



**CONCRETE BLOCK MACHINES / MANUFACTURING LINES / MOLDS / MIXING PLANTS** 



The TECHMATIK company was founded in summer 2004 in the Radom Subzone of the Tarnobrzeg Special Economic Zone, in Poland.

The broad TECHMATIK offer includes: molds for production of concrete paving blocks and decorative concrete products; modern high-performance concrete block machines; complete manufacturing plants; concrete mixing plants; and various machines used for manufacture of vibrated & pressed, as well as ready-mixed concrete. All production plants are equipped exclusively with the most advanced state-of-the-art machines ensuring high output and repeatability of production and superior quality of products. Our machines, devices and molds are designed for high-performance operation on steel production boards, which make it possible to obtain the best product properties by thorough compacting. At the same time, production costs can be significantly lowered by the reduction of cement added.

The offer is supplemented with the manufacturing process control systems. These include control modules for individual process stages and integrated control systems for the entire manufacturing process. Moreover, TECHMATIK offers services in the area of repair, refurbishment and maintenance of all machines and equipment.

The Company constantly extends its portfolio of machines and devices which - prior to commercialization - are thoroughly tested.

The superior quality confirmed by ISO 9001- certified quality management system, the performance and output levels of machines and molds produced, and competitive prices – these are the reasons why TECHMATIK is one of the leading manufacturers of machines and plants for the production of concrete pavers, and one of the leaders in the production of molds for precast concrete products.

Our modern approach combined with a long-term experience in concrete products manufacturing, innovative and high-quality machines, devices, and molds, has already been appreciated by hundreds of customers from over 50 countries on almost all continents. The company delivers its solutions directly to customers in many European and Asian countries, both Americas, Australia and New Zealand.

Techmatik is one of Columbia Machine companies.

Established in 1937, Columbia Machine is a third generation, privately held company, a world leader in design, manufacture and support of equipment for a variety of industries, with customers in above 100 countries around the world. The main product portfolio of the company contains solutions related to devices and molds for the manufacture of concrete products, packaging machines and robots, conveyor systems, manipulators and manufacturing services.

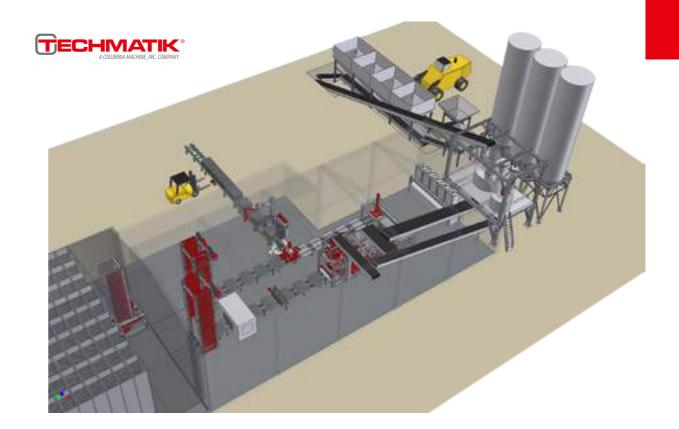




	About Techmatik	02
Manufacturing lines	Manufacturing plants for concrete paving blocks and decorative products Standard line SHP 5000 PRO C Standard line HP 3000 PRO – Legged production boards Standard line HP 3000 PRO – transportable racks	05 08 09 10
Concrete block machines	SHP 5000 PRO C concrete block machine	13 17 21 25 28
Devices of the manufacturing line	Robomatik cube  Wrapping machine  Stacking and destacking devices  Upper and lower truck  Rack System  Commercial pallet feeder  Boards feeder  Product dump station	30 32 34 35 36 37 38 39
Device for product refinement	WASHMATIK – product washing station Tumbler	40 42
Splitter lines	Splitter 1000	43 44
Mixing plants	Concrete mixing plants	46 47
Molds for concrete paving blocks and products	Molds for concrete paving blocks and products Technological process of molds production Molds Types	50 54 58
	Contact	64







# MANUFACTURING PLANTS FOR CONCRETE PAVING BLOCKS AND DECORATIVE PRODUCTS



Complete technological lines controlled by an integrated computer system that guarantee production repeatability and superior quality of the products.



Automatic control

Possibility to produce a broad range of products

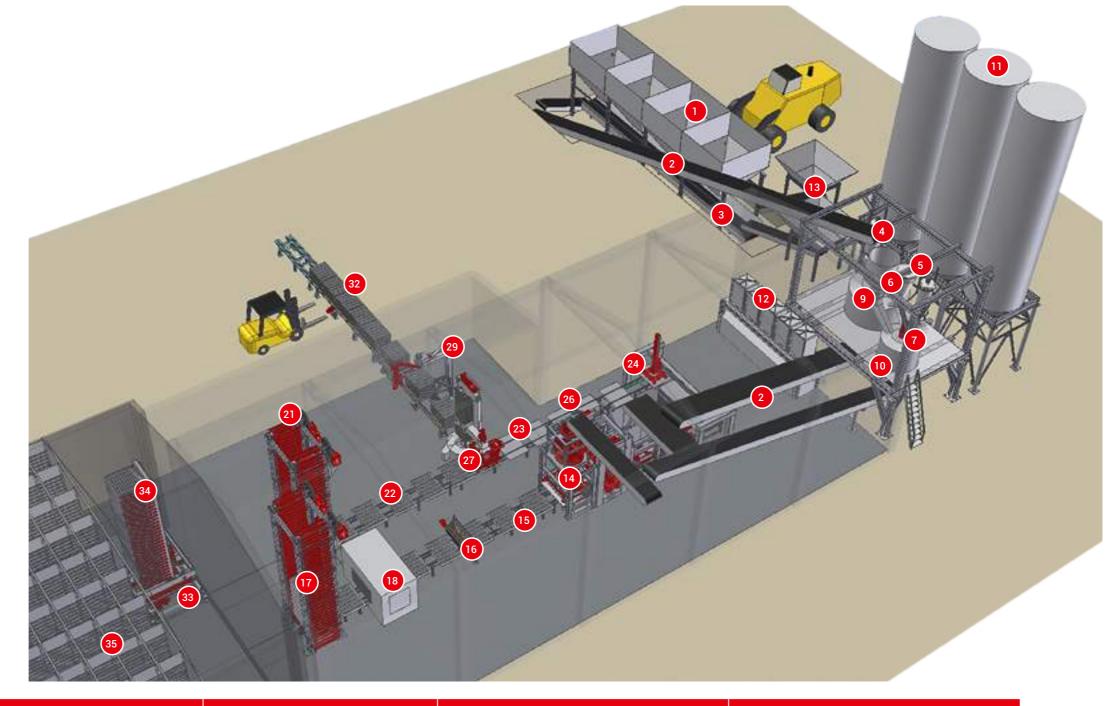


# TECHNATIK® A COLUMBIA MACHINE, INC. COMPANY TECHNATIK® A COLUMBIA MACHINE, INC. COMPANY

# TECHMATIK EXAMPLE MANUFACTURING PLANTS

All manufacturing plants are equipped with the most technologically advanced machines such as the SHP 5000 PRO C concrete block machine, modern stacking and destacking devices, lower and upper truck, board feeder, the ROBOMATIK cuber, and the machines of the concrete plants, such as concrete mixers.

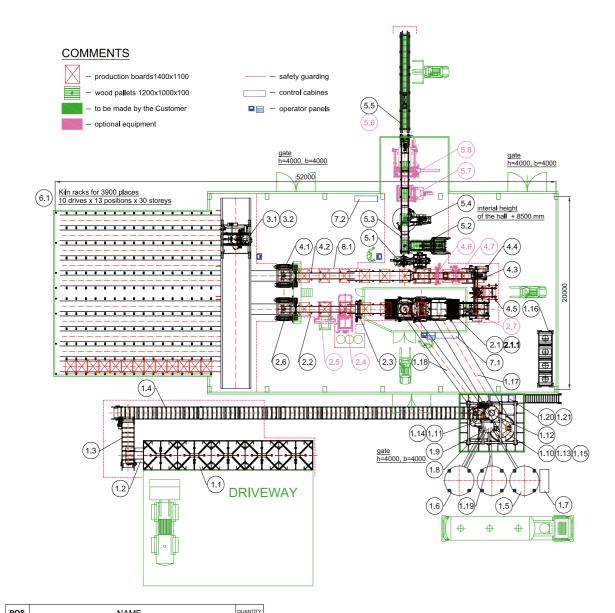
According to customers' needs, the production plant may be equipped with additional machines for concrete product enhancement - the WASHMATIK wash-out machine and the tumbler allowing to achieve the so called vintage pavement effect. Each production plant is adjusted and designed to meet individual needs of customers.



