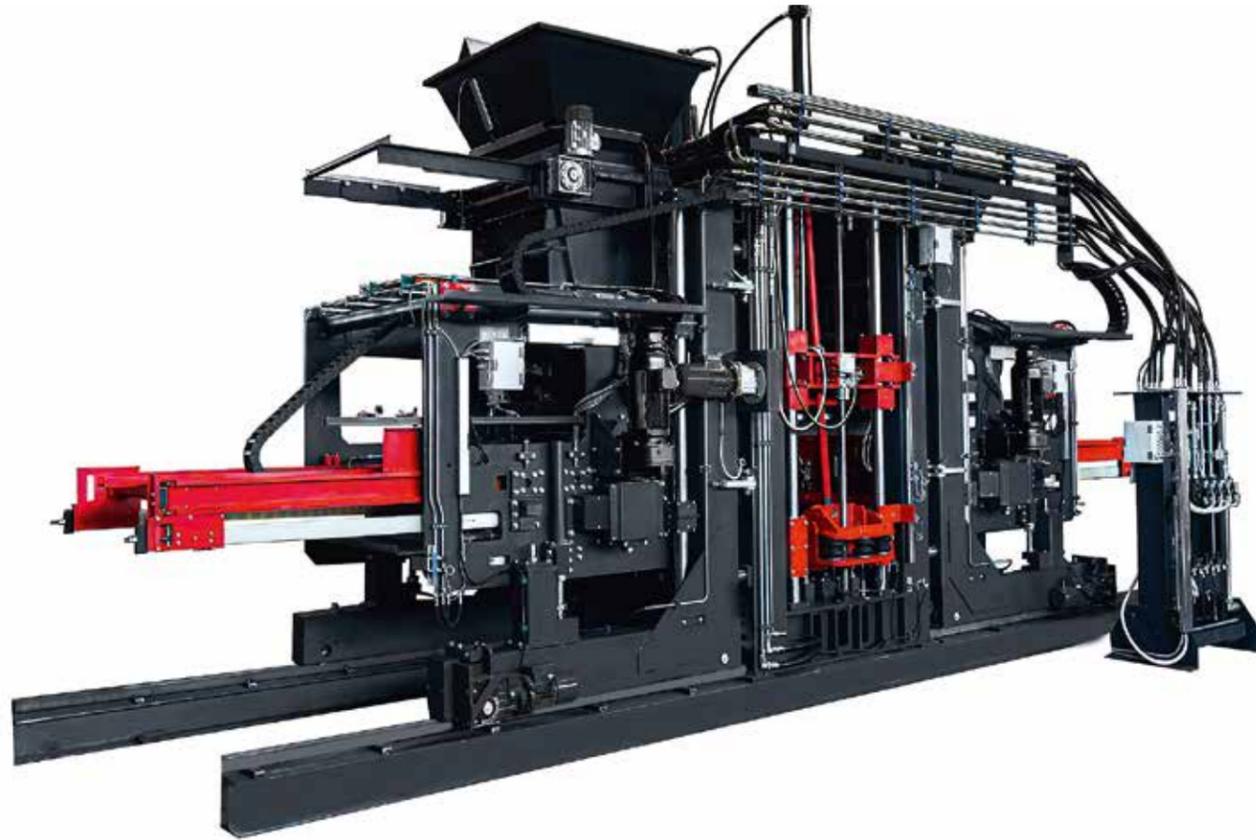


**PRODUCTION OF
CONSTRUCTION MACHINES**





Stationary block making machine PRO 1500

With its exceptional design, the PRO 1500 block machine aims to give highly efficient and dependable production.

This machine has an advantage over the competition due to its optimal use of electrical and hydraulic energy.

This machine can be considered the ultimate solution for the manufacture of concrete elements, as it offers a variety of choices as an additional upgrade that can increase production efficiency:

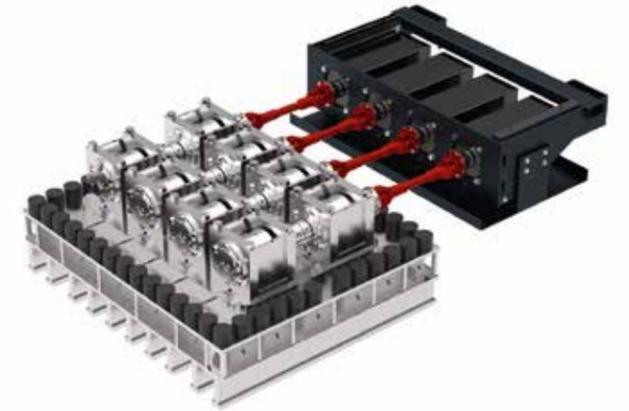
- Transverse cleaning brush for curbstone production
- Planing roller
- Inserting device for polystyrene
- Color mix device
- Automatic height adjusting of coarse mix and face mix
- Pneumatic tamperhead clamping.

TECHNICAL SPECIFICATIONS:		PRO1500
Production pallet (mm)		1400 x 1100
Production area (mm)		1300 x 1050
Min. product height (mm)		40 (25)
Max. product height (mm)		350 (500)
Weight (kg)		32.000
PRODUCTION CAPACITY		
Paving stones 10x20x6cm without face mix:		
	m ² in 8h	2000
	Cycle time (s)	13
	Pcs. in moulds	54
Paving stones 10x20x6cm with face mix:		
	m ² in 8h	1550
	Cycle time (s)	17
	Pcs. in moulds	54
Hollow block 20x20x40cm:		
	pieces for 8h	21.600
	Cycle time (s)	16
	Pcs. in moulds	12

Prometal block machine technology

Hi-dynamic servo vibration system transmits power for high compaction with just the right amount of electrical power consumption to a vibration table comprised of impact and ledge bars, thereby producing high-quality paving stones, blocks, curbstones, and any other products that the modern, demanding market requires.

A vibration power of 220 kN allows for rapid product compaction, resulting in shorter cycle times and accurate product heights.



Hi - Dynamic servo vibration system



Servo powered filling box

Filling boxes from both coarse mix and face mix with the assistance of two servo motors generates rapid back-and-forth motion that contributes to the consistent filling of the mould.

The filling box of coarse mix equipment is further equipped with an agitator (powered by a hydraulic cylinder) to ensure uniform and efficient filling. Servo motors are used to operate the filling box of coarse mix and face mix as well as the hydraulic power unit, resulting in higher energy efficiency.

Main mix and face mix device constructed from thick plates that are bolted together rather than welded, resulting in a stronger and more durable structure. All of the components are conveniently accessible for maintenance from all directions. Both devices are totally detachable.



