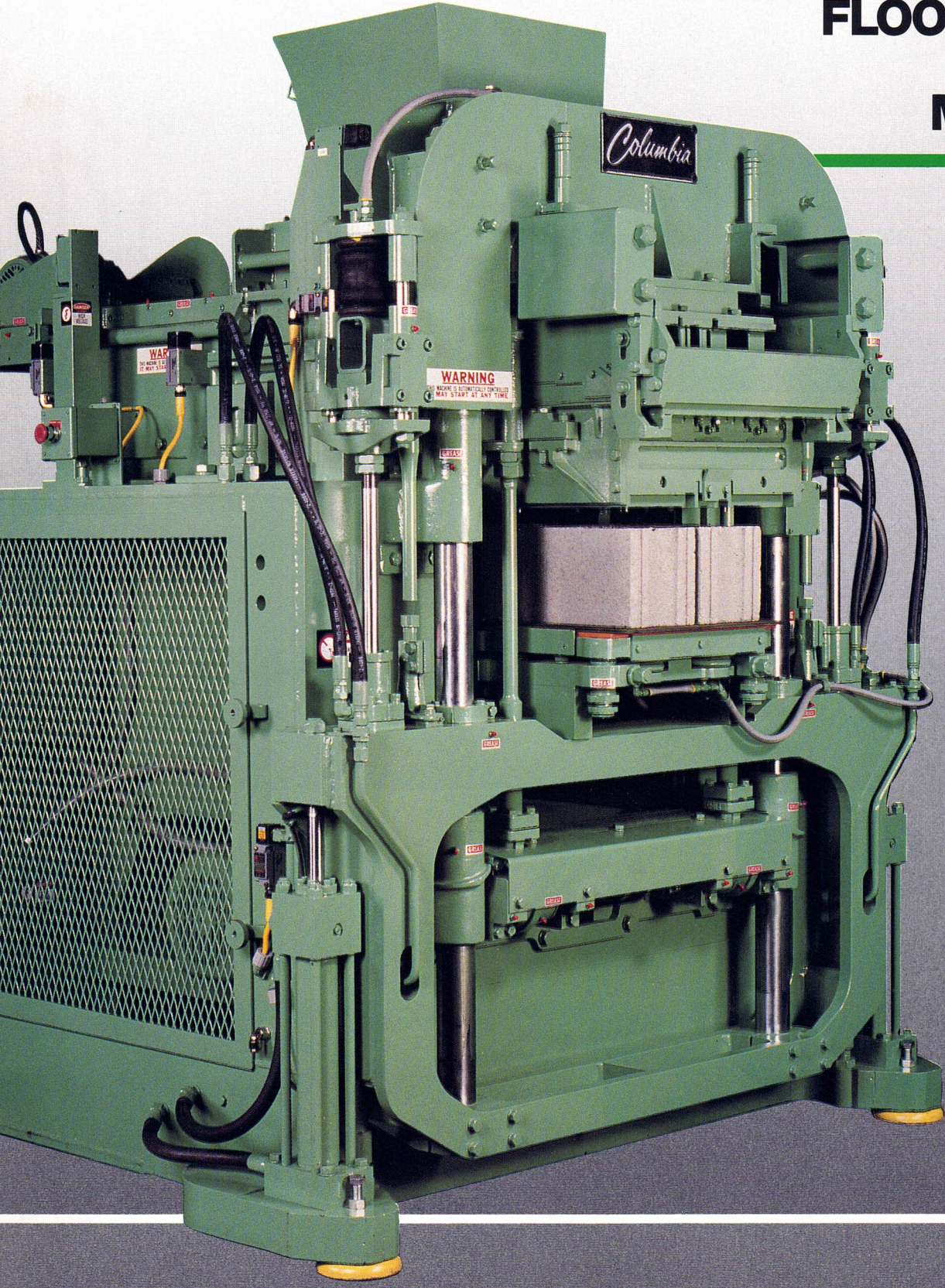


MODEL

Columbia[®] 22HF

FLOOR-LEVEL BLOCK MACHINE

The best
machine
available
for your
2 or 2½
block
line.



