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MAXIMUM DIMENSION IN PRECISION

Modul Line

Modul 130/130E | Modul 170/170E | Modul 220/220E

Single-colour

Max. cup size 200 mm

X-Y position electrically adjustable

Electric rotation on 2 axes

Automatic viscosity control

Camera control & positioning

Modul Line

Modul 130/130E | Modul 170/170E | Modul 220/220E

The Modul line features single-coloured pad printing machines with electric positioning and an optional pneumatic or electric pad stroke. The printing positions are adjusted through the graphic, multicoloured touchscreen display. The printing procedure can be programmed as desired.
It is possible to position many different print images on a single printing cliché.
These can be individually controlled, so that complex composite images or different variations can be printed.
Depending on requirements, several machines from the Modul line can be combined into one system and operated using a single display. This means that an almost unlimited number of colours with pot sizes of up to 200 mm are possible. Order data is stored in one central location, which significantly decreases adjustment times. Printing positions can be corrected in real time by camera or through the interface of a superordinate system.
There are many options available for parts handling: from pneumatic shuttling up to electric rotation on two axes using vacuum clamps and parts sensors.

OUR ADVANTAGE:

Programmable

Position correction
Combinable
Camera positioning
Viscosity control
Industrial Ethernet
OPC UA

Images: Sample configurations

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Applications

The Modul line is mostly used as a part of larger systems. It is suitable for parts with multiple images printed in various positions as well as for printing different variants within the scope of one single print job. For applications with short cycle times and high precision. Several units on a transport system can print very large quantities in multiple colours in parallel. Large and complex parts can be printed in a single process using a linear drive with a holder in combination with a rotation device.
For sensitive printing processes (including printed electronics, opaque or translucent printing), we recommend using an electrically powered pad stroke.

Inkwell

The machines in the Modul line are single-colour pad printing machines equipped with closed inkwells. The maximum cup size is 200 mm.
The surface pressure of the magnetic doctoring cups can be increased by a pneumatic holder on request.
If required, it is also possible to equip a special Modul variant with two pots. If the optional microPrint Viscomat is installed, ink viscosity inside the cup is regulated automatically.

Pad positioning

The X and Y positions of the pad are controlled by linear motors. They are adjusted in 0.01 mm increments using the display. The pad stroke can either be executed pneumatically or electrically using a servomotor and spindles. In the case of a pneumatic stroke, the speed is controlled using throttles. The electric pad stroke enables the use of different speeds on the up and down stroke for every single step – up to and including setting the length of time the pad remains in contact with the print object.
The angle can be adjusted either mechanically or electrically.

Parts handling

Standard models feature two toolport interfaces for connecting simple handling devices, such as vacuum boxes, parts sensors, clamps, pneumatic shuttle or rotation, or controlled jets of ionised air. The Modul line can be optionally fitted with electrically powered rotation on one or two axes or a simple shuttle for integrating any pre- or post-treatment devices, controls and positioning via cameras, or robotic loaders.

Operation, software and interface

Operation is performed through the graphic, multicoloured touchscreen display. It is possible to operate several units within a system via a single display. Printing procedures can be programmed in simple steps with the help of a user-friendly visual representation. The Modul line features a galvanically isolated digital interface and an Ethernet connection for updates and back-ups of order data.
Optional system communication enhancements include Profinet, Ethernet/IP or EtherCAT. To integrate operational data recording, an optional OPC UA interface is available.

