



## FLEXIBLE SPRAYING MACHINES FOR:



### SPRAYING GLAZE ON POROUS CERAMICS

Spraying on earthenware, stoneware and porcelain in one or two colours. Both static spraying and robotic spraying are used here. As well as dipping a colour outside, before or after spraying the inside.



### SPRAYING GLAZE ON VITREOUS CERAMICS

For bone-china. A pre-heater and a dryer are used here, either infra-red or hot air type.



### COLOUR STAIN SPRAYING ON READY WHITE WARE

Mostly robotic spraying, equipped with a pre-heater, dryer and a washing booth for the ware carriers (product supports).

Our rotary table glaze spray machines are always unique machines, fully adapted to the production process of the customer. After all, every customer has specific requirements. In many cases our engineers are requested to design a specific solution. We can do so very economically due to our modular designs. Herein lies our strength: we can meet all your requirements for the spraying of ceramics, especially dinner and clay-ware. Ask the comprehensive brochure for all technical details and options.

The Multispray is designed for fully automated glazing of ceramic products of various shapes and sizes. The machine is fitted with product spindles on a turn-table and a number of spray booths and spray guns. Thus allowing for quick simultaneous spraying of large numbers of products, in up to four different colours. There are multiple ways to colour the ceramics, two spray options are explained on the other page. Also robots can be added to the multispray, for flexible automation.

The spraying process is automated, fast, clean, and also economical due to the collection of glaze, so you can re-use it. An optional extraction unit that circulates the filtered air back into the building can be added. Various types of product support can be mounted on the spindles easily and quickly interchangeable. Due to our modular design, our big experience and many options, you can automate virtually any production.

### THE ADVANTAGES

- Spraying large numbers of ceramic products in many shapes and sizes;
- Accurate and infinitely repeatable production
- Spraying up to four different colours;
- Clean spray process with re-use of glaze;
- Modular design, with many options;
- Very high life-span with minimum maintenance;
- Turn-key delivery possible;
- User-friendly because of easy programming and cleaning, so fast change overs;
- A fully equipped test facility at VSM for optimum advising purposes;
- Specials up on request.

## BASIC LAY-OUT

Our modular design consist of six table diameters, two types of spindles and various modular spray booths (wide and height). On the right you can see some construction drawings of combinations with round turntables, spray booths, and spindles are shown in plan

view. The numbers in the right corner under the drawings is the distance between the spindles. All dimensions in millimetres. Please note, there are more options possible, like four spray booths or one big spray booth.



**M-D-1-7-32** With one big spray booth.

AMOUNT OF SPINDLES:	8	10	12	16	20	24
<b>Model M-E</b> D stc spindles = 2850 diameter table = 2950 spray booth = 1000 / 1400 wide  PITCH						
<b>Model M-D</b> D stc spindles = 2350 diameter table = 2450 spray booth = 1000 / 1400 wide  PITCH						
<b>Model M-C</b> D stc spindles = 2100 diameter table = 2200 spray booth = 1000 / 1200 wide  PITCH						
AMOUNT OF SPINDLES:	3	4	5	6	8	10
<b>Model CR</b> D stc spindles = 1350 diameter table = 1450 Only with robot  PITCH						
<b>Model M-B</b> D stc spindles = 1350 diameter table = 1450 spray booth = 1200 / 1350 wide  PITCH						
<b>Model M-B</b> D stc spindles = 1250 diameter table = 1350 spray booth = 1200 wide Spraying from centre  PITCH						
<b>Model M-A</b> D stc spindles = 810 diameter table = 910 Spray booth with opening doors  PITCH						

