- Designed to process all types of thermoplastic materials
- Full automated, hands free product handling
- Optimized cycle speed with lower production costs
- Multiple row moulding
- Designed for in-line and off-line extrusion & closed loop systems

The F87 is a fully automatic, servo driven, thermoforming machine. The in-mould trim eliminates issues caused by post forming shrinkage and ensures accurate, clean concentric trimmed parts from cycle to cycle and run to run. The F87 has been designed to process all types of thermoplastic and multilayer, co-extruded materials.

The F87 forming station and automatic product handling is designed for multiple row moulds, straight and/or staggered layouts. The international patented “vacuum plate” and unloading system along with the downstream stacking and counting, system allows for effortless and reliable hands-free handling of the final parts

The F87 design incorporates the “Smart Drive” system, which incorporates:

- **Drives**: CNC Axis control for all motors connected to electronic cams.
- **Sequencing**: Password controlled acces to all machine function screens with precision time settings available.
- **Recipe Screen**: assures repeat settings and quick mould changes.
- **Storage**: for important maintenance records & production information.

all moving product handling components on the thermoformer are made of light weight, durable carbon fibre material, which assures optimized cycle speed ensuring lower energy costs

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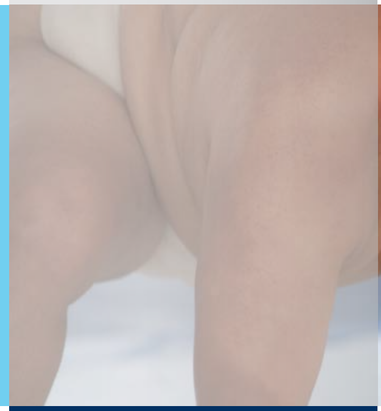
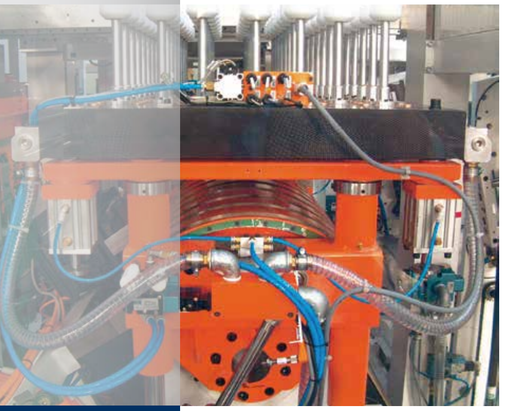
F87 – think big

