

SERIES FC 600/780/1000 Speedmaster Plus

STEEL RULE CUTTING MACHINES



FC SPEEDMASTER plus

The FC SPEEDMASTER plus is an automatic vacuum pressure forming machine with servo plugs and with steel rule cutting technology. High level of automation ensuring easy operation through a new and improved control system developed thanks to the continuous feedback of our customers.

High performance, constant forming quality, very short re-tooling time, high-accuracy in cutting, high flexibility and ease of use are only a few of the advantages of the FC SPEEDMASTER plus series that contribute to the rationalization of the production costs.

All thermoplastic materials like PP, PS, APET, CPET, PLA, OPS, EPS, PVC can be processed on our standard FC thermoforming machine realizing products such as hinged containers, lids, trays, blisters and so on.

One of the most important features is the possibility to work with all thermoforming mold technologies such as male or female molds as well as positive and negative forming molds. The plug assist forming system and the different stacking solutions turn the FC series into a universal machine with a very interesting investment ratio for any product application guaranteeing an optimized efficiency and higher performance for any material.

The FC SPEEDMASTER plus series is available in a very wide range of models providing the most suitable solution for various production needs in the modern packaging industry.

Do it right at the first time!






Investment means value:

- ✓ Constant quality, high performance and extreme flexibility
- ✓ MLS System (Machine Learning System) for initial self-setting of the cycle parameters
- ✓ Fast tool change to reduce machine downtime
- ✓ Cutting platen with minimal deflection to increase knife life and process stability
- ✓ Ceramic heating elements with individual temperature controllers for precise setting
- ✓ Display for energy consumption defining real Energy Savings
- ✓ Easy operating and maintenance
- ✓ Latest generation of software program and touch screen operating panel, fixed on a sliding arm and running along all the length of the operator side.

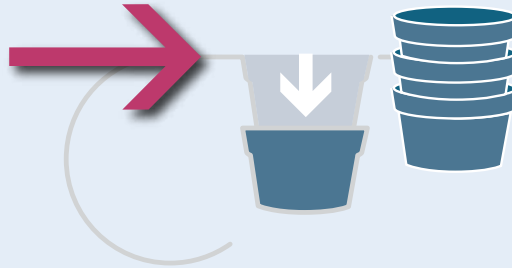


		FC600 E	FC780 E	FC1000 E
<div style="text-align: center;"> <h1>FC model</h1>  <h1>Stacker</h1> <p>Higher Flexibility lower Investment</p> </div>	Max. mould size	mm 640x450	780x570	1060x750
	Max. pos/negative depth	mm 130	130	140
	Forming clamping force	daN 15.000	30.000	60.000
	Total heating power	kW 50	96	176
	Cutting press clamping force	daN 50.000	60.000	105.000
	UP + Robot 3			✓
UP + Robot 2			✓	✓
Down		✓	✓	✓
UP		✓	✓	✓

FC SPEEDMASTER plus model range

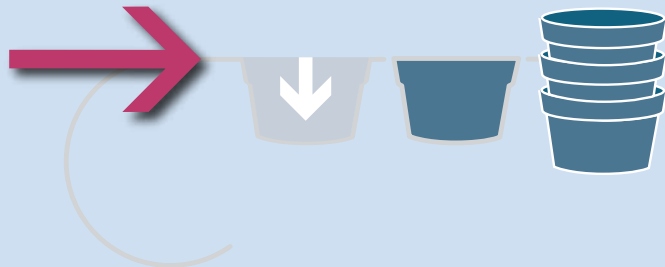
FC IM

Vacuum and high pressure forming with steel rule cutting in the forming tool + in-line stacking



