



DISCOVER NEW HORIZONS: THE PROTO5-M5

**The maker for up to 12,000 super slim or 14,000
king size cigarettes per minute**

PROTOS-M5: Unleash new potential

The new PROTOS-M5 offers you even greater performance and flexibility. Enabling you to meet the demands of the market with even greater precision and even more profitably.

There are over 100 PROTOS-M5 machines in operation worldwide, demonstrating extremely high availability levels and producing unparalleled cigarette quality on a day to day basis. Continuously.

What you need. Choose one of two speeds to suit your exact requirements: 12,000 cpm or 14,000 cpm king size. The machine is capable of producing slim or super slim cigarettes at a speed of 10,000 or 12,000 cpm, making it the fastest maker on the market for this sensitive but lucrative format.

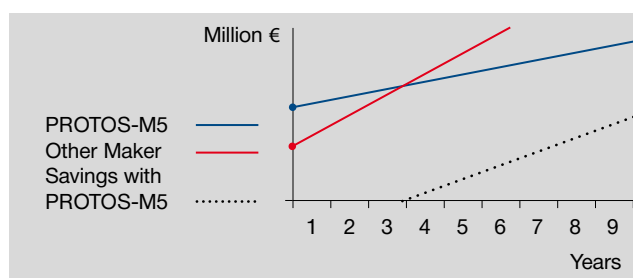
Brilliant, fast and economical – these are not mutually exclusive. In all our development work, cigarette and maker quality take top priority in the requirements specification. The quality of materials and workmanship minimizes the need for maintenance and reduces costs spent on wearing parts significantly. Its simple, clear design reduces cleaning time to max. 20 minutes every eight-hour shift. Its impressive Quick Brand Change (QBC) and Quick Size Change (QSC) speeds as well as its high level of automation turn the PROTOS-M5 into a multi-brand maker that achieves outstanding results with minimum effort and expense.

Avoidance strategy. The PROTOS-M5 prevents bothersome emissions from occurring in the first place. It prevents tobacco losses and saves up to 1% tobacco. MAX and SE waste – i.e. quality waste – is less than 1%. Noise emissions are almost half that produced by conventional machines. And it is energy-efficient too.

Talk to us about how we can optimize your production. We look forward to hearing from you.

Up to speed:

speed in every respect has its price but gives you a rapid return on investment. We will be happy to show you the figures.









HAUNI

PROTOS-M5

No secrets. Behind the unparalleled cigarette quality and huge availability of the PROTOS-M5 lie complex systems, highly sophisticated technology and not least considerable expertise and experience.

Operating your new maker efficiently and profitably during the initial familiarization stage goes without saying. That's where we, as the developer and manufacturer, will gladly offer you our support. With decades of experience in the tobacco industry under our belt.

Every step of the way. The start-up service package includes everything from installation through to commissioning. After that our Production Support can help show you how to exploit your new PROTOS-M5's full potential as quickly as possible. Technical training courses, either on your premises or in our Training Centre in Hamburg, give your operators the skills they need for any conceivable task.

You don't need to carry out any maintenance yourself either. It can be performed as required, after certain intervals or preventatively. This applies to the maker itself as well as all its sensors.

If you like, of course, we can also create an all-inclusive carefree package to suit your individual needs. Let us know what your requirements are.

In detail: get to know your M5 in the Training Centre, away from the bustle and pressure of the shop floor.



You'll never walk alone: whatever help you need, from installation to production, our technicians will be glad to assist you.



A close-up, macro photograph of a honeycomb structure. The hexagonal cells are filled with a golden-brown, textured substance, likely honey or beeswax. The lighting creates a soft glow, highlighting the intricate patterns of the honeycomb. A semi-transparent blue rectangular box is overlaid on the left side of the image, containing white text.

**Quality and
performance:
customer-proven
results**



Born to excel. The identical, flawless rods produced by the PROTOS-M5 form the basis for your excellent brands. Whether you are producing king size, slim, super slim, light or with a high Expanded Tobacco (ET) percentage, at fast or slow speeds. The zigzag feeder and fluidized bed principle used in the VE ensure that the tobacco is handled so efficiently and gently that you can practically forget about loose ends, soft or hard spots, degradation or standard deviation.