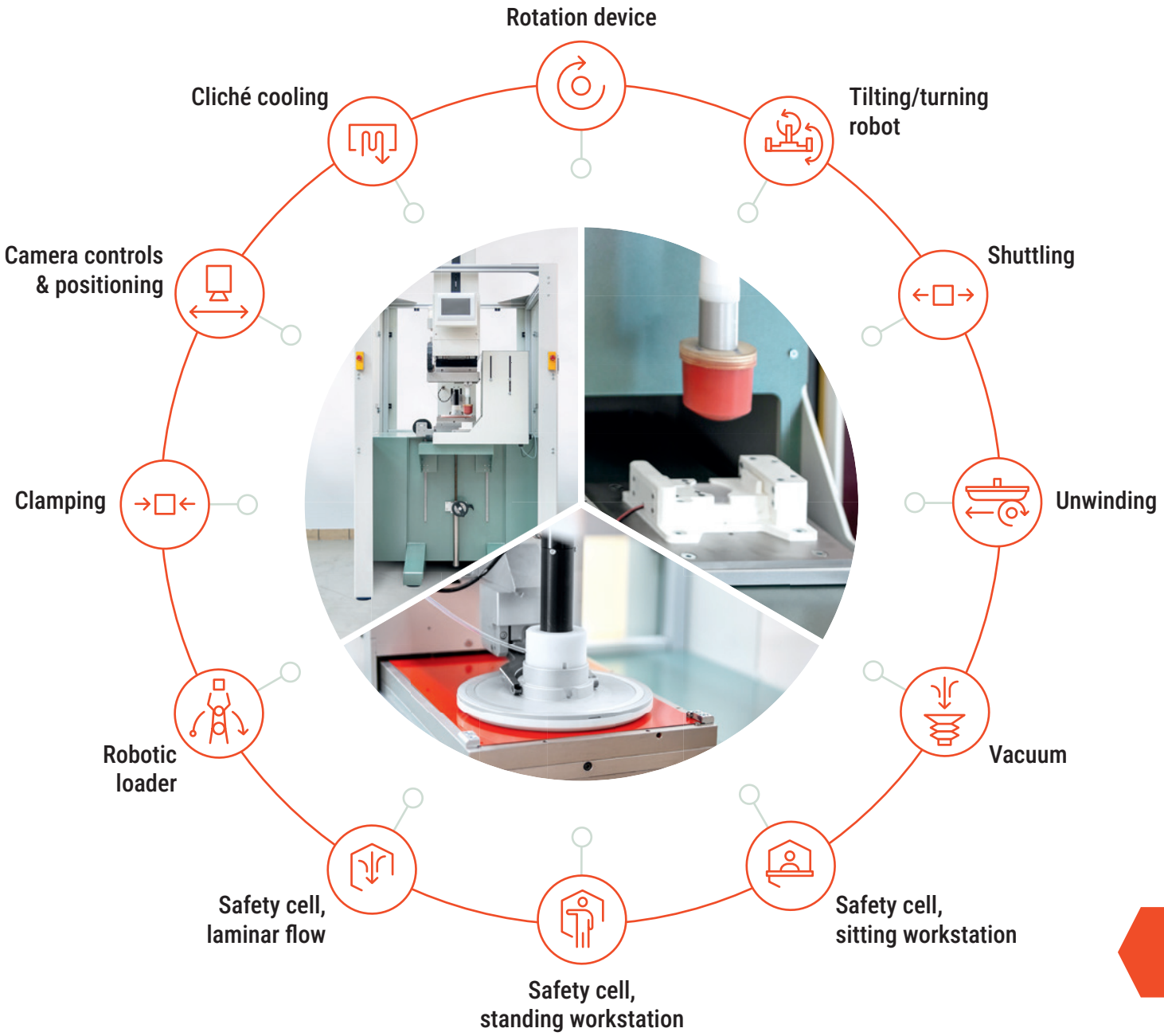
Accessories

For standalone operation within a system, we recommend at least pad cleaning control and the Viscomat. For higher requirements regarding product safety, we also offer filling level gauges for both units, as well as additional sensors for temperature and humidity. Cliché cooling is available to minimise temperature effects on colour transfer time and on the ink's pot life. Safety cells can be specially designed for sitting or standing workstations. They can also be equipped with an additional rotary indexing table and a laminar flow to minimise dust. A barcode reader simplifies and speeds up the set-up process.

ONE SOLUTION – **ENDLESS POSSIBILITIES**

Are you looking for a tailored solution to meet your needs?
The Modul line offers a broad range of configurations to meet your specific needs, ensuring maximum precision, flexibility and versatility.