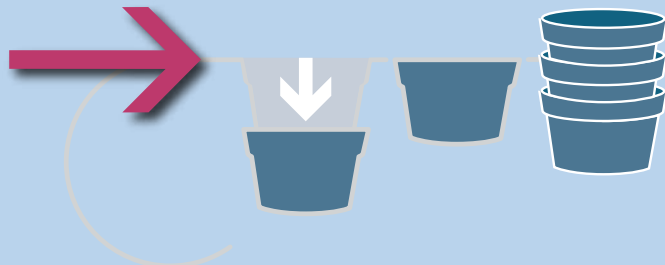
FC E

Vacuum and high pressure forming + steel rule cutting press + in-line stacking



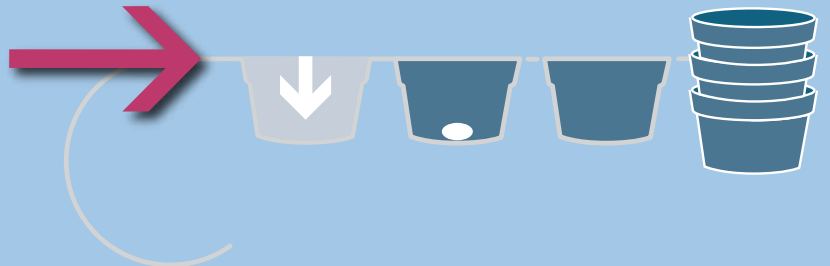
FC IM2

Vacuum and high pressure forming with steel rule cutting in the forming tool + in-line additional cutting press + in-line stacking



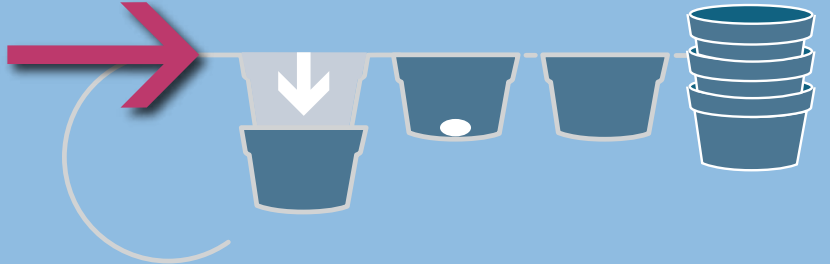
FC HP

Vacuum and high pressure forming + in-line hole punching press (punch and die) + steel rule cutting press + in-line stacking



FC IM2 HP

Vacuum and high pressure forming with steel rule cutting in the forming tool + in-line hole punching press (punch and die) + steel rule cutting press + in-line stacking

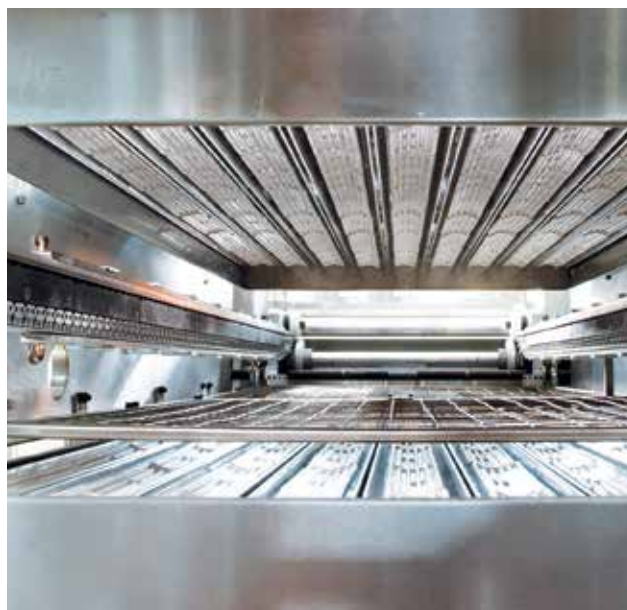


FC SPEEDMASTER plus in detail



Unwinding station with lifting device

An asynchronous motor and inverter are used to unwind the sheet material in continuous mode in order to prevent sheet scratches. The unwinding speed is synchronized with the average speed of the machine avoiding material contamination.