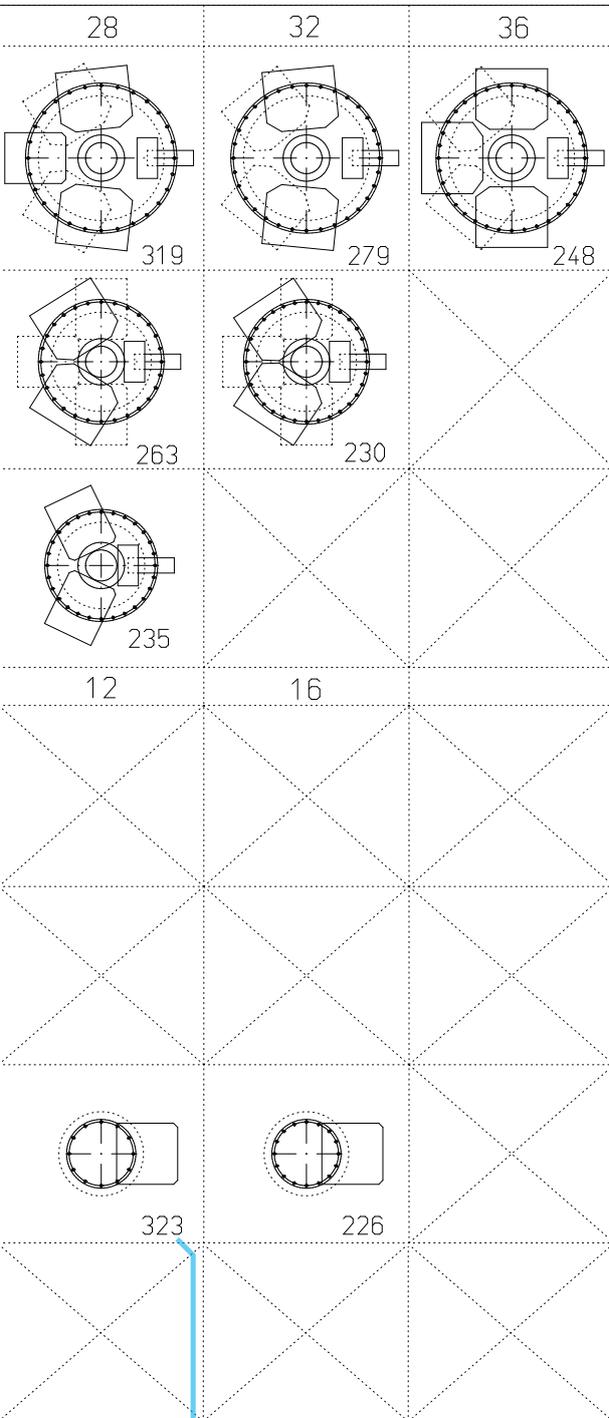


## MULTISPRAY WITH STATIONARY SPRAY GUNS

A fully automated spray machine with product spindles on a round turn-table, spray booths and stationary spray guns. With this machine you can quickly spray large series of products. The ceramic products are placed on revolving spindles with product supports, and are positioned in front of the spray booths.

### Advantages

- Big productions with short cycle times;
- Multiple spray guns possible.



## MULTISPRAY SPRAYING WITH ROBOT

The Multispray Robot (M-R) uses the multisprays round-table, spray booths and spindles as basis. It is equipped with one or more robots which moves the spray gun. Because of the many angles in which the spray gun can be directed at the product, the product can be sprayed on all sides. This makes the robot extremely flexible and especially suitable for the spraying of handles on cups and irregular products.

With this system you have a superb and flexible automatization of your production.