Thick plate chassis



Operation panel



Face mix filling box



De-attachable main and face mix



Pneumatic scrapper of filling box



Electric door opening



Tammerhead vibrators

FEATURES AND OPTIONS	PRO 1500
Fast pallet takeout device	O
Safety equipment for PRO 1500	O
Tamper head vibration	O
Facemix device	O
Transversal cleaning brush for curbstone	O
Sensor for material level inside of main hopper	O
Sensor for material level inside of face hopper	O
Color-mix device	O
Servomotor powered filling box main mix	I
Servomotor powered filling box face mix	I
Automatic height adjustment of main mix floor	I
Automatic height adjustment of face mix floor	I
Automatic movement of main mix device	I
Automatic movement of face mix device	I
Automatic locking of main mix unit	O
Automatic locking on face mix unit	O
Servomotors vibration system	I
High performance hydraulic	O
Active agitator for main mix	I
Stamp bottom plate for special products	O
Pneumatic scrapper for main mix filling box	I
Pneumatic scrapper for face mix filling box	I
Smoothing roller	O
Polystyrene inserting device	O
Pneumatic tamperhead clamping	O
Automation supervision system	O
Tele-service device	O
Option 500 mm production height	O
Option 25 mm production height	O

I - Included equipment O - Optional equipment



PRO 1500



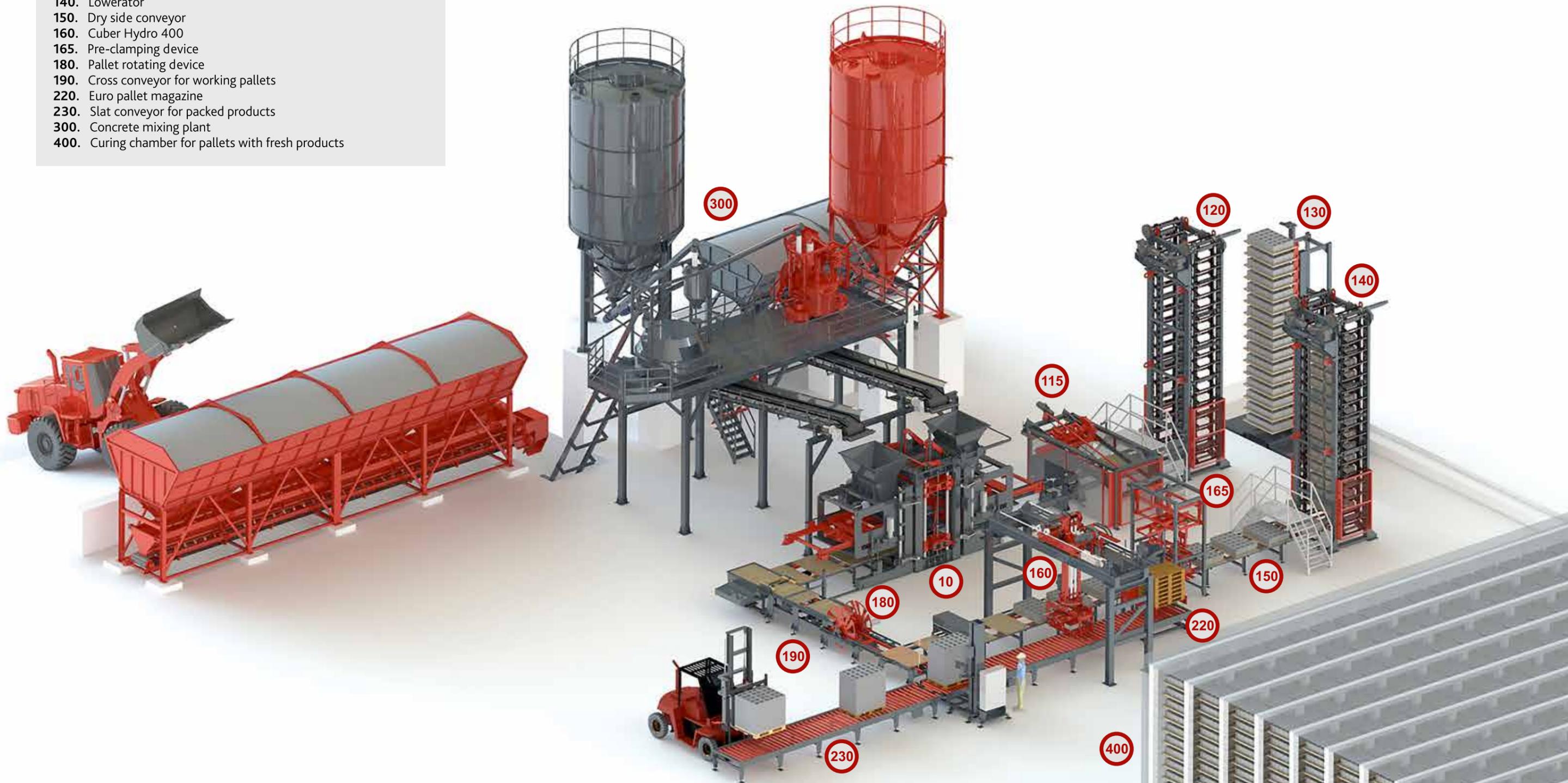
Filling box main mix

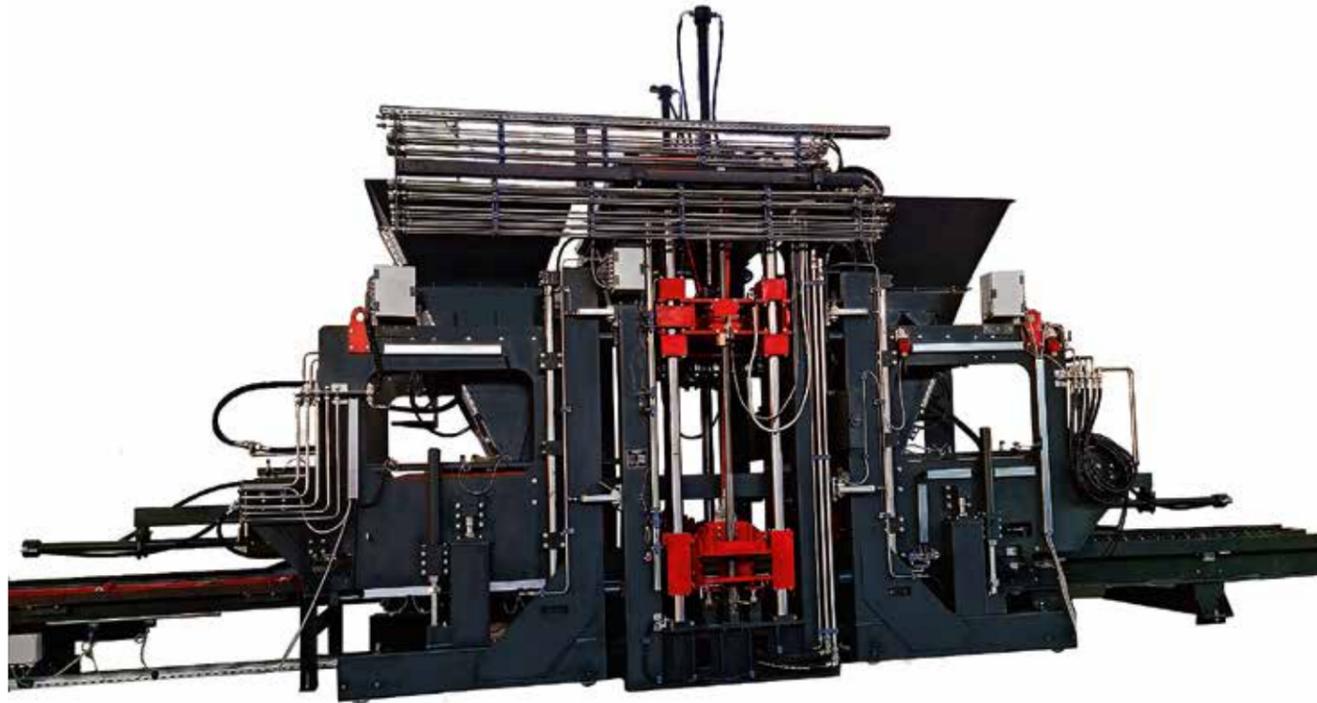


Hydraulic tamperhead brake

Fully automatic production line

- 10. Stationary block making machine PRO 1500
- 115. Face washing machine
- 120. Elevator
- 130. Finger car
- 140. Lowerator
- 150. Dry side conveyor
- 160. Cuber Hydro 400
- 165. Pre-clamping device
- 180. Pallet rotating device
- 190. Cross conveyor for working pallets
- 220. Euro pallet magazine
- 230. Slat conveyor for packed products
- 300. Concrete mixing plant
- 400. Curing chamber for pallets with fresh products





Stationary block making machine PRO 1000

The design of the PRO 1000 concrete block making machine places it among the most versatile machines on the market.

