



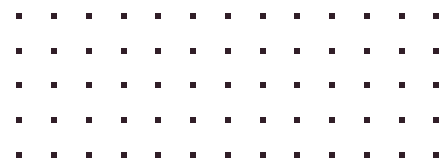
# TECHMATIK®

A COLUMBIA MACHINE, INC. COMPANY

## PRODUCT CATALOGUE

Manufacturing Lines  
Concrete Block Machines  
Mixers  
Molds

www.techmatik.com



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

TECHMATIK's wide range of products includes inter alia: moulds for paving blocks and concrete products, as well as modern high-capacity concrete block machines, complete process lines, concrete batching plants, equipment related to the production process of precast and ready-mixed concrete. All manufacturing lines are equipped only with state-of-the-art equipment machinery, guaranteeing high performance of manufacturing lines, production repeatability and the superior quality of products. The machinery and equipment as well as moulds manufactured by the company are adapted for high performance operation on steel production boards, which allows to obtain the best possible product characteristics through their accurate compaction while significantly reducing production costs through limitation of the amount of added cement.

The offer is complemented by manufacturing process control systems. These include control modules for individual phases or integrated control systems for the overall manufacturing line. TECHMATIK also provides repair, rebuilding and maintenance services for all machinery and equipment.

The Company is constantly expanding the range of machinery and equipment it manufactures, which are tested thoroughly before being placed on the market.

The superior quality confirmed by the certified quality management system ISO 9001 and the efficiency of the produced equipment and moulds combined with competitive pricing make TECHMATIK one of the world's leading manufacturers of machinery and complete manufacturing lines for paving blocks and one of the leaders in the manufacturing of moulds for concrete products from concrete block machines

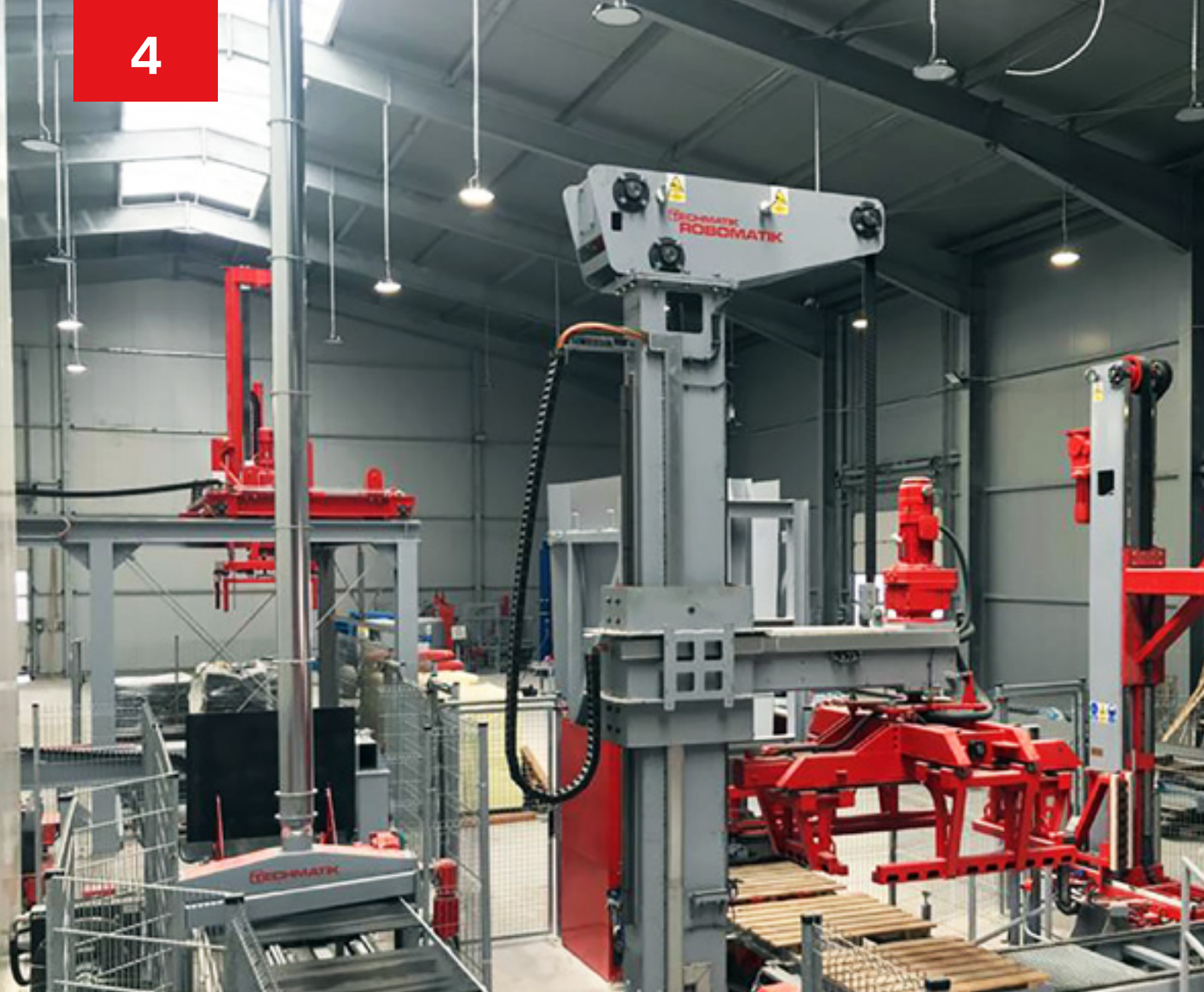
Our innovative approach backed with long-term experience we acquired in manufacturing of the concrete products, as well as the innovation and quality of our machinery, equipment and moulds have already been appreciated by several hundred customers from more than 50 countries on almost all continents. The company supplies its solutions directly to many countries in Europe and Asia, both Americas, as well as Australia and New Zealand. Techmatik is one of the member companies of Columbia Machine Group.

Founded in 1937, Columbia Machine is a family-run business currently by the third generation of owners. It is a global leader in the design, manufacturing and equipment support provided to various industries. It has established business relationships with the customers in more than 100 countries around the world. The company's main product portfolio comprises solutions for concrete product manufacturing equipment, moulds for manufacturing equipment, packaging machines and robots, conveyor systems, manipulators and manufacturing services.



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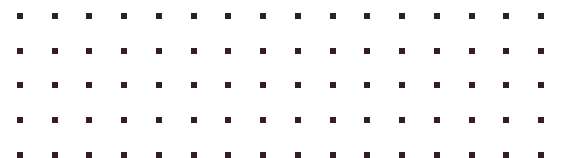




SEE A LINE

## MANUFACTURING LINES FOR CONCRETE BLOCKS AND DECORATIVE CONCRETE PRODUCTS

Comprehensive process lines, controlled by an integrated computer system, guarantee production repeatability and the superior quality products



### 1. MANUFACTURING LINES



Reliability



Fast and reliable maintenance services



Innovative design solutions



Modern manufacturing processes



Compact design



High production efficiency



Ease of operation and maintenance



Ability to manufacture a wide range of products



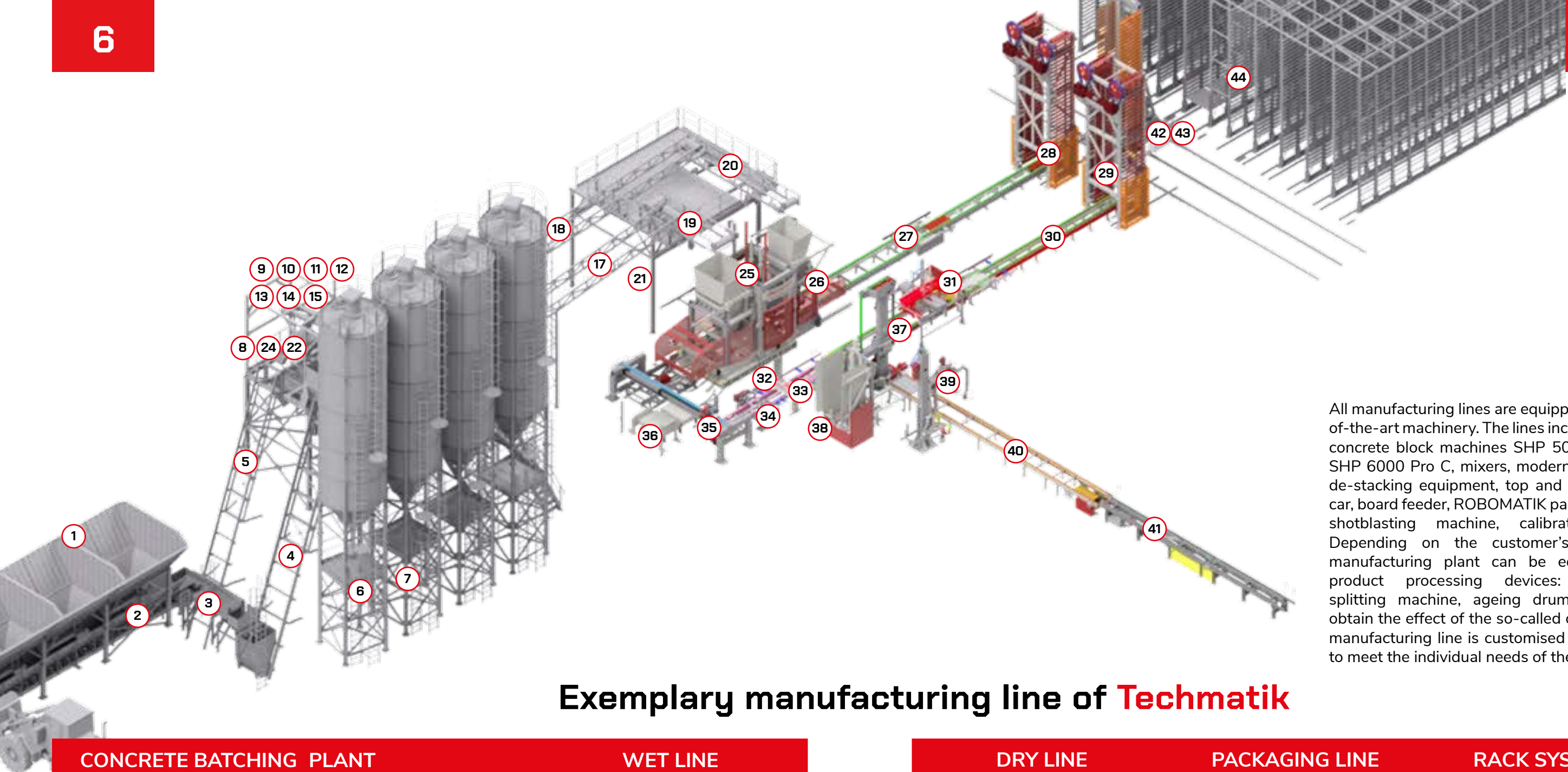
Automatic control



Global reach





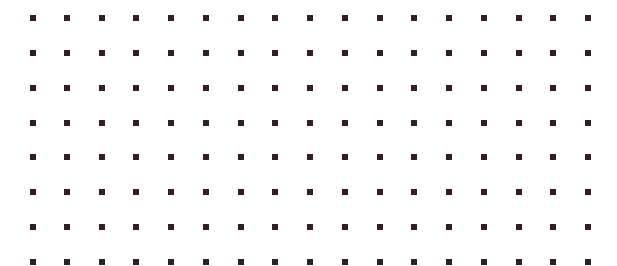


All manufacturing lines are equipped with state-of-the-art machinery. The lines include, inter alia: concrete block machines SHP 5000 PRO C or SHP 6000 Pro C, mixers, modern stacking and de-stacking equipment, top and bottom finger car, board feeder, ROBOMATIK packaging robot, shotblasting machine, calibrating grinder. Depending on the customer's needs, the manufacturing plant can be equipped with product processing devices: Washmatik, splitting machine, ageing drum allowing to obtain the effect of the so-called old print. Each manufacturing line is customised and designed to meet the individual needs of the customer.