CONCRETE PLANT	WET LINE	DRY LINE	PACKING LINE	RACK SYSTEM AND TRANSVERSE TRANSPORT
<ol> <li>Multi-chamber aggregate silo</li> <li>Belt conveyors</li> <li>Weighing belt conveyor</li> <li>Aggregates buffer</li> <li>Cement weighing system</li> <li>BWK discharge</li> <li>BWW discharge</li> <li>Chemicals dosing unit</li> <li>SPM Mixer base-mix</li> <li>SPM Mixer face-mix</li> <li>Silos with filtering system</li> <li>Dye dosing unit</li> <li>Tank of additives</li> </ol>	14. SHP 5000 PRO C concrete block machine 15. Wet belt conveyor 16. Outflow brush 17. Stacking machine 18. WASHMATIK product washing station 19. Product dump station 20. Board sprinkler	<ul><li>21. Destacking machine</li><li>22. Dry belt conveyor</li><li>23. Chain conveyor with collectors</li><li>24. Board feeder</li><li>25. Board storage</li><li>26. Board inverter</li></ul>	27. Robomatik cuber 28. Pallet feeder 29. Strapping machine 30. Swiveling chain conveyor 31. Chain conveyor 32. Stroke conveyor	33. Lower truck 34. Upper truck 35. Rack System



### STANDARD LINE SHP 5000 PRO C

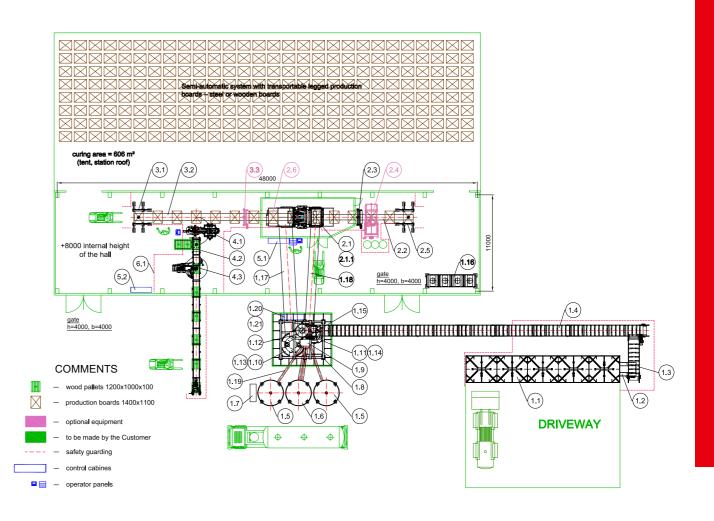


POS.	NAME	QUANTITY
1.1	Raw material metering feeders	1
1.2	Aggregate weighing belt conveyor	1
1.3	Belt conveyor	1
1.4	Belt conveyor	1
1.5	Cement silo	2
1.6	Divided cement silo	1
1.7	Silos filter	1
1.8	BMU supporting structure	1
1.9	Cement weight	1
1.10	Planetary mixer SPM 3000	1
1.11	Planetary mixer SPM 500	1
1.12	Aggregate buffer	1
1.13	Base-mix chute	1
1.14	Face-mix chute	1
1.15	Chemical additives dosing system	2
1.16	Color metering system (granulated)	1
1.17	Belt conveyor	1
1.18	Belt conveyor	1
1.19	Screw conveyor	4
1.20	Control system of the batching plant	1
1.21	Pneumatics and hydraulics of the batching plant	1
2.1	SHP 5000 C Pro concrete block machine	1
2.1.1	Steel reinforcement of machine foundations	1
2.2	Green line belt conveyor	1
2.3	Deburring brush	1

2.4	WASHMATIK product washing station (option)	1
2.5	Dump Station (option)	1
2.6	Stacker	1
2.7	Spraying device (option)	1
3.1	Finger car	1
3.2	Low car	1
4.1	Unstacker	1
4.2	Dry line belt conveyor	1
4.3	Chain conveyor with pusher dogs	1
4.4	Crossover conveyor	1
4.5	Board buffer - chain conveyor	1
4.6	Cleaning brush (option)	1
4.7	Board turn-over device (option)	1
5.1	Robomatik - clamp cuber	1
5.2	Wooden pallet dispenser	1
5.3	Chain conveyor (packaging line)	1
5.4	Stretch film wrapper	1
5.5	Walking beam conveyor	1
5.6	Slat conveyor (option)	1
5.7	Horizontal strapping machine (option)	1
5.8	Vertical strapping machine (option)	1
6.1	Kiln racks with rails	1
7.1	Control system of concrete block machine and wet line	1
7.2	Control system of dry line and packaging line	1
8.1	Safety features	1



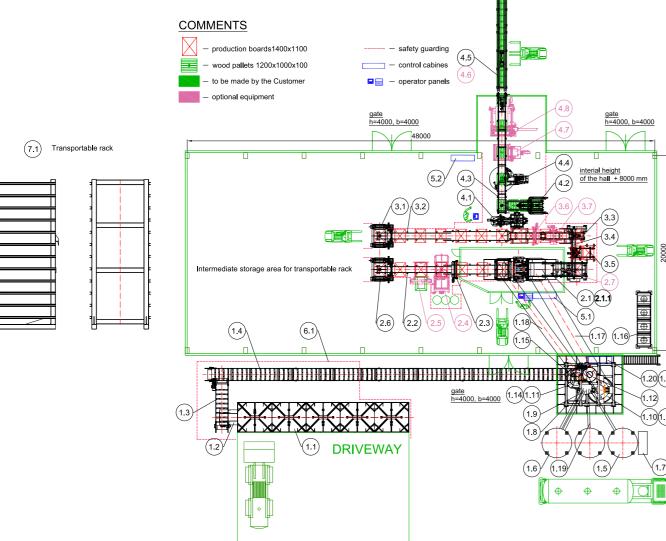
### STANDARD LINE HP 3000 PRO - LEGGED PRODUCTION BOARDS



POS.	NAME	QUANTIT
1.1	Raw material metering feeders	1
1.2	Aggregate weighing belt conveyor	1
1.3	Belt conveyor	1
1.4	Belt conveyor	1
1.5	Cement silo	2
1.6	Divided cement silo	1
1.7	Silos filter	1
1.8	BMU supporting structure	1
1.9	Cement weight	1
1.10	Planetary mixer SPM 3000	1
1.11	Planetary mixer SPM 500	1
1.12	Aggregate buffer	1
1.13	Base-mix chute	1
1.14	Face-mix chute	1
1.15	Chemical additives dosing system	2
1.16	Color metering system (granulated)	1
1.17	Belt conveyor	1
1.18	Belt conveyor	1
1.19	Screw conveyor	4

1.20	Control system of the batching plant	1
1.21	Pneumatics and hydraulics of the batching plant	1
2.1	HP 3000 Pro concrete block machine	1
2.1.1	Steel reinforcement of machine foundations	1
2.2	Green line belt conveyor	1
2.3	Deburring brush	1
2.4	WASHMATIK product washing station (option)	1
2.5	Stacker	1
2.6	Spraying device (option)	1
3.1	Unstacker	1
3.2	Walking beam conveyor	1
3.3	Cleaning brush (option)	1
4.1	Robomatik - clamp cuber	1
4.2	Chain conveyor	1
4.3	Stretch film wrapper	1
5.1	Control system of concrete block machine and wet line	1
5.2	Control system of dry line and packaging line	1
6.1	Safety features	1

# STANDARD LINE HP 3000 PRO - TRANSPORTABLE RACKS



POS.	NAME	QUANTITY	
1.1	Raw material metering feeders	1	
1.2	Aggregate weighing belt conveyor	1	
1.3	Belt conveyor	1	
1.4	Belt conveyor	1	
1.5	Cement silo	2	
1.6	Divided cement silo	1	
1.7	Silos filter	1	
1.8	BMU supporting structure	1	
1.9	Cement weight	1	
1.10	Planetary mixer SPM 3000	1	
1.11	Planetary mixer SPM 500	1	
1.12	Aggregate buffer	1	
1.13	Base-mix chute	1	
1.14	Face-mix chute	1	
1.15	Chemical additives dosing system	2	
1.16	Color metering system (granulated)	1	
1.17	Belt conveyor	1	
1.18	Belt conveyor	1	
1.19	Screw conveyor	4	
1.20	Control system of the batching plant	1	
1.21	Pneumatics and hydraulics of the batching plant	1	
2.1	HP 3000 Pro concrete block machine	1	
2.1.1	Steel reinforcement of machine foundations	1	
2.2	Green line belt conveyor	1	

2.3	Deburring brush	1
2.4	WASHMATIK product washing station (option)	1
2.5	Dump Station (option)	1
2.6	Stacker	1
2.7	Spraying device (option)	1
3.1	Unstacker	1
3.2	Dry line belt conveyor	1
3.3	Chain conveyor with pusher dogs	1
3.4	Crossover conveyor	1
3.5	Board buffer	1
3.6	Cleaning brush (option)	1
3.7	Board turn-over device (option)	1
4.1	Robomatik - clamp cuber	1
4.2	Wooden pallet dispenser	1
4.3	Chain conveyor	1
4.4	Stretch film wrapper	1
4.5	Walking beam conveyor	1
4.6	Slat conveyor (option)	1
4.7	Horizontal strapping machine (option)	1
4.8	Vertical strapping machine (option)	1
5.1	Control system of concrete block machine and wet line	1
5.2	Control system of dry line and packaging line	1
6.1	Safety features	1
7.1	Transportable rack	kpl.

**TECHMATIK**°















# **SHP 5000 PRO C CONCRETE BLOCK MACHINE**

TECHMATIK SHP 5000 PRO C concrete block machine is a machine with the highest productivity, intended for the completely automated production processes. The machine design contains technical solutions that are applied in high-precision industrial robots.



