

# SUPERPAC® Concrete Products Machine



The Superpac® is a large pallet, six-at-a-time concrete products machine that produces up to 3240 units (8"/200 mm equivalents) per hour. Low height paving stone and slabs, retaining wall units, architectural units and standard block are just a few of the products that can be manufactured on the Superpac.



**BESSER**  
Trusted Since 1904



# OUTSTANDING PRODUCTION AND FLEXIBILITY

## STANDARD FEATURES

### Cam Driven

The Superpac is cam driven to provide consistent speeds and movements. Achieving uniform product quality is easy even at variable operating conditions.

### Automatic Lubrication

An automatic lubrication system routinely performs an important maintenance function on the Superpac machine components subject to the most wear. Precisely measured amounts of lubricant are supplied to key bearings and pins.

### Frequency Drive on Block Moving Device

A variable speed frequency drive replaces the standard variable speed pulley drive. The variable speed frequency drive is remotely controlled from the control panel, compared to manually adjusting the variable speed pulley.

### Pallet and Delivery System

The block and pallet delivery system is independently adjustable; speed is not directly controlled by the operating rate of the machine. Since delivery takes less time than molding, this arrangement makes it possible to reduce delivery speed in order to gently handle fragile units without sacrificing the overall production rate. The movable inner frame design allows for constant delivery height of 37" (940 mm) regardless of the type of concrete masonry units being produced.



*A full range of standard, architectural and landscape concrete products can be manufactured on the Superpac.*

### AB Control Processor

Many of the operating functions of the Superpac can be easily adjusted by accessing the controls through the color graphics display unit. This control panel automatically pinpoints problems and displays information for making corrections fast, and improves quality control.

The state-of-the-art color graphics display swivels on a floor-mounted pedestal providing easy access for the machine operator. This solid state unit provides push-button command of the sequencing, interlocking and status monitoring functions. This device also provides the capability of storing and retrieving preset information based on product number. Plant personnel can easily program new products using intuitive touch screen controls.

### Block and Pallet Delivery System

The block and pallet delivery system is independently adjustable; speed is not directly controlled by the operating rate of the machine. Since delivery takes less time than molding, this arrangement makes it possible to reduce delivery speed to gently handle fragile units while maintaining the overall production rate. The movable inner frame design provides constant delivery height of 36-5/16" (922 mm) regardless of the type of concrete masonry units being produced.

### Rotary Position Sensor on Cam Shaft

The sensor provides cam position information to the controller. This allows adjustments to be made to the machine set points while the concrete products machine is operating. Adjustments are made through the color graphics display unit.

### Bescodyne Vibration

Standard Bescodyne vibration provides rapid engagement of vibrators to provide quick starts and stops, which results in a uniform product with high compressive strength.

### Pin Guidance

Manually inserted pins align the mold with the mold throat which extends mold life.

## Quality

Highly skilled staff follow stringent quality guidelines during the design, manufacture, assembly and testing of the equipment. All Besser equipment is manufactured with precision machinery, ensuring consistent quality.



## OPTIONAL ENHANCEMENTS

### Advanced Servo Vibration

By employing independent amplitude and frequency control, vibration is tunable to specific molds and product requirements. The ability to control both amplitude and frequency results in more rapid compaction and quicker finish times than can be obtained with conventional vibrating systems. Vibration can be engaged or disengaged multiple times within a single machine cycle.

### Main Drive Servo

Replaces mechanical components (clutch and brake), and the related wear and tear, with electronic components. Provides control of the machine cycle so operation can be tailored to the specific concrete units being produced, increasing overall cycle speed.

Operating the servo motor on the Main Drive creates power during deceleration. This power is sent to the main electrical panel for use by either the main drive during acceleration or by the Advanced Servo Vibration (ASV).

### AFC SmartPac® Vibration

By employing independent amplitude and frequency control, vibration is tunable to specific molds and requirements. The ability to control both amplitude and frequency results in more rapid compaction and quicker finish times than can be obtained with conventional vibrating systems. Vibration can be engaged or disengaged multiple times within a single machine cycle. Adjustments are made through the color graphics display unit. Mold life is increased with the use of AFC SmartPac vibration.