## Exemplary manufacturing line of **Techmatik**

CONCRETE BATCHING PLANT		WET LINE
1. Multi-chamber aggregate storage tank	13. Dumping of BWK	25. Concrete block machine
2. Weighing belt conveyor	14. Dumping of BWW	26. Outflow blower
3. Reverse belt conveyor	15. Chemicals batcher	27. Wet belt/chain conveyor
4. SKIP 3000L trolley	16. Liquid dye batcher	28. Stacking device
5. SKIP 500L trolley	17. BWK belt conveyor	
6. Silo (80t)	18. BWW belt conveyor	
7. Silo fixtures	19. BWK reverse conveyor	
8. Steel structure	20. BWW reverse conveyor	
9. Cement scales	21. Support structure with handling platform	
10. Cement scales	22. Screw conveyor	
11. Mixer SPM 3000	23. Control cabinet of concretemixing plant	
12. Mixer SPM 500	24. Water system, pneumatic system	

DRY LINE	PACKAGING LINE	RACK SYSTEM
29. De-stacking equipment	37. ROBOMATIK packaging robot	42. Bottom finger car
30. Dry belt/chain conveyor	38. Pallet feeder	43. Top finger car
31. Alignment equipment	39. Automatic wrapping machine	44. Rack system
32. Chain conveyor with drivers	40. Chain conveyor	
33. Board brush	41. Sequencing conveyors	
34. Board reversing machine		
35. Board feeder		
36. Board storage		

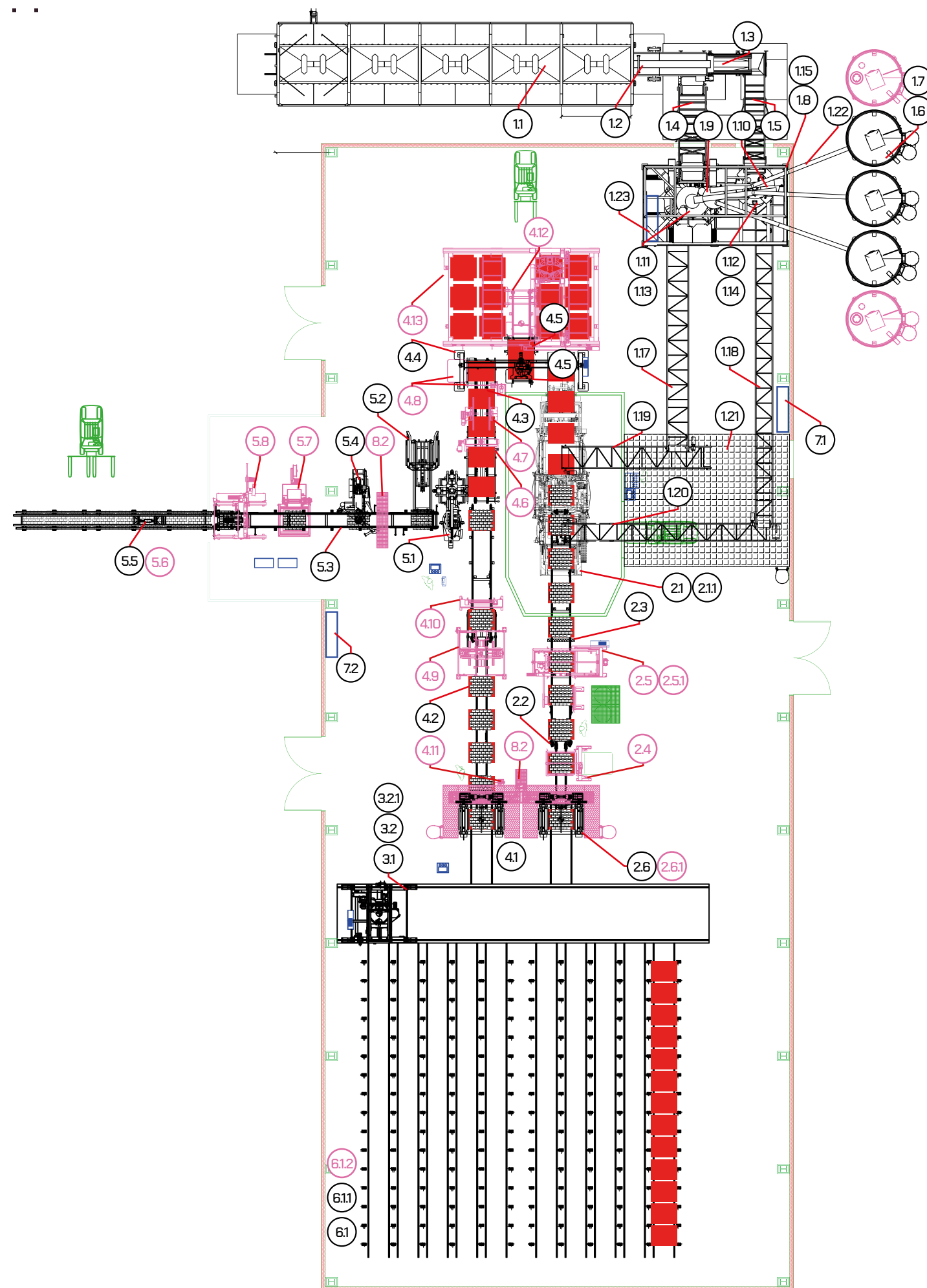




# FLOW CHART OF AUTOMATIC LINE WITH SHP 6000 PRO C

#	NAME OF MACHINE	QTY
1.1	Aggregate bin with batching belt conveyors	1
1.2	Weighing belt conveyor	1
1.3	Reverse belt conveyor	1
1.4	„SKIP“ 3000L trolley	1
1.5	„SKIP“ 500L trolley	1
1.6	Silo	3
1.7	Silo fixtures	3
1.8	Steel structure	1
1.9	Cement scales	1
1.10	Cement scales	1
1.11	Planetary mixer SPM 3000	1
1.12	Planetary mixer SPM 500	1
1.13	Dumping of BWK	1
1.14	Dumping of BWV	1
1.15	Chemicals batcher	2
1.16	Liquid dye batcher	1
1.17	BWK belt conveyor	1
1.18	BWV belt conveyor	1
1.19	BWK reverse belt conveyor	1
1.20	BWV reverse belt conveyor	1
1.21	Support structure with handling platform	1
1.22	Screw conveyor	5
1.23	Control cabinet of concrete-mixing plant	1
1.24	Water system, pneumatic system	1
2.1	Concrete block machine SHP 6000 PRO C	1
2.1.1	Foundation frame	1
2.2	Chain conveyor	1
2.3	Outflow blower	1
2.4	Reject tippler (optionally)	1
2.5	WASHMATIK scrubber (optionally)	1
2.5.1	WASHMATIK scrubber drainer (optionally)	1
2.6	Stacking device	1

#	NAME OF MACHINE	QTY
2.6.1	Operating platform (optionally)	2
3.1	Top finger car	1
3.2	Bottom finger car (rotary)	1
3.2.1	Tracks of the bottom finger car	1
4.1	De-stacking equipment	1
4.2	Dry chain conveyor	1
4.3	Chain conveyor with drivers	1
4.4	Board feeder	1
4.5	Board storage	1
4.6	Board brush (optionally)	1
4.7	Board reverser (optionally)	1
4.8	Board sprinkler (optionally)	1
4.9	Alignment equipment (optionally)	1
4.10	Granulated product spreader (optionally)	1
4.11	Board rounder (optionally)	1
4.12	Chain conveyor (optionally)	1
4.13	Board automatic buffering (optionally)	1
5.1	Robomatik	1
5.2	Pallet feeder	1
5.3	Chain conveyor (under the wrapper)	1
5.4	Wrapper	1
5.5	Sequencing conveyor (8 pallets)	1
5.6	Tile chain conveyor (optionally)	1
5.7	Horizontal tying machine (optionally)	1
5.8	Vertical tying machine (optionally)	1
6.1	Rack system - 200mm	1
6.1.1	Tracks of the rack system	1
6.1.2	Curtains of the rack system (optionally)	1
7.1	Control cabinet of the concrete block machine and wet line	1
7.2	Control cabinet for the dry line and repackaging plant	1
8.2	Operating platforms (optionally)	1

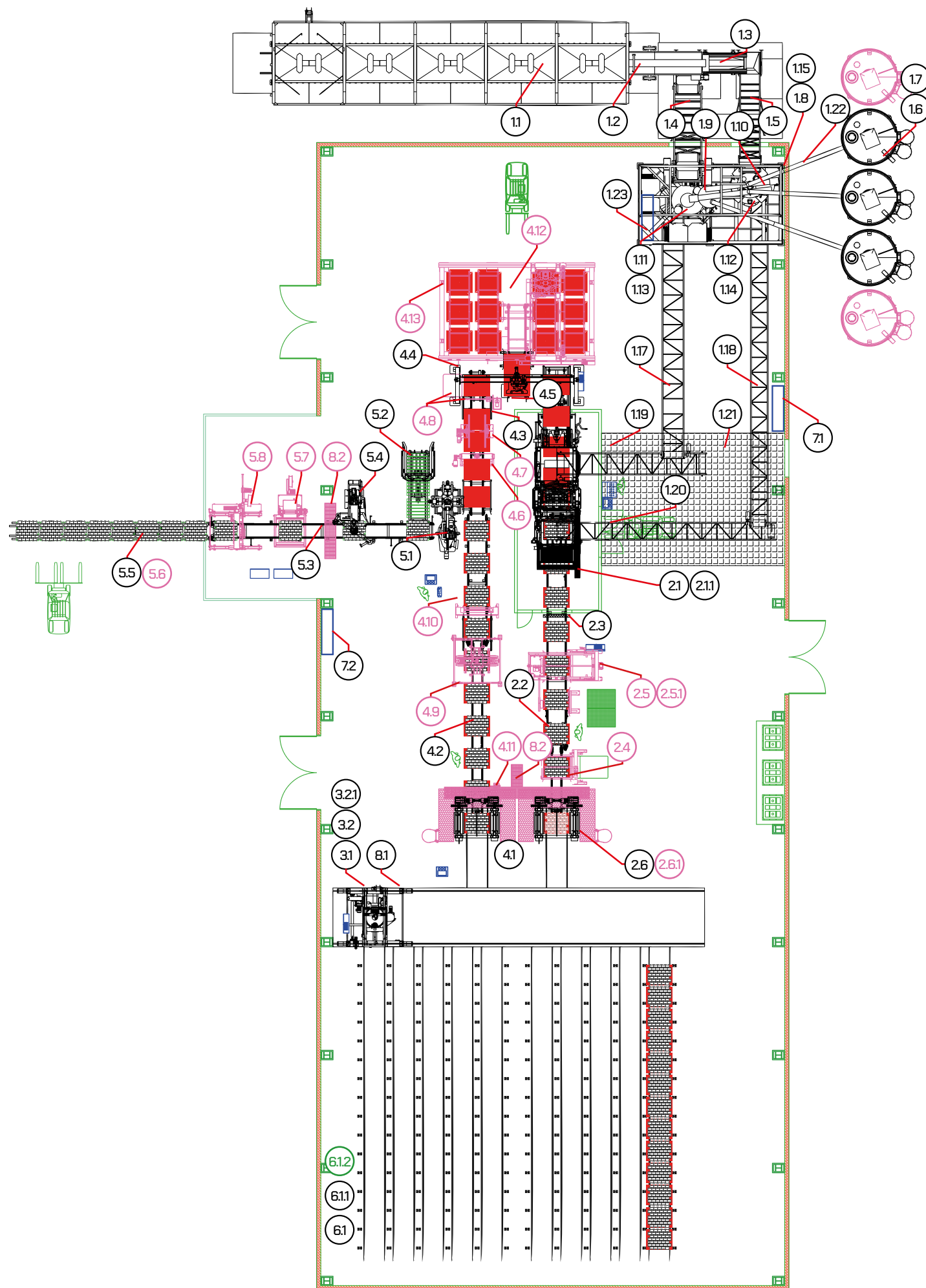




## FLOW CHART OF AUTOMATIC LINE WITH SHP 5000 PRO C

#	NAME OF MACHINE	QTY
1.1	Aggregate bin with batching belt conveyors	1
1.2	Weighing belt conveyor	1
1.3	Reverse belt conveyor	1
1.4	„SKIP“ 3000L trolley	1
1.5	„SKIP“ 500L trolley	1
1.6	Silo	3
1.7	Silo fixtures	3
1.8	Steel structure	1
1.9	Cement scales	1
1.10	Cement scales	1
1.11	Planetary mixer SPM 3000	1
1.12	Planetary mixer SPM 500	1
1.13	Dumping of BWK	1
1.14	Dumping of BWV	1
1.15	Chemicals batcher	2
1.16	Liquid dye batcher	1
1.17	BWK belt conveyor	1
1.18	BWV belt conveyor	1
1.19	BWK reverse belt conveyor	1
1.20	BWV reverse belt conveyor	1
1.21	Support structure with handling platform	1
1.22	Screw conveyor	5
1.23	Control cabinet of concrete-mixing plant	1
2.1	Concrete block machine SHP 5000 PRO C	1
2.1.1	Foundation frame	1
2.2	Chain conveyor	1
2.3	Outflow blower	1
2.4	Reject tippler (optionally)	1
2.5	WASHMATIK scrubber (optionally)	1
2.5.1	WASHMATIK scrubber drainer (optionally)	1
2.6	Stacking device	1
2.6.1	Operating platform (optionally)	2