Trust is good, control is better. Simply trusting that both the tobacco and the finished product massflow are handled in a particularly gentle manner is not enough. All the relevant physical and visual criteria are measured online. Extremely high cigarette quality is ensured by a variety of sensors which are integrated in control circuits. The weight, diameter and printmark position, for example, are adjusted on a continual basis. The endless tobacco rod is checked for Non-Tobacco Related Materials (NTRM). Anything less than 100% quality is precision-ejected. And both the airtightness and pressure drop of each individual cigarette is checked before it leaves the machine.

Nothing but the best. The PROTOS-M5 produces top-notch cigarettes each and every time. Up to 14,000 king size or 12,000 slim / super slim cigarettes per minute. Hour after hour. Shift after shift.

Turning the corner to success: the zigzag feeder ensures perfectly homogeneous, identical tobacco rods.



All good: the inspection drum provides concrete proof of top quality.



**Optimum tobacco
yield:
up to 1% savings
and minimal waste**



Tobacco belongs in cigarettes. Not in the bin or anywhere else. It is too precious to waste. We have fine-tuned the PROTOS-M5 in painstaking detail so that you can save up to 30 tons of tobacco. Every year. On a 3-shift basis.

New sources of tobacco. For the PROTOS-M5 we can offer you the Short Tobacco Recovery (STR) system. It filters reusable shorts from the exhaust air. Tobacco obtained in this manner is systematically and continuously added to the centre of the rod. Maintaining total blend consistency with the same moisture content. Without any degradation. Cigarette quality is completely unaffected.

Quality saves you money. Control circuits keep rod quality consistently high, and quality waste consistently low. The machine's operational reliability and automatic restart function keep start-up and stop waste to a minimum. The run-empty program automatically ensures that every last bit of tobacco goes into your precious blends. Total waste is well below 2%.

Different types of waste are removed automatically. Tobacco can be recovered from quality, start-up and stop waste and returned to the production process. NTRM waste is removed separately.

More than tobacco. Utilization of waste heat is one of the many ways in which substantial savings can be made. The water cooling system enables you to recover 50% of the energy used by connecting it to your factory's air conditioning system, for example.

All in all, these potential savings give you an incredibly fast ROI.

Short Tobacco Recovery: *your PROTOS-M5 produces up to 37 million more cigarettes per year from the same amount of tobacco.*



Self-starter. It will usually be external reasons that stop the PROTOS-M5. No reason to panic – the M5 restarts automatically after the forced stop, resuming the production of cigarettes of a sellable standard ad hoc.

Automatic monitoring. The PROTOS-M5 monitors itself continuously as it operates – and corrects any fluctuations immediately. For example, ODM optical diameter measurement adjusts the cigarette diameter on a continual basis. The machine handles this and various other quality criteria automatically so your operator is free to concentrate on other tasks.

Automatic feed and disposal. Your operator no longer has to worry about what waste is produced when or where. It is discharged from the machine automatically with pinpoint precision. NTRM waste for disposal, other waste for further use. Overfull waste bins are a thing of the past. So is having to stop the machine due to a paper shortage. Reliable and continuous paper feed is ensured by the BOB-MEs, which change the bobbins exactly when needed and splice the webs fully automatically. We can of course also offer you equipment that supplies bobbins to the BOB-ME fully automatically. The BD bobbin depalletizer is the next step towards a fully automated factory.

The PROTOS-M5 is so reliable and saves your operators so much time that they will willingly cast an eye on another machine before they get bored.

10 µm is too much:

ODM corrects fluctuations in the rod diameter.




With a microwave: MIDAS-XR guarantees pure cigarettes with the perfect weight. Cigarette after cigarette.