### AFC SmartPac and Posapac® Dual Vibration

Dual vibration utilizes a Bescodyne clutch/brake which allows the concrete products machine to use Posapac weights for short production orders. This is beneficial if several existing molds are owned with weights attached. AFC SmartPac can then be used for longer production orders or for manufacturing specialized products. This allows you to take advantage of reduced mold wear as well as independent amplitude and frequency control to facilitate improved feeding and finishing of products.

### Frequency Drive for Main Drive Speed Control

Allows particular segments of the machine cycle to be slowed down or sped up. This feature will allow you to slow down the stripping speed without sacrificing overall cycle speed. The variable speed frequency drive is remotely controlled from the SLC 5/05 control panel, compared to changing the motor sheave.

### Mold Insertion Device

The time needed to change molds is shortened and simplified with the mold insertion device. This pneumatic powered mechanism lifts/lowers the entire mold assembly off/onto the mold throat. The mold assembly is manually rolled into/out of the mold throat area. The mold insertion device is available on Superpacs with 18-1/2" (470 mm) pallets.



*The Superpac® production rate is impressive – producing up to 3240 8" x 8" x 16" (200 mm x 200 mm x 400 mm) units an hour.*

### Mold Locks

After the mold is placed into the concrete products machine, the mold is manually locked in place.

Note: pin guidance and mold locks are used separately.

### Air Compaction

The use of air compaction reduces finish time, which improves overall cycle time. Air cylinders supplement the force on the mold exerted by the weight of the machine head. The addition of compressed air brings the height pins together sooner, compacting the unit faster and more effectively.

### Pallet Receiver Cam Inserts

Pallet receiver cam inserts allow for rapid height changeovers for certain mold configurations between 2" and 7-5/8" (50 mm - 190 mm). 60 mm, 3-5/8", 5-5/8" and 7-5/8" flat top molds can be run from the 7-5/8" position and do not require moving the inner frame. Other product heights may be able to run from this position depending upon the mold configuration. Please contact your Besser sales representative to determine the appropriate configurations for your specific requirements.

### Vibrator Motor Air Bag Lifts

The vibrator motor air bag lift is an easy and quick way to raise the vibrator motors for mold changes. A lever operated pneumatic valve is moved to the up position allowing air to flow into the air bags. When the bags inflate both vibrator motors rise. This allows the operator to remove the belts and begin the mold change procedure. Once the mold change is completed, the belts are reinstalled on the sheaves. The lever is moved to the down position, allowing the air bags to deflate and the vibrator motors to lower. A lockout device is included for safety during maintenance.

### Pallet Scraper

Material build-up on pallets is automatically removed during each machine cycle. The tension forcing the scraper blade down on the pallet is fully adjustable to meet specific cleaning needs.





# SPECIFICATIONS

## Production Rates

- Machine Cycle Time (in seconds): 3.3
- Forming Time (feed, finish and delay - in seconds): 3.4
- Total Cycle Time (in seconds): 6.7
- Cycles Per Minute: up to 9
- Concrete Masonry Units (8" equivalents per minute): 54
- Concrete Masonry Units (8" equivalents per hour): 3240

Note: Optimum production rates depend upon many variables, therefore actual production may vary from this example.

## Horsepower

- Main Drive: 40 hp (30 kW)
- Automatic Feed: 1 hp (0.8 kW)
- Pallet and Block Delivery: 5 hp (3.75 kW)
- Feedbox Agitator: 5 hp (3.75 kW)

## Vibration

- Bescodyne Vibration: requires two 25 hp (18.75 kW) motors, or
- AFC SmartPac® Vibration: requires two 10 hp (7.5 kW) motors, or
- Dual Vibration (Bescodyne clutch/brake): requires two 25 hp (18.75 kW) motors

## Pneumatic Requirements

- 1 SCFM\* (.028 SCMM\*\*) for miscellaneous concrete products machine functions
- 9 SCFM (.255 SCMM) with AFC SmartPac Vibration
- 20 SCFM (.560 SCMM) with Dual Vibration
- 50 SCFM (1.400 SCMM) with air compaction
- All above at 80 psi minimum