#	NAME OF MACHINE	QTY
3.1	Top finger car	1
3.2	Bottom finger car (rotary)	1
3.2.1	Tracks of the bottom finger car	1
4.1	De-stacking equipment	1
4.2	Dry chain conveyor	1
4.3	Chain conveyor with drivers	1
4.4	Board feeder	1
4.5	Board storage	1
4.6	Board brush (optionally)	1
4.7	Board reverser (optionally)	1
4.8	Board sprinkler (optionally)	1
4.9	Alignment equipment (optionally)	1
4.10	Granulated product spreader (optionally)	1
4.11	Board rounder (optionally)	1
4.12	Chain conveyor (optionally)	1
4.13	Board automatic buffering (optionally)	1
5.1	Robomatik	1
5.2	Pallet feeder	1
5.3	Chain conveyor (under the wrapper)	1
5.4	Wrapper	1
5.5	Sequencing conveyor (8 pallets)	1
5.6	Tile chain conveyor (optionally)	1
5.7	Horizontal tying machine (optionally)	1
5.8	Vertical tying machine (optionally)	1
6.1	Rack system - 200mm	1
6.1.1	Tracks of the rack system	1
6.1.2	Curtains of the rack system (optionally)	1
7.1	Control cabinet of the concrete block machine and wet line	1
7.2	Control cabinet for the dry line and repackaging plant	1
8.1	Safety fencing	1
8.2	Operating platforms (optionally)	1

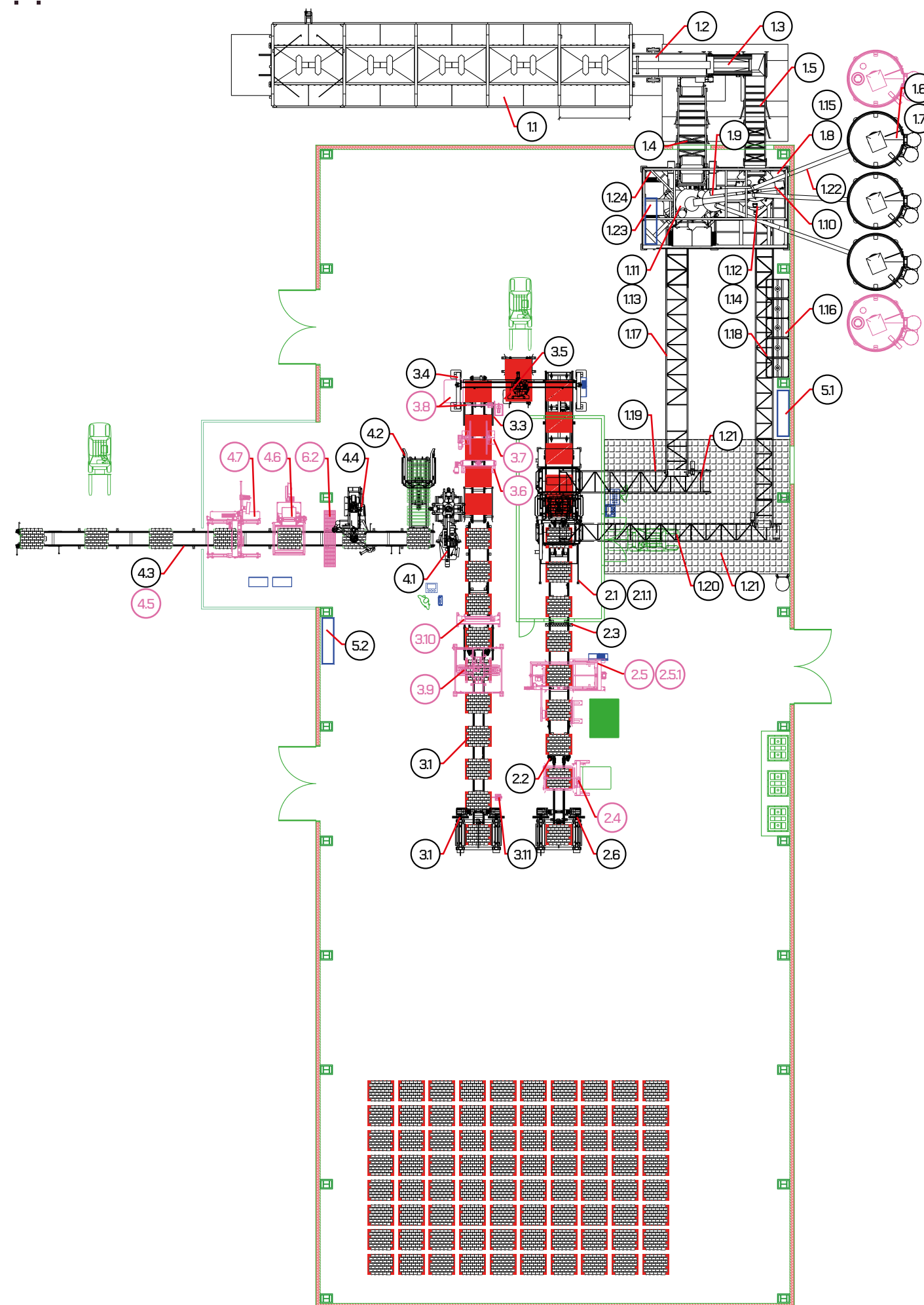




## FLOW CHART OF SEMI-AUTOMATIC LINE WITH HP 3000 PRO C

#	NAME OF MACHINE	QTY
1.1	Aggregate bin with batching belt conveyors	1
1.2	Weighing belt conveyor	1
1.3	Reverse belt conveyor	1
1.4	„SKIP“ 3000L trolley	1
1.5	„SKIP“ 500L trolley	1
1.6	Silo	3
1.7	Silo fixtures	3
1.8	Steel structure	1
1.9	Cement scales	1
1.10	Cement scales	1
1.11	Planetary mixer SPM 3000	1
1.12	Planetary mixer SPM 500	1
1.13	Dumping of BWK	1
1.14	Dumping of BWV	1
1.15	Chemicals batcher	2
1.16	Liquid dye batcher	1
1.17	BWK belt conveyor	1
1.18	BVV belt conveyor	1
1.19	BWK reverse belt conveyor	1
1.20	BVV reverse belt conveyor	1
1.21	Support structure with handling platform	1
1.22	Screw conveyor	5
1.23	Control cabinet of concrete-mixing plant	1
1.24	Water system, pneumatic system	1
2.1	Concrete block machine HP 3000 PRO C	1
2.1.1	Foundation frame	1
2.2	Chain conveyor	1
2.3	Outflow blower	1
2.4	Reject tippler (optionally)	1
2.5	WASHMATIK scrubber (optionally)	1
2.5.1	WASHMATIK scrubber drainer (optionally) 1	1
2.6	Stacking device	1

#	NAME OF MACHINE	QTY
3.1	De-stacking equipment	1
3.2	Dry chain conveyor	1
3.3	Chain conveyor with drivers	1
3.4	Board feeder	1
3.5	Board storage	1
3.6	Board brush (optionally)	1
3.7	Board reverser (optionally)	1
3.8	Board sprinkler (optionally)	1
3.9	Alignment equipment (optionally)	1
3.10	Granulated product spreader (optionally)	1
3.11	Board rounder (optionally)	1
4.1	Robomatik	1
4.2	Pallet feeder	1
4.3	Chain conveyor (under the wrapper)	1
4.4	Wrapper	1
4.5	Plate chain conveyor (optionally)	1
4.6	Horizontal tying machine (optionally)	1
4.7	Vertical tying machine (optionally)	1
5.1	Control cabinet of the concrete block machine and wet line	1
5.2	Control cabinet for the dry line and repackaging plant	1
6.2	Operating platforms (optionally)	1

