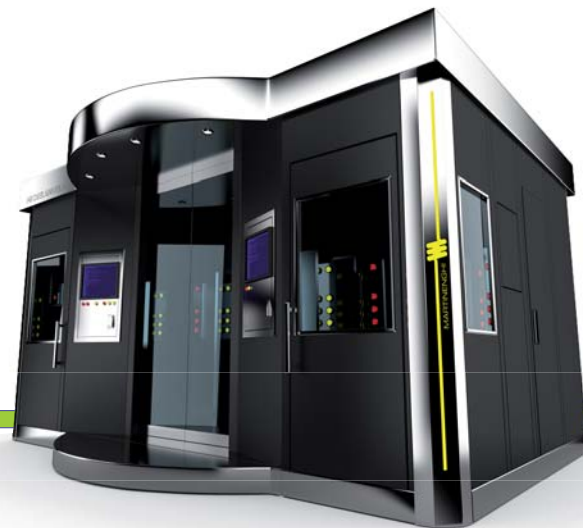


A NEW RENAISSANCE IN PRINTING PROCESS





MICHELANGELO



MARTINENGI



KX48P

MICHELANGELO PACKAGING PROGRAM

The dawn of a new era

Genius and Innovation

Digital Printing: the new decoration process for aluminium tubes, aerosol cans and plastic tubes.

Genius and Sustainability

No scrap due to setup adjustments; dramatic reduction of energy consumption, thanks to UV curing process.

Genius and Brain

Downtime for decoration change over reduced to zero seconds: the best performance ever seen in a printing process.

Genius and Beauty

Amazing decoration possibilities, small batches, variable data, authentication capability; and much more.



CMYK COLOUR MODEL

CMYK Colour model is the standard solution for digital printing. It uses four basic colours: Cyan, Magenta, Yellow and Black. CMYK works by partially or entirely masking colours on a lighter, usually white, base coating. The ink reduces the light that would otherwise be reflected. The final result is that the human eye perceives it as millions of different colours.



GRAPHICS TO CONTAINER

Digital technology allows immediate execution of each printing job. The chosen image will be exactly duplicated on the media, accurately recreating the colours defined in the customer's artwork. Sample production has "zero impact" on the machine performance and such samples are immediately available.



PRINTING SYSTEM

The machine uses a contactless drop on demand inkjet system composed of several piezoelectric printing heads, a built-in ink feeding system, UV curing lamps and a proprietary graphics software. The system is able to create ink drops in the scale of pico liters (trillionth of a liter).



UV CURABLE INKS

The machine utilizes highperformance UV curable inkjet inks for state-of-the-art image quality and excellent text sharpness. The inks guarantee strong adhesion, high scratch resistance and very high solvent resistance as well as a top level jetting performance. All inks are homologated for real production.

KX48P is the digital printing machine born from the genius and the creativity of a team highly experienced in the design and manufacture of machinery for tubes and aerosol cans. It opens a new era in the decoration of hollow bodies, ensuring the highest standards of productivity, reliability and quality and giving to all our customers the freedom to lead market changes, rather than follow them.

DIGITAL PRINTING

All batches can be handled as printing a queue, so it is technically possible to print each single tube with its own unique decoration! Quality is guaranteed by a built-in camera detection system. It means a real revolution in production output and capability. Furthermore, it gives to the end customer an unbelievable range of marketing opportunities.

MACHINE ARCHITECTURE

Thanks to the contactless nature of our system, the substrate and printing heads are never in contact, and there are no mechanical stresses on the mandrels. So, Martinenghi's engineers have developed a smart solution, composed of eight linear motors coupled to a laser measuring system, for conveying the parts under the printing deck with extremely high accuracy*. This patented device guarantees the highest efficiency in the printing process.

HOMOLOGATED INKS AND GRAPHIC SOFTWARE

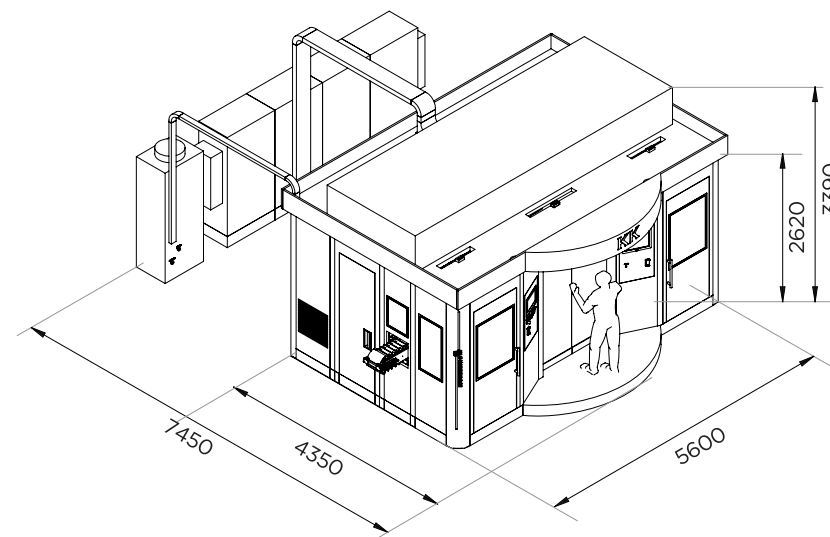
A huge effort has resulted in the development of appropriate raw materials that guarantee both the sharpest, shiniest graphic result and the fulfilment of extensive production homologation tests. Specific graphic software manages the whole process, continuously monitoring the quality of the output. Now, aerosol can and collapsible tube manufacturers are in the position to decorate their products using the optimum digital process.

TRAINING AND KNOW HOW

Martinenghi is developing a complete training program that starts before the installation and includes both theoretical sessions and practical hours on a machine in a production environment. Our support is always available after the installation, thanks to network devices and remote assistance, as well as on-site support delivered worldwide.

MAIN TECHNICAL FEATURES

Diameter range	mm	13,5 - 66
Length range	mm	50 - 280
Process colours	n°	up to 7
Gray scale	n°	up to 8 levels
UV curing devices		1 + 4/6
Linear printing speed	mm/min	up to 80.000
Power	kW	approx. 50
Weight	Kg	30.000



* Technical Advisor: Politecnico di Milano