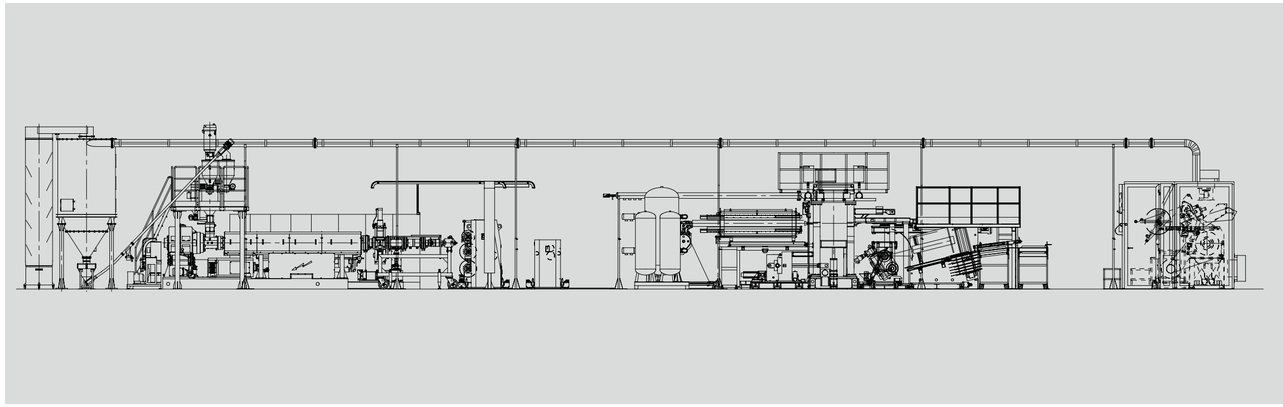


The ultimate deep draw cup & universal thermoformer

Specially designed for high production requirements

- Optional specialized RIM-rolling device for cups
- Capability to form the widest range of cups and containers
- Controlled access to all machine functions from the Operator panel
- Recipe storage and retrieval for efficient tool changes
- Designed for in-line and off-line extrusion and closed loop system





- Electronic servo drive with profiled acceleration/deceleration torque
- Chain rails can be retracted away from the form station, during mould change, for easy access
- Extensive Oven zoning (Heating elements)
- C -Shape oven with top and bottom ceramic heater elements arranged in longitudinal and transversal zones
- Special features are built into the oven to avoid sheet sag issues typically experienced in traditional ovens
- Sheet edge pre-heaters, located at the entrance of the oven
- Forming station with high form air pressure and coiners
- Platen movement is driven by a toggle/cam assembly where the trim is operated by an independent hydraulic action without load drive cams/shafts
- The lower platen is driven by a brushless servo motor. During the forming/trimming phase, the motor stops, reverts, and after the end of the forming cycle it begins a new cycle. The stroke of the lower platen is adjustable depending on product height (depth of draw).

Plug assist

A robust 3rd motion servo-driven plug assist, independent from platen movement, provides an optimum processing window and the ability to ramp the speed up or down during the pre-stretching of the sheet. Capable of forming sheet in solid state for biaxial stretching benefits . Optional **Vacuum Bleed** valves for advanced material thickness distribution in deep draw parts

On-Board Rim Rolling

The F87 Former also affords the option to add the on-line Rim-Rolling System. This eliminates the need for the inefficient, generic off-line rim rolling systems as well as the excessive handling of parts. Instead, OMV's unique method of rim rolling utilizes the latent heat from the form station to roll the rims without reducing cycle times. This method ensure consistent quality rim rolled parts

Technical Specifications of F 87 THERMOFORMER - In Mould Trim
Materials PS – PP – ABS – PET – PE – PLA

Max. forming area	mm	850 x 650
Max. sheet width	mm	920
Sheet thickness	mm	0,2 – 2,8
Max. forming depth	mm	1° = 117 2° = 207
Max. positive forming	mm	15
Forming with compressed air	bar	6
Dry cycles	strokes/min	38
Oven size	mm	2.800 x 1.100
Mould closing force/Cutting force	daN	80.000
Max. cutting length	mm	20.000
Max. air consumption	Nl/min	20.000
Max. cooling required (at 8°-10°C)	kcal/h	100.000
Max. vacuum consumption	m3/h	230
External dimensions	mm	12.000 x 7.500 x 4.000
Total installed motor power	kW	100
Total installed heating power	kW	180

SELECTION OF MOST WIDELY USED PRODUCTS – CHARACTERISTICS

Shape	USE	Dimension mm	Content	N. of Cavities	Cycles/min.	Production/hour
	DRINKING	Ø 71	200 cc	72 S	28	121.000
	CUP				30	129.000
	DRINKING	Ø 78	300 cc	56 S	24	81.000
	CUP				26	87.000
	DRINKING	Ø 95	600 cc	42 S	20	50.400
	CUP				22	55.400
	YOGURT	Ø 75	150 cc	63 L	21	79.400
	CUP				22	83.000
	DELI	Ø 116	400 cc	24 L	22	31.700
	CONTAINER				23	33.000
	MARGARINE	Ø 127	500 gr	20 L	19	22.800
	TUB				20	24.000
	YOGURT	Ø 77		48 L	23	66.200
	CUP LID				24	69.200
	MARGARINE	Ø 129		20 L	20	24.000
	CUP LID				22	26.400