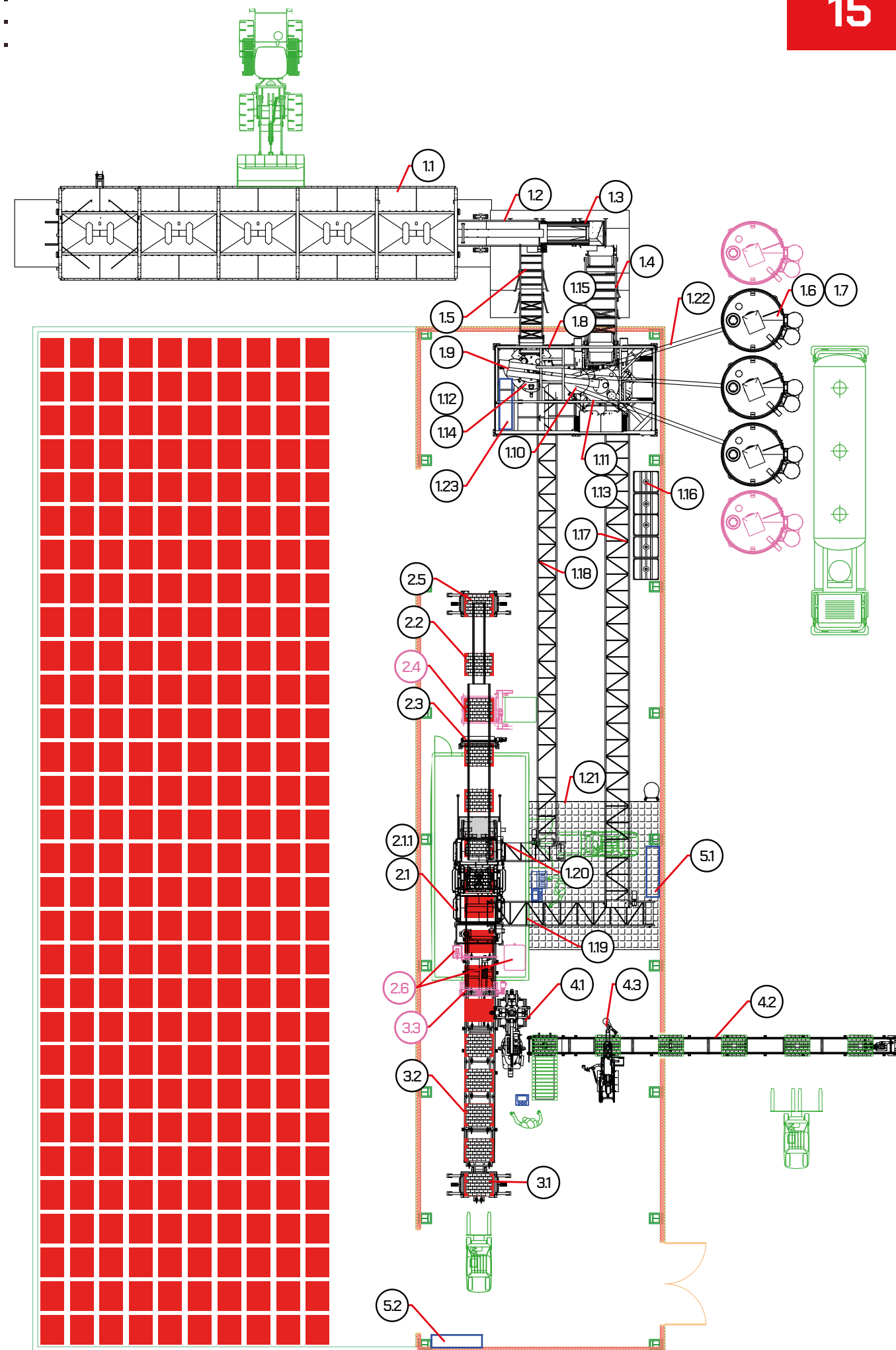




## FLOW CHART OF SEMI-AUTOMATIC LINE WITH HP 3000 PRO C

POZ.	NAZWA MASZyny	ILOŚĆ
1.1	Aggregate bin with batching belt conveyors	1
1.2	Weighing belt conveyor	1
1.3	Reverse belt conveyor	1
1.4	„SKIP” 3000L trolley	1
1.5	„SKIP” 500L trolley	1
1.6	Silo	3
1.7	Silo fixtures	3
1.8	Steel structure	1
1.9	Cement scales	1
1.10	Cement scales	1
1.11	Planetary mixer SPM 3000	1
1.12	Planetary mixer SPM 500	1
1.13	Dumping of BWK	1
1.14	Dumping of BWV	1
1.15	Chemicals batcher	2
1.16	Liquid dye batcher	1
1.17	BWK belt conveyor	1
1.18	BWV belt conveyor	1
1.19	BWK reverse belt conveyor	1
1.20	BWV reverse belt conveyor	1
1.21	Support structure with handling platform	1
1.22	Screw conveyor	5
1.23	Control cabinet of concrete-mixing plant	1
1.24	Water system, pneumatic system	1
2.1	Concrete block machine HP 3000 PRO C	1
2.1.1	Foundation frame	1
2.2	Wet belt conveyor	1
2.3	Outflow brush	1
2.4	Reject tippler (optionally)	1
2.5	Workbench stacking device	1
2.6	Board sprinkler	1
3.1	Workbench de-stacking device	1

POZ.	NAZWA MASZyny	ILOŚĆ
3.2	Dry side conveyor	1
3.3	Board brush	1
4.1	Robomatik	1
4.2	Chain conveyor (under the wrapper)	1
4.3	Wrapper	1
5.1	Control cabinet of the concrete block machine and wet line	1
5.2	Control cabinet for the dry line and repackaging plant	1





## Advantages of AUTOMATIC TECHMATIK manufacturing line

- Fully automated production process
- High productivity and production repeatability
- Top quality of manufactured products
- Minimum number of operators required to operate the line (3-4 people)
- Optimum space utilisation - compact design
- Customer-friendly line - easy to operate and maintain
- Online diagnostics and mobile service support
- Integrated safety system
- Monitoring and statistics of the manufacturing process
- Minimisation of production costs

## Advantages of semi-automatic TECHMATIK manufacturing line

- Economical solution, lower upfront capex
- High quality of manufactured products
- An option to manufacture different products up to a height of 300 mm
- Installation in a small footprint
- Manufacturing of single- and double-layer products
- Upgradable to an automatic line

## Photos of commissioned lines in various countries







SEE THE MACHINE

## CONCRETE BLOCK MACHINE SHP 6000 PRO C

Concrete block machine TECHMATIK SHP 6000 PRO C – A machine with the highest performance designed for fully automated production. It supports the production of a wide range of products with heights from 15mm to 550mm. Obtaining products with a height from 15 mm is possible thanks to the optimisation of the design and the application of innovative technological solutions.



## SHP 6000 PRO C



High production efficiency



Can produce a wide range of products from the height of 15mm



Production on all types of boards with dimensions 1400x1100 / 1400x1300



Full automation with visualisation of all process steps



Extended machine operational life due to reinforced vibrating box design



GDS – Gap Detection System.



CCS – Cycle Counting System.



System COLORMIX - allows the production of multi-coloured products



Precise guidance of the tamper head and mould cases through the use of linear bearings



To the Techmatik SHP 6000 PRO C concrete block machine, we have applied innovative design solutions that guarantee efficient production while keeping operating costs at a reasonable, low level:

#### ■ Optimized vibrating box design

Development of a new design of the vibrating box, with the main focus on the extension of its service life, while enhancing the efficiency of the overall system. Key changes in all structural nodes resulted in completely new performance characteristics of the vibrating box.

#### ■ Precise positioning system of the formliner against the tamper head

More precise positioning of the mould formliner in the jaws of the boxes, through the use of limiters, to prevent it from moving relative to the tamper head during operation. The adjustment is carried out by means of a set screw that presses the stop bar against the formliner clamping bar. In addition, the jaws holding the formliner have been lengthened, providing better pressure and the ability to produce on 1300 x 1400 [mm] boards. An additional limiter was used to protect the pads from mechanical damage during mould changes.

#### ■ GDS – Gap Detection System

A diagnostic system that tests the correct alignment of the mould boxes on the bumping bolts. The main task of the system is to enhance the life of the formliners by measuring the distance, between the pressure beam on the formliner and the lower part of the box. The structure is based on sensors, positioned at four points, which register the value of deviation from a set parameter.

#### ■ CCS – Cycle Counting System

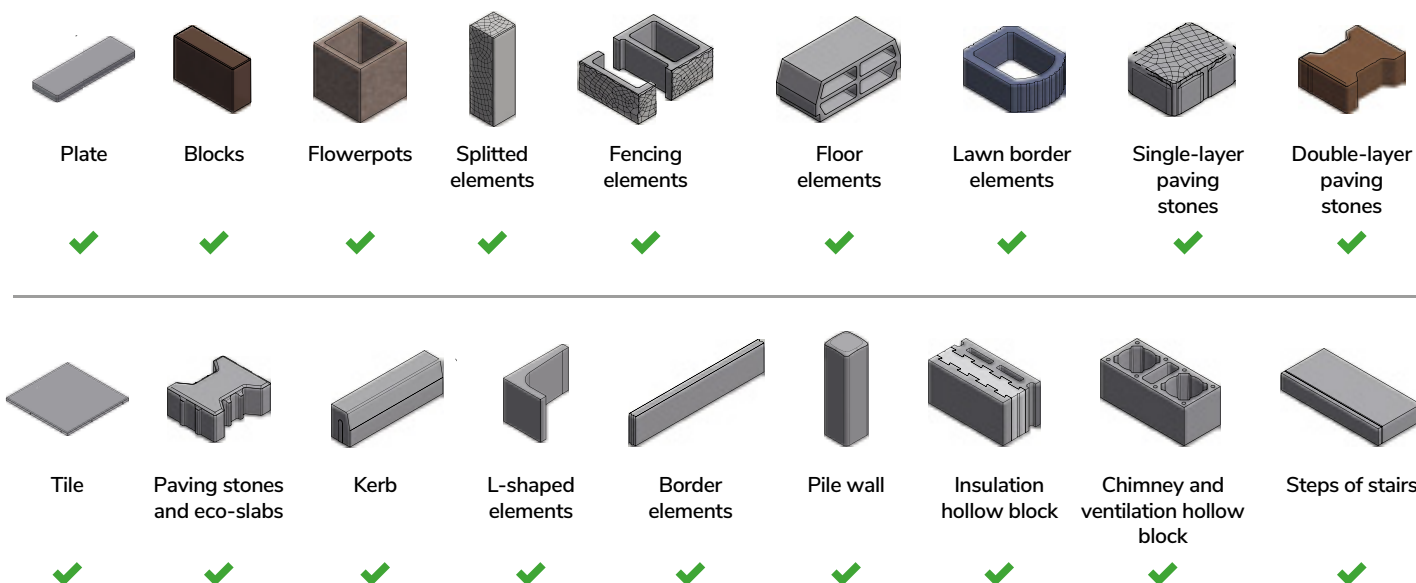
The diagnostic system, counting the number of cycles (strokes) performed for a given mould. A system built on the basis of a head (transmitter), fixed on the moulding unit, and a receiver permanently mounted in the mould formliner. A very large number of possible combinations allows the exact estimation of production volumes for individual products.

#### ■ Grate hydraulic drive

The use of a hydraulic actuator to drive the grates suspended from the angle braces. The main task of the system is to distribute and backfill the concrete mix in the formliner more accurately

## TYPE OF PRODUCT

Products 15mm to 550mm high



## TECHNICAL DATA

### SCOPE OF AUTOMATION

MINIMUM HEIGHT OF PRODUCT

### FULL AUTOMATION OF MOLDING PROCESS

15 mm

MAXIMUM HEIGHT OF PRODUCT

550 mm

PRODUCT STRUCTURE

SINGLE- OR DOUBLE-LAYER OR SINGLE- OR MULTI-COLOUR PRODUCT

MOULDING FIELD

1300 x 1050 mm lub 1300 x 1250 mm

SIZE OF BOARD

1400 x 1100 mm lub 1400x1300mm

THICKNESS OF BOARD

FROM 12 mm TO 55 mm

OVERALL DIMENSIONS OF MECHANICAL STRUCTURE

3150 x 9250 x 5570 mm

WEIGHT OF COMPLETE MACHINE

44 000 kg

CONNECTION POWER

170 kW

VIBRATION IMPACT STRENGTH – STEPLESS ADJUSTMENT

130 kN

TAMPER HEAD CLAMPING FORCE

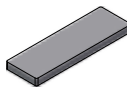
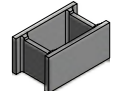
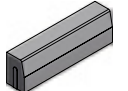
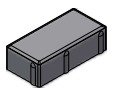
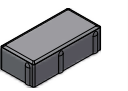
2 X 102 kN