Enables manufacturing of a wide variety of products with heights from 40 mm up to 500 mm



Low energy consumption thanks to the application of innovative drives and kinematic pairs



Complete automation with visualization of the technological process on each stage



Production on boards made of steel, wood, or artificial materials - allowing to achieve high quality concrete products



COLORMIX system allowing the manufacture of products with multicolored surface layer



Compact design - hydraulic station is an integral part of the machine





In Techmatik SHP 5000 PRO C concrete block machine innovative design solutions are applied that ensure effective production, while maintaining the operating costs at a reasonable low level:

- Tamper head counterweights structural elements moving inside the machine body counterbalance the weight of the tamper head; this solution reduces the energy required to move the tamper head, the power of the hydraulic unit supplying the machine, and the number of actuators moving the integrated devices of the tamper head – from two to one.
- Linear bearings a solution for accurate guiding and positioning of the mold and tamper head elements working together, reducing thus the wear of molds for manufacturing of concrete products
- Oil-lubricated vibrating box a new vibrating box is not permanently attached to the machine structure, therefore vibrations transferred to the machine are significantly reduced; the oil lubrication system extends the lifetime of the box and considerably reduces the scope of the operator's work.
- Drive of the feeding box-the indirect drive transmission of the feeding box by a lever and actuator mechanism has been replaced by a solution that transfers the drive directly from the motors through gears and toothed bars; dimensions of this machine part have been reduced, therefore moving the feeding box requires less energy. In the structure of wheels, composition of different materials reducing noise and protecting other expensive elements of the system against wear have been applied.
- Movable grate uniform distribution of concrete in the mold bottom.
- Colormix a set of devices for feeding colored concrete mix to the feeding box with concrete mix, which enables coloristic repeatability of the products.
- Tamper head clamp introduction of a hydraulic clamp with two motors prevents displacement of the tamper head in relation to the mold, thus enhancing the mold lifetime.
- Tamper head stabilization unit Simple and reliable structure which consists of two toothed bars stabilized with a shaft with toothed gears.
- VB pneumatic floor raising system the pneumatic system has been replaced by four bellow actuators stabilized with linear bearings.

### **PRODUCT TYPE**

Products with a height from 40 mm to 550 mm



Eco paving

stones and

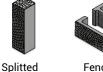
slabs















Ceiling

elements

Palisade







Double layer paving blocks

paving blocks





Curbstones



elements



L-series





elements



Borders







blocks

Gazons







Ventilation chair insulated bricks



Stair steps



### 14 - 15

CONCRETE BLOCK MACHINE / SHP 5000 PRO

### **TECHNICAL DATA**

SCOPE OF AUTOMATION	fully automatic molding process
MAXIMUM PRODUCT HEIGHT	550 mm
MINIMUM PRODUCT HEIGHT	40 mm
PRODUCT STRUCTURE	single or double layer product, single or multicolor
SIZE OF PRODUCTION BOARDS	1400 x 1100 mm
MAXIMUM MOLD AREA	1300x1050mm
THICKNESS OF PRODUCTION BOARDS	from 12 to 55 mm
INSTALLED POWER	139 kW
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	2660 x 7600 x 5260 mm
WEIGHT OF THE COMPLETE MACHINE	32 000 kg

### SPECIFICATION OF MACHINE OPERATION ON THE EXAMPLE OF SELECTED PRODUCTS

Product name	Hollow brick	Hollow brick	Curbstone	Brick	Standard rectangular single-layer paver	Standard rectangular double-layer paver	Single-layer "Uni-Decor" paver	Double-layer "Uni-Decor" paver with Colormix
Product Size	200x200x400mm	100x200x400mm	200x300x1000mm	60x250x120mm	98x198x60mm	98x198x60mm	140x60x230 mm	140x60x230 mm
Amount of pro- duct in a single cycle	12	24	4	40	54	54	40	40
Average cycle time	14 seconds +/- 20% *	14 seconds +/- 20% *	14 seconds +/- 20%*	14 seconds +/- 20%*	12 seconds +/- 20%*	13 seconds +/- 20%*	11 seconds +/- 20%*	13 seconds +/- 20%*
Amount of pro- duct per hour (at 90% efficiency)	2780 +/- 556	5560 +/- 1112	1029 +/- 206	10286 +/- 2057	15,892 +/- 3,178	13,443 +/- 2,689	11,772 +/- 2,354	9,958 +/- 1,992

<sup>\*</sup> The cycle time may vary, depending on the design of concrete mixture, machine settings, material feeding, board handling and other factors.





# **HP 3000 PRO CONCRETE BLOCK MACHINE**



The concrete block machine TECHMATIK HP 3000 – a machine of high productivity and the smallest dimensions in the family of stationary concrete block machines.



Allows to manufacture products in the range from 40 mm to 300 mm high



Attractive purchase price, and low operating costs



Easy to use



Reliable and durable due to the application of proven structural solutions



Production in the stationary system in an automatic or semi-automatic version using portable racks



Production on boards made of steel, wood or artificial materials - allows to obtain high-quality concrete products





CONCRETE BLOCK MACHINES / HP 3000 PRO

- Drive of the feeding boxes indirect drive transmission to the feeding boxes by hydraulic actuators and a lever mechanism has been replaced with a structural solution that transfers the drive directly from the hydraulic motors through gears to box bars. This change resulted in the reduction of the dimensions of this machine part, thus for moving the feeding boxes less energy is required. In the structure of wheels, composition of different materials reducing noise and protecting other expensive elements of the system against wear have been applied.
- Linear bearings the solution applied for accurate guiding and positioning of the mold and tamper head elements working together reduces mold wear. This way, the lifetime of mold liner cavities and tamper shoes is extended.
- Possibility to equip the machine with the system of COLORMIX devices that allows to manufacture products with multicoloured topcoat.







### **PRODUCT TYPE**

Products with a height from 40 mm to 300 mm



Eco paving

stones and

slabs





















Double layer paving blocks

paving blocks





Curbstones





Splitted

elements







L-series





Borders

elements





Palisade

Ceiling

elements



Hollow

insulated

blocks

Gazons









Stair steps





### **TECHNICAL DATA**

SCOPE OF AUTOMATION	fully automatic molding process
MAXIMUM PRODUCT HEIGHT	300 mm
MINIMUM PRODUCT HEIGHT	40 mm
PRODUCT STRUCTURE	single or double layer product single or multi-colored (option)
SIZE OF PRODUCTION BOARDS	1400 x 1100 mm
MAXIMUM MOLD AREA	1300x1050mm
THICKNESS OF PRODUCTION BOARDS	from 12 to 55 mm
INSTALLED POWER	85 kW
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	2500 x 5600 x 4670 mm
WEIGHT OF THE COMPLETE MACHINE	approx. 16 000 kg

# **TABLE OF PRODUCTS MANUFACTURED USING THE CONCRETE BLOCK MAKING MACHINE** For the production board with the dimensions of 1,100 x 1,400 mm (43.3 x 55.1 inches). Production capacity with 90% of the machine efficiency.

Product name	Hollow brick	Hollow brick	Curbstone	Brick	Standard rectangular single-layer paver	Standard rectangular double-layer paver	Single-layer "Uni-Decor" paver	Double-layer "Uni-Decor" paver with Colormix
Product Size	200x200x400mm	100x200x400mm	200x300x1000mm	60x250x120mm	98x198x60mm	98x198x60mm	140x60x230 mm	140x60x230 mm
Amount of pro- duct in a single cycle	12	24	4	200	54	54	40	40
Average cycle time	18 seconds +/- 20% *	18 seconds +/- 20% *	18 seconds +/- 20%*	14 seconds +/- 20%*	12 seconds +/- 20%*	17 seconds +/- 20%*	14 seconds +/- 20%*	17 seconds +/- 20%*
Amount of pro- duct per hour (at 90% efficiency)	2400 +/- 480	4800 +/- 960	800 =/- 160	8000 +/- 1600	15,892 +/- 3,178	11435 +/- 2287	10286 +/-2057	8471 +/- 1694

<sup>\*</sup> The cycle time may vary, depending on the design of concrete mixture, machine settings, material feeding, board handling and other factors.





# **MULTI 1200 PRO MOBILE CONCRETE BLOCK MACHINE**



MULTI PRO 1200 concrete block machine is a mobile machine designed for production of high concrete products.



Allows to manufacture a wide range of products with the height from 60 mm to 1200 mm



It enables the production of various concrete products, from concrete pavers, slabs (with the application of the vibrating table), through curbstones, borders, to high elements of landscape and garden architecture, such as palisades, fence elements, etc., also other road infrastructure elements, such as pipes, culverts etc.



It is possible to manufacture concrete products without the necessity to apply the complete process plant



Full automation with visualization of all stages of the technological process





- Drive of the feeding boxes indirect drive transmission to the feeding boxes by hydraulic actuators and a lever mechanism previously used has been replaced with a solution that transfers the drive directly from hydraulic motors through gears and toothed bars. This change resulted in the reduction of dimensions of this machine part, thus less energy is required for moving the feeding boxes. The application of toothed gears improved the dynamics of the box operation. In the structure of wheels, a composition of different materials reducing noise and protecting other expensive elements of the system against wear has been applied.
- Linear bearings the solution applied for accurate guiding and positioning of the mold and tamper head elements working together reduces mold wear. In this way, the wear of molds for manufacturing of concrete products is reduced.
- Tamper head and mold liner synchronization system used to immobilize the tamper head in relation to the mold liner when the liner moves to the demolding position; it consists of chains, brake bars, and hydraulic actuators.
- Machine drive consists of two hydraulic motors.
- Mold liner shaft unit and tamper head shaft unit driven by hydraulic actuators; robust and durable structure combined with high-quality bearings seated in in-housed designed casings that guarantee reliable operation.
- Frame raising unit formed by 4 screws synchronized with a chain, and driven by a hydraulic motor. They ensure reliable and easy adjustment of the floor height in relation to the mold liner.





