

Concrete Products Machine	Definitions
Compression Head	Fabricated assembly consisting of a head plate, plunger, and mold shoes, bolted to compression beam to apply pressure to material within the mold.
Mold Shoes	Components of the compression head that mate with and enter the mold cavity to apply pressure directly to the material.
Mold	Fabricated box structure containing block-shaping core(s) and core retaining bars. Receives block mix for pressure and vibration forming.
Feed Drawer	A hydraulic actuated drawer that moves a pre-measured amount of mixed material from the material hopper to the mold.
Dwell	To delay or remain.
Feed Drawer Dwell Time	Duration of time that the Feed Drawer remains over the mold, thus controlling pre-compression fill-vibration time and consequently, product density.
Last Feed Drawer Dwell Time	Displays the last Feed Drawer Dwell Time. This can be used for setting up Auto Density.
Oscillation	This is the back and forth movement of the Feed Drawer between the material hopper and the mold. Term used only to define that the Feed Drawer movement which is in addition to the normal machine cycle.
Number of Oscillations (0,1,2,3)	This selects the number of desired oscillations for the Feed Drawer to cycle during one cycle of the machine. Select "0" for a normal Feed Drawer cycle, select "1,2 or 3" for the number of additional desired oscillations of the Feed Drawer.
1 st Oscillation Dwell Time	Used only if one extra oscillation is chosen. This is amount of time the Feed Drawer stays forward on the Feed Drawer forward switch when one oscillation is selected.
2 nd Oscillation Dwell Time	Used only if two extra oscillations are chosen. This is amount of time the Feed Drawer stays forward on the Feed Drawer forward switch when two oscillations are selected.
3 rd Oscillation Dwell Time	Used only if one extra oscillation is chosen. This is amount of time the Feed Drawer stays forward on the Feed Drawer forward switch when three oscillations are selected.

Re-Feed	Term used to define the Feed Drawer backstroke distance during oscillation cycle(s).
1 st Oscillation Re-Feed Time	Used only if one extra oscillation is chosen. This is the amount of time the Feed Drawer will retract before going forward for the first oscillation.
2 nd Oscillation Re-Feed Time	Used only if two extra oscillations are chosen. This is the amount of time the Feed Drawer will retract before going forward for the second oscillation.
3 rd Oscillation Re-Feed Time	Used only if three extra oscillations are chosen. This is the amount of time the Feed Drawer will retract before going forward for the third oscillation.
Vibrator	Motor-driven, mechanical device designed to apply vibration at the block machine mold. Eccentric shaft assemblies that drive shaker shafts attached to the mold achieve vibration.
Vibrator Delay Timer	This timer delays the start of the Vibrator. Timers starts when.....
Vibrator Double Start	Off/On – when selected “ON” vibrator will start normal, then stop after a time when the feed Drawer starts back, then re-start after a time when the Compression Head starts down.
First Vibrator Stop Time	This timer determines the length of time the vibrator will run the first time. Used only when Vibrator Double Start is selected “ON”.
Second Vibrator Start Time	This timer determines when, after the Compression Head starts down, the vibrator will re-start. Used only when the Vibrator Double Start is selected “ON”.
Slump (Timed Release)	Off/On – This option allows the machine to strip down by time, by-passing the Height Stop pins.
Slump Vibrator	This timer determines the length of time, after the Compression Head starts down, when the Stripper Beam goes down. This is used to time release of the product from the mold.
Vibrator “Comp” Speed (RPM)	Vibrator speed (RPM) for compacting the product to height during compression.
Vibrator “Fill” Speed (RPM)	Vibrator speed (RPM) for filling the mold.
Variable Frequency Drive (VFD) - Vibrator	Variable Frequency Drive controller; to control the speed (RPM) of the vibrator motor. Allows the operator to adjust the vibrator speed (RPM) for various products.
Hydrostatic Vibrator Drive	Closed loop hydraulic drive; provides a positive variable speed control for the vibrator.
Lube Pump (Vibrator)	Provides forced oiled lubrication of the vibrator shaft.
Actual Compression Time	Displays the last compression time. Use this to assure