OPERATING PRESSURE

13 MPa

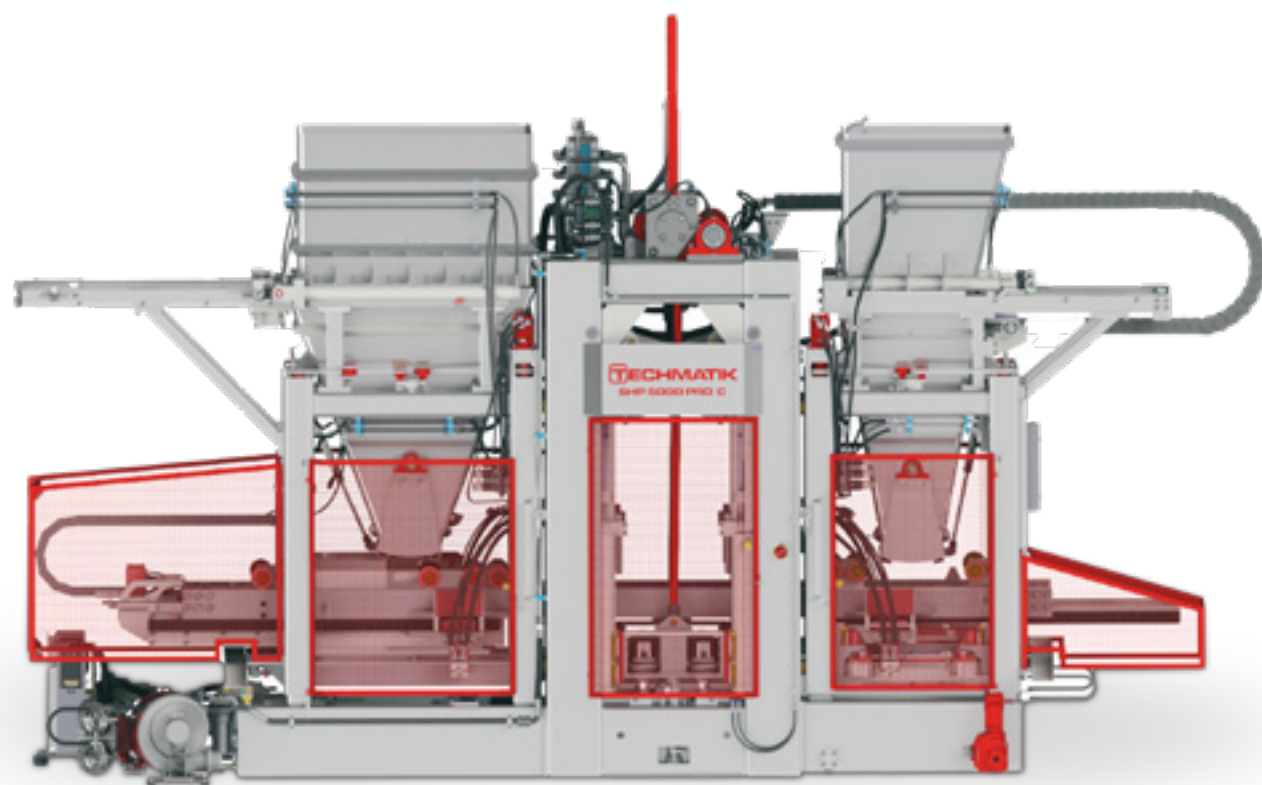
## MACHINE OPERATIONAL SPECIFICATIONS EXEMPLIFIED BY SELECTED PRODUCTS

For a 1400x1100 mm board.  
Production capacity at 90% of machine capacity

					
Name of product	Tile	Hollow block	Kerb	Rectangular single-layer concrete block	Rectangular double-layer concrete block
Size [mm]	71x220x15	200x400x200	200x1000x300	98x198x60	98x198x60
Qty per cycle	50	12	4	54	54
Mean cycle time	20 sec.*	14 sec.*	21 sec.*	11 sec.*	13 sec.*
Qty of products per hour	8100*	2777*	617*	15905*	13458*

\*Cycle time may vary depending on concrete mix design, machine settings, material feed rate, handling, pallets and other factors.

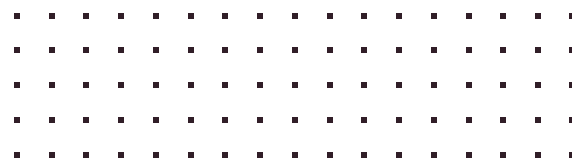




SEE THE MACHINE

## CONCRETE BLOCK MACHINE SHP 5000 PRO C

Concrete block machine TECHMATIK SHP 5000 PRO C – High-performance machine dedicated to fully automated manufacturing processes. The design of the concrete block machine incorporates technical solutions used in the design of precision industrial robots, ensuring production efficiency and low operating costs.



## SHP 5000 PRO C



It supports the production of a wide range of products with heights from 40 mm to 550 mm



Full automation with visualisation of all manufacturing process steps



Production on all types of boards allows to achieve high quality concrete products



COLORMIX system - allows the production of multi-coloured products



Precise guidance of the tamper head and mould cases through the use of linear bearings

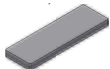



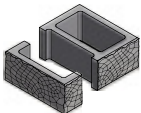


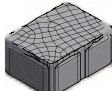



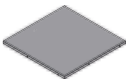


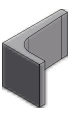


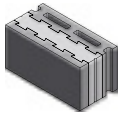
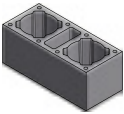

To the Techmatik SHP 5000 PRO C concrete block machine, we have applied state-of-the-art design solutions that guarantee efficient and effective production, while maintaining optimum operating costs:

- **Tamper head counterweights** – Structural elements moving inside the body of the concrete block machine, balancing the weight of the tamper head; this solution reduces the amount of energy required to move the tamper head
- **Linear bearings** – The applied solution of precise guidance and positioning of the cooperating elements of the formliner and the punch results in lower wear of the moulds for the production of concrete products
- **Oil vibrating box** – – the vibrating box is not permanently attached to the structure of the concrete block machine, which significantly reduces the vibrations transmitted to the body of the machine, and the structural solutions applied extend its operational life and significantly reduce the scope of maintenance services
- **Feed drawer drive** – The transfer of torque from the hydraulic motors to the gear rails via gears significantly improves the dynamics of the drawers. Compositions of different materials are used in the wheel design to reduce noise and protect against wear and tear of other costly system components
- **Movable grate** – helps and accelerates the even distribution of concrete in the formliner
- **Colormix** – a multi-coloured concrete batching device to guarantee the colour repeatability of the products
- **Tamper head clamp** – a hydraulic clamp with two cylinders prevents the tamper head from moving against relative to the formliner, which extends the operational life of the mould
- **Punch stabilisation unit** – a reliable, simple system that ensures a consistent concrete block height across the entire board and minimises the risk of mould damage

TYPE OF PRODUCT

Products 15mm to 550mm high

								
Plate	Blocks	Flowerpots	Splitted elements	Fencing elements	Floor elements	Lawn border elements	Single-layer paving stones	Double-layer paving stones
✗	✓	✓	✓	✓	✓	✓	✓	✓

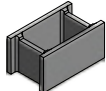
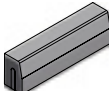
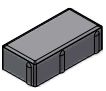
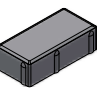
								
Tile	Paving stones and eco-slabs	Kerb	L-shaped elements	Border elements	Pile wall	Insulation hollow block	Chimney and ventilation hollow block	Steps of stairs
✗	✓	✓	✓	✓	✓	✓	✓	✓

TECHNICAL DATA

SCOPE OF AUTOMATION	FULL AUTOMATION OF MOLDING PROCESS
MINIMUM HEIGHT OF PRODUCT	40 mm
MAXIMUM HEIGHT OF PRODUCT	550 mm
PRODUCT STRUCTURE	SINGLE- OR DOUBLE-LAYER OR SINGLE- OR MULTI-COLOUR PRODUCT
SIZE OF BOARD	1400 x 1100 mm
THICKNESS OF BOARD	FROM 12 mm TO 55 mm
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	2700 x 8350 x 5265 mm
WEIGHT OF COMPLETE MACHINE	39 000 kg
CONNECTION POWER	135 kW
VIBRATION IMPACT STRENGTH – STEPLESS ADJUSTMENT	130 kN
TAMPER HEAD CLAMPING FORCE	102 kN
OPERATING PRESSURE	13 MPa

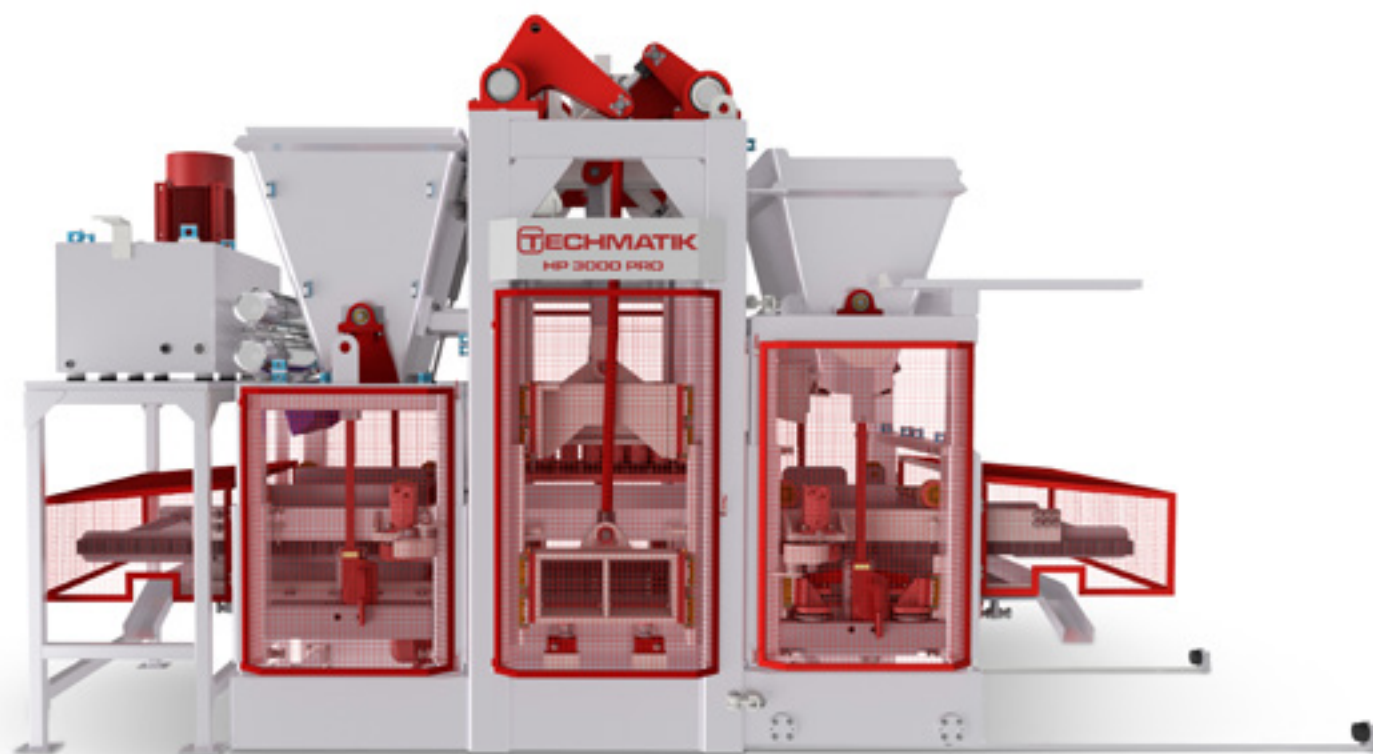
MACHINE OPERATIONAL SPECIFICATIONS  
EXEMPLIFIED BY SELECTED PRODUCTS

For a 1400x1100 mm board.  
Production capacity at 90% of machine capacity

				
Name of product	Hollow block	Kerb	Rectangular single-layer concrete block	Rectangular double-layer concrete block
Size [mm]	200x400x200	200x1000x300	98x198x60	98x198x60
Qty per cycle	12	4	54	54
Mean cycle time	15 sec.*	22 sec.*	12 sec.*	14 sec.*
Qty of products per hour	2592*	589*	14580*	12497*

\*Cycle time may vary depending on concrete mix design, machine settings, material feed rate, handling, pallets and other factors.





SEE THE MACHINE

## CONCRETE BLOCK MACHINE HP 3000 PRO

Concrete block machine TECHMATIK HP 3000 PRO - economical, efficient machine with the smallest footprint of the stationary family of concrete block machines

2. CONCRETE BLOCK  
MACHINES



## HP 3000 PRO



It supports the production of products with heights from 40 mm to 300 mm



Attractive purchase price and low operating costs



Easy to operate



Reliable and robust due to the application of proven design solutions



Stationary production in automatic or semiautomatic versions using mobile rack systems



Production on all types of boards allows to achieve high quality concrete products






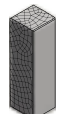
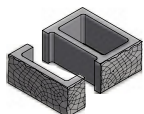
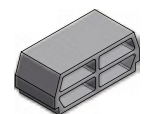

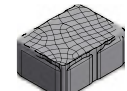

To the Techmatik SHP 3000 PRO concrete block machine, we have applied design solutions that guarantee efficient production while maintaining optimum operating costs.




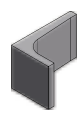



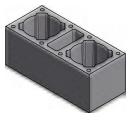

- **Feed drawer drive** – The transfer of torque from the hydraulic motors to the gear rails via gears significantly improves the dynamics of the drawers. Compositions of different materials are used in the wheel design to reduce noise and protect against wear and tear of other costly system components.
- **Linear bearings** – precise guidance and positioning of cooperating mould and tamper head components results in less wear and tear on the moulds. As a result, the formliner cavities and tamper shoes, have a longer service life
- **An option of offering the COLORMIX system** allows manufacturing of multi-colour products.