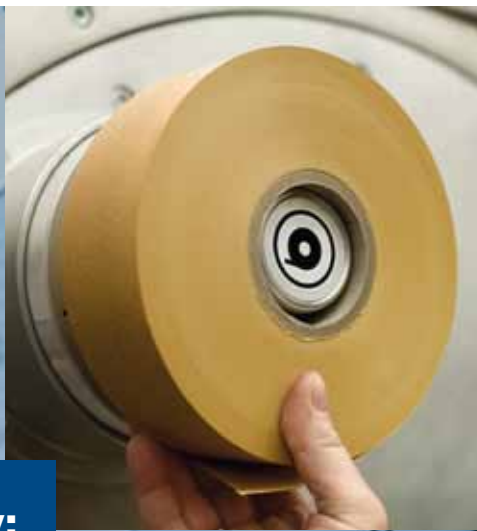
Looks good:

ORIS-XR checks each cigarette for any visual faults.

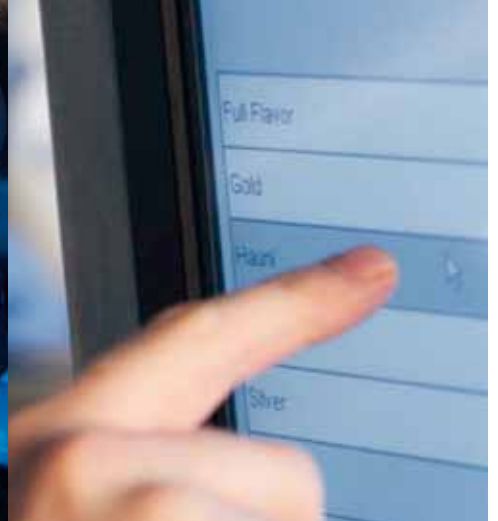




**Maximum auto-
mation: new
manning concept
possible**



**Maximum flexibility:
Quick Brand
Change and Quick
Size Change**



However small the batch. Rapidly changing markets mean you need to fill small niches flexibly as well. The PROTOS-M5 has stood the test of time as a multi-brand maker for many years, which makes these smaller batches very lucrative as well.

QBC: an extremely efficient use of 30 minutes. If, when changing from one brand to another, the material dimensions are identical, you can have production of sellable cigarettes back up and running in less than 30 minutes. Most parameters are stored and can be adjusted at the touch of a button. A few “modifications” are already preset – all you need to do is more or less flip the switch. Done.

QSC: used to require a second maker – now it’s done in less than 2.5 hours. If the bobbin width, the tobacco rod and filter lengths are being changed and the total length and diameter stay the same, we preconfigure it so that a QSC will only take 60 to 150 minutes to perform – with only two technicians. A number of parameters are also stored here and are performed at the touch of a button. The visualization system guides the operator through everything else step by step. Usually the operator will only have to switch to the second preset configuration. Parts that have to be replaced are designed so that they can be fitted easily and exactly in one position only. There is no need to run the machine in to the new format.

The savings are easy to calculate. Even without all the other potential savings the PROTOS-M5 offers you, the decision to replace two machines that would be costly and time-consuming to retrofit by just one single multi-brand maker is certainly worth thinking about.

Cigarette break:
*the time lapse
between these two
cigarettes is just 150
minutes.*



Easy operation and maintenance

Operation. Typical of Hauni. Step-by-step operator guidance. Many of the details that used to be dealt with by the operator are now handled by the maker itself. Via control circuits, automatic starts, self-adjusting brand parameters and everything that goes with it.

Needs to be done, but doesn't have to be a hassle. We have reduced the remaining cleaning work to a minimum by including plenty of automatic cleaning. The MAX jet-gluing unit, MIDAS-XR or FILTROMAT-E, for example, clean themselves automatically. The rest takes around 20 minutes every 8-hour shift.

Maintenance is much easier. Typical wearing parts last a lot longer. Suction tapes last for 2 shifts, and garniture tapes can actually last for up to 3 shifts. You can use the cutting edges on the tipping roller in the shear-cut tipping unit four times. And belts, which are prone to wear, have been replaced by worm conveyors in the VE.

