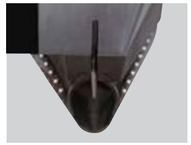
The Kaymich AFS1000 Key Applications

The AFS1000 offers clean, accurate application of virtually any flavour to any part of the cigarette

Filter



Tobacco

Paper

MAKING MACHINE APPLICATION

The AFS1000 can be used to service a number of different making lines (although only one at a time) and can be pre-set with both shift pattern and brand setup. Furthermore, many customers choose to enable flavour application at a number of different points within the secondary as this can affect the composition of their end product, and therefore provides more versatility in terms of cigarette design.

Three applicator choices are available:

1. On the paper on the cigarette maker (for up to 6mg/cigarette)

Application onto the paper on the cigarette maker is generally acceptable for dosages up to 6mg per cigarette. Up to this dosage the tobacco is capable of absorbing the flavour directly from the paper.

2. Into the tobacco on the cigarette maker (for above 6mg/cigarette)

For higher dosages (above 6mg per cigarette.) Kaymich recommend that the application is made into the tobacco stream. A unique applicator design ensures that an accurate dosage of flavour is distributed evenly across the stream, allowing the effective absorption of the full flavour dosage, without producing any negative effects upon the quality of the rod produced.

3. Into the tow on the filter maker

The AFS1000 uses the manufacturer's stuffer jet with the flavour applicator mounted on the tow funnel. Flavour is dispensed through a hollow needle into the heart of the filter tow. When the machine receives a stop signal, the needle is retracted from the tow and rests in a safe place within the valve body. The exact position is in the centre of the moving tow, just at the point where the filter paper and the tow are formed within the tongue. Thereby encasing the liquid menthol within the acetate tow and filter paper.

The flavour is completely encapsulated within the tow ensuring that flavour production is completed without contamination of manufacturing equipment downstream from the filter maker.

The AFS1000 is the most versatile flavour application system on the market today. The unit itself applies flavouring on-line to an average accuracy within +/- 0.2mg per cigarette stick. Flow is proportional to making machine speed and so the specified dosage per cigarette is always applied, regardless of how fast or slow the making machine is running.

technical specification

AFS1000
Advanced Flavour System

system description:

The AFS1000 is designed for the on-line application of liquefied flavour during the Secondary process of cigarette manufacture. The unit can apply both heated flavours such as pure menthol, or cold flavour. The AFS1000 can apply a variety of flavours over a wide range of colour and viscosity.

Flavour can be applied on-line at a variety of locations dependent upon requirements:

- Cigarette making machine – on the cigarette paper
- Cigarette making machine – in the tobacco stream
- Filter making machine – into the tow

Average accuracy to within +/- 0.2mg/cigarette, the AFS1000 employs a low maintenance pump that delivers near pulse-less flow.

Suitable for fitment to a wide variety of machines including Cigarette Makers and Filter Plug Makers. For specific machine types please refer to Kaymich.

CE compliant

services required:

Dry, filtered non lubricated air 60 to 100 psi/4 to 7 bar
Electrical voltage 220/240Vac single phase

flavour specification:

Typical flavour application could include Menthol (crystal or solution), Mint, Fruit, Clove, Vanilla, Liqueur flavouring.
Menthol crystals, natural or synthetic
Viscosity, not critical
For confirmation of flavour capability, please contact Kaymich

performance characteristics:

Maximum capacity 7.5 litre per tank
Temperature range ambient to 70°C
Standard flow rate 288ml/minute. (Up to 1500ml/minute optional.)
Dimensions for the dispensing unit 935mm x 935mm x 532mm
Dimensions for the Human Machine Interface 420mm x 375mm x105mm