The PRO machine series provides the broadest selection of available handling and cubing systems, making them the most configurable machines in their class. By upgrading handling equipment on the wet and dry line sides, the capacity of the entire installation can be greatly improved.

Synchrotronic vibration system by utilizing counter-rotating shafts, synchronized vibrators give programmable and adjustable vibration.

Capable of upgrading vibration system to a Hi-Dynamic servo vibration system.

TECHNICAL SPECIFICATIONS:		PRO1000
Production pallet (mm)		1400 x 900
Production area (mm)		1300 x 850
Min. product height (mm)		40 (25)
Max. product height (mm)		350 (500)
Weight (kg)		25.000
PRODUCTION CAPACITY		
Paving stones 10x20x6cm without face mix:		
	m ² in 8h	1660
	Cycle time (s)	15
	Pcs. in moulds	44
Paving stones 10x20x6cm with face mix:		
	m ² in 8h	1400
	Cycle time (s)	18
	Pcs. in moulds	44
Hollow block 20x20x40cm:		
	pieces for 8h	19.200
	Cycle time (s)	18
	Pcs. in moulds	12



Tamperhead clamping



Filling box agitator



Pneumatic scraper

FEATURES AND OPTIONS	PRO 1000
Fast pallet takeout device	O
Safety equipment for PRO 1000	O
Tamper head vibration	O
Facemix device	O
Transversal cleaning brush for curbstone	O
Sensor for material level inside of main hopper	O
Sensor for material level inside of face hopper	O
Color-mix device	O
Servomotor powered filling box main mix	O
Servomotor powered filling box face mix	O
Automatic height adjustment of main mix floor	I
Automatic height adjustment of face mix floor	I
Automatic movement of main mix device	O
Automatic movement of face mix device	O
Automatic locking of main mix unit	O
Automatic locking on face mix unit	O
Servomotors vibration system	O
High performance hydraulic	O
Active agitator for main mix	O
Stamp bottom plate for special products	O
Pneumatic scraper for main mix filling box	O
Pneumatic scraper for face mix filling box	O
Smoothing roller	O
Polystyrene inserting device	O
Pneumatic tamperhead clamping	O
Automation supervision system	O
Tele-service device	O
Option 500 mm production height	O
Option 25 mm production height	O

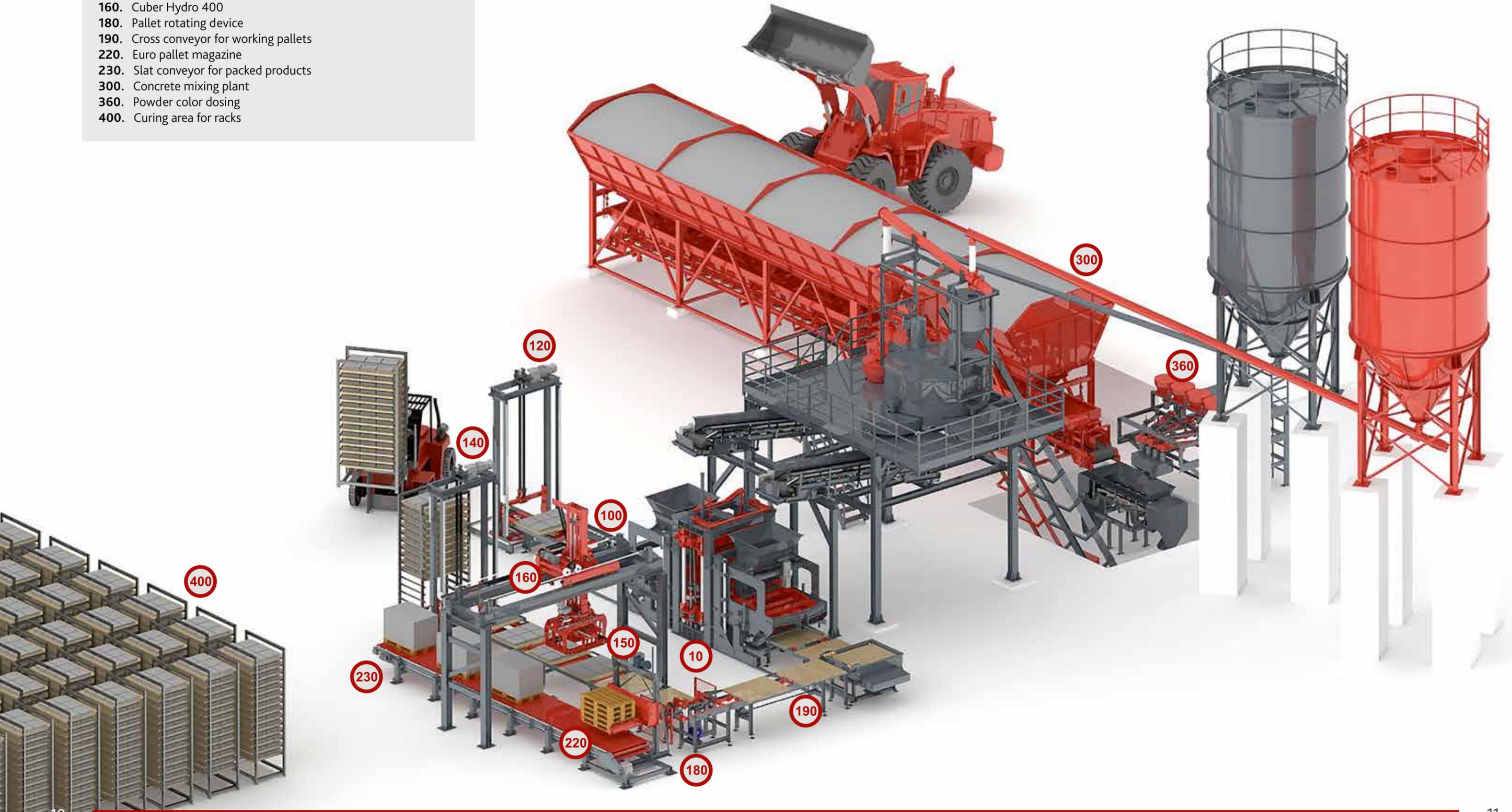
I - Included equipment O - Optional equipment