### **PRODUCT TYPE**

Products with a height from 60 mm to 1200 mm



Eco paving

stones and slabs











Ceiling

elements

Palisade







Double layer paving blocks

Single layer paving blocks





Curbstones



Splitted

elements



L-series



elements



Borders





Hollow

insulated

blocks

Gazons







Stair steps









### **TECHNICAL DATA**

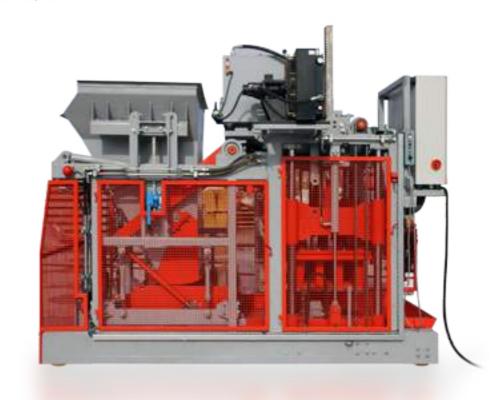
SCOPE OF AUTOMATION	fully automatic molding process
MAXIMUM PRODUCT HEIGHT	1200 mm
MINIMUM PRODUCT HEIGHT	60 mm
PRODUCT STRUCTURE	single or double layer product
MAXIMUM MOLD AREA	1300x1050mm
INSTALLED POWER	55 kW
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	2490 x 6900 x 5700 mm
WEIGHT OF THE COMPLETE MACHINE	39 000 kg

### TABLE OF PRODUCTS MANUFACTURED USING THE CONCRETE BLOCK MAKING MACHINE Production capacity with 90% of the machine efficiency.

Product name	Flowerpots	Flowerpots	Ring palisade	Nostalit palisade
Product Size	500x500x500mm	500x1000x500mm	110x400mm	180x120x800mm
Amount of pro- duct in a single cycle	4	2	56	30
Average cycle time	30 seconds +/- 20% *	30 seconds +/- 20% *	26 seconds +/- 20% *	26 seconds +/- 20% *
Amount of pro- duct per hour (at 90% efficiency)	800 +/- 160	400 +/- 80	11200 +/- 2240	6000 +/- 1200

<sup>\*</sup> The cycle time may vary, depending on the design of concrete mixture, machine settings, material feeding, board handling and other factors.





# **MULTI 300 PRO MOBILE CONCRETE BLOCK MACHINE**



The MULTI 300 concrete block machine is designed for the production of construction elements in the mobile system.



No tracks are required for the production



The manufacture of concrete products does not require a complete production plant; low start-up cost



Simplified and compact structure of the concrete block making machine that occupies only a small area



The concrete block making machine is equipped with hydraulic station, control cubicle, and a panel with operator's seat



Equipped with molds with attached vibrators



Products are formed directly on the floor



Power generator can be installed within the structure of the concrete block making machine



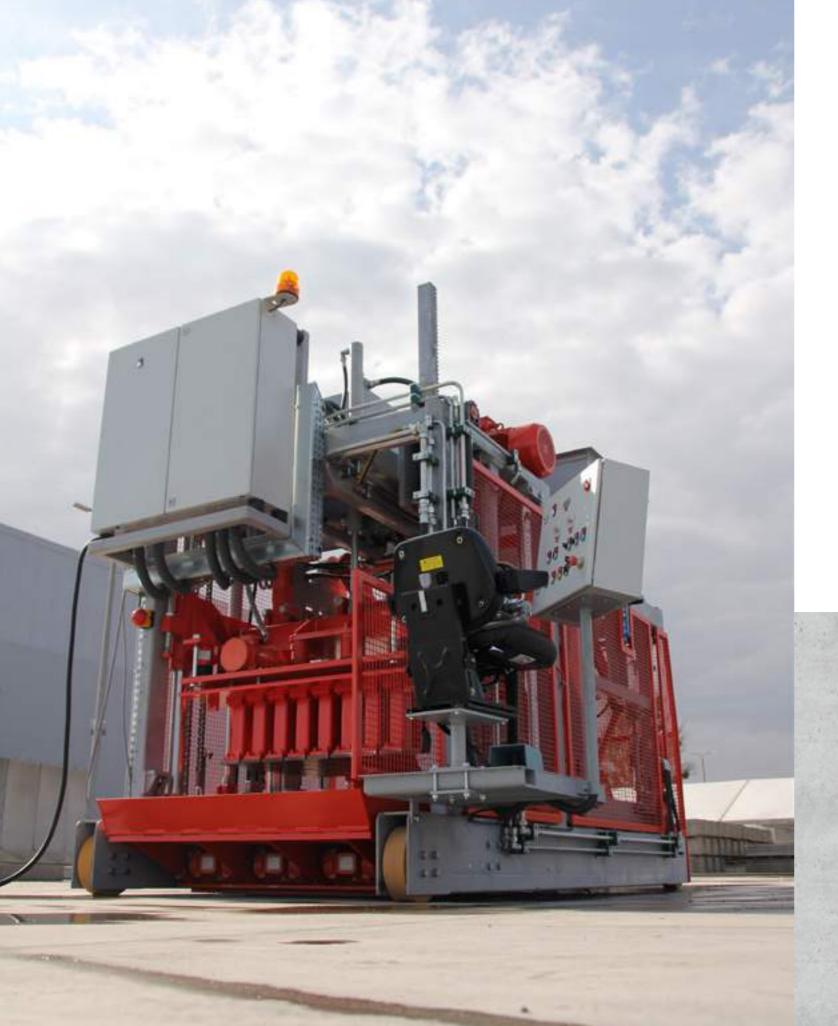
Easy to transport to other locations



The Multi 300 concrete block machine can also be equipped with a polystyrene insert feeding system















Products with a height from 170 mm to 300 mm

### **PRODUCT TYPE**



**Blocks** 











Splitted

elements



elements





Ceiling

elements







Double layer paving blocks

Single layer paving blocks













Curbstones



L-series



Borders

Palisade



Hollow

insulated

blocks



Gazons



Ventilation chair

bricks



Stair steps





### **TECHNICAL DATA**

SCOPE OF AUTOMATION	manual or automatic molding process
MAXIMUM PRODUCT HEIGHT	300 mm
MINIMUM PRODUCT HEIGHT	170 mm
PRODUCT STRUCTURE	single layer product
INSTALLED POWER	25 kW
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	3,800 x 2,150 x 3,520 (with a seat: 4,400 x 2,700 x 3,520)
WEIGHT	7200 kg
MAXIMUM MOLD AREA	1240x1130 mm
CAPACITY OF CONCRETE TANK	1 m3

# TABLE OF PRODUCTS MANUFACTURED BY MEANS OF THE CONCRETE BLOCK MAKING MACHINE Production capacity with 90% of the machine efficiency.

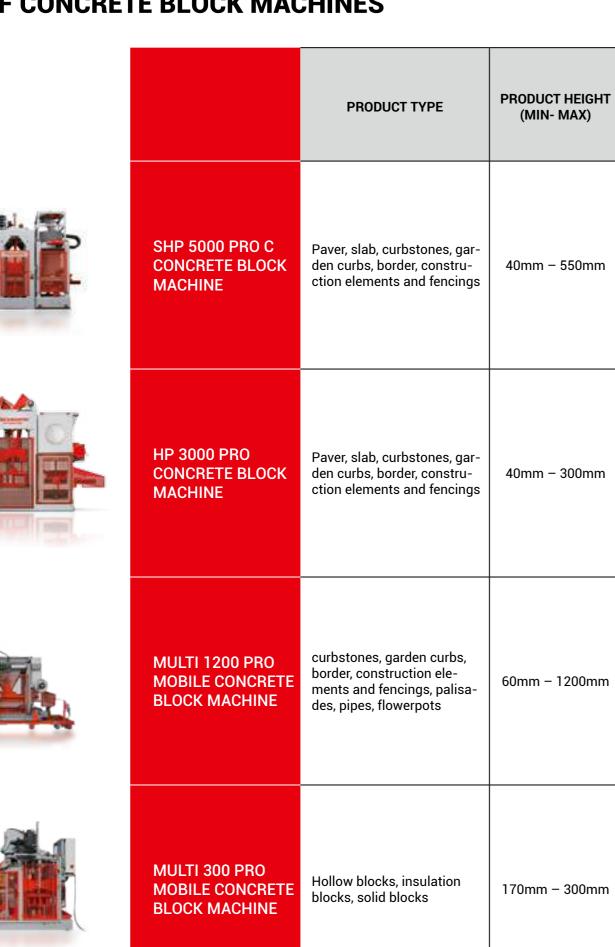
Product name	Block	Hollow insulated blocks
Product Size	120x240x380 mm	400x200x200mm
Amount of pro- duct in a single cycle	21	12
Average cycle time	45 seconds +/- 20%*	45 seconds +/- 20%*
Amount of pro- duct per hour (at 90% efficiency)	1680 +/- 336	2400 +/- 480



<sup>\*</sup> The cycle time may vary, depending on the design of concrete mixture, machine settings, material feeding, board handling and other factors.