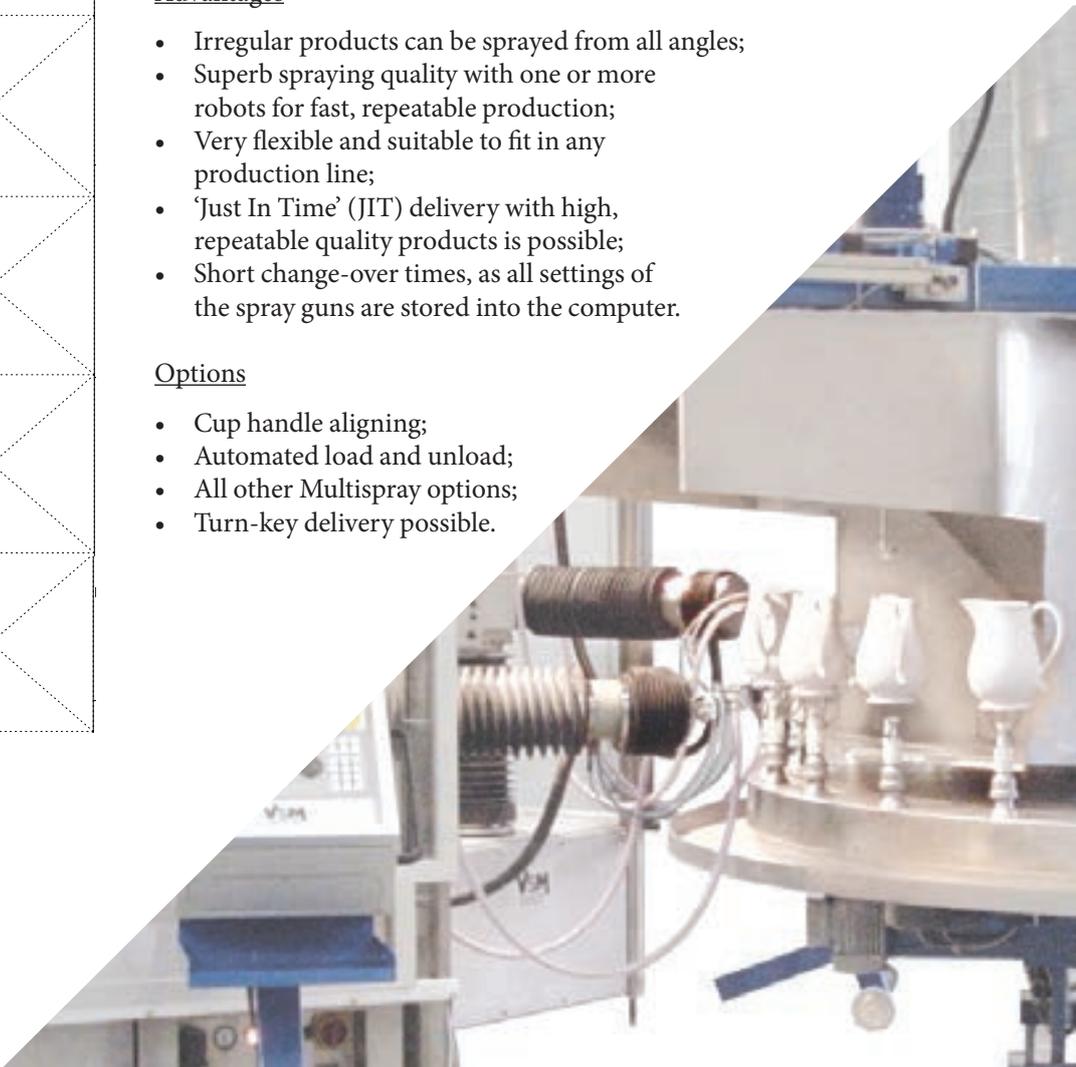
The combination can be made by one or more Kuka, other commercial or VSM Coat-A-Flex robots. Several configurations are possible, depending on the number of required fixed and flexible spray guns and the colours to be sprayed. With the M-R it is possible to spray irregular shapes very fast and accurately.