Tamperhead break

Closed line rack system

- 10. Stationary block making machine PRO 1000
- 120. RS elevator
- 140. RS lowerator
- 150. Dry side conveyor
- 160. Cuber Hydro 400
- 180. Pallet rotating device
- 190. Cross conveyor for working pallets
- 220. Euro pallet magazine
- 230. Slat conveyor for packed products
- 300. Concrete mixing plant
- 360. Powder color dosing
- 400. Curing area for racks





Main filling box



Mould clamping



Main filling box

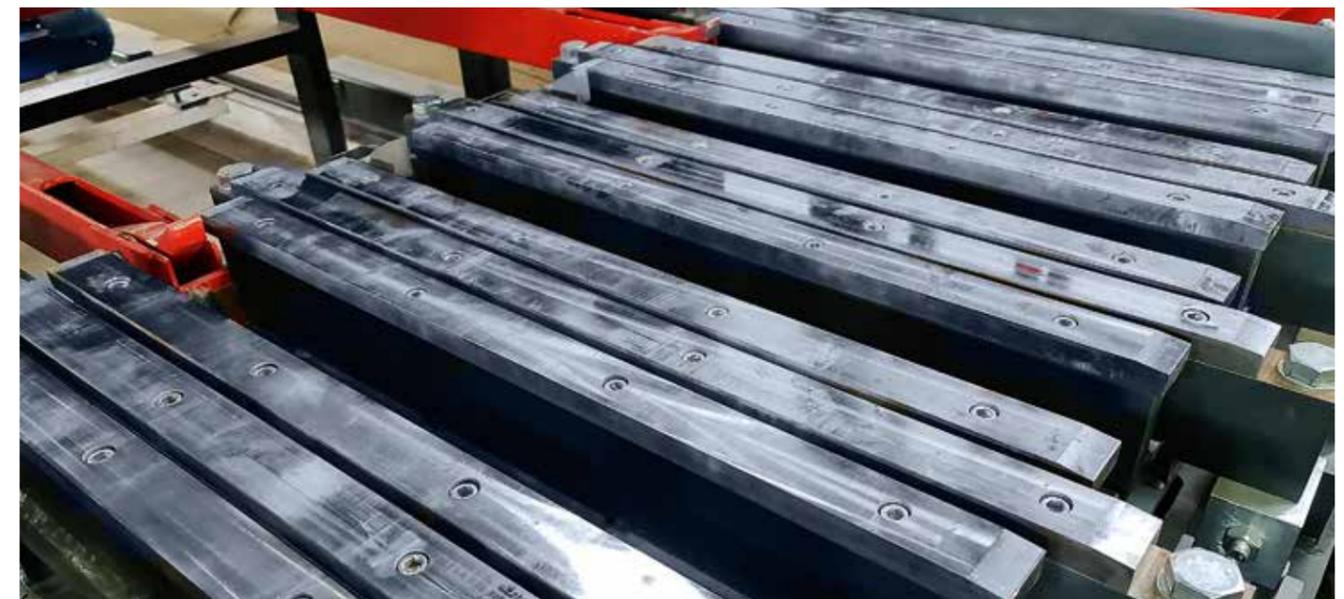


Tamperhead clamping

Stationary block making machine PRO 500

The PRO 500 machine is an excellent machine that can be equipped with a variety of options, including a Hi-dynamic servo vibration system, pneumatic tamperhead clamping, and more. Strong and durable chassis identical to those of large block machines, designed to withstand a strong vibration system with four vibrators. As with all machines in the PRO series, the main mix and face mix are detachable for straightforward maintenance.