1 SPECIAL QUIET TABLE COVER

2 FULLY ADJUSTABLE PALLET TABLE

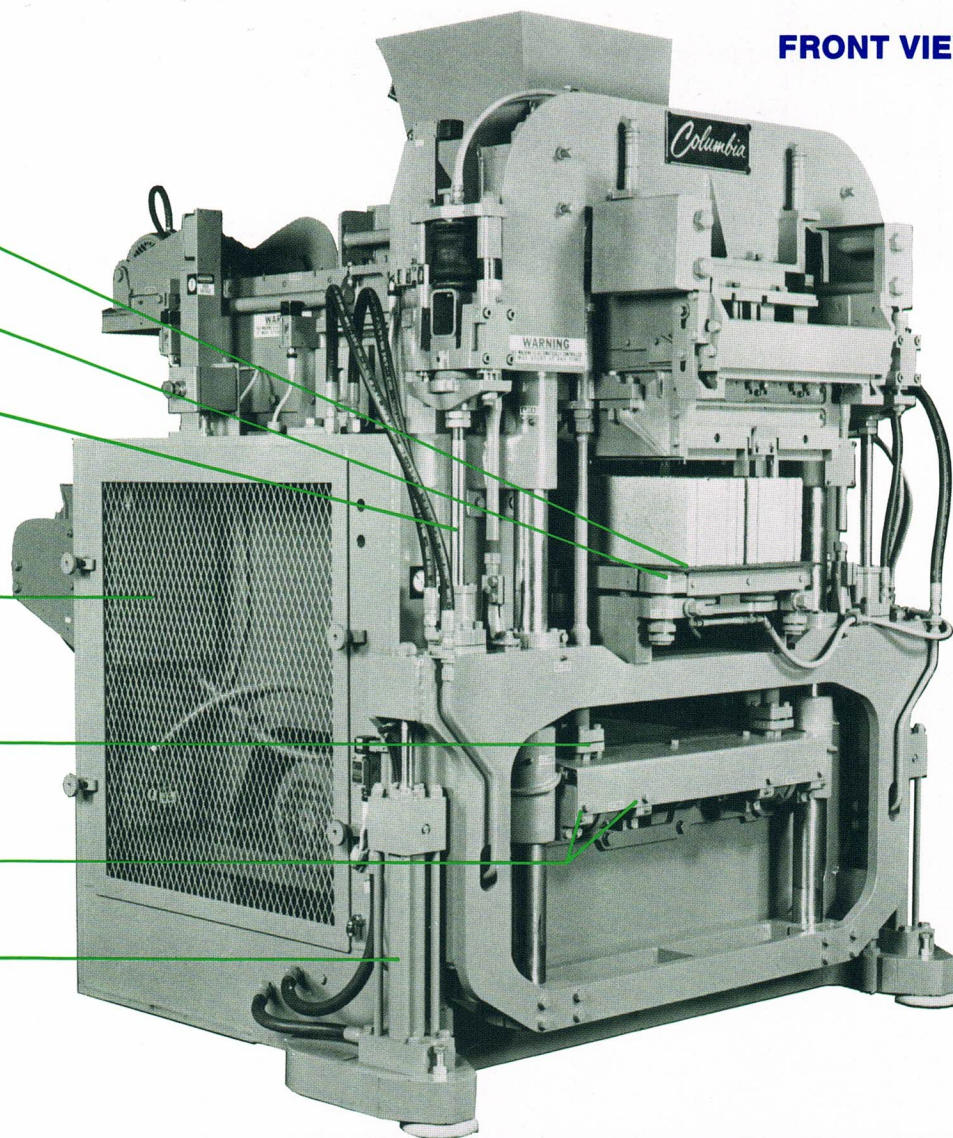
3 COMPRESSION CYLINDERS

4 ELECTRICAL CONTROLS

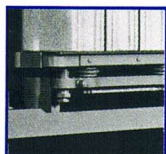
5 FIXED VIBRATOR AMPLITUDE

6 GREASE LUBRICATION OF VIBRATOR SHAFT

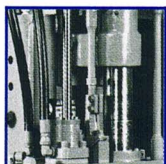
7 STRIPPER CYLINDERS



1 SPECIAL "QUIET TABLE" COVER is provided for the surface of the pallet table to decrease table wear and reduce machine noise levels. The cover is simple and easy to change and will lower maintenance costs by increasing pallet table life.



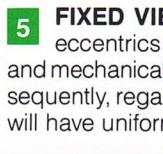
2 FULLY ADJUSTABLE PALLET TABLE settings can be made quickly and easily by loosening two locking bolts located on the front of the machine and adjusting four bushings that are readily accessible at each corner of the table. Such adjustments allow precise dimensional control of the block produced. The accessibility of these bolts and bushings provides for ease in lubrication which extends service life and lowers maintenance costs.



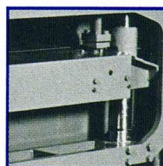
3 COMPRESSION CYLINDERS use built-in cushions in both directions. Hydraulic lines are generously sized and employ balanced flow paths to assure a quick, smooth, shock-free response of the top beam during compression and stripping cycles.



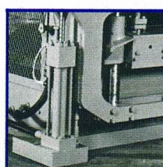
4 ELECTRICAL CONTROLS are concentrated on one side of the machine with easy access through large, fully opening doors. This simplifies adjustments and makes maintenance easier, as each switch is numbered for quick identification.



5 FIXED VIBRATION AMPLITUDE results from the use of twin eccentrics on the vibrator shaft. Vibration is transmitted directly and mechanically throughout the entire mold via the shaker shafts. Consequently, regardless of the location of the block in the mold, all blocks will have uniform density and dimensional integrity.

