

M u l t i c a s t



# M u l t i c a s t

## Versatile manufacturing machine for all kinds of products

Multicast is the ideal machine for high quality production of a large range of infrastructural products like reinforced and non-reinforced pipes, circular and non-circular pipes, man-hole bases, risers and cones, large diameter products, jacking pipes, lined pipes and box culverts.

The Multicast machine can be configured from a range of modular components, which makes it possible to tailor a machine for any kind of need.

### Capacity

Depending on the given machine model and configuration and the products being produced, the Multicast can annually make up to 35,000 tons of products.

### System Benefits

#### Flexible Machine Configurations

The Multicast series of machines comprises a comprehensive range of production stations, concrete feeders and vibration systems facilitating the configuration of a machine which is designed for each customer's specific requirement. This allows any concrete producer to start up or expand his production in the most efficient way.

#### Large Diameter Pipes and Manholes

The Multicast machine can make products up to 3.6m (144") diameter. This allows the producer to respond to the growing need for larger infrastructural products for storm

water drainage and storage. The Multicast machine can be supplied with a wide range of handling solutions to secure efficient production flow of these large products.

#### Ideal for Lined Pipes and Jacking Pipes

The Multicast machine is an ideal solution for special applications such as lined pipes and jacking pipes. The machine can be supplied in a special 3m version which is often the preferred product length for jacking pipes.

The machine can also be supplied with special pneumatic equipment for the production of HDPE, PVC, and GRP lined concrete pipes. All these features give the concrete producer the ability to offer a wide range of infrastructural products to the market with just a single plant.

#### Unique Box Culvert Solutions

The Multicast machine can be supplied with different vibration systems tailor-made for the production of box culverts, including a range of vibration tables designed for different maximum size products; or synchronized core vibrators in the inner mold. To supplement the Multicast we offer a modular box mold system. The modular mold and joint ring components can be configured to manufacture boxes of many different sizes with a single set of components.

### Operation

All Multicast machine operations are mechanized and controlled from a central opera-

tor's console. The machine can be equipped with manual, semi-automatic, or fully automatic controls. After the mold is filled, vibrated, and pressheaded, an overhead crane is used to offbear the finished product from the machine fully supported in the external jacket. The assembly is transported to the curing area and immediately demolded. The jacket is then returned to the Multicast machine for further production.

Only one or two machine operators are required depending on the type of product to be manufactured, and the level of automation.

### Models Available

#### Central Core Vibration Machines

- Multicast SCC 150
- Multicast SCC 200
- Multicast SCC 250
- Multicast XL SCC 300
- Multicast XL SCC 360

#### Vertical Vibration Machines

- Multicast SCV 120
- Multicast SCV 150
- Multicast SCV 200
- Multicast SCV 250
- Multicast XL SCV 300
- Multicast XL SCV 360
- Multicast XL BC 300
- Multicast XL BC 360
- Multicast XL BC 450

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  - Large Diameter Pipes and Manholes