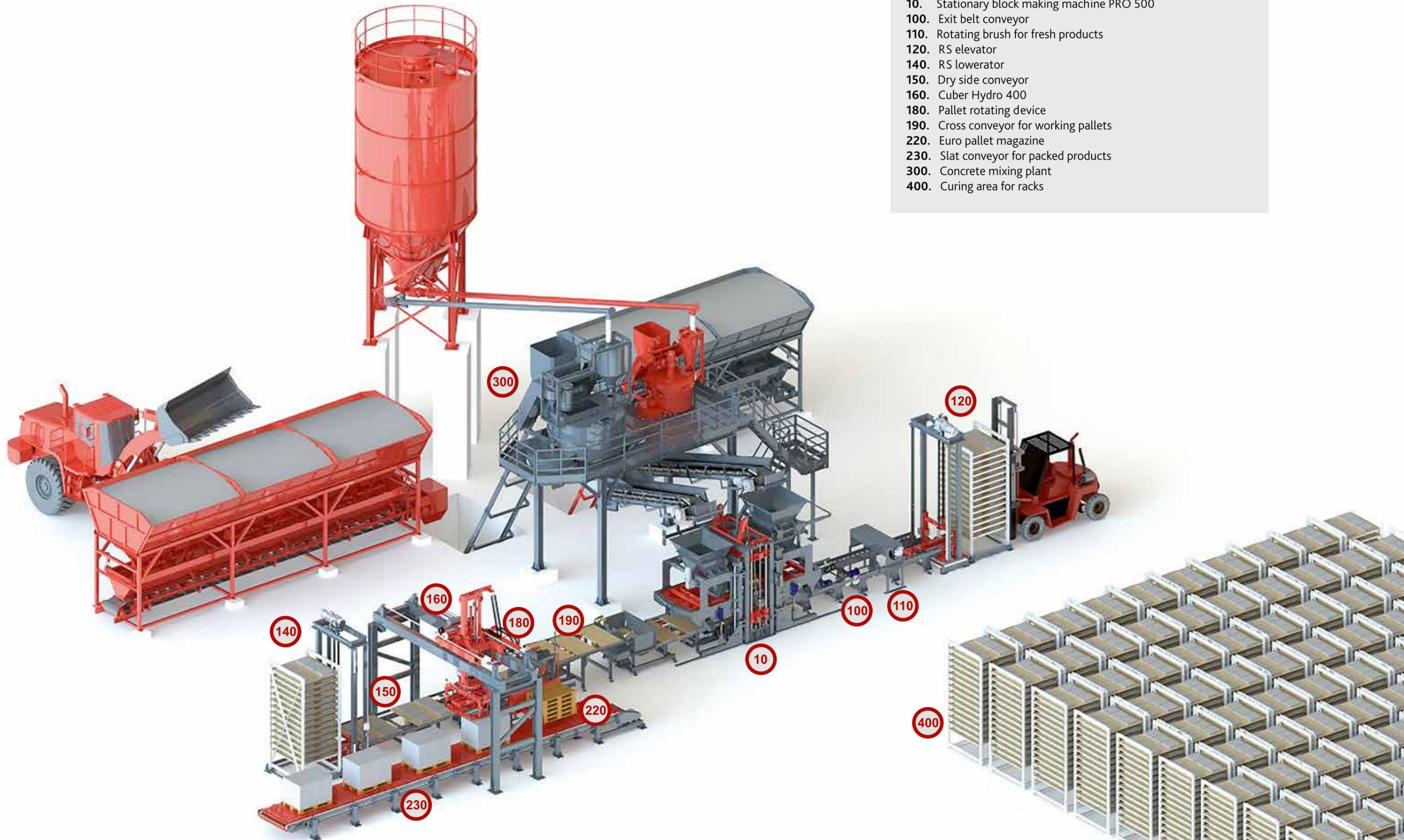
TECHNICAL SPECIFICATIONS:		PRO 500
Production pallet (mm)		1400 x 700
Production area (mm)		1350 x 650
Min. product height (mm)		25
Max. product height (mm)		300
Weight (kg)		14.700
PRODUCTION CAPACITY		
Paving stones 10x20x6cm without face mix:		
	m ² in 8h	1016
	Cycle time (s)	17
	Pcs. in moulds	30
Paving stones 10x20x6cm with face mix:		
	m ² in 8h	864
	Cycle time (s)	20
	Pcs. in moulds	30
Hollow block 20x20x40cm:		
	pieces for 8h	12.960
	Cycle time (s)	20
	Pcs. in moulds	9

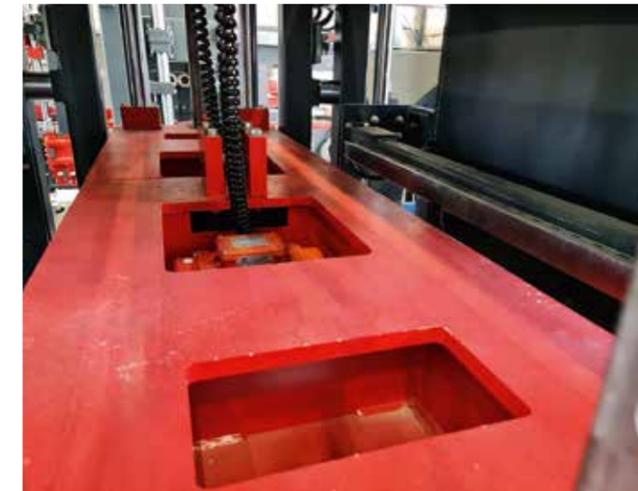


Vibration table

Open line rack system

- 10. Stationary block making machine PRO 500
- 100. Exit belt conveyor
- 110. Rotating brush for fresh products
- 120. RS elevator
- 140. RS lowerator
- 150. Dry side conveyor
- 160. Cuber Hydro 400
- 180. Pallet rotating device
- 190. Cross conveyor for working pallets
- 220. Euro pallet magazine
- 230. Slat conveyor for packed products
- 300. Concrete mixing plant
- 400. Curing area for racks





Tamperhead bridge



Pneumatic mould clamping



Sensor for product height



Face mix filling box

Stationary block making machine PRO 400

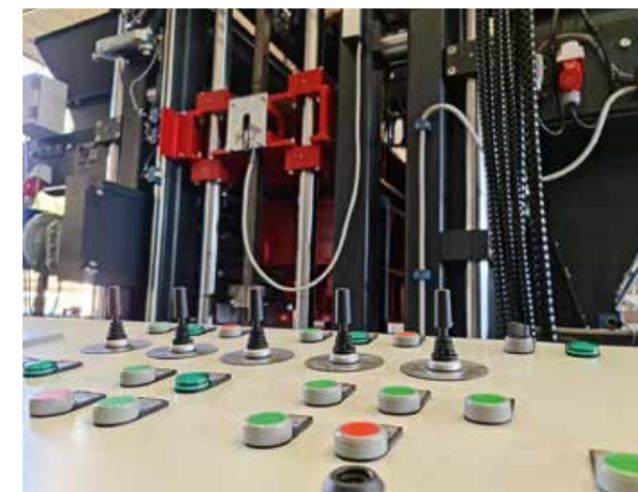
The PRO 400 block machine is an ideal entry-level production solution. Machine can be outfitted with the same options as the larger PRO series models.

Utilizing counter-rotating shafts, synchronized vibrators give programmable and dynamic vibration.

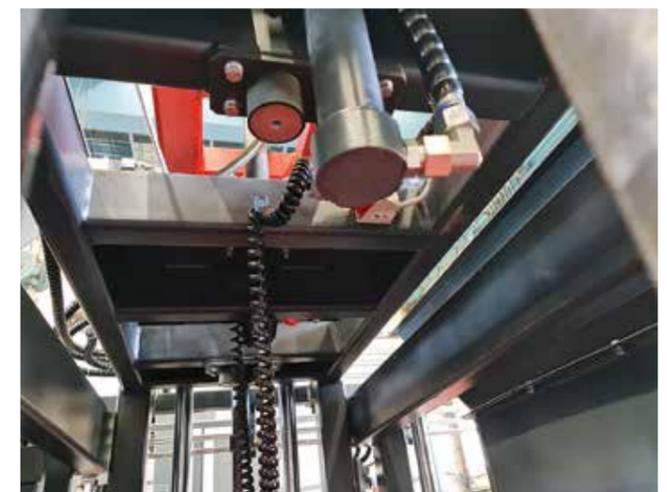
With two vibrators, the SYNCHROTRONIC vi-bro-compaction design ensures uniform wave amplitude from the front to the back of the mold. This provides products with a high density and homogeneity, requiring less cement.