The PROTOS-M5 has an openly accessible, coherently logical design. Slide-out functions and quick-lock functions ensure that every action is performed easily, clearly and safely. Index pins on the drums ensure that the required position is always correct.

Quietly confident. With a noise emission of less than 78 db(A), you can remain calm in the knowledge that it meets all the guidelines. Servomotors, the efficient water cooling system and the effective use of guards on the machine make it really easy.

Keeps on running: the new tip-jet gluing unit cleans itself automatically after every machine stop, and that's all it needs.



Wear-resistant: long lasting parts increase your uptime.



Ergonomics is when even maintenance is so easy it's enjoyable.







**Options:
ask for more
PROTOS-M5**

Adaptable. We can customize your PROTOS-M5 with various options to suit your exact requirements. Whether you intend to produce king size format at 12,000 / 14,000 cpm, or slim / super slim format at 10,000 / 12,000 cpm.

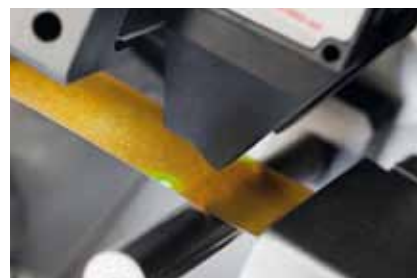
The tobacco supplied to your PROTOS-M5 is controlled by the tobacco feed control system. This ensures that exactly the right quantity of a blend is supplied to the maker at any time, whatever the production speed.

If requirements call for ventilated cigarettes, we can provide a laser that is designed to perforate cigarettes online. The short tobacco recovery system turns your maker into a thrifty machine. We provide QBC and QSC kits which are tailored exactly to your brands. The quality of every aspect of your brands is ensured by a variety of sensors. And the machine's printer units apply print-marks to your cigarettes accurately and precisely.

More colour for your brands: a second printer makes your brands more colourful.



Never unstuck: the sensor monitors the tipping paper to ensure that it is always correctly glued.



Technical data:

Total cigarette length*	69 – 100 mm
Tobacco rod length*	49 – 75 mm
Tobacco rod diameter*	5.4 – 8.4 mm
Tipping paper width per cigarette (min. 4 mm overlap)	28 – 74 mm
Filter length – 4-up filter rods	15 – 33 mm
– 6-up filter rods	10 – 25 mm

*Other formats available on request

Logistics: your PROTOS-M5 – perfect in any production environment

No maker is an island. Upstream equipment is needed to supply the materials and downstream equipment is needed to transfer the finished cigarettes onwards. We can offer you a range of logistics components in both directions, which not only process the product very gently but are also able to handle whatever speed your PROTOS-M5 is producing at. Without having to stretch their limits.

Tailored to requirements. We tailor the supply of materials to your PROTOS-M5 to suit your production environment. Paper is supplied by BOB-MEs. And they, in turn, can be supplied by a fully automated BD bobbin depalletizer.

Filters are supplied just as reliably by the FILTROMAT-E or by massflow.

The finished cigarettes can be transferred as a massflow to the VARIOS first-in, first-out reservoir directly via RTS-V components. Or COMFLEX-MV and HCF-M can ensure that the cigarettes are transferred quickly and gently into trays or conveyed to the reservoir or packer.


Perfectly connected. Of course, thanks to a range of CPMS Cigarette Production Management System components your PROTOS-M5 and entire peripheral equipment can be integrated perfectly into your factory automation system. As modules, step-by-step, individually.

We look forward to discussing the production environment of your makers with you.

Input: reliable infeed to the PROTOS-M5 by massflow and/or the FILTROMAT ensures a reliable production process.





A full-page photograph of a worker in a dark blue or black uniform walking through a factory. The worker is carrying a large, light-colored sheet of material, possibly a piece of machinery or a large panel, under their arm. The background is blurred, showing industrial equipment and structures, suggesting a fast-paced environment. A dark blue rectangular box with white text is overlaid on the left side of the image.

**Service: so your
PROTOS-M5 works
for you continuously
right from the start**