



In-House Coatings
is a joint venture
between



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Patent for the coating for In-House magnetic rollers has been GRANTED in the U.S. : nbr 6,503,674.
Patent pending in other countries.

CF-Technologies introduces the next revolution in Recycling

CF-TECHNOLOGIES are constantly looking for a faster and more efficient way to bring higher quality and a more profitable business to the cartridge recycling business.

Due to the unique application method, in a clean air environment, only a low investment all-in-one machine is required to coat or recoat PCRs and Magnetic Rollers, at a fraction of the replacement cost.



3 available racks:

- Rack A:
Ø 16mm without magnet or
Ø 12mm with or without
magnet for 121 pieces
- Rack B:
Ø 20mm for WX, HP9000
with or without magnet
for 30 pieces
- Rack C:
HP4000 with magnet or
Ø 16mm without magnet
for 55 pieces

4 available adaptors:

- PCR adaptor: metal axle Ø 6mm
- Magnetic roller Ø 16mm adaptor:
for HP4000 mag roller with magnet and
all Ø 16mm mag rollers without magnet
- Magnetic roller Ø 12mm adaptor:
all Ø 12mm mag rollers without magnet
(AX and HP1100 with magnet)
- Magnetic roller Ø 20mm adaptor:
for WX, HP8100 with magnet

Other adaptors can be made upon request.

COMMERCIAL INFO

Included in package:

- coating machine (single lathe)
- oven which will hold up to A3 Mag Roller size
- 3 multi purpose racks (see details below)
- multi functional cleaning lathe
- 4 adaptors (see details below)
- dual filter system including HEPA filters
pre-filter to be changed every 6 months
- mixing-unit propellers
- 3 automatic cleaning "guides"
- high precision scales for coating volume control

Maintenance contract includes:

All parts including Hepa filter, prefilters, mixing propellers, motors, etc... (adaptor ware excluded) and all software upgrades.

Extras:

- shipment and crating

Rental contracts: 3 or 5 years

License and training fee:

- Includes 3 days training in our factory in Belgium.

Training summary:

1. Set-up of the machine
2. Explanation of the machine and its parts
3. Machine settings
4. Coating products and mixing
5. Preparation of the coating process
6. The coating process for PCRs and MRs
7. The curing process
8. Cleaning methods
9. Quality control procedures
10. Safety

- Includes hotel and restaurant for up to 2 people.
- Customers will be asked to send 500 Magnetic Rollers to treat during training. These will be returned coated. If sending in sleeves is not an option, high precision new sleeves can be made available.
- On site training is optional.

- *Technical support is available to assist with the implementation of the In-House coating.*

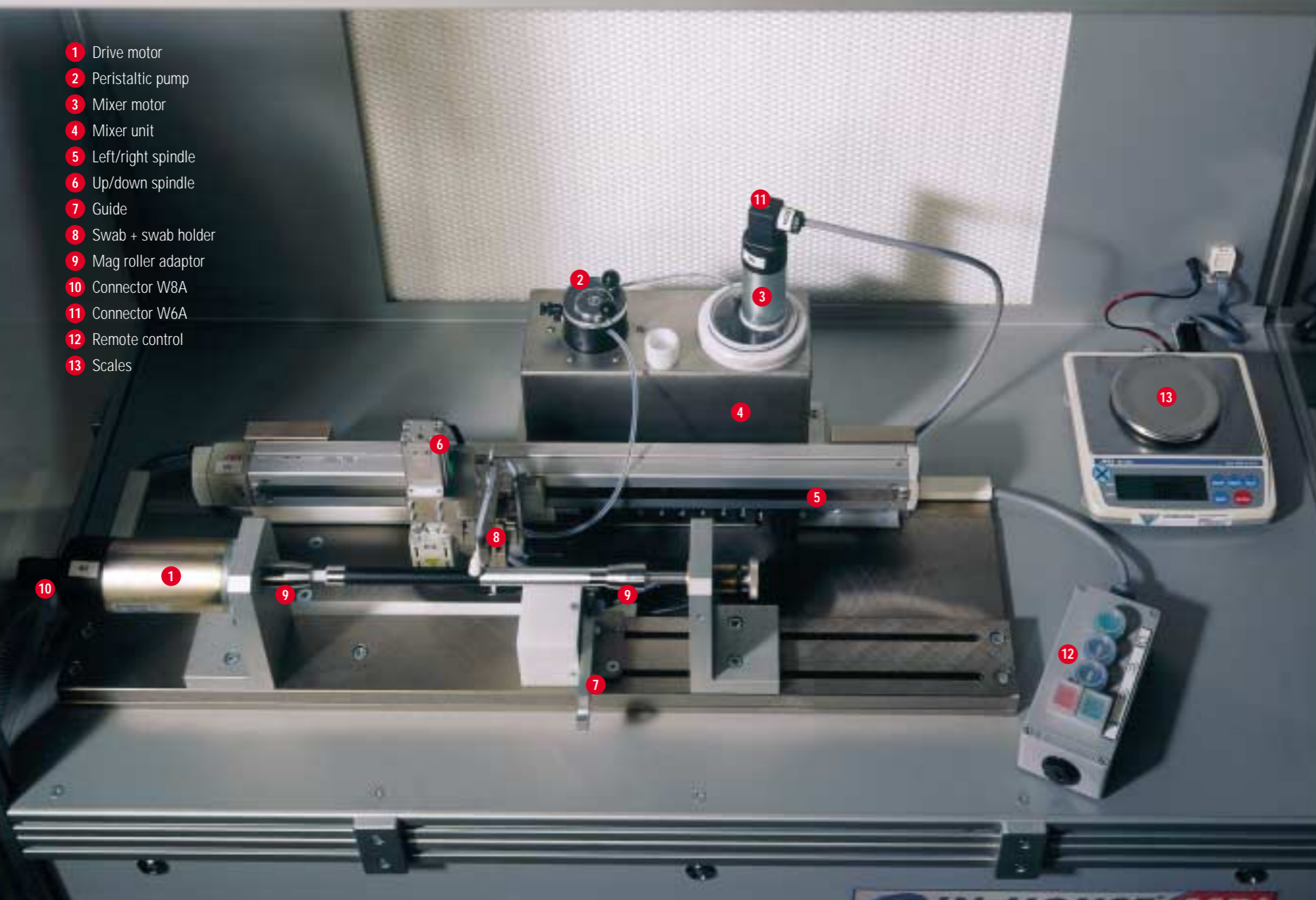
- *A non-analysis agreement relating to the coating liquids is to be signed by the company and its owner(s).*