Simple in servicing and modification SYNCHROTRONIC vibration system is one of the most cutting-edge vibration systems now used on block machines.

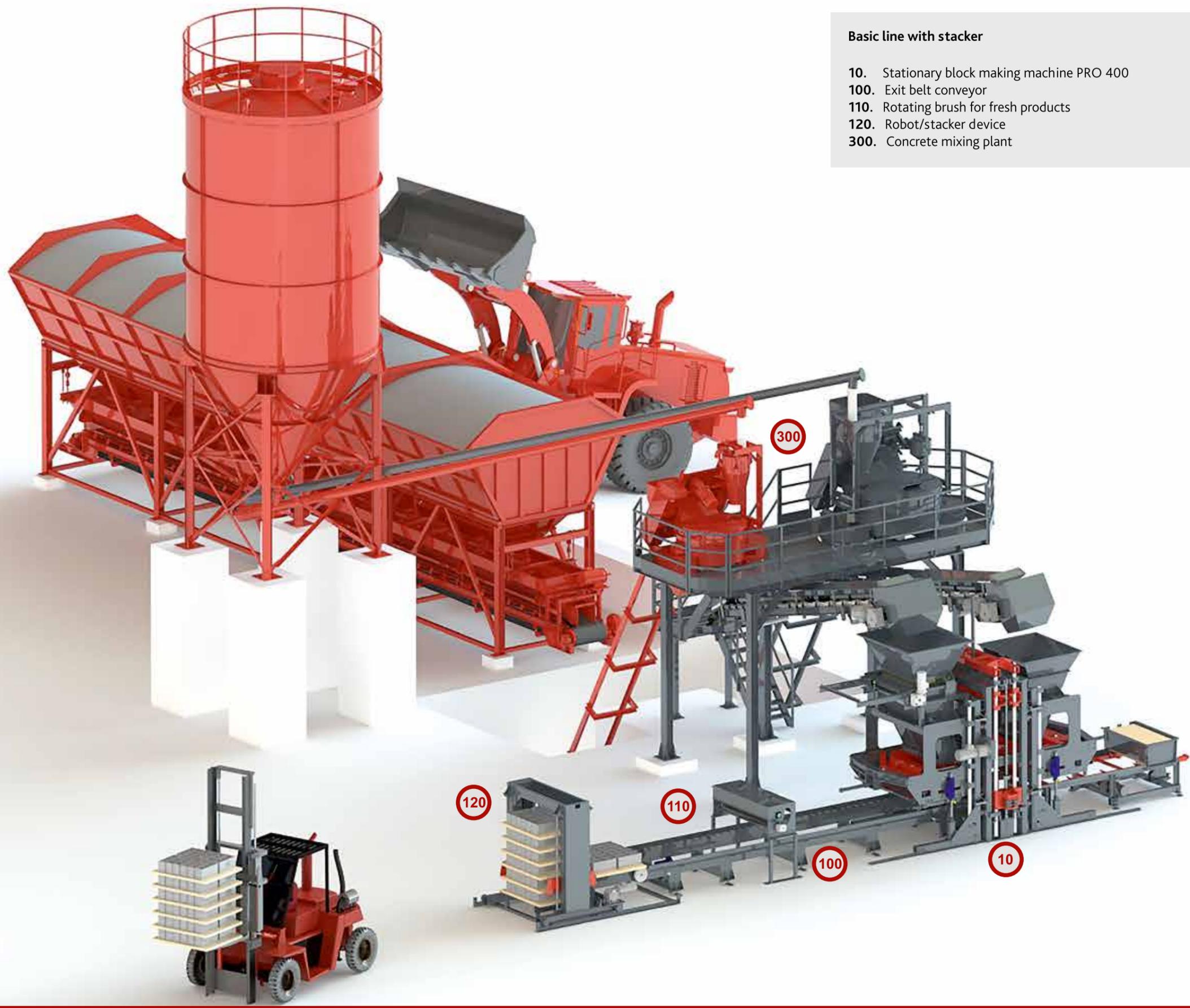
TECHNICAL SPECIFICATIONS:		PRO 400
Production pallet (mm)		1200 x 550
or max for pallets with legs/support		1350 x 550
Production area (mm)		1100 x 500
Min. product height (mm)		25
Max. product height (mm)		300
Weight (kg)		11.300
PRODUCTION CAPACITY		
Paving stones 10x20x6cm without face mix:		
	m ² in 8h	760
	Cycle time (s)	15
	Pcs. in moulds	20
Paving stones 10x20x6cm with face mix:		
	m ² in 8h	570
	Cycle time (s)	18
	Pcs. in moulds	20
Hollow block 20x20x40cm:		
	pieces for 8h	8.000
	Cycle time (s)	18
	Pcs. in moulds	5



Control panel



Central part chassis



Basic line with stacker

- 10. Stationary block making machine PRO 400
- 100. Exit belt conveyor
- 110. Rotating brush for fresh products
- 120. Robot/stacker device
- 300. Concrete mixing plant

Elements packing

Equipment for cubing, transporting, and packing products. Fully automatic packing lines for concrete products. Possible upgrades for various production line types, system integration, and more.

We offer solutions for cubing, packing, and shipping:

Automatic cubing

For packing pavers, blocks, curbstones, and other concrete products, fully automatic cubing systems can be utilized.

Conveyors for transport

Transporting conveyors for euro palletized products. Roller conveyors, slat conveyors, and chain conveyors are some of the solutions offered by Prometal to its clients.

Packaging machines

Wrapping machines for finished products using stretch foil or PET strips. Wrapping can be accomplished horizontally, vertically, or both.



Cubing device



Finger car

Finger car

Designed for simultaneous acceptance of all concrete product pallets from the full elevator and transport to the drying chamber and back to the packing area. Customizable number of levels and distance between levels.

Automatic transport

Transport of fresh products to the curing chamber and returning to the packaging area, while monitoring the curing process.

Curing chamber

Curing chamber for concrete products, having the ability to close the chamber for particular procedures like vapour curing or air circulation.

Rotation platform

With the finger car rotating platform, our clients can position the curing chamber at the back of the line. The platform rotates 180 degrees.



Lowerator

Lifting, lowering and transport

Various types of elevators and lowerators are utilized for lifting and stacking pallets carrying fresh products and lowering pallets carrying dry goods. Pallet and product transport, turning, and conveyors on both the wet and dry side of the line.