# TECHMATIK

# COMPARISON OF PARAMETERS OF CONCRETE BLOCK MACHINES





MAXIMUM MOLD AREA	MAXIMUM OUTPUT(NUMBER OF PRODUCTION CYCLES PER HOUR)	WEIGHT OF CONCRETE BLOCK MA- CHINE	INSTALLED POWER	OVERALL DIMENSIONS OF MECHANICAL STRUCTURE
1300x1050mm	approx. 250 cycles	32 000 kg	139kW	2660 x 7600 x 5260 mm
1300x1050mm	approx. 180 cycles	16 000 kg	71kW	2500 x 5600 x 4670 mm
1300x1050mm	approx. 120 cycles for double layer pavers approx. 100 cycles for 800 mm palisade, single layer	39 000 kg	50k <b>W</b>	2490 x 6900 x 5700 mm
1240x1130 mm	approx. 100 cycles	7200 kg	25kW	3,800 x 2,150 x 3,520 (with a seat: 4,400 x 2,700 x 3,520)

# **TECHMATIK**°





# **ROBOMATIK CUBER**



Robomatik - cuber is a multifunctional device operating on the packing line.

Robomatik is a robot that simultaneously centres the products on the production board, transports the products from the dry line to the packing line and stacks layers of products on commercial pallets.



Multifunctionality (replaces the work of two machines found in plants of other manufacturers)



Quiet and dynamic operation - through the application of belt drives



Product positioning accuracy - through the application of linear bearings



Compact design - thanks to the application of the counterweight

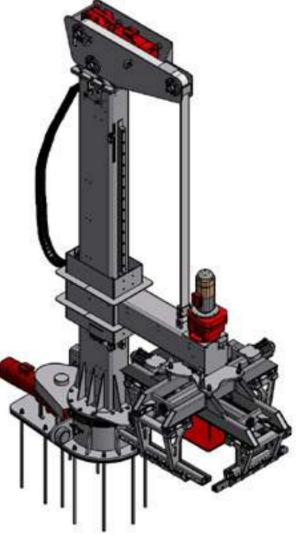


No damages to products during packing - due to the design of the gripper and the application of clutches in its drive



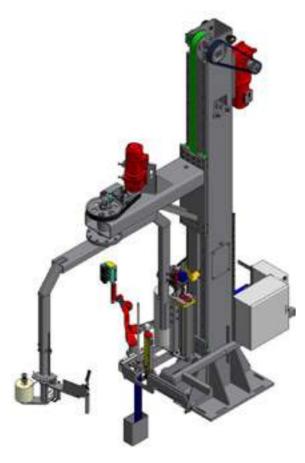






INSTALLED POWER	39,7 kW
MAX. LOAD	560 kg
HEIGHT	4934 mm
WORKING RADIUS	1563 mm





# **WRAPPING MACHINE**



The wrapping machine is a device working on the packaging line.

The wrapping machine is the first machine of this kind on the market that enables simultaneous wrapping of products with a stretch foil and a strap with manufacturer's logo, without any adhesives. It is a part of the process plant and works automatically, maintaining the continuity of the production cycle.



Simultaneous wrapping with a stretch foil and a tape with manufacturer's logo



Application of adhesive-free foil with manufacturer's



Compact design through the application of the column structure, counterweight and linear bearings



The device operates within the process plant, and the packing process is performed automatically during the production cycle





DIMENSIONS	Height 4,900 mm, Width 2,500 m, Length 4,000 mm	
MAXIMUM PRODUCT SIZE	Height 1,920 mm, Width 1,000 mm, Length 1,200 mm	
LIFTING SPEED	0,09 m/s	
ROTATION SPEED	11.5 rotations per minute, adjusted with an inverter	
WIDTH OF THE STRETCH FOIL	max. 700 mm	
WIDTH OF THE FOIL WITH LOGO	max. 250 mm	
MAXIMUM WORKING STROKE	2050 mm	
INSTALLED POWER	3 kW	
PRESSURE OF THE PNEUMATIC SYSTEM	approx. 0.6 MPa	
WEIGHT	3600 kg	
STANDARD WORKING CYCLE	min. 56 seconds, 3 wrappings with the stretch foil + 1 wrapping with the foil with logo and the stretch foil + 2 wrappings with the stretch foil	





### STACKING AND DESTACKING DEVICES



The stacking and destacking devices are intended for vertical transport and storage of the finished concrete products.

The stacking device operates on the so called wet line. Its task is to store a specific number of boards with formed products which are transported to the rack system in the further part of the technological process, for pre-seasoning. On the dry line, the destacking device collects production boards with cured products and transfers them to the further part of the process plant. Quiet and smooth operation is provided by properly selected drive units.









### **UPPER AND LOWER ROTARY PLATFORM**



The lower and upper rotary platforms are the devices for horizontal transport.

The upper rotary platform of the process line operates with the lower rotary platform: the stacking and destacking device, delivering or collecting concrete products from the curing chamber. Its compact structure ensures stable operation. In the construction of the upper rotary platform, an innovative solution of a telescopic mast structure with linear bearing system and an oil tank of the hydraulic station integrated with the structure have been applied. The lower rotary platform has compact structure and innovative positioning system.



Quiet and smooth operation is provided by properly selected drive units





Compact design and innovative positioning system

Telescopic design of the mast with a linear bearing system

Oil tank of the hydraulic station integrated with the structure



Fast and stable operation of the set of devices enabling continuous production without the need for using additional product buffer



### **TECHNICAL DATA**

INSTALLED POWER	8 kW
WORKING LOAD	11 700 kg
LIFTING/LOWERING SPEED	0,05 m/s
DIMENSIONS: HEIGHT	7,650 mm x 2,700 mm x 2,300 mm (for 30 levels, with a shelf spacing of 200 mm)

### TECHNICAL DATA

UPPER ROTARY PLATFORM

INSTALLED POWER	14,7 kW
DIMENSIONS (FOR 30 LEVELS)	6900 mm x 1300 mm x 2600 mm
LOWER ROTARY PLATFORM	
INSTALLED POWER	7 kW
DIMENSIONS	1280 mm x 3100 mm x 3900 mm









# **RACK SYSTEM**



The rack system is designed for seasoning of concrete products.

The rack system is designed for the storage of production boards (both made of wood and steel) with concrete products, to carry out the process of their pre-seasoning. It can be equipped with a set of automatically controlled curtains. There is also a possibility to cover it with sandwich panels or to install devices for atmosphere control.

# **COMMERCIAL PALLET FEEDER**



The device is intended for the automation of the process of feeding commercial pallets.

The device consists of a storage and the pallet feeder. The device is intended for feeding commercial pallets to the station of the ROBOMATIC packaging robot which performs the packaging cycle of finished products. It is equipped only with pneumatic drives. The operation of both devices is synchronized and carried out automatically.



DEVICES OF THE MANUFACTURING LINE / **RACK SYSTEM** 

Solid, robust and stable steel structure



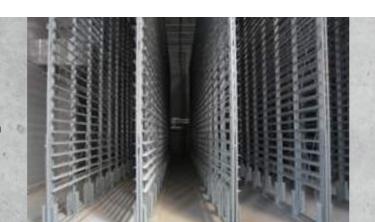
High corrosion resistance - made of galvanised steel elements



The structure resistant to loads and supported on the foundations made of steel profiles



Quick and easy installation without the need to engage the lifting equipment





Increased work safety by automatic delivery of commercial pallets to the production plant



Simple and compact structure that limits the dimensions of the production plant



Innovative and reliable structure of the conveyor drives



### **TECHNICAL DATA**

NUMBERS	3,900 places, 10 entries, 30 floors, with a shelf spacing of 200 mm
HEIGHT X WIDTH X LENGTH	7 x 17,6 x 15,3 m
LOAD WITH BOARDS WITH PRODUCTS	3,4 kN/m2
FOR BOARDS WITH DIMENSIONS	1400 x 1100

MAXIMUM NUMBER OF PALLETS IN THE STORAGE	30 pcs.
HEIGHT	3990 mm
WIDTH	1770 mm
LENGTH (WITH CONVEYOR)	3700 mm
OPERATING PRESSURE	0,6 MPa
WEIGHT	2100 kg







### **BOARD FEEDER**



The device provides smooth circulation of boards in the production plant.

The device transports production boards from the dry to wet line, providing production continuity. Modern motors in the Servo technology applied in the structure, along with belt drives and linear bearing systems, ensure quiet operation, high positioning accuracy of the board conveyor unit, and short operation cycles.



Compact design



Quiet operation through the application of belt drives and modern motors in the Servo technology



6..... 6.... 6.... 6...

Board positioning accuracy through the application of linear bearings

Integrated with the board storage



### **TECHNICAL DATA**

INSTALLED POWER	7 kW
MAXIMUM LOAD	175 kg
GRIPPER STROKE	3450 mm
WIDTH	2000 mm
MINIMUM HEIGHT	2100 mm
MAXIMUM HEIGHT	2600 mm
LENGTH	5800 mm
WEIGHT	2500 kg
OPERATING PRESSURE	0,6 MPa







### PRODUCT DUMP STATION



The product dump station is intended for removing products qualified as rejects from the board.

The device is intended for removing the entire layer of products from the production board qualified as rejects that are generated at the beginning or at the end of the production cycle, by lifting the board by an angle that allows the products to slip. The device can be also used to remove excess water from products after the flushing process.

The product dump station is located in the so-called wet line of the production plant. The device has simple structure and is reliable in operation. The belt drive transmission as well as structural solutions of movable parts reduce noise during the operation.