WM heating system

Two heating banks (top and bottom) assembled on a single frame are sliding on prismatic guides to eliminate vibrations. Top heater with Ceramic heating elements and individual temperature controllers for precise setting. Pyrometer for sheet temperature reading and temperature adjustment in closed loop. Lateral insulation gates to reduce heat dispersion. Both independent bank heaters easily can be positioned lengthwise by means of a proper handle (screwless) according to the tool size.





Forming station

- Two movable platens (upper and lower) driven by three tie-bars for positive and negative pressure forming
- Highly dynamic air valves adjusted independently are achieving a higher forming speed
- Integrated independent movements 3rd motion for servoplugs, clamping frame and de-molding system
- Quick mold locking and automatic centering.



Holes punching press (punch and die)

- Two movable platens (upper and lower) are driven by three tie-bars
- Integrated hole punching scrap exhausting system on request
- Lower platen adjustable in high.



Steel rule cutting press

- Two movable platens (upper and lower) driven by four tie-bars
- Cutting platens with minimal deflection to increase knife life and process stability
- Automatic locking, steel rule cutting X-Y regulation and heated cutting plate on both platen.

Additionally, following features valid for all stations

- Central force is distributed by a double toggle that eliminates transversal force on the guiding columns (less vibration and better parallelism)
- Lower and upper fix plate adjustment allowing the usage of different mold heights according to product design.

FC SPEEDMASTER plus in detail



Upward stacking system

- Low investment and high speed
- A-B stacking
- Precise linear guide to prevent vibration



Downward stacking system

- Low investment and high speed
- No stacking frame
- Fast tool change to reduce machine downtime
- Precise linear guides to prevent vibration
- Ergonomic collecting with an integrated conveyor belt



Upward stacking system + 2 or 3 axes Robot

- High flexibility and speed
- A-B-C stacking
- No limitation on product design and mold lay-out
- Solid frame to prevent vibration
- Fast tool change to reduce machine downtime
- Better process stability



Servo driven plugs assist (3rd motion)

After fixing the clamping frame to the sheet, the plugs assist pushes the material into the cavities in order to guarantee an optimal material distribution on the sidewalls and to reach a better product stiffness using as less material as possible.



Automatic mold locking device and x-y steel rule cutting adjustment

- Faster tool change
- Clean and safe adjustment



Additional spreading point before the forming station.

Helpful in order to limit sheet overlapping (wrinkling)

Latest generation of drivers and control system



Drivers and Control system

- ✓ The system is based on an extremely reliable and well tested B&R industrial PC and Drives
- ✓ Compact touch screen
- ✓ High speed data exchange to optimize at the best cycle times
- ✓ MLS System (Machine Learning System) for initial self-setting of the cycle parameters to optimize machine sequencing and increase machine output and product quality
- ✓ Program for mold change
- ✓ Forming and cutting force monitoring
- ✓ Energy recovery
- ✓ Ceramic heating elements with individual temperature controllers for precise setting
- ✓ Energy consumption and driver analysis
- ✓ High speed modem connection in order to facilitate technical after sales support.

PH Preheaters



All thermoforming machines can be completed with the PH Preheaters series:

- easy sheet passage and quick feeding
- optimal hot air flow distribution
- high efficiency and optimal temperature distribution
- optimal insulation
- improvement in thermoforming polypropylene

		PH 920	PH 1100	
<div style="background-color: #0070C0; color: white; padding: 10px; font-size: 2em; font-weight: bold; text-align: center;">MAIN features</div>	Hot air system capacity	Kw	30	53
	Max speed	m/1'	27	32
	Volume of moved air	cu.m/h	5.000	8.000
	Fan motor power	kW	3	5,5
	Insulation thickness	mm.	80	80
	Max sheet storage	m.	15	15
	Output capacity	Kg/h	300-480	550-800
	Max sheet width	mm.	920	1.100
	Sheet thickness	mm.	0,35-1,5	0,35-1,5



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