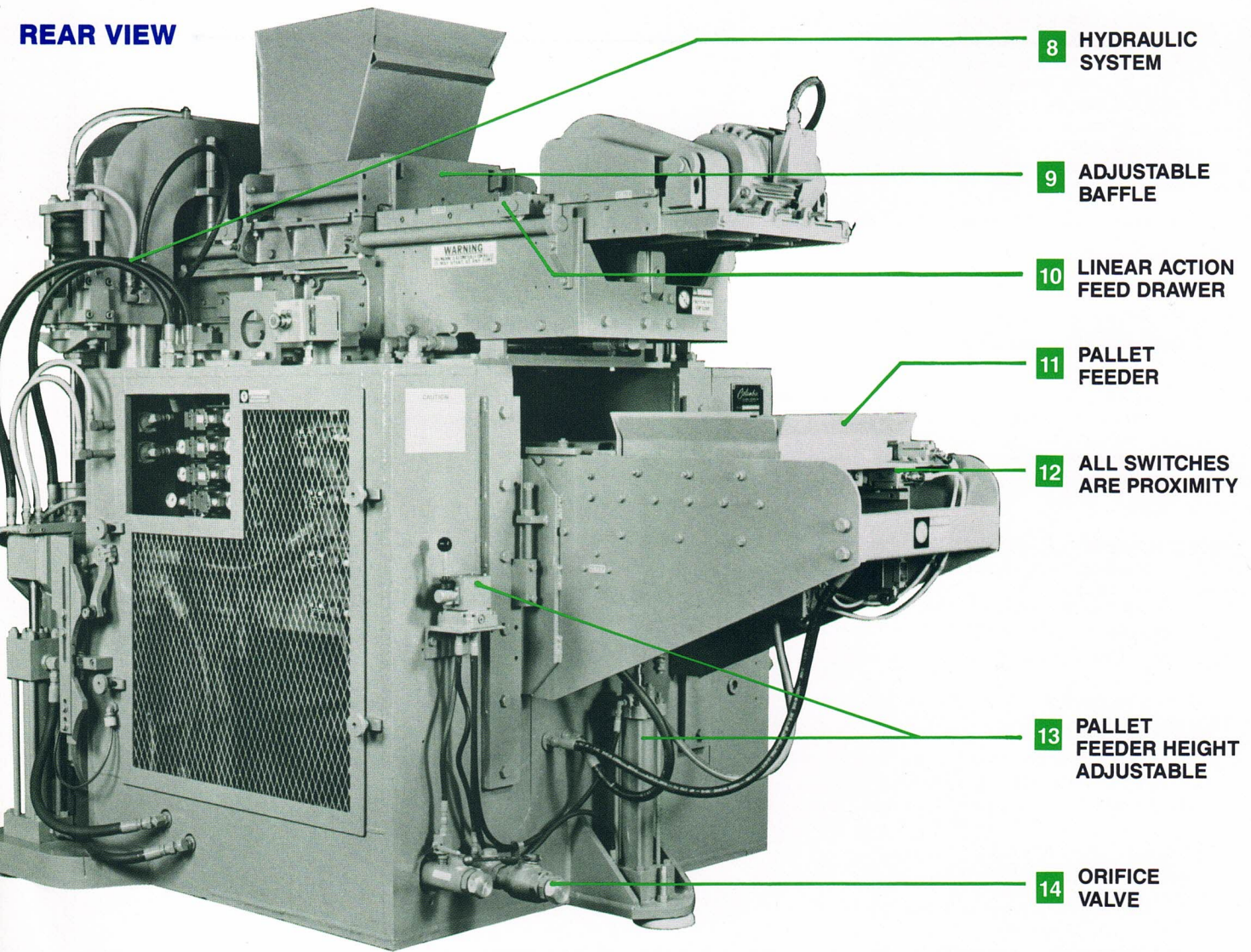


6 GREASE LUBRICATION OF VIBRATOR SHAFT reduces dependence on oil seals and enhances machine access by eliminating lubrication and connecting hoses.



7 STRIPPER CYLINDERS use a combination of built-in cushion action in one direction and adjustable cushioning action of the rotary control valve in the other. Hydraulic lines are generously sized and employ balancing flow paths.

REAR VIEW



8 HYDRAULIC SYSTEM

9 ADJUSTABLE BAFFLE

10 LINEAR ACTION FEED DRAWER

11 PALLET FEEDER

12 ALL SWITCHES ARE PROXIMITY

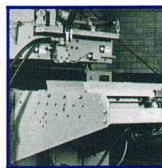
13 PALLET FEEDER HEIGHT ADJUSTABLE

14 ORIFICE VALVE

8 HYDRAULIC SYSTEM is engineered for quick response and minimum resistance to fluid flow. Hydraulic hoses are utilized throughout and are rated at over double the operating pressure. All hydraulic connections are of the "O" ring type. Major valves are mounted on one common manifold which also includes the flow controls and other hydraulic circuitry. Centering valves are employed for maximum safety. The system is designed with generously sized components, has the most leak-free connections available and has a simple plumbing system that performs with sophistication and precision.

9 ADJUSTABLE BAFFLE in the machine hopper helps control material flow and can be altered to fit demands for various sizes and configurations of block, as well as allowing for changes in the mix design.

10 LINEAR ACTION FEED DRAWER is designed to use a minimum of moving parts. Drive portions of the system include agitator arms which are fully lubricated and protected from exposure to the abrasive action of concrete in the feed drawer. This feature, along with the linear action of the agitator grate, evenly distributes concrete into the mold, resulting in a more uniform block from front to back and side to side.