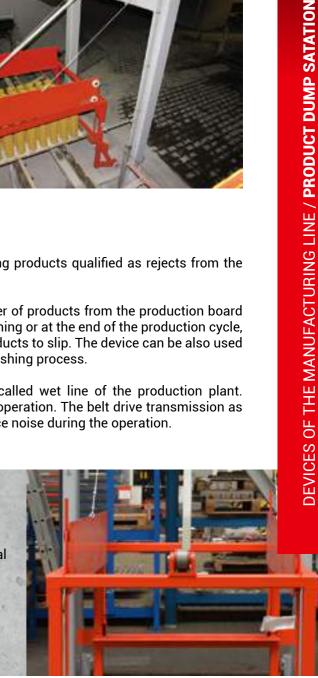
Simple structure that provides reliable and quiet operation



Dual function (removal of rejects and initial removal of excess water after the flushing process) shortening the production cycle



Increased safety by automatic removal of rejects from the production plant



INSTALLED POWER	2,2 kW
LENGTH	2400 mm
WIDTH	1900 mm
HEIGHT	2800 mm
WEIGHT	920 kg
MAXIMUM LOAD	760 kg





# **WASHMATIK PRODUCT WASHING STATION**



The WASHMATIK product washing station is designed to enhance the products by washing out concrete from the upper layer of pavers and paving tiles in order to expose decorative aggregates.



High speed of washing and high performance



Uniform flushing on the entire board surface (perfect quality)



Intuitive navigation interface



Independent on/off parameter change in every nozzle section (economical water usage)



Steplessly adjustable product washing depth



Easy adaptation to existing production plants

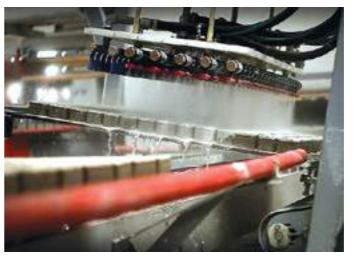


Operational reliability



Simple construction enabling easy operation and maintenance









The WASHMATIK product washing station is a part of the process plant for manufacturing concrete pavers and decorative products. With its application enhanced concrete pavers and paving tiles can be obtained. The machine, through water and air nozzles, washes out concrete from the upper layer of the product in order to expose decorative aggregate (granite, basalt, marble and the like). Such enhanced products are used for arranging elegant paths, alleys, and squares, thus enhancing their aesthetic and functional values.

MAXIMUM PRODUCTION BOARD WIDTH	1400 mm
MAXIMUM PRODUCTION BOARD LENGTH	1100 mm
DURATION OF WASHING CYCLE	from 12 s
INSTALLED POWER	4,5 kW
DIMENSIONS OF THE WASHER	length: 4,080 mm, width: 3,535 mm, height: 2,250 mm
HEIGHT OF THE WET LINE CONVEYOR	530 ÷ 700 mm
MINIMUM DISTANCE BETWEEN PRODUCTION BOARDS	500 mm
WEIGHT	1700 kg
WATER CONSUMPTION	from 25 liters per cycles





# **TUMBLER**



DEVICE FOR PRODUCT REFINEMENT / TUMBLER

Machine belonging to the group of machines intended for product refinement. Designed for mechanical surface treatment of concrete pavers.

After the treatment, the so called vintage pavement effect is achieved. The main element of the machine is the rotary drum, where the concrete pavers are loaded. During the rumbling process the product edges break and marks imitating long-term wear appear.







### **TECHNICAL DATA**

INSTALLED POWER	5,5 kW
DIMENSIONS OF THE DRUM	length: 6,120 mm width: 1,770 mm height: 3,330 mm



# **1000 SPLITTER**



The splitter is used to split concrete products.

The splitter belongs to the group of machines for product refinement. With its application, products with irregular decorative surfaces, imitating natural stone can be obtained.



Precise splitting of large packages – broad working

Adjustable working table



Durable and reliable structure

Possibility to automate the splitting process by the expansion with additional devices that are a part of the splitting line



DIMENSIONS	1710 x 2120 x 2520 mm
HEIGHT OF THE TABLE	900 to 1070 mm
WEIGHT	2200 kg
MAXIMUM SPLITTING FORCE	700 kN
INSTALLED POWER	15,12 kW
WORKSPACE (OF SPLITTING)	Maximum width 1,040 mm, Maximum height 350 mm
OPERATING PRESSURE	25 MPa





# **600 SPLITTER**



The splitter is designed to split concrete products.

The splitter belongs to the group of machines for product refinement. With its application, products with irregular decorative surfaces, imitating natural stone can be obtained.



Blade structure that adapts to the surfaces of the split product



High performance hydraulic station



Durable and reliable structure



Possibility to automate the splitting process by expanding with additional devices being a part of the splitting line



Side actuators are equipped with linear guides



Adjustable limit switches enabling stepless adjustment of knife's working stroke depending on the size of the split products



High safety of operator's work thanks to the application of synchronized controls, safety switches, and steplessly adjustable workspace shields







DIMENSIONS	2245 x 2364 x 1070 mm
HEIGHT OF THE TABLE	900 mm
WEIGHT	2100 kg
MAXIMUM SPLITTING FORCE	800 kN
INSTALLED POWER	15,12 kW
WORKSPACE (OF SPLITTING)	Maximum width 640 mm, max. height 330 mm
MAXIMUM OPERATING PRESSURE	25 MPa



# **CONCRETE MIXING PLANTS**



The concrete batching plants are intended for manufacturing of ready-mix concrete and concrete used in manufacturing of dry-cast concrete products.

Manufacturing of concrete in the concrete batching plants is automatic with full visualisation of all stages of the technological process. The plant includes: raw material storage and transporting devices, devices producing concrete mix, and transporting it to the production plant or transport vehicles, control system.







### **ELEMENTS OF THE CONCRETE BATCHING PLANT**

Storage facilities for raw materials and additives	Transportation facilities for transporting raw mate- rials and concrete	Raw material measuring devices	Devices for concrete production	Control systems
<ul> <li>Multi-chamber aggregate tank</li> <li>Cement silos</li> <li>Aggregate buffer with hopper</li> </ul>	<ul> <li>Proportioning belt conveyors</li> <li>Screw conveyors</li> <li>Filling carriage of the SKIP type</li> </ul>	<ul> <li>Cement weight</li> <li>Weighing belt conveyor</li> <li>Water weight</li> <li>Pigment doser</li> <li>Liquid chemicals doser</li> </ul>	■ Planetary mixers	<ul> <li>Control panels with production process visualization</li> <li>Control cubicle</li> <li>Our original control software</li> </ul>





# **SPM MIXERS**



The family of planetary mixers for each type of concrete ensures a fast mixing cycle by using the initial water dosing. Precise mixing of concrete is achieved thanks to the application of optimal number of mixing blades. The high degree of concrete mix homogenization is achieved by application of the high-speed rotor — wirbler.



Short mixing cycle through the initial water dosing



Accurate mixing of concrete mix due to optimum number of mixing blades



Compact design and reliable drives delivered by the SEW company



Simple operation and easy maintenance



Quiet operation

= |

Integrated hydraulic station

### **ADDITIONAL OPTIONS**

- Moisture content measuring probe
- Additional hydraulically opened discharge flap
- Inspection glass
- Wirbler





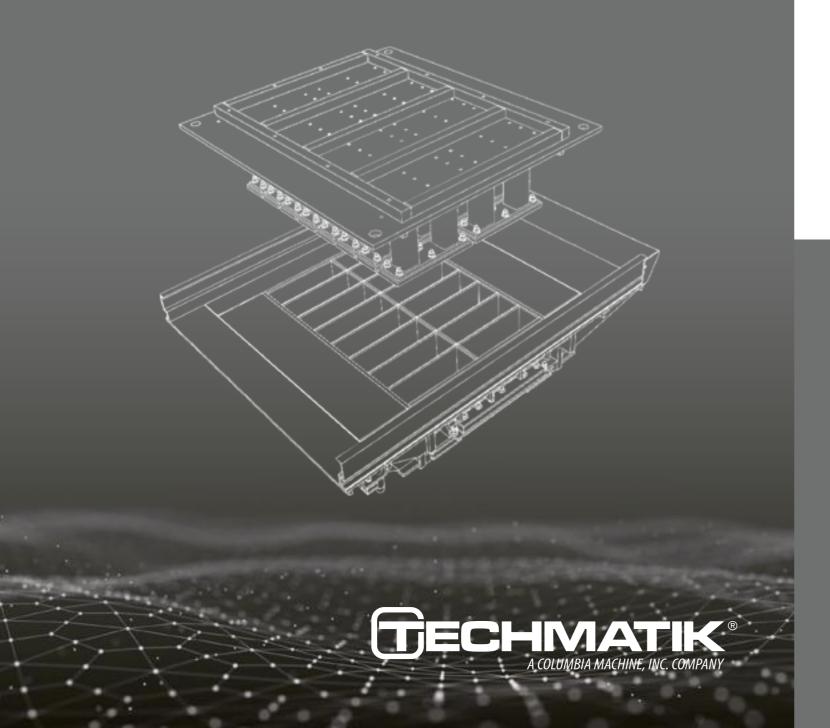


MIXER	UNIT	SPM-375	SPM-500	SPM-750
DRY FILLING	l/kg	375/600	500/820	750/1200
UNIT OUTPUT PER CYCLE	m³	0,25	0,33	0,5
MINIMUM DRY FILLING	kg	150	200	300
WEIGHT OF THE MIXER	kg	3100	3200	4100
DRIVING POWER	kW	9,2	15	2x9,2
NUMBER OF DISCHARGE OPENINGS	pcs	1	1	1
TOTAL HEIGHT, MOTOR INCL.	mm	2220	2220	2420
HEIGHT OF MIXER DRUM, INCLUDING SUPPORTS	mm	1325	1325	1520
HEIGHT OF MIXER DRUM WITH NO SUPPORTS	mm	920	920	1020
WITH FLANGE	mm	1940	1940	2200
MAXIMUM TOTAL DIAMETER	mm	690	690	735
HEIGHT OF MIXER DRUM	mm	1560	1560	1986
NUMBER OF MIXING STARS	pcs.	1	1	1
NUMBER OF MIXING BLADES	pcs.	2	2	2
NUMBER OF UPPER SCRAPERS	pcs.	-	-	1
NUMBER OF SIDE SCRAPERS	pcs.	1	1	1
NUMBER OF CORNER SCRAPERS	pcs.	1	1	1