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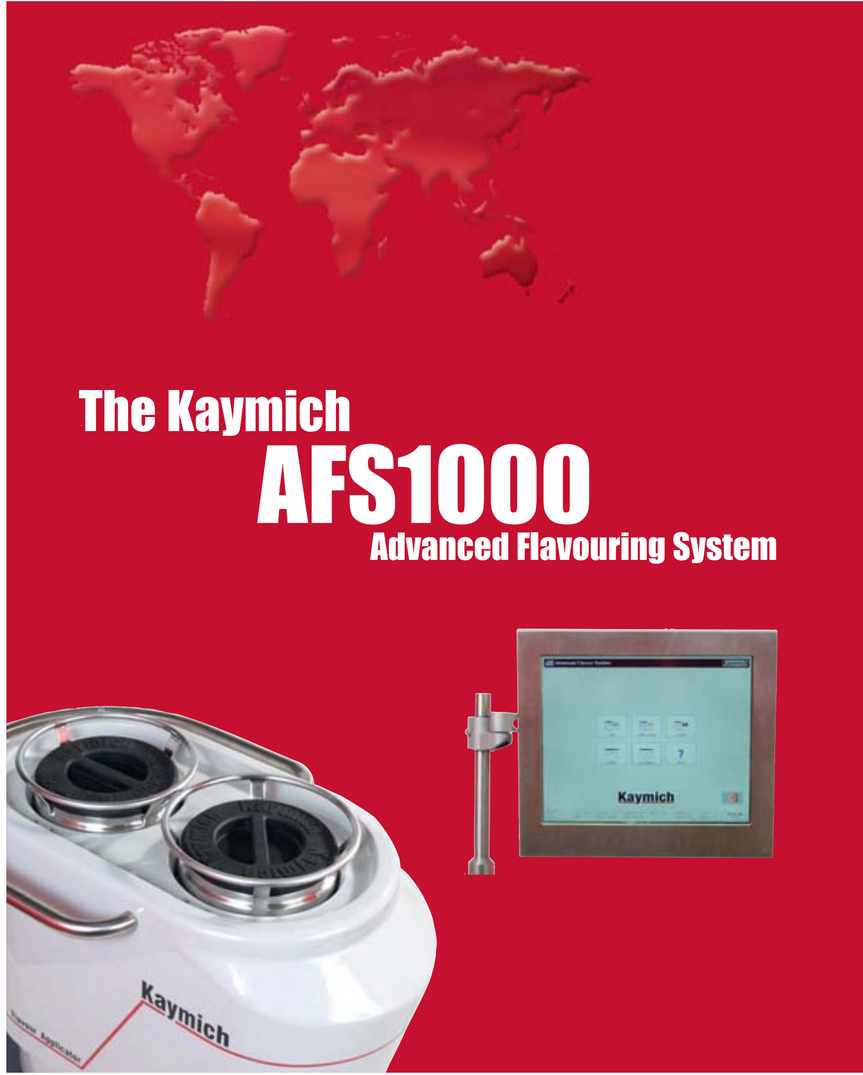

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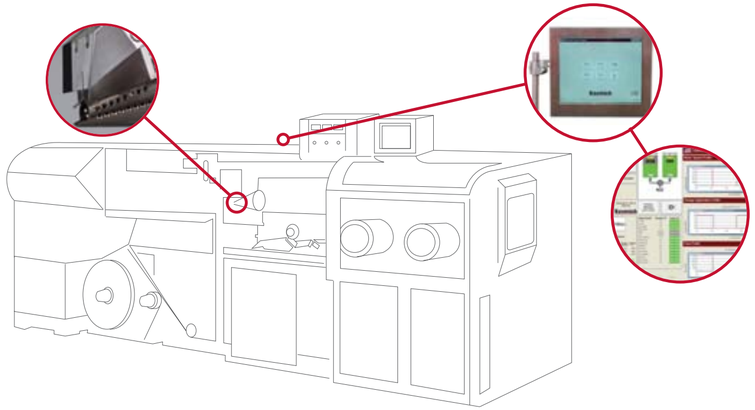
The Kaymich AFS1000

Advanced Flavouring System

For Cigarette and Filter Makers

The AFS1000 Advanced Flavouring System has been designed to apply an extensive range of liquid flavours through three different choices of application points; onto the paper on the cigarette maker, into the tobacco on the cigarette maker or into the tow on the filter maker. The AFS1000's advanced technology software offers the most intelligent and versatile flavouring unit available on the market today.



As pioneers of the first on-line application system in the tobacco industry, Kaymich have over 20 years experience in flavour application systems.

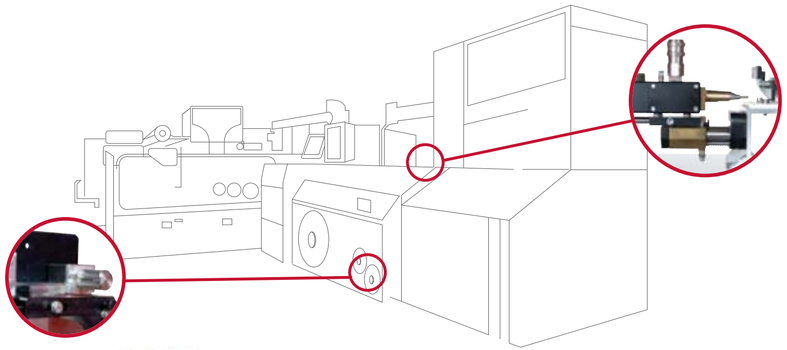
All Kaymich's flavouring systems benefit from:

- Accurate and consistent application
- On line monitoring
- Clean application
- Production versatility

Kaymich flavouring systems have enjoyed substantial success with many users buying multiple units to extend the versatility of their production facilities.