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Drymix Concrete Feeder



Hydraulic Press for Spigot Forming



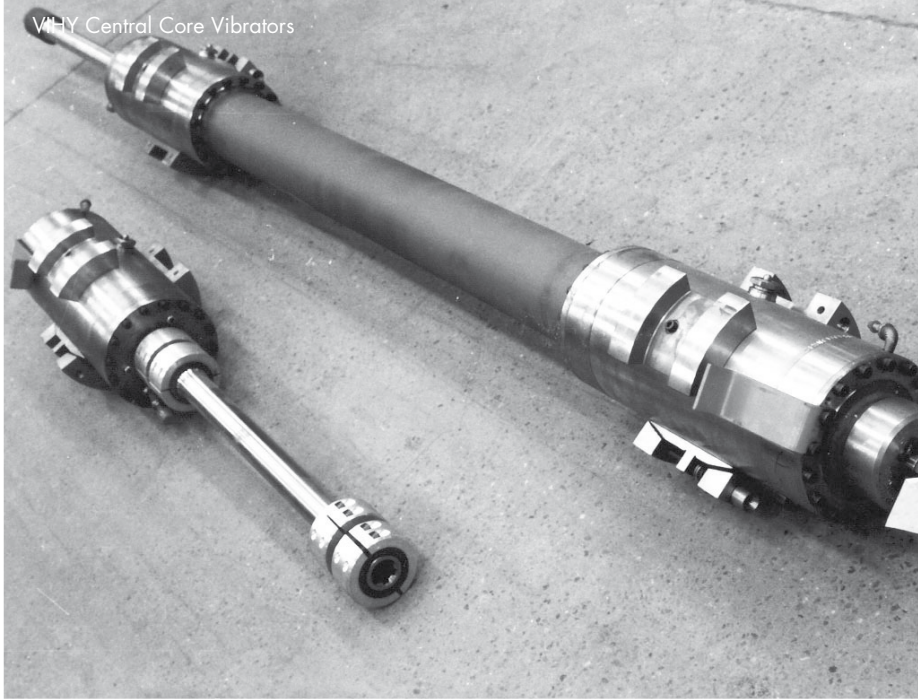
Demolding of Box Culvert



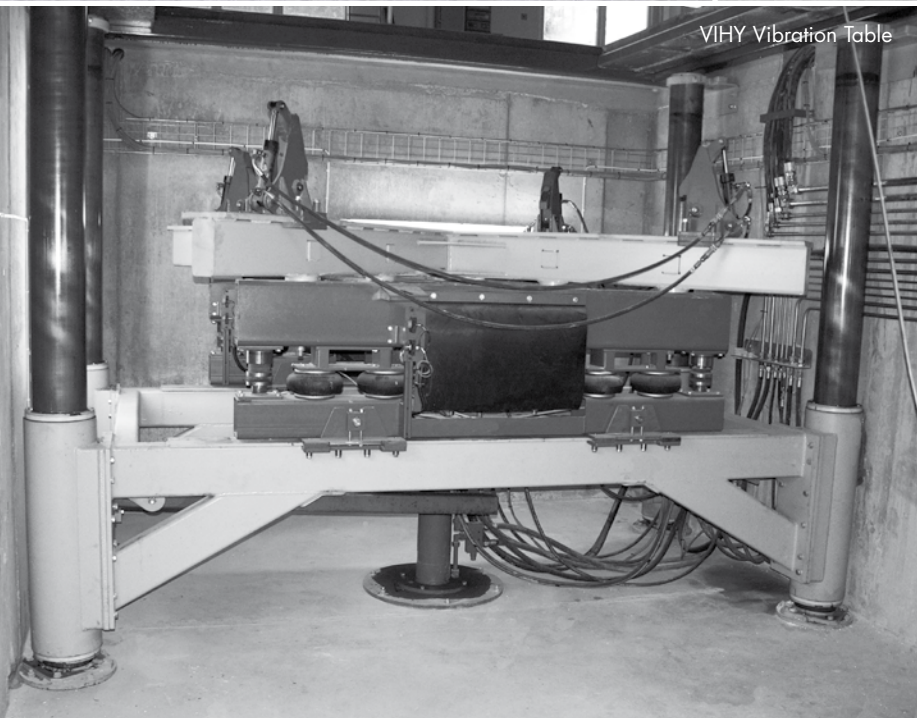
Products in Different Diameters



VIHY Central Core Vibrators



VIHY Vibration Table



Lined Concrete Pipes



Box Culverts



Jacking Pipes



# V i b r a t i o n   S y s t e m s

## The Multicast machine comes with different vibration systems to suit various production requirements

To enable the most efficient production of a wide array of quality concrete products, Multicast is available with several vibration styles. Core vibration provides excellent results with round and cone-shaped products, whereas table vibration is better suited for other shapes. Multicast's range of vibration styles provides optimum results for all your production requirements.

### Select Your Vibration

#### VIHY Core Vibration

The VIHY core vibrator is the industry's leading vibrator. Its precision built quality and dry-sump, oil-lubricated design allows for speeds and powers unmatched by competitive vibrators – permitting maximum compaction power, reduced cement consumption and maximum concrete densities – even for very thick-walled pipes.