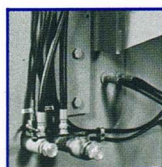


11 PALLET FEEDER carriage runs on large cam followers. Speed and cushioning action are adjustable through rotary control valve for maximum product protection.

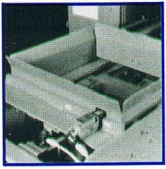
12 ALL PROXIMITY SWITCHES with LEDs and quick disconnects. With this design, there is less wear because there are no external moving parts. LEDs give visual indication of power to the switch which aids in maintenance. If needed, switches can be replaced in a matter of minutes without touching a wire.



13 PALLET FEEDER HEIGHT ADJUSTMENT is made easy by manually operating a positioning cylinder provided to raise or lower the pallet feeder. Such positive control makes adjustment quick and simple.

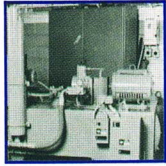


14 ORIFICE VALVE located between the machine and the hydraulic reservoir, allows operation of all cylinders in slow motion, making it easy to move the beams in small increments for quicker mold change and shorter set-up time.



■ **FULLY ADJUSTABLE CUSHIONING AND SPEED CONTROL** are built into the pallet feeder system through the use of a rotary control valve. Because of the fast but gentle feeding of pallets to the pallet

table, there is less chance of "green" block damage at the machine's higher cycle rate.



■ **QUICK RESPONSE HYDRAULIC PUMP PACKAGE** is provided with the machine. The unit is equipped with an easy-to-change filter, a thermostatically-controlled air cooler, oil level gauge, pressure gauge, thermometer, and (1) five gallon accumulator with safety pressure relief. Machine output is more consistent because of constant operating temperatures which result in uniform hydraulic fluid viscosity and uniform machine speeds. The pumping unit is separate from the machine for easy access and remote location, if desired.

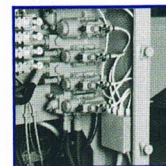
thermometer, and (1) five gallon accumulator with safety pressure relief. Machine output is more consistent because of constant operating temperatures which result in uniform hydraulic fluid viscosity and uniform machine speeds. The pumping unit is separate from the machine for easy access and remote location, if desired.

■ **SPECIAL VIBRATION MOUNTS** serve as sound reducers, vibration isolators, and as machine leveling devices. They insure quieter operation, less machine fatigue, less floor vibration, and, when machine rests on flat slab foundation, aid in quick machine leveling.

■ **SOLID STATE PROGRAMMABLE CONTROLS** provide solid state flexibility and reliability, ease of trouble-shooting, precise control and easy-to-understand logic. Combining these benefits with the electric and hydraulic features, the Model 22HF offers a control system which has no equal.

■ **VALVING** in the air control manifold provides independently adjustable air pressure settings, both front and rear, for the fill and compression segments of the cycle. Adjustable air pressure supporting the pallet table insures that the pallet is held firmly against the bottom of the mold without inhibiting vertical vibration. This adaptability will accommodate changes in mix design and provide a more consistent block density and dimensional stability.

■ **COMBINATION AIR CLUTCH AND BRAKE SYSTEM** allows the vibrator motors to continue to run between cycles and thus avoids current surges experienced by start-stop drives. This prolongs motor life, provides for cooler operation and quicker response, and results in shorter cycle times.