SPM-1125	SPM-1750	SPM-2250	SPM-3000	SPM-3750	SPMW 750	SPMW 500
1125/1800	1750/2800	2250/3600	3000/4800	3750/6000	750/1200	500/820
0,75	1,15	1,5	2	2,5	0,5	0,33
450	700	900	1200	1500	300	200
4230	7350	7370	8900	13600	4400	3520
2x15	2x22	2x30	2x37	2x55	2x9,2 +15	15 + 11
1	1	1	1	1	1	1
2420	2740	2740	2920	3275	2500	2220
1520	1690	1690	1720	1865	1520	1325
1020	1150	1150	1160	1335	1020	920
2200	3000	3000	3220	3785	2200	1940
735	900	900	900	1030	735	690
1986	2680	2680	2900	3455	1986	1560
1	2	2	2	2	1	1
2	4	4	4	6	2	2
1	2	2	2	2	1	-
1	1	1	1	2	1	1
1	2	2	2	2	1 wirbler	1 wirbler

# MOLDS FOR CONCRETE PAVING BLOCKS AND PRODUCTS







# MOLDS FOR CONCRETE PAVING BLOCKS AND PRODUCTS

The production of molds is tailored to individual needs of our customers.

### **MOLD PRODUCTION**

The production of molds is tailored to individual needs of our customers. We also offer a full range of services related to regeneration and repair of the molds. We make every effort to ensure that our products have the longest life span and guarantee high-quality concrete products. Molds production is based on company's own quality standards. Through continuous improvement of technological processes, implemented by our qualified personnel of design engineers and technologists, the highest quality of molds and services related to their maintenance can be offered. Introduction of new technological solutions is always preceded by tests, which makes it possible to control the quality and continuously improve the production process. We always try to recognize the needs of our customers and meet the growing market demands.



The highest quality of molds requires a comprehensive approach to production and attention to the slightest details. The highest quality and functionality of the Techmatik molds is ensured by:

- Our know-how and many years of experience in manufacturing molds
- The highest quality of steel supplied by renowned manufacturers
- Our experienced team of designers, engineers, and production workers
- Modern and complex production machine park
- DYNAHARD an innovative hardening method that guarantees high abrasion resistance
- Complete control of the entire production process in a single plant
- Comprehensive quality control, supported by standards of ISO 9001

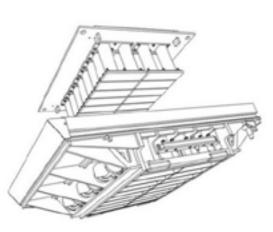
We make every effort to ensure that innovative, top-class products and service standards meet all the expectations of our clients.

### QUALITY

The quality of molds is affected not only by the technological process, but also by the quality of material used for production. Quality control starts as early as on the steel delivery stage. The quality of steel delivered to our factory is checked by means of, for example, ultrasonic examination of every steel sheet used for mold manufacture.

Examination is made with the use of a dedicated cart with a transmitting/receiving head and a flaw detector installed. The material is checked for discontinuities such as delaminations, lappings, cracks, and chip weldings, the presence of gas bubbles and nonmetallic intrusions. During mold production process all welded joints are examined by means of ultrasonic method. The quality of joints is specified in the PN-EN 25817:1997 standard. Welded joints are examined for the occurrence of flaws such as cracks, chip weldings, pinholes, and gas bubbles.

Ultrasonic examinations are also performed during repair and refurbishment jobs for molds and other devices. We cooperate exclusively with reliable steel suppliers who guarantee the premium quality material delivered.



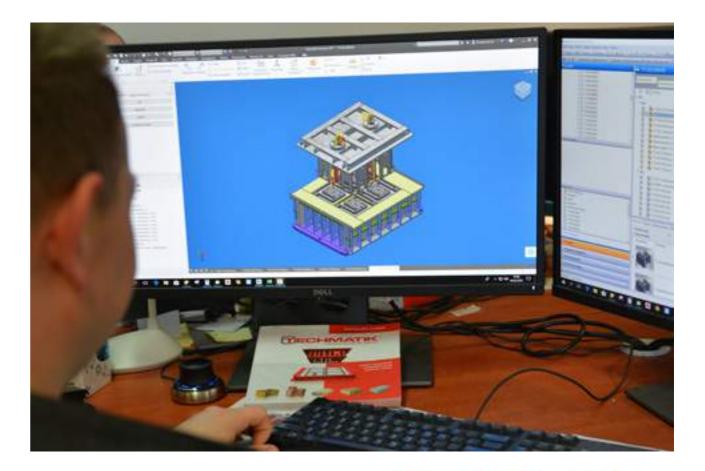




### **MOLDS DESIGN**

### CUSTOM DESIGNED MOLDS ARE AVAILABLE ON REQUEST:

- Consultation and technical advice provided during product conception
- Preparation of the mold design
- Preparation of detailed technical
- Documentation
- Mold production
- Possibility of reservation concept



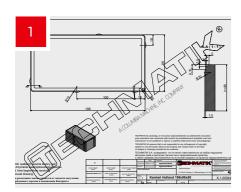


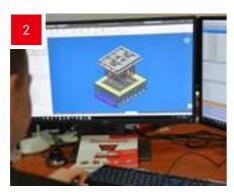




















# TECHNOLOGICAL PROCESS OF MOLDS PRODUCTION

Mold bottom cavities and tamper head plates are machined on high class, three- and five-axis CNC machining centers developed by machine tool manufacturers like FPT, Mori Seiki, and Hartford. These centers ensure a very precise machining process and, what is the most important for the quality of concrete products, high accuracy and repeatability of mold bottom cavity dimensions.

Mold bottom cavity wall surface is treated to facilitate the demolding of dry-cast concrete and ensure reliable mold operation. Tamper plates are made with circumferential clearance of about  $0.3 \div 0.4$  mm for low molds and  $0.5 \div 0.6$  mm for the high ones. Such small circumferential clearance of the cavity guarantees top quality of concrete product and extends mold lifetime.

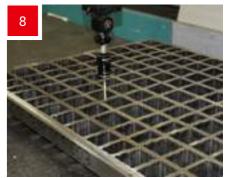
### **DYNA HARD®**

The innovative DYNA HARD thermo-chemical treatment process ensures long life of molds. Depending on the type of mold and its parts various thermo-chemical processes are carried out including carbonising, hardening and nitriding processes. In case of molds used for the production of high products the DYNA HARD PLUS thermochemical treatment process ensures hardness of the shaping part of the mold on the level of minimum 68 HRC, whereas for low-height molds, used to manufacture concrete paving blocks, the shaping part receives the hardness of minimum 64 HRC. Therefore the DYNA HARD process ensures high abrasion resistance and, consequently, long lifetime of molds. Moreover, a uniform distribution of hardness in the 1.2 - 1.6 mm thick heattreated layer is ensured. Surface hardening by using DYNA HARD method is performed during the fully automatic and insulated thermochemical treatment process in furnaces with integrated quenching tanks. Thanks to a suitable arrangement of dies and stamp plates and proper temperature distribution in furnace chambers guarantee proper quality of treated mold part elements. Thus the lifetime of molds can be significantly extended and the customer gains significant benefits by reducing production costs.



- 2. Construction-Technologic design
- 3. Ultrasonic examination of steel by means of defectoscope
- Mold insert and tamper head shoes cutting-out
- Tamper head welding
- 5. Heat treatment (hardening process)
- 7. Machining of mold die on CNC five-axis milling machine
- 8. Quality control measurement of die cavities are performed by measuring machine
- 9. Milling of tamper head shoes
- 10. Individual fitting of tamper head shoes
- 11. Assembling of tamper head shoes with tamper head
- 12. Painting of mold
- 13. Quality control
- 14. Handing over the finished product to the warehouse
- 15. Shipment to the customer
- 16. Production of a selected stone pattern in a finished mold





















# **MOLDS WITH HEATED TAMPER SHOES**

The heated tamper shoes of the mold ensure a perfect antique finish of the concrete products and help to gain a competitive edge on the market. The 3D-scanning technology allows to accurately capture all clients' textures. The products have a surface which is almost indistinguishable from natural stone and follow the current trends on the world market for pavers.