### Advantages

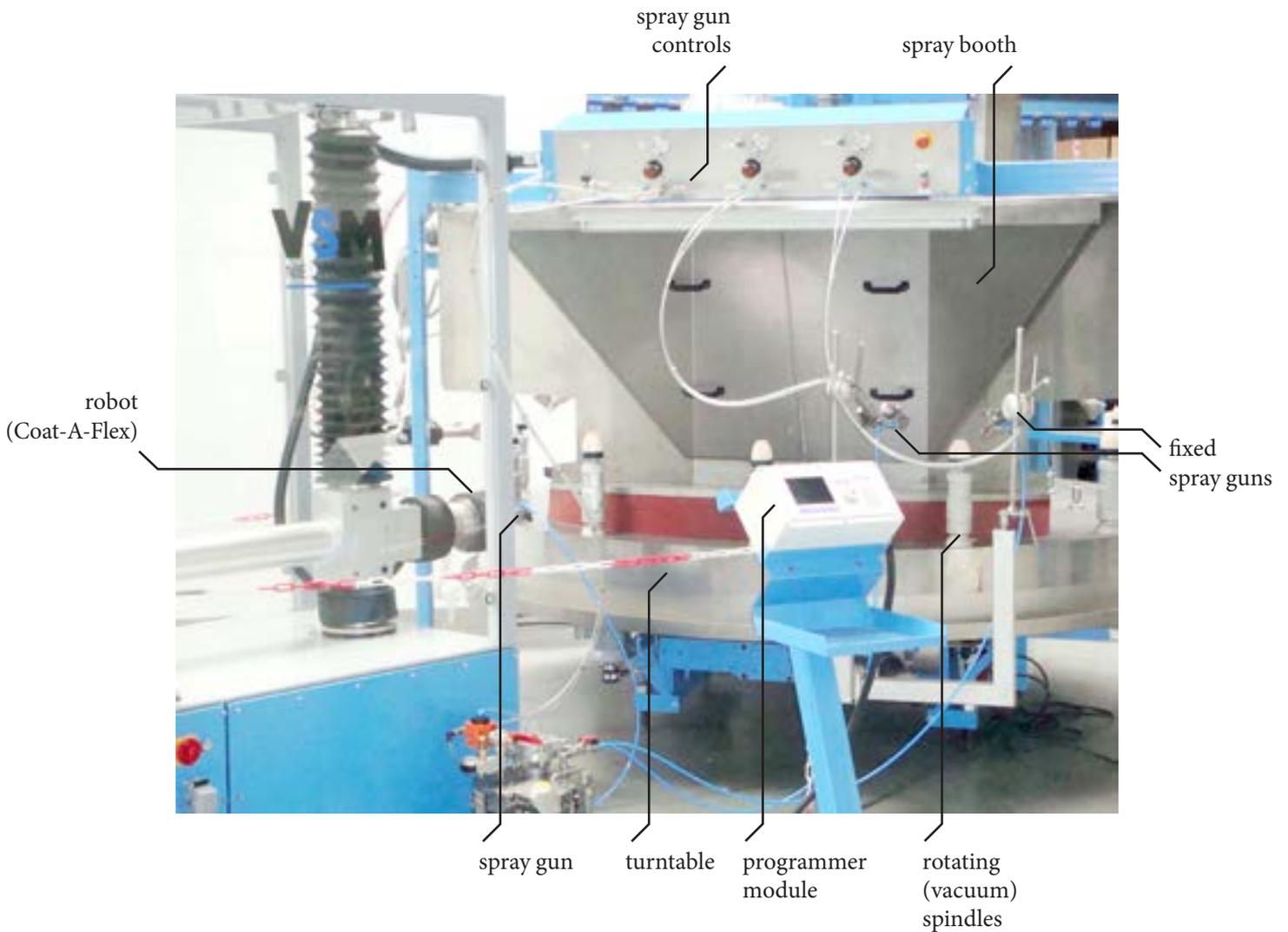
- Irregular products can be sprayed from all angles;
- Superb spraying quality with one or more robots for fast, repeatable production;
- Very flexible and suitable to fit in any production line;
- 'Just In Time' (JIT) delivery with high, repeatable quality products is possible;
- Short change-over times, as all settings of the spray guns are stored into the computer.

### Options

- Cup handle aligning;
- Automated load and unload;
- All other Multispray options;
- Turn-key delivery possible.



This is a multispray with a Coat-A-Flex robot and two auxiliary fixed spray guns. Each component is adaptable, both in amount and in its type.



The Dutch company VSM Nieuwkoop is specialised in high-tech machines for pressing and spraying ceramic products. Thanks to more than 30 years of experience in developing innovative machines, based on modular designs, we are able to find a suitable solution of any specific production problem in the field of ceramic manufacturing. VSM is renowned for its outstanding after-sales practice.

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