TYPE OF PRODUCT

Products 40mm to 300mm high

								
Plate	Blocks	Flowerpots	Splitted elements	Fencing elements	Floor elements	Lawn border elements	Single-layer paving stones	Double-layer paving stones
✗	✓	✗	✓	✓	✓	✓	✓	✓

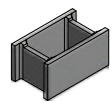
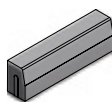
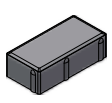
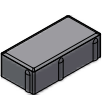
								
Tile	Paving stones and eco-slabs	Kerb	L-shaped elements	Border elements	Pile wall	Insulation hollow block	Chimney and ventilation hollow block	Steps of stairs
✗	✓	✓	✗	✓	✓	✗	✓	✓

TECHNICAL DATA

SCOPE OF AUTOMATION	FULL AUTOMATION OF MOLDING PROCESS
MINIMUM HEIGHT OF PRODUCT	40 mm
MAXIMUM HEIGHT OF PRODUCT	300 mm
PRODUCT STRUCTURE	SINGLE- OR DOUBLE-LAYER OR SINGLE- OR MULTI-COLOUR PRODUCT
SIZE OF BOARD	1400 x 1100 mm
THICKNESS OF BOARD	FROM 12 mm TO 55 mm
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	2550 x 4650 x 6100 mm
WEIGHT OF COMPLETE MACHINE	24 000 kg
CONNECTION POWER	80 kW
VIBRATION IMPACT STRENGTH	70 kN
TAMPER HEAD CLAMPING FORCE	100 kN

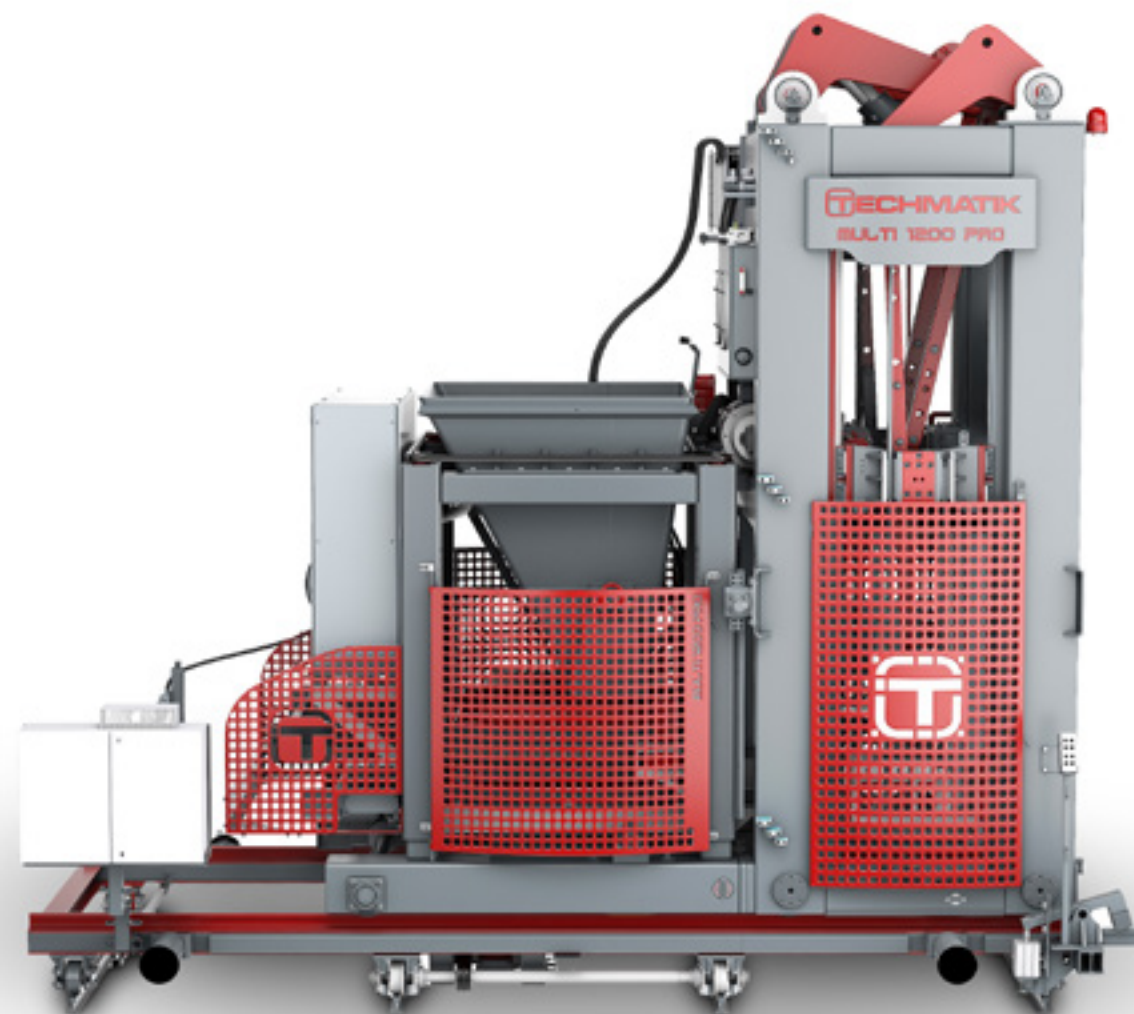
MACHINE OPERATIONAL SPECIFICATIONS  
EXEMPLIFIED BY SELECTED PRODUCTS

For a 1400x1100 mm board.  
Production capacity at 90% of machine capacity

				
Name of product	Hollow block	Kerb	Rectangular single-layer concrete block	Rectangular double-layer concrete block
Size [mm]	200x400x200	200x1000x300	98x198x60	98x198x60
Qty per cycle	12	4	54	54
Mean cycle time	19 sec.*	25 sec.*	14 sec.*	19 sec.*
Qty of products per hour	2046*	518*	12497*	9208*

\*Cycle time may vary depending on concrete mix design, machine settings, material feed rate, handling, pallets and other factors.





SEE THE MACHINE

## MOBILE CONCRETE BLOCK MACHINE MULTI 1200 PRO

Mobile concrete block machine TECHMATIK MULTI 1200 PRO is the only mobile machine in the world designed for the production of tall concrete products, from 100 mm to 1200 mm in height.

2. CONCRETE BLOCK  
MACHINES



## MULTI 1200 PRO



An option to extend the product range to include the production of extremely high concrete products up to a height of 1200 mm



Low capex and infrastructure expenditures



Rapid investment and production start-up time



A capability to manufacture concrete products without the need to apply a complete manufacturing line



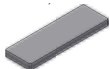



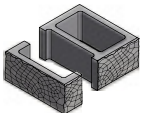

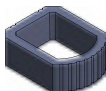
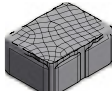

Automated concrete block machine manufacturing process with visualisation of all process steps

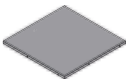


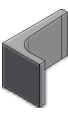



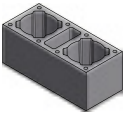

To the Techmatik MULTI 1200 PRO concrete block machine, we have applied design solutions that guarantee efficient production while maintaining optimum operating costs.

- **Hydraulic drive of the charging hopper** ensures even distribution of the concrete mix. Transmission of torque from hydraulic motors, to toothed rails, by means of gears of special design. The application of gears improves the operational dynamics of the hoppers. The composition of different materials reduces noise and prevents excessive wear on the hopper mechanisms.
- **Linear bearings** allow precise guidance and positioning of the formliner and tamper head, which leads to less wear of moulds for manufacturing concrete products.
- **Machine electrical drive** e for smooth running and precise positioning of the concrete block machine. Electrical system, based on a geared motor and belt transmission, controlled by an inverter.
- **Drive for crosshead (tamper head) and mould (formliner) cases** s to ensure the stability of the mould in the machine. A reliable simple system implemented through a system of hydraulic cylinders and shafts mounted in bearings and supported on the machine body.
- **Hydraulic locking of the moving frame** reduces the concrete block machine operations
- **Hydraulic brake** enables stabilisation and better control of the machine during its operation
- **The vibrator system** on the mould ensures uniform compaction of extremely high products
- **Mobile vibrating table system** enables manufacturing of products starting from 100 mm on the concrete block machine.

TYPE OF PRODUCT

Products 40mm to 1200mm high

								
Plate	Blocks	Flowerpots	Splitted elements	Fencing elements	Floor elements	Lawn border elements	Single-layer paving stones	Double-layer paving stones
✗	✓	✓	✓	✓	✓	✓	✗	✗




								
Tile	Paving stones and eco-slabs	Kerb	L-shaped elements	Border elements	Pile wall	Insulation hollow block	Chimney and ventilation hollow block	Steps of stairs
✗	✗	✓	✓	✓	✓	✗	✓	✓

TECHNICAL DATA

SCOPE OF AUTOMATION	FULL AUTOMATION OF MOULDING PROCESS SEMI-AUTOMATIC MACHINE FEED SEMI-AUTOMATIC MACHINE RUN
MINIMUM HEIGHT OF PRODUCT	100 mm
MAXIMUM HEIGHT OF PRODUCT	1200 mm
PRODUCT STRUCTURE	SINGLE-LAYER PRODUCT
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	3300 x 5800 x 4800 mm without transport frame
WEIGHT OF COMPLETE MACHINE	26 000 kg
CONNECTION POWER	MACHINE 60 kW / MOLD UP TO 32 kW DEPENDING ON THE TYPE OF MOLD
VIBRATION IMPACT STRENGTH	196 kN
TAMPER HEAD CLAMPING FORCE	80 kN
MAXIMUM PERFORMANCE	Approx. 100 cycles per hour for pile wall 800mm

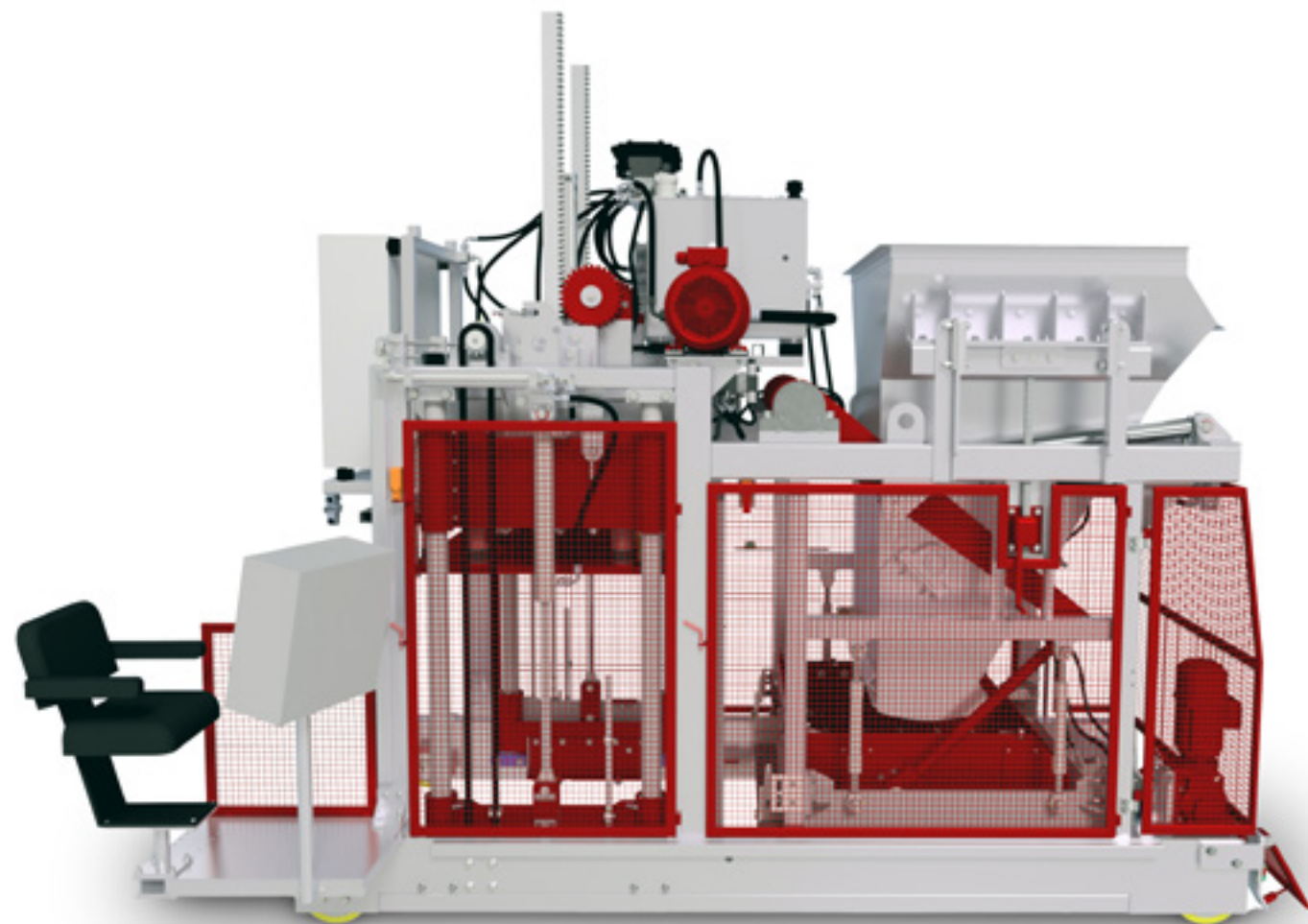
MACHINE OPERATIONAL SPECIFICATIONS  
EXEMPLIFIED BY SELECTED PRODUCTS

Production capacity at 90% of machine capacity

			
Name of product	Flowerpots	Flowerpots	Nostalit Pile Wall
Size [mm]	500x500x500	500x1000x500	180x120x800
Qty per cycle	4	2	16
Mean cycle time	30 sec.*	30 sec.*	26 sec.*
Qty of products per hour	432*	216*	1994*

\*Cycle time may vary depending on concrete mix design, machine settings, material feed rate, handling, pallets and other factors.





