89mm)

### Trim Press Specifications

<b>Sheet Width</b> <b>Model 50 or Model NT</b> <b>Model 44 VTS</b> <b>Model 36NT</b>	52" (1321mm) Roll Stock, 50" (1270mm) Inline 48" (1219mm) Roll Stock, 44" (1117mm) Inline 40" (1016mm) Roll Stock, 38" (965mm) Inline
<b>Product Depth</b>	Standard: 7.50" (191mm)
<b>Treadle Adjust</b>	Vertical: 6" (152mm), Horizontal: 7" (178mm)
<b>Stroke</b>	Min: 4.5" (114mm), Max: (305mm)
<b>Standard Platen Opening</b>	Index Direction: 14-20" (356mm-508mm) Across Sheet: 57" (1498mm)
<b>Maximum Cutting Force</b>	40 Tons
<b>Dry Cycle Speed</b>	1-145 rpm
<b>Servo Ejectors</b>	Optional



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