Further additional equipment and adaptations available on request: info@microprint.ch



TECHNICAL DATA OVERVIEW

Machine series	Modul Line		
Machine types	**Modul 130**	**Modul 130E**	**Modul 170**
Number of colours	1	1	1
Speed [cycles/h]	1,800/1,200 with pad cleaning	1,900/1,300 with pad cleaning	1,600/1,100 with pad cleaning
Drive – pad stroke	pneumatic	electric with servomotor	pneumatic
Drive – pad X-axis/Y-axis	linear motor	linear motor	linear motor
Drive – cliché	pneumatic (S) / linear motor (O)	pneumatic (S) / linear motor (O)	pneumatic (S) / linear motor (O)
Cliché sizes max. [mm]	130 x 250 x 10/0.5	130 x 250 x 10/0.5	170 x 330 x 10/0.5
Ink cup [number x Ø in mm]	1x56 / 1x70 / 1x86 / 1x120	1x56 / 1x70 / 1x86 / 1x120	1x120 / 1x140 / 1x160
Print image max. [Ø in mm]	46 / 60 / 76 / 110	46 / 60 / 76 / 110	110 / 130 / 150
Pad stroke – force [N]	750	1,000	1,750
Pad stroke – travel distance max. [mm]	140	140	165
Pad projection max. [mm]	162	147	225
Pad cleaning	optional: 115 mm wide	optional: 115 mm wide	optional: 138 mm wide
Control	SPS Beckhoff	SPS Beckhoff	SPS Beckhoff
Program memory size	approx. 200	approx. 200	approx. 200
Interfaces	digital, Ethernet / optional: EtherCAT, Profinet, Ethernet IP, OPC UA	digital, Ethernet / optional: EtherCAT, Profinet, Ethernet IP, OPC UA	digital, Ethernet / optional: EtherCAT, Profinet, Ethernet IP, OPC UA
Thinning system	optional	optional	optional
Weight without base [kg]	approx. 92	approx. 130	approx. 159
Air consumption [l/min]	78	48	245
Power supply	110 – 240V, 50/60Hz	110 – 240V, 50/60Hz	110 – 240V, 50/60Hz

Further additional equipment and adaptations available on request: info@microprint.ch

Modul 130/130E | Modul 170/170E | Modul 220/220E

Machine series	Modul Line		
Machine types	**Modul 170E**	**Modul 220**	**Modul 220E**
Number of colours	1	1	1
Speed [cycles/h]	1,700/1,200 with pad cleaning	1,500/1,000 with pad cleaning	1,600/1,100 with pad cleaning
Drive – pad stroke	electric with servomotor	pneumatic	electric with servomotor
Drive – pad X-axis/Y-axis	linear motor	linear motor	linear motor
Drive – cliché	pneumatic (S) / linear motor (O)	pneumatic (S) / linear motor (O)	pneumatic (S) / linear motor (O)
Cliché sizes max. [mm]	170 x 330 x 10/0.5	220 x 420 x 10/0.5	220 x 420 x 10/0.5
Ink cup [number x Ø in mm]	1x120 / 1x140 / 1x160	1x140 / 1x160 / 1x180 / 1x200	1x140 / 1x160 / 1x180 / 1x200
Print image max. [Ø in mm]	110 / 130 / 150	130 / 150 / 170 / 190	130 / 150 / 170 / 190
Pad stroke – force [N]	3,000	3,000	6,000
Pad stroke – travel distance max. [mm]	165	190	180
Pad projection max. [mm]	210	285	270
Pad cleaning	optional: 138 mm wide	optional: 138/194 mm wide	optional: 138/194 mm wide
Control	SPS Beckhoff	SPS Beckhoff	SPS Beckhoff
Program memory size	approx. 200	approx. 200	approx. 200
Interfaces	digital, Ethernet / optional: EtherCAT, Profinet, Ethernet IP, OPC UA	digital, Ethernet / optional: EtherCAT, Profinet, Ethernet IP, OPC UA	digital, Ethernet / optional: EtherCAT, Profinet, Ethernet IP, OPC UA
Thinning system	optional	optional	optional
Weight without base [kg]	approx. 189	approx. 180	approx. 215
Air consumption [l/min]	60	270	130
Power supply	110 – 240V, 50/60Hz	110 – 240V, 50/60Hz	110 – 240V, 50/60Hz