	that you are getting the compaction necessary to produce a good product. If too low adjust the Feed Drawer dwell time higher, and if too long adjust the Feed Drawer dwell time lower.
Agitator	A rake-like device through which block mix is deposited in the mold. Device is agitated during fill to properly distribute the mix.
Agitator Start Delay	Delays the start of the Agitator. Timer starts when the Feed Drawer moves forward off the Feed Drawer back switch.
Agitator Stop Delay	Stops the Agitator from running. Timer starts when the Feed Drawer moves off the Feed Drawer forward switch.
Density	The weight per unit volume of a substance.
Auto Density	Off/On – Automatically changes the Feed Drawer dwell time depending on the Actual Compression time versus the Desired Compression time.
Block Machine in Automatic Time	Time the machine was in automatic since the last reset.
Interlocked	Electrical handshake between two or more components.
Block Machine Interlocked Time	Machine has stopped production for the following reasons: <ol style="list-style-type: none"> 1. No Pallet on the Walking Beam to move forward. 2. No Material, Feed Drawer Probe low. 3. Can't move Pallet forward on Green Product Conveyor.
Block Machine By-Pass	Off/On – used to run pallets empty through the machine without running the machine through a complete cycle. Use this option to fill out a rack or PTS car at the end of a shift or mold change.
Last Cycle Time	Displays the last cycle time of the machine.
Pallet Count	Displays how many cycles have been made since the last pallet count reset.
Release	Term used to define time interval between height stop contact and actuation of stripper function.
Release Time	This timer delays the stripping function to allow the material to settle in the mold after the height stops are made. Time starts after both height stops make contact for a short time, then the stripper strips down.
Stripper	Term used to define lower hydraulic cylinders and beam structure that operate to strip block from the mold, in effect lowering the pallet from mold in conjunction with compression head pressure.

Shaker Shaft	Vertically installed rod connected between the vibrator and the mold to transmit vibration.
Strike-off Plate	Adjusted plate that is mounted on the front of the mold box. When adjusted it determines how much material is left above the mold cavity.
Height Stop (Electrical)	Electrical control circuit comprised of upper stop pins and lower contact bolts that are wired and insulated. When circuit is closed by contact, subsequent machine function “Stripper down” is initiated.
Pallet Table	Sectionalized table consisting of; a flat upper surface, air-bags and base section, that accepts block carrying pallets. Attached to the main beam structure to hold pallet against the bottom of the mold during fill and compression.
Air-Bags (Pallet Table)	Sealed, rubber diaphragm installed between Pallet Table sections and connected to a controlled compressed air source. Pressure application causes diaphragm to expand and raise table slightly, thereby ensuring positive contact between the pallet and the mold during block-making process.
Pallet	Thin, rectangular plate used as a base when conveying block during the manufacturing and handling process.
Pallet Feeder	A hydraulic actuated carriage that moves an empty pallet from the pallet hopper to the pallet table.
PanelMate	Operator interface, a device that allows the operator to make machine settings and store recipe setups stored the PLC.
Motor Starter	A motor control device that is used to start a motor through an electrically held contactor and applies power to the motor.
Limit Switch	A type of position sensing switch that opens or closes its contacts when an object moves its actuator.
Proximity Switch	A type of position sensing switch. Inductive proximity switches can detect the presence or absence of a metal object. Capacitive proximity switches can sense a wide variety of materials.
Selector Switch	A multi-position switch that can be set to the desired mode of operation. Usually located in a pushbutton station or control panel.
Pushbutton Station	An enclosure that mounts pushbuttons, selector switches, etc. and holds all spliced conductors relating to them. Used for manual control.
Pushbutton	Part of an electrical device, consisting of a button that must be pressed to effect an operation.

PLC	(Programmable Logic Controller) A control device that is programmed to control an operation such as a process or machine operation. It consists of; processor (PLC), input/output modules, and power supply/base.
Terminal Panel	A main junction box. An enclosure used as a central conductor terminating location.
Control Panel	An enclosure that holds the programmable logic controller (PLC) or relays.
Manual Control	A control actuated by the operator, regardless of the means of actuation. Example: control from a pushbutton station
Relay	An electrical/mechanical switching device.
Relay Logic	A network of relays that provide selective command signals within an electrical control system.
Walking Beam Pallet Feed	A hydraulic rotary actuator/crank arm for controlling empty pallet input to the pallet table, and pallet –with-product transfer to outfeed conveyor.
Push-Back Pan	Fabricated assembly operated by pneumatic pressure, that pushes spillage in front of the mold into the mold cavities.
Pump Unit	An electrical motor drives a pump which delivers hydraulic fluid under pressure to the machine. The hydraulic flow is the source of energy for driving various hydraulic actuators. Pump unit consists of, electric motor, accumulator, heat exchanger, and reservoir (tank).