The AFS1000 offers many new benefits and features, that aid today's demanding production requirements.

- **User Friendly – 17" Touch screen with animated icons and easy to follow set up procedures.**
- **Greater versatility – A wide choice of settings and parameters, including brand setting.**
- **Advanced quality control- Flow meter ensures correct dosage amount.**
- **Various pump options.**
- **Easy set up – touch screen controls with on-line trouble shooting facility**
- **Easy to use – quick release at all points (tanks and hose)**



Features

- Flow Meter as standard.
- 17" Human Machine Interface.
- Optional pump configuration.
- Inbuilt Language options.
- Asset labelling (reference and location.)
- Brand and shift settings.
- Animated touch screen controls.
- On-line troubleshooting guide.
- Configurable units of measurement.
- On screen monitoring charts.
- User friendly on screen keyboard.
- Choice of application points.
- Constant measurement of the tank's content.
- Twin tanks provide continuous manufacturing.
- Quick release self sealing connections.
- Locking lids.
- Optional Data Collection software.
- Optional tank agitation system for specialist flavours.
- Optional Remote Heating System.

Benefits

- Integrated Flow Meter ensures the application dosage is within the set parameters.
- High capacity pump option enables higher dosages at faster speed.
- Large touch screen HMI provides user friendly animated icons and clear optional settings.
- Standard language setting effortlessly translates the on screen language to the customer's preference for their convenience.
- Integrated on-line trouble shooter assists users in diagnosing and correcting errors.
- Personal preference of measurement unit.
- On screen keyboard for convenient entry of text or numeric values.
- Eliminates primary equipment contamination.
- Fully compensates for making machine speed ensuring consistent flavour application.
- Accommodates batch production.
- Twin flask design for cleaner, easier refill procedure and ensuring continual flow.
- Easy change between flavours with minimal cleaning.
- Accommodates a wide range of flavours.
- Application on the cigarette maker (paper or tobacco stream) or on the filter maker into the tow.
- Handles clear, translucent and coloured liquids, high and low viscosities.
- Collection of data, and monitoring system through the optional data collection function.

OPTIONS

DATA COLLECTION

Data Collection is a software feature that provides remote access, via Ethernet to the AFS1000's and making machine's "live" information.

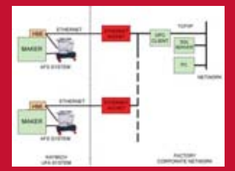
The AFS1000's Human Machine Interface (HMI) is fitted with an Ethernet socket, that enables connection to an existing network or stand alone PC. Both the AFS1000 and maker data is transferred over the Ethernet (TCP/IP) using OLE for process control (OPC). The HMI acts as an OPC server while the factory network's PC/servers act as OPC clients.

Data Collection allows the user to access a wide range of the AFS1000 information from a remote location. Typical parameters that can be monitored include temperature settings, temperature zones, dosage, tank levels, brand selection, maker speed, stop and start times, reasons for last stop and more.

Multiple AFS1000 users have the advantage of managing several production lines from one PC.

Requirements:

- OPC client configured to collect and store data from the AFS1000
- One available network connection per AFS1000
- AFS/HMI and network security configuration.



REMOTE HEATING SYSTEM

The RH1A product has been designed to complement the Kaymich Advanced Flavouring System and provides a means of storing, heating and melting flavours where high consumption is required in the cigarette, filter or cigar manufacturing process.

A piston agitator is used to significantly reduce the time to heat flavours in the flask. It draws in melt from the flask, heats it and ejects it back into the flask. This method also aids mixing of the flask contents by the flow of heated flavour back into the flask.

FEATURES

- Interchangeable flasks with the Advanced Flavouring System
- User friendly control panel
- Lockable wheels for easy transportation and secure positioning
- Built in refill prompt message
- Options to use with the AFS agitator to ensure consistence of mixed flavour.

BENEFITS

- Rapid melt time
- Increases the production capacity of the Advanced Flavour Applicator
- Allows flavours to be prepared off-line

TANK AGITATOR

The cylinder agitator assembly is designed to keep the liquid flavour inside the AFS1000 cylinder moving whilst having the lowest impact upon the AFS1000 itself. The Cylinder Agitator fits onto the standard FS103100 Flavour cylinder. This enables the Cylinder Agitator to be controlled from the HMI to start, stop and vary the speed.

The purpose of having the ability to agitate the tank contents is to ensure that the consistency and mix of the flavour ingredients remain constant during flavour application. This is particularly essential when a flavour comprises ingredients of different specific gravity.

The Cylinder Agitator is fitted with an interlock to ensure that it can only be started when it is correctly positioned within the cylinder.

A variable speed control allows the operator to change the speed of agitation within the tank according to the requirements of the flavour.

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