SEE THE MACHINE

## MOBILE CONCRETE BLOCK MACHINE MULTI 300 PRO

Mobile concrete block machine TECHMATIK MULTI 300 PRO is a machine designed for the manufacturing of building elements in a mobile system, with a height of 170 mm - 300 mm



## MULTI 300 PRO



It supports the production of products with heights from 170mm - 300mm



An option of running a manufacturing process without track construction



A capability to manufacture concrete products without the need to apply a complete manufacturing line



Attractive purchase price and operating costs



Easy-to-use, compact design



It has an integrated hydraulic station, control cabinet and console with operator seat



It is equipped with moulds with mounted vibrators



Moulding of products directly on the floor



It can be easily transported to another site

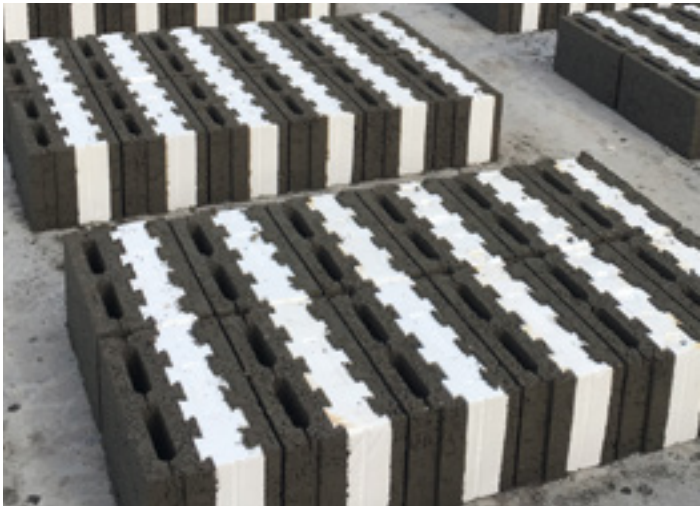


It can be equipped with polystyrene insert feed system



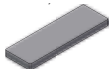


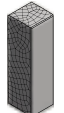
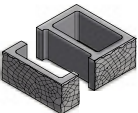
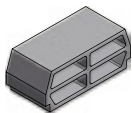
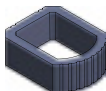
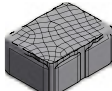

An option to operate the concrete block machine in an automatic mode

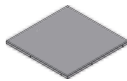
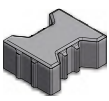

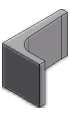



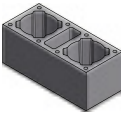





TYPE OF PRODUCT

Products 170mm to 300mm high

								
Plate	Blocks	Flowerpots	Splitted elements	Fencing elements	Floor elements	Lawn border elements	Single-layer paving stones	Double-layer paving stones
✗	✓	✗	✗	✗	✓	✓	✗	✗


								
Tile	Paving stones and eco-slabs	Kerb	L-shaped elements	Border elements	Pile wall	Insulation hollow block	Chimney and ventilation hollow block	Steps of stairs
✗	✗	✗	✗	✗	✗	✓	✓	✗

TECHNICAL DATA

SCOPE OF AUTOMATION	MANUAL OR AUTOMATIC MOLDING PROCESS
MINIMUM HEIGHT OF PRODUCT	170 mm
MAXIMUM HEIGHT OF PRODUCT	300 mm
MOLDING FIELD	1240 x 1130 mm
PRODUCT STRUCTURE	SINGLE-LAYER PRODUCT
OVERALL DIMENSIONS OF MECHANICAL STRUCTURE	3400 x 3550 x 4600 mm WITH A SEAT
WEIGHT OF COMPLETE MACHINE	7 200 kg WITHOUT MOLD
CONNECTION POWER	MACHHINE 21 kW / MOLD - BLOCK 1,8 kW
VIBRATION IMPACT STRENGTH	DEPENDING ON THE MOLD AND TYPE OF PRODUCT FOR A BLOCK OF 24 kN
TAMPER HEAD CLAMPING FORCE	80 kN
MAXIMUM PERFORMANCE	FOR THE BLOCK 1400 pcs. per hour

MACHINE OPERATIONAL SPECIFICATIONS  
EXEMPLIFIED BY SELECTED PRODUCTS

Production capacity at 90% of machine capacity.

		
Name of product	Blocks	Insulation hollow block
Size [mm]	120x240x380	400x200x200
Qty per cycle	16	12
Mean cycle time	37 sec.*	47 sec.*
Qty of products per hour	1401*	827*

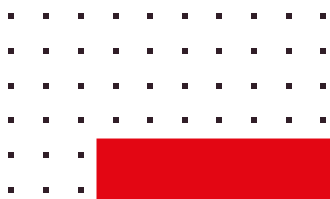
\*Cycle time may vary depending on concrete mix design, machine settings, material feed rate, handling, pallets and other factors.





BENCHMARKING ANALYSES OF CONCRETE  
BLOCK MACHINE CHARACTERISTICS

		TYPE OF PRODUCT	PRODUCT HEIGHT (MIN - MAX)
	CONCRETE BLOCK MACHINE SHP 6000 PRO C	Facade tile, paving stones, flagstones, kerbs, border elements, building and fencing elements	15-550 mm
	CONCRETE BLOCK MACHINE SHP 5000 PRO C	Paving blocks, flagstones, kerbs, border elements, building and fencing elements	40-550 mm
	CONCRETE BLOCK MACHINE HP 3000 PRO	Paving blocks, flagstones, kerbs, border elements, building and fencing elements	40-300 mm
	MOBILE CONCRETE BLOCK MACHINE MULTI 1200 PRO	Flowerpots, lawn border elements, garden architectural and decorative elements, pile walls, fencing elements, road infrastructure elements, L-shaped blocks, decorative concrete products	100-1200 mm
	MOBILE CONCRETE BLOCK MACHINE MULTI 300 PRO	Hollow blocks, hollow blocks with polystyrene insert, blocks, building and fencing elements	170-300 mm



MOLDING FIELD	MAXIMUM CAPACITY (PER HOUR) FOR DOUBLE-LAYER PAVING BLOCKS	WEIGHT OF CONCRETE BLOCK MACHINE	CONNECTION POWER	OVERALL DIMENSIONS
1300x1050 mm or 1300x1250 mm	approx. 275 cycles	44 000 kg	170 kW	3150x9250x5570 mm
1300x1050 mm	approx. 250 cycles	39 000 kg	135 kW	2700x8350x5265 mm
1300x1050 mm	approx. 180 cycles	24 000 kg	80 kW	2550x4650x6100 mm
1300x1050 mm	approx. 130 cycles for the pile wall 800mm, single-layer	26 000 kg without transport frame	machine 60kW mold up to 32kW	3300x5800x4800 mm without transport frame
1240x1130 mm	approx. 100 cycles for the block, single-layer	7 200 kg without mold	machine 21 kW mold up to 1,8kW	3400x3550x4600 mm with a seat



SEE THE MACHINE

## ROBOMATIK

A packaging robot whose job is to take finished concrete products from the dry line conveyor and transfer and stack them on commercial pallets. Robomatik's design is compact and the operation is characterised by low noise emissions and highly dynamic movements. It is characterised by a high degree of positioning accuracy of the products being conveyed. By using Robomatik, damage to products during packaging can be eliminated. The use of a counterweight in the robot's design contributes to energy efficiency despite the fast operation and heavy load.



## ROBOMATIK



Multifunctionality - replaces the operation of two machines found in the product lines of other manufacturers



Electric drive of grippers on servo motors



Quiet and dynamic operation - thanks to belt transmission



Gripper clamps and clamp force can be adjusted and positioned from the control panel



Accuracy of product positioning through the use of linear bearings



Compact design thanks to counterweight



Elimination of damage to products during packing thanks to the design of the gripper and the use of couplings in its drive

CONNECTION POWER

39,7 kW

MAXIMUM LOAD

560 kg

HEIGHT

4934 mm

MACHINE WORKING RADIUS

1563 mm OR EXTENDED





SEE THE MACHINE

## CENTERING DEVICE

It is located in the dry line above a conveyor transporting boards with seasoned products. It is designed to slide products to the board axis. It is installed in the line when:

- the line's working cycle needs to be accelerated - Robomatik does not perform centring and its working cycle is shortened,
- in front of the Robomatik there are devices that require centring of products
- Robomatik transfers two layers of products onto the retail pallet. The products are transported to the Robomatik station already centred



## CENTERING DEVICE



Quiet and dynamic operation - thanks to belt transmission



Accuracy of product positioning through the use of linear bearings



The design of the centring device eliminates damage to the products during packaging, thanks to the use of a synchronised pneumatic drive

SUPPLY - PNEUMATIC SYSTEM PRESSURE

0,6 MPa

OVERALL DIMENSIONS

2450 x 2500 x 3375 mm

SCOPE

850 - 1400 mm / 600 - 1150 mm

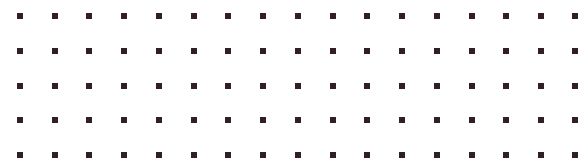




SEE THE MACHINE

# WRAPPER

The wrapping machine is a machine working in a packaging line that allows the simultaneous wrapping of products with stretch film and non -adhesive tape with the manufacturer's logo. It is part of the production line and works automatically to maintain continuity in the production cycle.



# WRAPPER



Simultaneous wrapping of products in stretch film and tape with manufacturer's logo



Use of adhesive-free film with manufacturer's logo



Adjustable stretch film tension



Compact design, thanks to pile construction, counterweight and linear bearings



The machine, which works in a production line, carries out the packaging process automatically during the production cycle.