Mixed Product Injection

IN-HOUSE MPI COATING MACHINE



- 1 Drive motor
- 2 Peristaltic pump
- 3 Mixer motor
- 4 Mixer unit
- 5 Left/right spindle
- 6 Up/down spindle
- 7 Guide
- 8 Swab + swab holder
- 9 Mag roller adaptor
- 10 Connector W8A
- 11 Connector W6A
- 12 Remote control
- 13 Scales



"In-House" Coating technology featuring "MPI" (mixed product injection) is the perfect solution.

A low investment, "all-in-one" machine combined with "easy to use" coating liquids will allow you to re-use worn parts without having to worry about cartridge quality. You can also choose to "make" new mags using blank aluminium sleeves.

This affordable and easy to use coating process makes it possible to repair worn and scratched magnetic rollers for the AX, BX, EX, HP1100, HP1200, HP2100, HP2200, HP4000, HP4100, HP4200/4300, HP4500, HP5000, HP8100, LX, N32, NX, NP12-NP17, PX, SX, WX, PB9800 & PB9900. Some are being tested with different toner and will be launched later. Furthermore, AX, HP4000, HP8100, NP12-NP17, PB9900, WX-type sleeves can be coated without removing the magnet.

The **MPI single step coating**, developed for this purpose, contains all necessary surface properties like conductivity and roughness. This was achieved by using a diversity of complex solid and conductive materials. It is this combination which allows the single step coating process, without the need to rely on any potentially inconsistent surface treatment of the substrate for roughness. For this reason, MPI can successfully treat scratched and completely worn rollers, as well as blank aluminium sleeves. Apart from oven curing, there is no need for any treatment after the coating process.

Such a sophisticated coating liquid demanded a stable application system. For this reason, the MPI coating machine was invented and developed over

a period of 3 years. The MPI coating machine addresses precision issues like pumping liquid, X-Y movements, RPM, mixing of the coating, etc. and ensures consistency with high-grade, low-maintenance components. Providing years of trouble-free use.

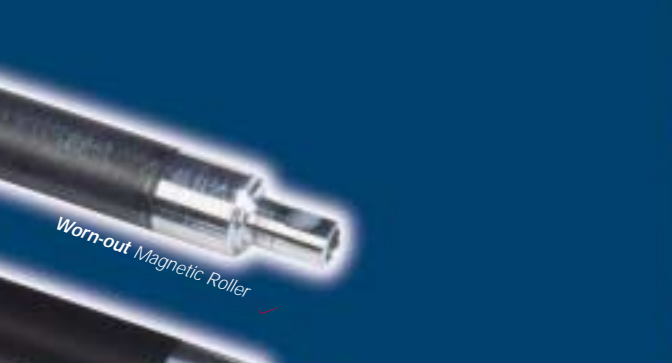
At less than **half the price** of a new magnetic roller, this system will offer a very cost-effective alternative. The MPI package includes oven, racks, etc. and will be available to rent.