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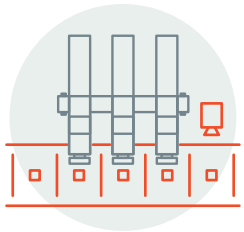
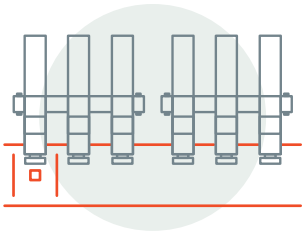
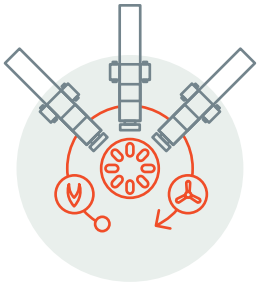
System options & details



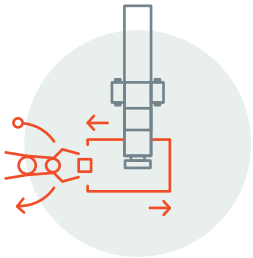
Complete system with conveyor belt and camera controls



Large system incorporating multiple units, with shuttle table and central control system

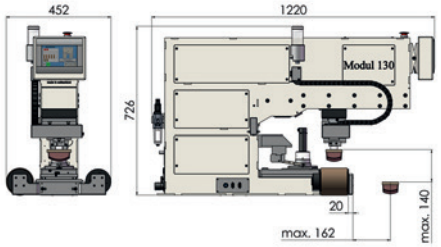


Rotary index table for pre- & post-treatment



Robot loader

Modul 130



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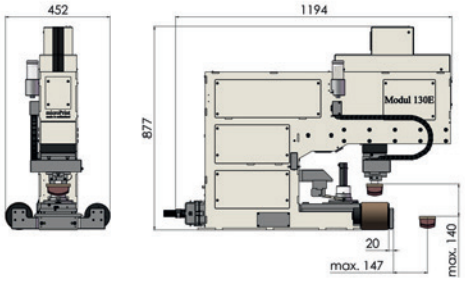
Modul 130E



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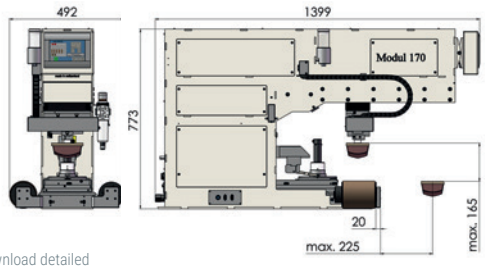
Modul 170



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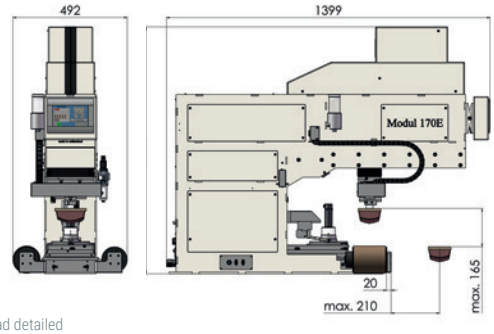
Modul 170E



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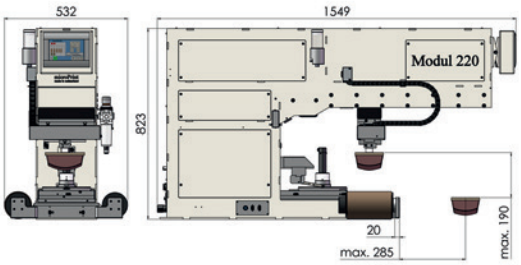
Modul 220



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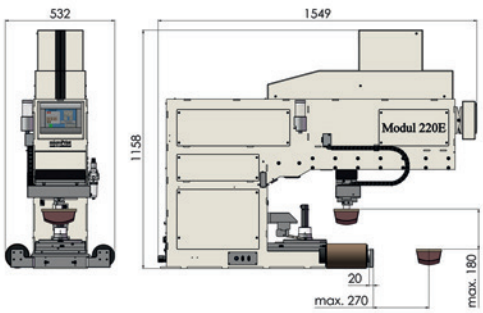
Modul 220E



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Since 1995, **microPrint** has been at the forefront of pad printing technology, consistently setting new standards and revolutionising the industry. Our team of experts is dedicated to developing innovative solutions tailored to meet the unique requirements of our clients. With extensive configuration options and a commitment to customised solutions, we deliver the ideal solution for every challenge.
Discover the microPrint advantage.

OUR GOAL:

Precision
Versatility
Innovation
Customised solutions
Flexibility
Efficiency

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