Various pallet transport, product stacking, lifting, and lowering solutions:

Elevator and Lowerator

The lifting and lowering of pallets from and to the conveyors on the wet and dry side of the production line. We offer clients a variety of options using regular chain, belt, or RS-type elevators and lowering devices.

Product transport

Transporting the products on both the wet side and dry side of the production line automatically.

Pallet turning device

A device for pallet rotation that is used on both sides equally. This approach extends the lifespan of working pallets.

Pallet handling

The handling of working pallets can be expensive; we are here to keep these expenses to a minimum. Euro pallet handling, pallet buffering, pallet brushes, and storage.

Handle your pallets with competence:

Pallet buffer

Pallet buffer for working pallets gives a unique solution for inserting or removing pallets entirely automatically.

Euro pallet magazine

Integrated into the system of packaging is a magazine for euro-pallets as a standard transport pallet solution.

Device for spraying pallets

A device for spraying pallets as part of a regular maintenance kit for working pallets. Nozzles for spraying with a reservoir and a high-pressure pump.



Pallet handling



Agitator for main filling box

EB 12

The EB 12 movable block machine offers manufacturing of a vast array of concrete products. It can be used as both a universal machine and a machine for producing unique products. This versatile block machine can be used to manufacture:

- Hollow blocks
- Chimney blocks
- Hourdy blocks
- Garden blocks
- Insulated blocks
- Solid blocks
- Kerb stones
- Paving stones with or without face mix

With its basic safety features, rigid frame construction that permits heavy-duty operation, and simplicity of design that reduces maintenance to a minimum, this machine is the most cost-effective option for a vast array of manufacturers of concrete products.

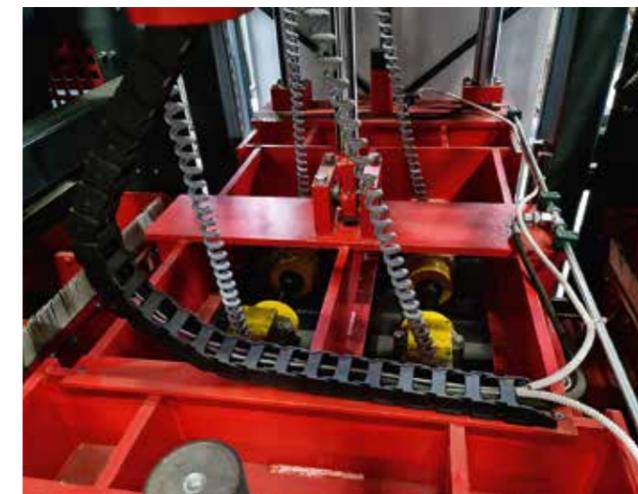
TECHNICAL SPECIFICATIONS:		EB 12
Production area (mm)	1240 x 850	
Production area for EB12 with vibrator plate (mm)	1350 x 550	
Block height floor production (mm)	175 - 500	
Block height vibration table production (mm)	60 - 250	
Weight with mould and without face mix dev. (kg)	9.200	
Weight with mould and with face mix dev. (kg)	12.300	
PRODUCTION CAPACITY		
Paving stones 10x20x6cm without face mix:		
	m ² in 8h	670
	Cycle time (s)	35
	Pcs. in moulds	42
Paving stones 10x20x6cm with face mix:		
	m ² in 8h	620
	Cycle time (s)	38
	Pcs. in moulds	42
Hollow block 20x20x40cm:		
	pieces for 8h	13.600
	Cycle time (s)	25
	Pcs. in moulds	12



Hydraulic unit



Control panel



Tamperhead vibration



Mould and tamperhead



From small through medium to large capacity concrete mixing plants, we offer the most efficient means of producing high-quality concrete. Choose from concrete mixing plants with capacities ranging between 15 to 120 cubic meters per hour. Long-lasting structures and a robust design guarantee our clients a long-term, productive investment.

Electric installation of a concrete mixing plant comprises all electrical connections for regulating voltage and a measuring component. All installations and safety equipment adhere to EC standards and are protected by IP 67. The entire factory is controlled by a PLC Siemens controller that provides system connections that meet safety requirements.



Cement silo

The design and construction of aggregate hoppers are based on the notion that they will be subjected to intense operating conditions for an extended period of time. There are two electro-pneumatically controlled discharge gates that allow flexibility and choice in the discharge as well as the appropriate height. S-type load cells are used to weigh aggregate.

- To combine and customize concrete mixing plants, our customers may choose:
- Concrete mixer planetary or twin-shaft with or without a movable skip.
- Platform steel structure (made and designed by customer needs)
- Mixer feeding conveyor
- Aggregate hoppers with weighing belt conveyor adapted to the size of concrete batching plant
- Water weighing scale
- Cement weighing scale
- Additive system for dosing chemical additives
- Electric installations and controlling of batching plant with PLC Siemens controller
- Cement silos with the following equipment and cement screw conveyors
- Insulation construction from sandwich panels with sub construction for winter execution. Much more equipment per customer demand.



Aggregate hopper



Fine dosing belts



Concrete mixing plant



Cement silo

Concrete mixing	Units	BP 10	BP 20	BP 30	BP 40	BP 60	BP 80	BP 100	BP 110	BP 120
Capacity	m3/h	10	20	30	40	60	80	100	110	120
Batch count	cycle/hr	90	90	90	90	90	90	90	90	90
Mixer Capacity (compacted)	m3	0.25	0.375	0.5	0.75	1	1.5	2	2.5	3
Mixer Motor Power - Planetary mixer	kW	11	11	18.5	30	45	55	75	90	110
Aggregate Compartments	no.	2	2 to 3	3 to 4	4 to 6	4 to 6				
Aggregate Compartment capacity	m3	8	10 to 15	10 to 15	15 to 20	15 to 20	20 to 30	20 to 30	30 to 40	30 to 40
Cement Weigher	kg	150	170	300	400	500	750	1000	1400	1750
Water Weigher	l	70	110	160	200	250	400	600	800	1000
Additives Weigher	l	20	20	20	20	20	20	35	35	40

Planetary Type Mixer features three arms per star and one or two stars on larger models. This method creates a counter-current flow of the batch materials. This form of mixing action results in a more efficient and aggressive shuffling of aggregates, resulting in shorter cycle durations and less wear. Identical floor tiles are low cost and can be individually replaced.



Planetary mixer PM 1000

The planetary (or countercurrent) design causes each arm to span the whole mixer floor over a number of revolutions. This powerful mixing action is fast and thorough, resulting in a faster mixing time. As a result, the throughput is increased, leaving more concrete per hour for a plant of the same size, as well as improved consistency and increase in strength and cement savings.



Planetary mixer PM 250



Aggregate hoppers



Cleaning blade of planetary mixer



Mixing blades

Cut from a full steel board

Our moulds for elements with heights up to 140 mm are cut from a full steel board.

