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Large forming area with OMV "pre-clamping" technology for high quality lids

// Perfect forming cutting and handling for all kind of shallow products// Safe stacking and de-nesting even

for difficult-shaped trays

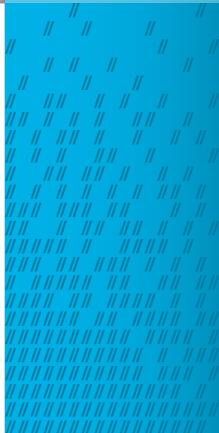


The F86 is a fully automatic electro mechanically driven thermoformer with in-mould trim, which nullifies shrinkage effects on trim accuracy. It has been designed to process all types of thermoformable materials, including polypropylene, and coextruded barrier materials.

This machine is characterized by a special ejection and unloading system (an OMV international patent) including a guided vacuum plate, 4-station rotary transport wheel, a stacker, a rotary arm and one unloading robot.

In addition, the unloading and transfer conveyors have been especially designed for handling shallow products with minimum stacking height and for eliminating "de-nesting" of different product types, thanks to the adjustable inclination setting. There is also available space to install optional quality control station, hole punch station or other in-line operation before stacking and unloading. OMV "Quick mould change feature" minimizes down time for mould changes.

The cutting device is made by excentrics, placed on the upper press (an OMV international patent).



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Mechatronica S.C. Gabrovo/Bulgaria



F86 – two dynamic versions



AMERICA

Polytype America Corp. Lincoln Park, NJ/USA

ASIA

Polytype Asia Pacific Co., Ltd. Chachoengsao/Thailand

Wifag-Polytype India Marketing Private Ltd. New Delhi/India

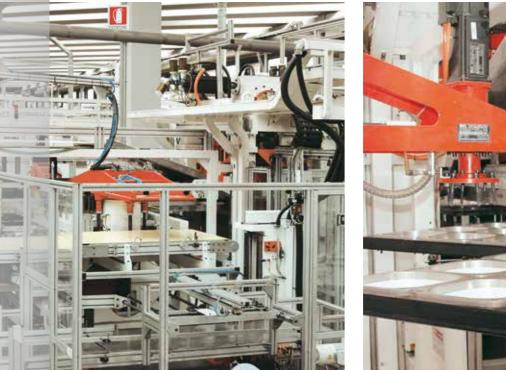
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Thermoformer for high production of lids and other shallow products of any type of thermoformable materials



Unique automation allows for in-line quality control and handling of products with difficult stacking design

> // Hole-punching facility for lids // Upper press in motion for positive-formed lids







Other special features of F86:

- **// Sheet index:** Especially designed with "double width pin-chain" to transport sheet into the forming station using servo drive for precise index accuracy.
- **// Servo:** Automatically programs and displays selected index length and speed on the screen.
- **// C-Shape oven:** With top and bottom ceramic heater elements arranged in longitudinal zones individually controlled.
- **// Sequencing:** Operator has screen access to all machine functions with precision time setting available. The single machine functions may also be individually switched ON or OFF.
- // Mould set-up storage: A recipe card is used to recall all previous job settings there by minimizing start up time and scrap when changing moulds.
- // OMV Process Controller
- **// Alarm:** the controller will display alarm and emergency situations.

The F86 thermoformer is supplied in two versions for two different applications: FC86 for lids and FV86 for trays, plates and shallow containers.

FC86 Specific features:

- // Lids forming method by "PRE-CLAMPING" technique, assure an even rim thickness over the lid circumference.
- // Upper press in motion allowing smooth unloading operation for positive-formed articles (lids)
- // Capability of Hole-Punching Device installation in the second station of the rotary drum, to pierce holes in the formed lids.

Technical Specifications of F86 THERMOFORMER - In Mould Trim Materials PS - PP - ABS - PE								
Materials		FV86	FC86					
Max. forming area	mm	855 x 650	825 x 600					
Max. sheet width	mm	925	910					
Sheet thickness	mm	0,2 - 2,5	0,2 - 2,5					
Max. forming depth	mm	95	30					
Max. positive forming	mm	10	15					
Forming with compressed air	bar	6	6					
Dry cycles	strokes,	/min 32	32					
Oven size	mm	2.700 X 1.000	2.700 X 1.000					
Mould closing/Cutting force	daN	40.000	40.000					
Max cutting length	mm	11.000	11.000					
Max. air consumption	NI/min	10.000	10.000					
Max. cooling required(at 8°–10°C)	kcal/h	50.000	50.000					
Max vacuum consumption	m3/h	160	160					
External dimensions	mm	6.600 x 11.4	00 X 3.200					
Weight	kg	25.000	25.000					
Total installed motor power	kW	99	104					
Total installed heating power	kW	173	173					

Technical Specifications of F86 THERMOFORMER - In-line System Materials HIPS - PP - ABS - HDPE								
		FV86 - D100	FC86 - D8o					
Gross output HIPS	kg/h	640 - 660	360 - 380					
Gross output PP	kg/h	470 - 500	270 - 290					
Sheet thickness HIPS	mm	0,2 - 2,2	0,2 - 2,2					
Sheet thickness PP*	mm	0,4 - 2,2	0,4 - 2,2					
Extruder size	mm	100	80					
L/D ratio for water/air cooled	mm	35/1 - 33/1	35/1 - 33/1					
Extruder motor power	kW	175	110					
Max. screw rev.	Rpm	225	290					
Flat die width	mm	1.100	1.100					
Lip opening	mm	0,2 - 2,5	0,2 - 2,5					
Gear pump capacity	cm³/tur	n 92,6	92,6					
Calender roll Ø (Upper-Middle-Lower)	mm	270 - 350 - 350	270 - 350 - 350					
Pull roll diameter (haul-off)	mm	170	170					
Rubber roll diameter	mm	130	130					
Effective rolls width	mm	1.200	1.200					
Max. cooling required (at 8°-10°C)	kcal/h	100.000	82.000					
Total installed motor power	kW	461	376					
Total installed heating power	kW	292	284					
*PP Sheet thickness can be reduced to a with the additonal air knife (optional)	minimum	of 0,2 mm						

FV86 Specific features:

// Capability of Robot installation in the second station of the rotary drum, to rotate alternatively the formed products, in order to avoid the stacked products nesting.

F86 Product characteristics									
Use	Dimension mm	Depth mm	Weight gr	Cavities	Cycles min	Production hour			
FV86									
Plate	220	25	17	8	25	12.000			
Plate	178 x 178	36,3	15,5	12	25	18.000			
FC86									
Lid	118,2	7,2	4,9	20	24	28.800			
Lid	95,5 X 145,5	12,7	5,0	18	24	26.000			