### PRODUCTION ADVANTAGES WITH SUCH MOLDS:

- closed surface of the final product
- less concrete build up on the shoe surface
- more precise reproduction of the shoes on the pavers
- possibility to increase the moisture amount in the concrete mix



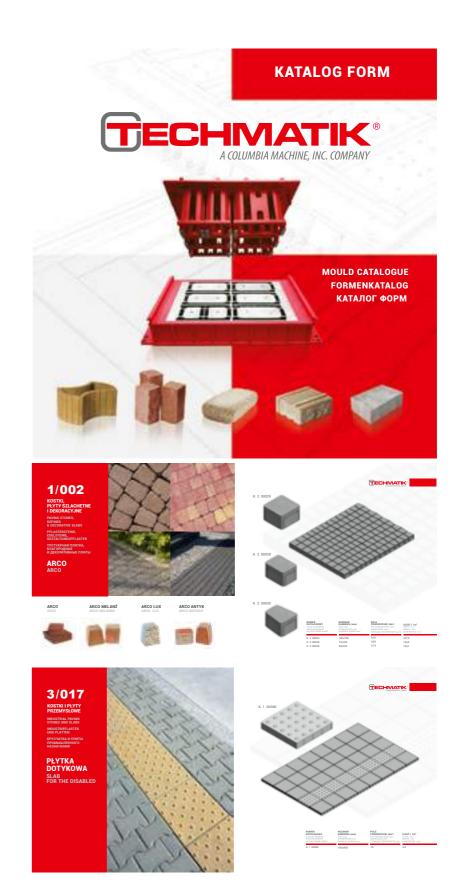
### **TECHNICAL DATA**

MAXIMUM TOTAL POWER	40 KW
VOLTAGE	3x 400 Volt
CURRENT CONSUMPTION	max 75 Amper
TEMPERATURE RANGE	40 °C to 100 °C



# **NEW MOLDS CATALOGUE**

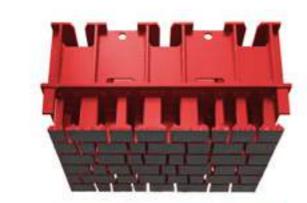
- 167 different types of products, stones, paving blocks, chamfers and textures
- The ability to adapt the molds to the customer requirements
- Molds for all types of concrete pavers/block machines available on the market



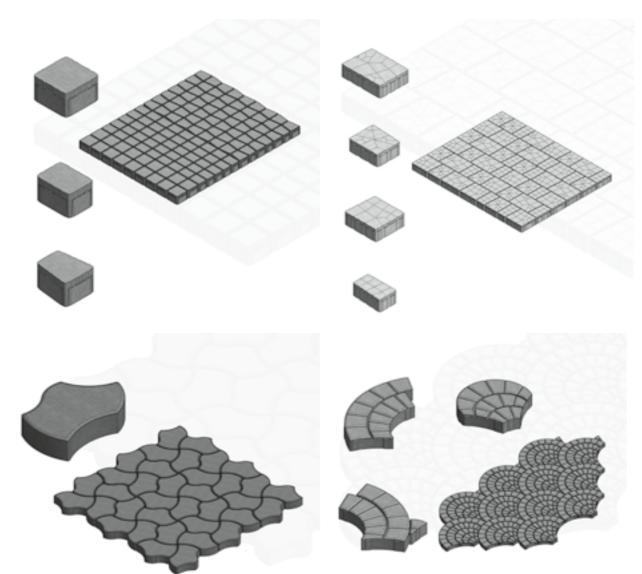
# TECHNATIK®

PAVING STONES, REFINED & DECORATIVE SLABS

MOLDS / PAVING STONES, REFINED & DECORATIVE SLABS





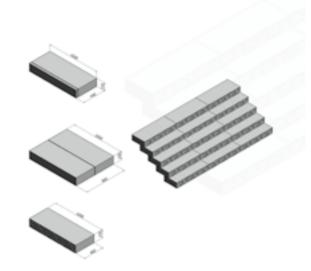




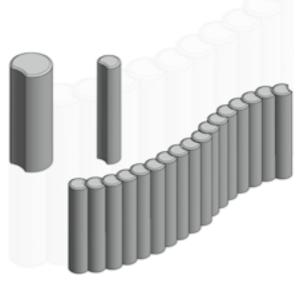
DECORATIVE ELEMENTS, STAIRS & PALISADES

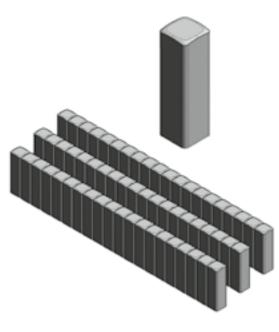










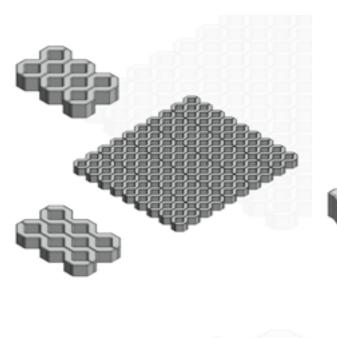


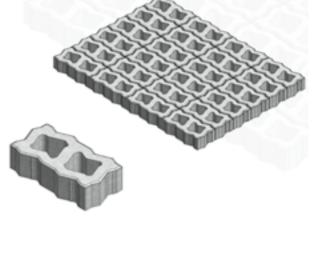
MOLDS / INDUSTRIAL PAVING STONES AND SLABS

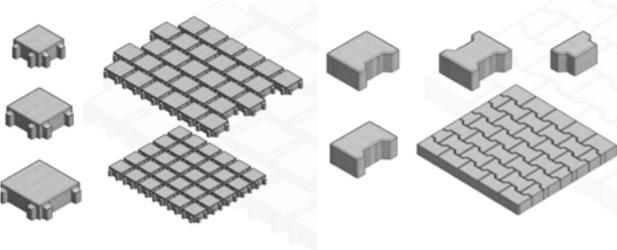
# TECHNATIK®

3
INDUSTRIAL PAVING STONES AND SLABS





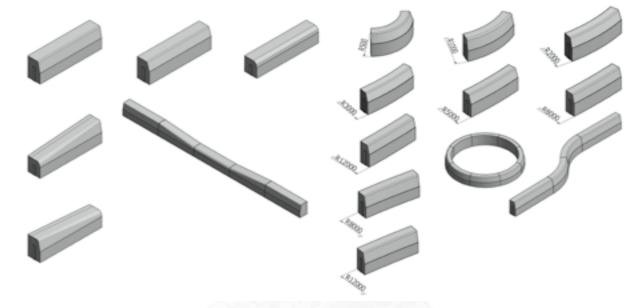


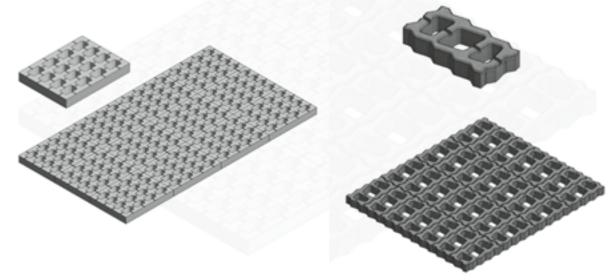












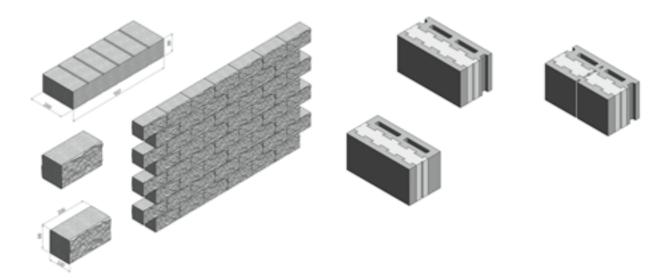
MOLDS / RENOVATION & REPAIR OF MOLDS

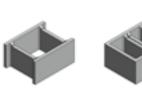
# TECHMATIK®

**CONSTRUCTION ELEMENTS & FENCINGS** 





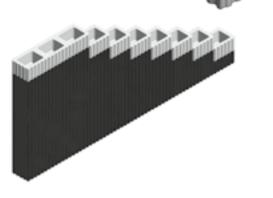














# **RENOVATION & REPAIR OF MOLDS**

- Comprehensive technical assessment of all refurbished molds (all manufacturers)
- Renovation and repair of molds:
  - change of tamper head shoes
  - renovation of mold bottoms and tamper heads
  - repair of other wear and tear on the molds







ADRES | ul. Żółkiewskiego 131 / 133

26 – 610 Radom POLAND

| 796-262-29-03 NIP

N 51° 24.926′ **GPS** 

E 21° 11.935′

**OFFICE** 

+48 48 369 08 00 tel. +48 48 369 08 01 fax e-mail: techmatik@techmatik.pl

DOMESTIC SALES DEPARTMENT

+48 48 369 08 12 tel.: +48 608 422 500 mobile: mobile: +48 608 422 200 +48 48 369 08 09 fax: e-mail: dsk@techmatik.pl

SERVICE/SPARE PARTS

+48 48 369 08 40 tel.: +48 608 611 611 mobile: fax: +48 48 369 08 01 serwis@techmatik.pl e-mail:

SERVICE/SPARE PARTS

tel.: +48 48 369 08 13

tel.kom.: +48 608 422 700 tel.kom.: +48 668 122 206 fax: +48 48 369 08 09 isd@techmatik.pl e-mail:

+48 48 369 08 08 tel.:

+48 608 422 100 mobile: +48 512 028 028 mobile: +48 48 369 08 09 fax: e-mail: isd@techmatik.pl

tel.: +48 48 369 08 13 mobile: +48 608 422 300

+48 532 859 002 mobile: fax: +48 48 369 08 09 isd@techmatik.pl e-mail:

### WWW.TECHMATIK.PL

Anytime our professional consultants are ready to explain details of our offer, help you to select solutions tailored to your needs and assist you in all business formalities. We are looking forward to cooperating with you.