We are here to help

Each mould is made per the client's request. That means here at Prometal clients can choose the dimensions of the product, consult with engineers regarding technical solutions and create their own completely new product.

Precision

Moulds are made with the highest precision in cutting, welding, and grinding, so our clients can get high-quality products.



Moulds for block machines for hollow blocks, solid blocks, paving stones, curbstones, chimney blocks, stairs and more...

Moulds of the highest quality for Prometal's block machines as well as for other block making machines from any other manufacturer.

Moulds for block machines for hollow blocks, solid blocks, paving stones, curbstones, chimney blocks, stairs and more...

Mould case

- Heat – cut from one piece of high – yield special steel and successively surface hardened by means of heat treating.
- Very high wear resistance
- Laying spacers on entire manufacture height.
- Hardness achieved 60+ HRC with 1.5 mm of depth.
- Plates, supports and other parts Fe 430

TAMPER HEAD

- Special steel tempers, milled and polished by precision automatic machines and surface hardened by means of heat-treating. Hardness achieved about 60/62 HRC with 0.5/0.8 mm of depth.
- Plates, supports, and other parts Fe 430.
- Machine –adjustment of every single temper on the case with the progressive numbering of the pressers.



Mould for paving stones



Mould for curbstone



Mould for hollow block



The function of the powder color dosing device is to dispense colors inside the mixer's skip or on the belt. Up to four distinct colors can be loaded into the mixer, allowing clients to build their own color palette for the creation of paving stones, blocks, garden curbstones, or any other product. The use of one to four hoppers for the pre-dosing of colored powder, which is conveyed to the scale by means of a screw conveyor, allows for extremely exact dosing. The scale is opened pneumatically, and with the aid of gravity and a vibrator linked to the scale, the powder is completely released into the mixer's skip.



Pneumatic actuators



Vibrators on screw conveyors

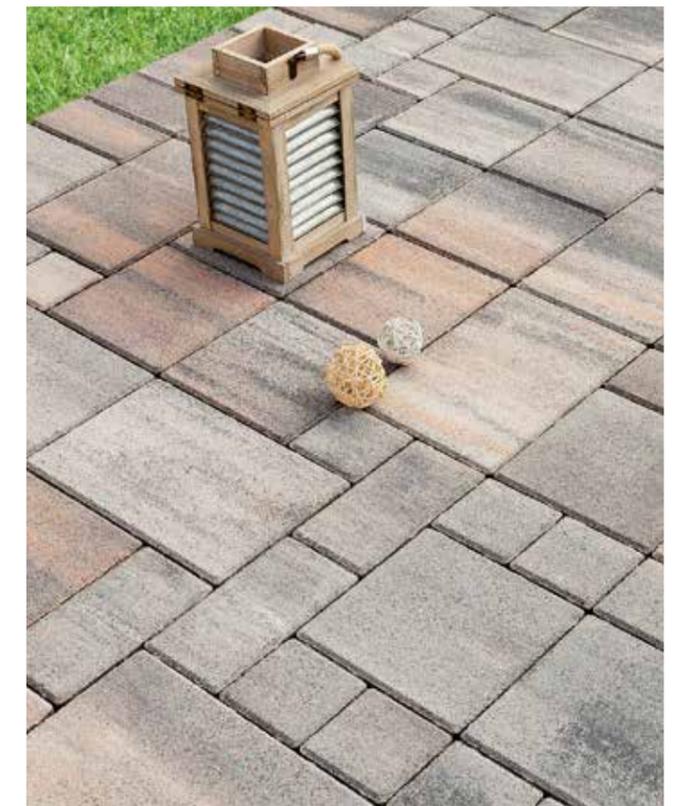


Screw conveyors



Mounted on top of the machine hopper, main mix hopper, or face mix hopper, this system provides our clients with a solution for the simple yet effective manufacturing of multicolor paving stones, blocks, or other products that require such treatment for modern finishing.

Electrically powered, section-by-section openings provide a natural blending of previously mixed-colored concrete mixtures as they descend into the block machine's hopper. After the hopper gate is opened, colored concrete is poured into the filling box, which therefore moves back and forth over the mold to produce multicolor products.





Face washing machine is used to manufacture pavers with a washed surface. One or two pallets of washed products for each cycle. It consists of a stationary frame with height-adjustable washing units and a pallet lifting mechanism. One side of the pallet is raised so that wastewater can flow from the pallet to the foundation hole. The driving carriage, which is equipped with three spray bars and one air blower, runs inside the two guide rails. The function of the air-blowing section is to expel sufficient water from pallets and washed products. The carriage is powered by a gear motor that is frequency-controlled. The first two spray bars run at high pressure to wash the product's face. To prevent streaking, they are mounted on oscillating mechanisms. The third spray bar functions at low pressure to clean the surface, so generating a natural-looking finish on the surface of the pavers.



Spraying nozzles



The block splitting machine is used to split concrete products such as block and concrete fence caps. We offer a variety of options to our customers, ranging from semi-automated to fully automatic line setups. Standard equipment includes of hydraulically operated top, bottom, and side-splitting knives, a pushing table, and an exit table. Options of lifting, handling, and transporting the products further are dependent on client preferences.



Splitting knives

Prometal After Sales Service

Our customers get the top level of after-sales services, as we understand the importance of a "lost second" in the manufacturing business. Different departments of our company will be responsible for taking care of customers' requests and needs after the plant start-up. Fast response to the requests is one of the many qualities we are able to provide to our customers.



Spare parts delivered to the customer address anywhere in the world



Technical support for problem-solving in real-time via video call



Existing plant upgrade and equipment retrofit



Assistance via teleservice device in a real-time



Consulting services for a plant setup and processes



Development of the new products with customer



Training of the new personnel

Prometal Training Center

Our customers and future operators of equipment can sign up at the "Prometal Training Center" for training in the operation of the equipment, safety, maintenance of equipment, and concrete technology. Trainees will go through the theoretical part of the training and afterward will be trained in the production plant on the fully automatic production line.

What our customers get from training:

- Theoretical knowledge of the machinery operation
- Safety training
- Practical training from the operators directly at the production plant
- Maintenance training
- Know-how and increase in the productivity





Growth. Innovation. Trust

Prometal is located in Sopot, Belgrade, Serbia. Prometal has been present on the global construction equipment industry for 50 years. The earliest products were machines for concrete block production. The company was founded in 1973. Over the course of time, PROMETAL has created highly sophisticated block making machines with fully automatic hydraulic and electronic, concrete mixing plants and mixers, concrete pipe-making machines and other machinery. Due to our extensive knowledge and commitment to innovation, you can rest assured that you have discovered a reliable partner in the concrete business, as proved by thousands of satisfied customers on six continents.

S.R. Prometal

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