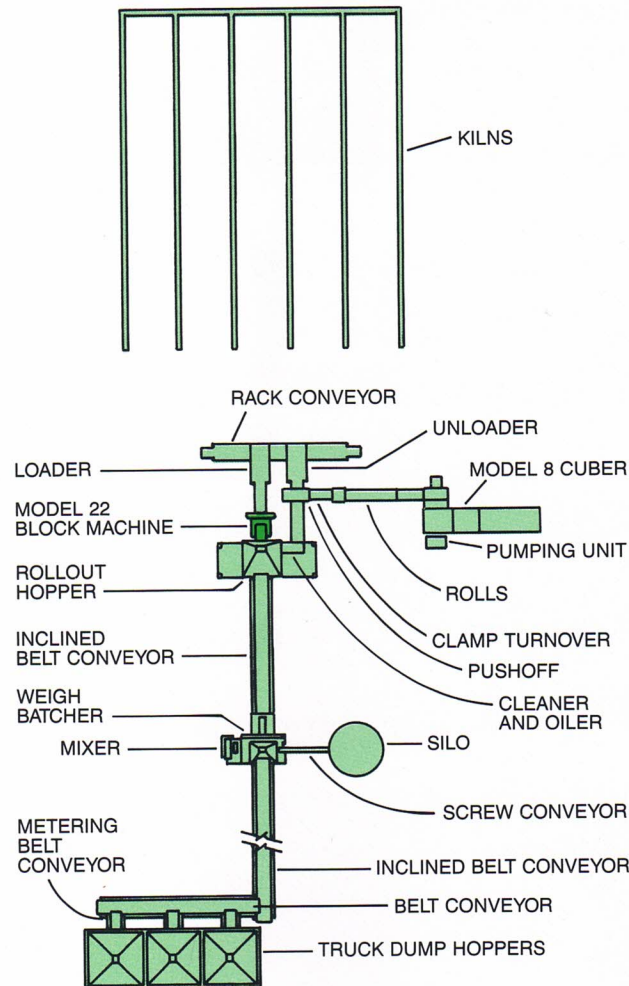


■ **HYDRAULIC CONTROLS** are concentrated on one side of the machine with easy access through fully opening doors. Components are clearly marked, which aids in trouble-shooting, machine adjustments, and maintenance.

■ **ALL SOLENOID VALVES** have quick disconnect electrical plugs and indicator lights which show when the solenoids are energized. This feature means faster trouble-shooting and, if necessary, faster replacement.

■ **STRIPPER CYLINDER ROTARY VALVE ASSEMBLY** allows the main beam to be quickly but gently lowered, which prevents the "green" block from being damaged.

TYPICAL PLANT LAYOUT



SPECIFICATIONS: Model 22HF 2-Block Machine

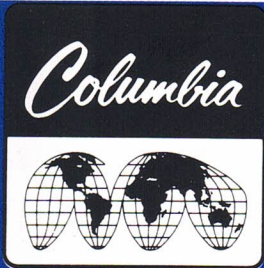
Dimensions:	Width	Height	Length
Overall Dimensions:	1.91m (75")	2.38m (94")	2.71m (107")
Pallet Size:	Width: 508mm (20") Depth: 457mm (18") Special sizes on request.		
Product Height:	Up to 305mm (12")		
Pallet Thicknesses:	6mm (1/4")		
Net Weight:	5,900 kg (13,000 lbs.)		
Gross Weight: (crated)	6,250 kg (13,750 lbs.)		
Hydraulic Requirements:	Tank capacity: 605 liters (160 gal.) Pump capacity: 3.2 liters per second (50 gpm)		
Electrical Requirements:	Vibrator motor, 5.6 kw (7.5 hp) Agitator motor, 1.5 kw (2 hp) Pump motor, 18.7 kw (25 hp) Fan motor, 0.2 kw (1/4 hp) Control circuit, 1 kw (1000 watts)		

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MODEL 22HF BLOCK MACHINE

Your Answer

... to superlative engineering at a price you can afford.

Your Answer

... to unparalleled performance and low-cost, quality production.

Your Answer

... to meeting the growing demands in today's paver and construction industries with both precision and variety.

Your Answer

... to more maintenance-free operation and increased capacity per investment dollar.

If these answers apply to questions you may have, Columbia's Model 22HF has been designed to simplify the selection of a block machine to meet your production needs. The Model 22HF has gained acceptance and proven its value in markets worldwide. If maximum return on your investment and product quality are your goals, backed by the kind of parts and service representation you can depend on, **the answer is the Columbia Model 22HF.**

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