\* SCFM = standard cubic feet per minute

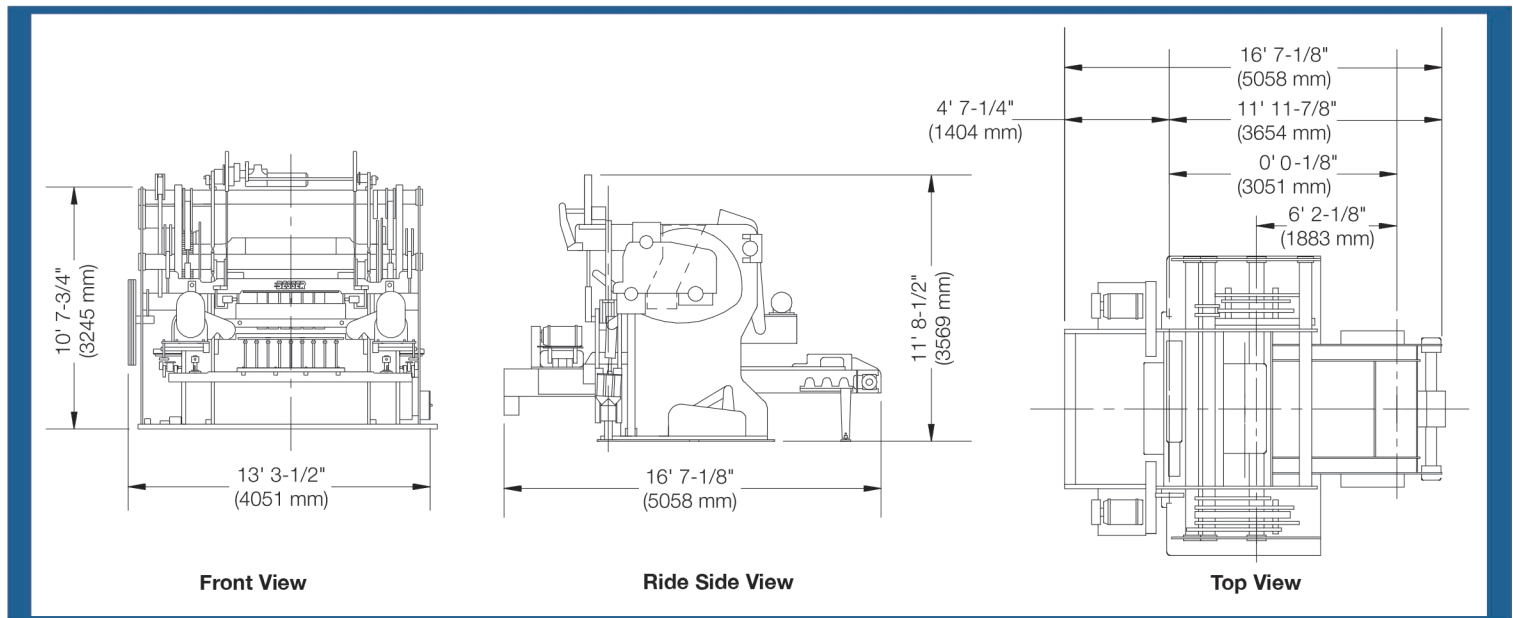
\*\* SCMM = standard cubic meters per minute

## Dimensions/Weight

- Width: 13' 3-1/2" (4051 mm)
- Height: 11' 8-1/2" (3569 mm)
- Length: 16' 7-1/8" (5058 mm)
- Weight: 72,000 lbs. (32,700 kg)
- Block Delivery Height: 37" (940 mm)
- Pallet Size: 52" x 18-1/2" x 5/8" (1321 mm x 470 mm x 16 mm) (other pallet sizes available for five and six-at-a-time 8" equivalents)
- Product Height: 2" (51 mm) high – 12" (250 mm) high

## Voltages

- Control Circuit: 110 V., single phase, 60 Hertz
- Motors: 460 V., 3 phase, 60 Hertz (other voltages available)



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Cover photo: The Superpac® concrete products machine producing patio slabs on edge.

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