Considering that profitability is achieved by coating as few as 400 mag rollers per month, all remanufacturers will be able to benefit. One unit can coat 7000 magnetic rollers per month, with one operator.

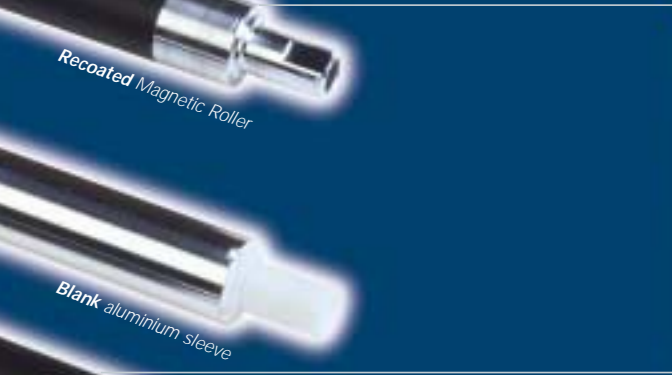
The same machine will have the possibility to coat PCR's for those remanufacturers who are interested.

Coating In-House means no more lead-time for shipping and returning coated parts. Moreover, it allows remanufacturers to grow their profit margins In-House. Higher margins in the cartridge business can easily be generated if the remanufacturer is recycling parts himself, instead of having to replace them with new ones.





Worn-out Magnetic Roller



Recoated Magnetic Roller



Blank aluminium sleeve

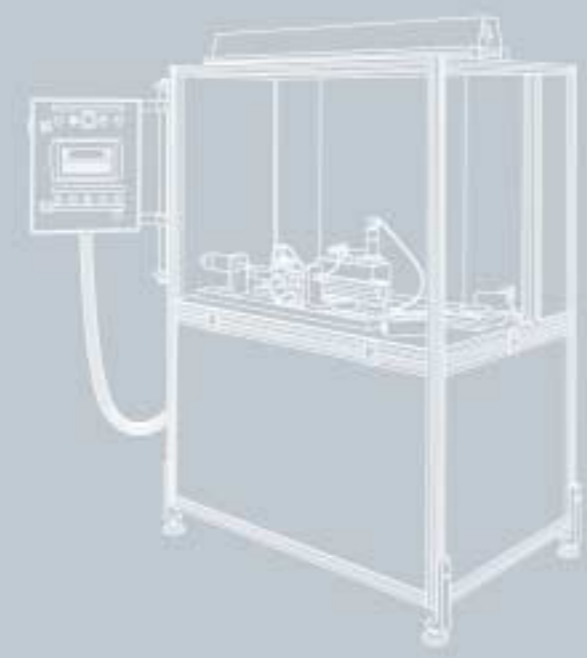


New Magnetic Roller



MPI Consumables

Specifications



IN-HOUSE MPI COATING MACHINE INFORMATION

- Machine type: IHMACHMPI (single lathe machine)
- Coating capacity: 350/day = 7000/month
- One machine: coating Mag Rollers & PCRs
- Height: 2050mm (81"), Length: 1280mm (50"), Width: 900mm (35")
- Weight: approx. 310 kg (684 lbs)
- Power Supply: USA: electrical 115V/ single phase 60 Hz: 2000 VA
- Europe: electrical 190V/ 230V/ single phase 50 or 60 Hz: 1500 VA
- Clean air environment incorporated in the unit
- Can coat A4 and A3 format products
- Constant development of new coating liquids
- No stripping of the OEM layer
- High repair capability of the OEM layer
- Modem line required for software updates on new Mags and PCRs

ENVIRONMENT

The complete recoating and cleaning process ideally takes place in a room where the temperature is between + 18°C (64°F) and + 23°C (73°F), with a relative humidity between 40% and 60%.

Installation requirements:

The coatings need to be stored between 7°C (44F) and 12°C (53F). The In-House machine is best placed as far away from the toner handling area as possible.



Worn-out PCR

Recoated PCR

TESTS AND MEASURING

Before putting the product on the market (MPI coating machine was invented and developed, over a period of 3 years).

Various tests were carried out:

- Life tests on all liquids: Shelf life, Pot life
- Transport tests
- Mag Roller tests including Print tests, Long-life tests, Compatibility tests and Structural tests with electronic microscope
- PCR tests including QEA tests, Shorting tests, Print tests, Long-life tests, Freezing tests and Visual tests
- Polymerization test
- Roughness testing & control

EASY-TO-USE

At the heart of this system we have one machine that, thanks to its unique design, is capable of coating Magnetic Rollers and PCRs.

- The simplicity of handling makes changes fast and simple.
- The machine is set once at the start of each day.
- The built-in clean air tunnel provides a dust-free environment during the coating process.

Advantages:

- Little space required
- Short training period
- Controllable quality, thanks to pre-tested parameters per product
- Damaged/scratched OEM sleeves are repairable