HawkeyePedershaab also has a vibrator exchange program for customers. If a vibrator needs to be serviced or repaired a replacement vibrator is shipped to the customer, while the old vibrator is returned to HawkeyePedershaab for service or repair.

This reduces down time if the customer does not have a spare vibrator in stock – and it reduces the operating costs for the customer as he only pays for the repair of the old vibrator.

#### Built-in Synchronized Core Vibration

High-powered, built-in, electrically-driven core vibration system allows for the production of high-quality products and speeds up form changeover. The SCV vibrators are dedicated and remain with each core, eliminating the need to switch vibrators between cores during changeover.

#### VIHY Vibration Tables

The VIHY vibration table allows for the optimal production of many shapes that are difficult to compact with a traditional core vibration process. These shapes would include flat products, rectangular products and other special profiles.

Table vibration greatly expands the production flexibility of the Multicast, enabling the manufacture of a vast array of concrete products.

The table vibrators are mechanically synchronized to eliminate horizontal vibrations. Accordingly, all the vibration energy is transmitted vertically into the mold for optimum compaction and to reduce wear on the equipment.

The vibrations are isolated from the foundations and the rest of the machine with air cushions. The air pressure is automatically and individually adjusted based on the table load - even for non-symmetrical loads such as U-Culverts. Since all the vibration ener-

gy is transferred to the mold, the vibration and noise levels around the machine are reduced to an absolute minimum.

#### Hybrid Machines

A Multicast machine can be supplied with one or more of the above mentioned vibration systems, allowing the user to produce a wide variety of products on the same machine. With this level of flexibility, even short runs of the most complex products can be efficiently manufactured on the Multicast.

As the concrete producer's business expands, the Multicast machine can be dedicated for the production of more specialized products, and the manufacture of high-volume products can be moved to a dedicated machine.

#### Special Equipment for Lined Pipes

The Multicast core vibration system is ideally suited for manufacturing high quality lined pipes. Additionally, to streamline production special pneumatic equipment is available to smoothly handle and control the liners.

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- VIHY Core Vibration
  - Built-in Synchronized Core Vibration
  - VIHY Vibration Tables
  - Hybrid Machines
  - Special Equipment for Lined Pipes



# Double Stations

## Configured as a double station the Multicast offers more flexibility and output

In order to increase versatility, flexibility and productivity, the Multicast can be set up with double production stations.

Although a double station Multicast machine has two casting stations it is effectively supported as one production plant. The supporting production processes around the machine – such as reinforcement production, concrete batching and product handling – only need to serve a single plant.

This reduces the total investment in the factory as compared to supporting two individual machines.

### Increased Output

In a double station configuration the concrete feeder on the Multicast machine moves to feed two adjacent casting stations.

With a double station configuration, while one form is being filled and pressheaded, the other form is being demolded in the curing area. These simultaneous production sequences collapse production motions for increased output.

### Increased Versatility

With a double station configuration, the machine can produce two different pipe sizes at a time. If the two casting stations are equipped with different vibration systems the versatility of the plant increases even further.

This allows the producer to manufacture a large variety of products on the same machine. Also, this can prove to be a valuable feature as market conditions change.

### Manufacturing Flexibility

The manufacturing flexibility of the plant also grows significantly with a double station. In case of frequent mold changes the machine can produce at full speed in single station configuration on one station, while the mold equipment is being changed on the other station. When completed, the plant can again run in double station configuration and produce two different products at a time.

A further benefit with the double station Multicast is the reduction of capital equipment investment for large diameter products. The mold equipment in these sizes can be relatively expensive, but savings can be achieved by only investing in base pallets for half shift production on each station.

Products are manufactured on one station for one half shift, and another large product is manufactured on the other station in the next half shift.

This process is repeated the following day for as many days as the products are demanded.

### Investment in Stages

An investment in a double station Multicast can be made in stages. To keep the initial investment down a concrete producer can start by installing a single station Multicast.

Later, when the timing is right, a second station can be added to form a double station machine to utilize all the additional benefits described above.

- Increased Output
- Increased Versatility

- Manufacturing Flexibility
- Investment in Stages











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