## DIMENSIONS

4900 mm x2500 mm x 4500 mm

## MAXIMUM OVERALL DIMENSIONS OF THE PRODUCT

1920 mm x 1000 mm x 1200 mm

## LIFTING SPEED

0,09 m/s

## ROTATIONAL SPEED

11,5 rpm, adjustable by frequency converter

## WIDTH OF STRETCH FILM

max. 700 mm

## WIDTH OF LOGO FILM

max. 250 mm

## MAX WORKING STROKE

1680 mm

## CONNECTION POWER

3 kW

## PRESSURE OF THE PNEUMATIC SYSTEM

ok 0,6 MPa

## WEIGHT

3600 kg

## STANDARD OPERATING CYCLE

Min 56 sec, 3 wraps with stretch film + 1 wrap with logo + stretch film





# WASHMATIK



SEE THE MACHINE

## WASH-OUT MACHINE WASHMATIK

Machine designed to refine products. It is part of a manufacturing line for paving blocks and concrete products, enabling the production of refined paving blocks and flagstone. Through a system of water jets, the unit washes out the top layer of the product to expose the decorative aggregate (granite, basalt, marble, etc.). The resulting refined products are used to arrange elegant paths, alleys and squares, upgrading their aesthetic and functional qualities.



Rinsing speed, high performance



Uniform rinsing over the entire board area (perfect quality)



Infinitely adjustable nozzle assembly travel



Intuitive interface operation



Independent change of on/off parameters. Each nozzle section (economical use of water)



Infinitely adjustable rinsing depth of the product



Easily adaptable to existing manufacturing lines



Operational reliability



Simple design for easy operation and maintenance

PRODUCTION BOARD

1100 x 1400 mm

RINSE CYCLE TIME

12 - 20 s

CONNECTION POWER

4,5 kW

MACHINE DIMENSIONS

2250 mm H x 1535 mm W x 4080 mm D

HEIGHT OF WET LINE CONVEYOR

460 ÷ 700 mm

WEIGHT OF COMPLETE MACHINE

1900 kg

WATER CONSUMPTION

approx. 25l/cycle



## STACKING AND DESTACKING DEVICES



SEE THE MACHINE

### Stacking and destacking devices

are designed for the vertical transport and storage of finished concrete products. They are presented on the wet line. Its task is to store an adequate number of production boards with moulded products, which further down the process go into the racking system for pre-seasoning. In the dry line, the de-stacking device receives the boards with the seasoned products and passes them on to the remaining part of the process line.

Quiet and smooth operation is ensured by appropriately selected drive units



Quiet and smooth operation is ensured by appropriately selected drive units

CONNECTION POWER	8 kW
OPERATIONAL LOAD	11 700 kg
LIFTING / DESCENDING SPEED	0,05 m/s
DIMENSIONS	7650 x 2700 x 2300 mm (for 30 floors with 200 mm shelf spacing)
WEIGHT	7200 kg

## BOTTOM AND TOP FINGER CARS



SEE THE MACHINE

### Bottom and top finger cars

The top finger car on the manufacturing line works together with the bottom finger car: a stacking and de-stacking device, delivering or collecting concrete products from the seasoning plant. It features a compact design for stable operation. The design of the top, multi-lift truck uses an innovative telescopic mast design with a linear bearing system and a hydraulic station oil tank integrated into the design. The rotary bottom finger car is distinguished by its compact design and innovative positioning system.



Compact design and innovative positioning system



Telescopic mast design with linear bearing system



Hydraulic station oil tank integrated with the structure



Fast and stable operation of the equipment set-up for continuous production without the need for an additional product buffer

TOP FINGER CAR	
CONNECTION POWER	14,7 kW
DIMENSIONS	6900x1300x2600 mm
WEIGHT	7300 kg

BOTTOM FINGER CAR	
CONNECTION POWER	7 kW
DIMENSIONS	1280X3100X3900 mm
WEIGHT	4900 kg



## RACK SYSTEM



SEE THE MACHINE

### Rack system

it is designed for the storage of boards (wooden, steel and plastic) with concrete products for their pre-seasoning process. It can be fitted with an automatically controlled set of curtains. It is possible to enclose the system with sandwich panels and install atmosphere control equipment.



Robust, durable and stable steel design



High corrosion resistance.  
Made of galvanised components



Extremely load-bearing structure, supported on steel profile foundations



Quick, easy installation with no need to use the lifting equipment.

CAPACITY	3900 PLACES, 10 CHAMBERS, 13 ENTRANCES
DIMENSIONS	7000 x 17600 x 15300 mm
PRODUCT PALLET LOAD	3,4 kN/m <sup>2</sup>
FOR THE BOARDS WITH THE FOLLOWING DIMENSIONS	1400 x 1100 mm

## COMMERCIAL PALLET FEEDER



SEE THE MACHINE

### Commercial pallet feeder

The unit is designed to automate the commercial pallet feeding process. It consists of a warehousing facility and a pallet feeder. It is designed to feed commercial pallets into the ROBOMATIK packaging robot station, carrying out the packaging cycle of the finished goods. The unit is equipped with pneumatic drives only. The operation of both devices is synchronised and takes place automatically.



Can be adapted to different sizes, robust, durable and stable structure and different types of commercial pallets



Enhancing of occupational safety by automating the process of delivering commercial pallets to the manufacturing line



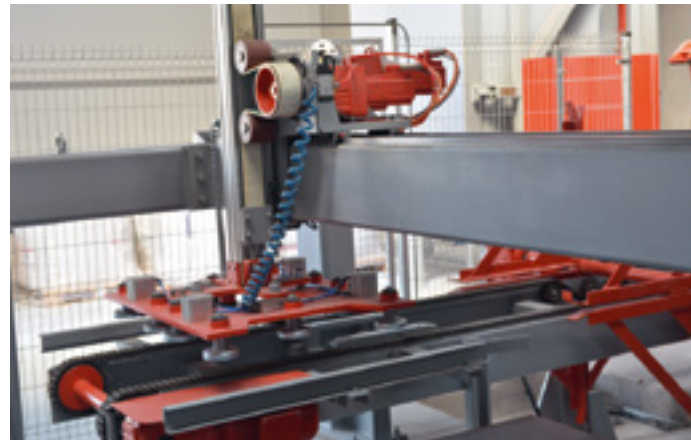
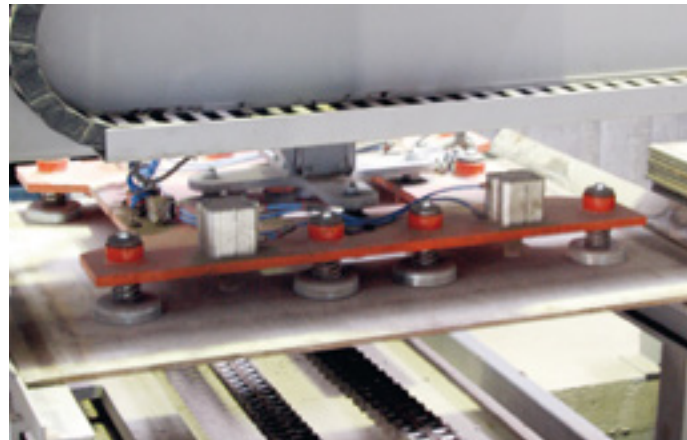
Simple and compact design reducing the size of the manufacturing line



Innovative and reliable design of the conveyor drives

MAXIMUM NO. OF PALLETs IN A WAREHOUSING FACILITY	30 units
DIMENSIONS	4000 x 1800 x 4200 mm
OPERATING PRESSURE	ok 0,6 MPa
STANDARD COMMERCIAL PALLET	1200 x 1000 mm

## BOARD FEEDER



SEE THE MACHINE

### Board feeder

The device ensures smooth circulation of the boards in the manufacturing line. The feeder transports the boards, from the dry line to the wet line, ensuring production continuity.

The state-of-the-art electric motors, belt drives and linear bearing systems used in the construction ensure quiet operation, high positioning accuracy of the board transfer unit and short individual cycle times.



Compact design



Quiet operation thanks to belt drives and modern electric motors



Precise positioning of the boards thanks to the use of linear bearings



Metal, wooden and plastic boards can be handled

CONNECTION POWER	7 kW
MAXIMUM LOAD	175 kg
WIDTH	2000 mm
HEIGHT	MIN 2100 mm, MAX 2600 mm
LENGTH	7100 mm
WEIGHT	2500 kg
OPERATING PRESSURE	0,6 MPa

## REJECT TIPPER



SEE THE MACHINE

### Reject tipper

It is designed to remove the entire layer of products from the board classified as rejects arising at the start or end of the production cycle by tilting the board at an angle that allows the products to slide off. The device can also be used to remove excess water from products after the rinsing process.

The tipper is located in the wet part of the manufacturing line. The device is characterised by its simple design and reliable operation, while the belt transmission used and the moving parts design reduce noise during operation.



Simple design for reliable and quiet operation



Dual-tasking (removal of rejects and preliminary removal of excess water following the rinsing process) to reduce the production cycle



Enhanced occupational safety by automating the process of removing process line rejects



Metal, wooden and plastic boards can be handled

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



## TUMBLER

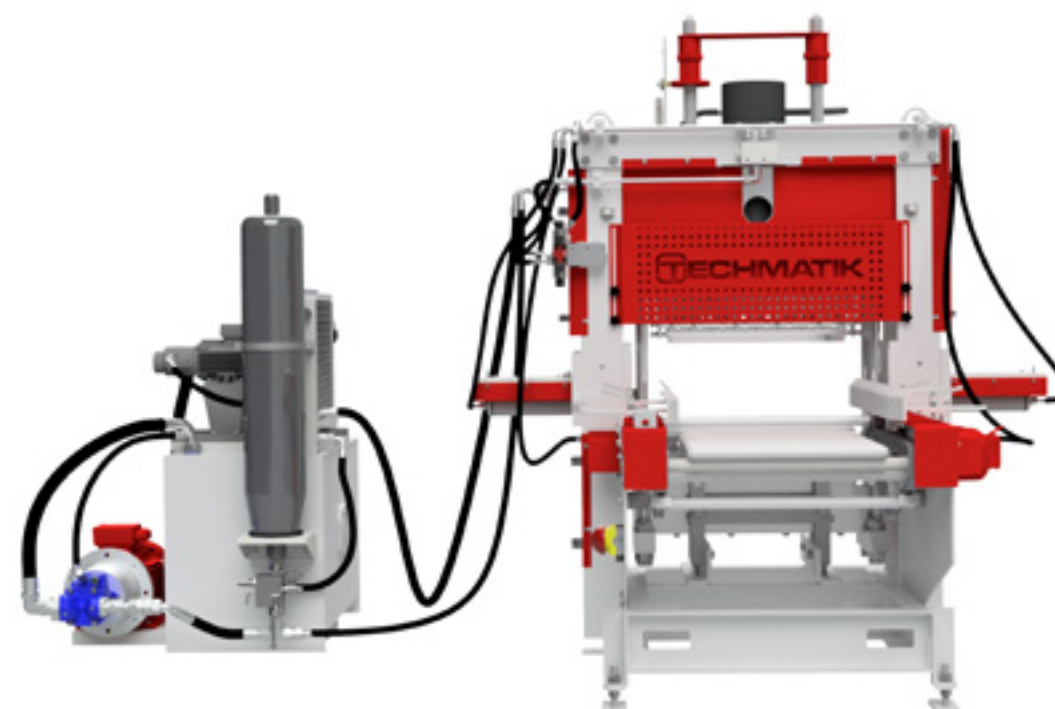


SEE THE MACHINE

### Tumbler

It is used for product refinement. It is designed for mechanical surface treatment. Following the refinement in the machine, we get the effect of a long-used and aged product. The main component of the machine is the rotating drum, which houses the products. During the machining process, their outer surfaces break down and marks are formed, imitating the natural long-term wear and tear.

## SPLITTER 600



SEE THE MACHINE

### Splitter

A machine from the product category used for product refinement. Thanks to its application it is possible to obtain products with irregular decorative surfaces, giving the effect of natural stone.



Simple, solid construction



Low operating cost



Extension of the product portfolio

CONNECTION POWER

5,5 kW

DIMENSIONS

1770 x 3330 x 6120 mm

WEIGHT

3300 kg



Design of knives adapting to the surface of the product to be split



Additional side actuators



Effective splitting force

SPLITTING STRENGTH

ACTUATOR STROKE

CONNECTION POWER

MOC PRZYŁĄCZENIOWA



High performance hydraulic station



Durability and reliability of the structure



An option to automate the splitting process by adding additional equipment to the splitting line

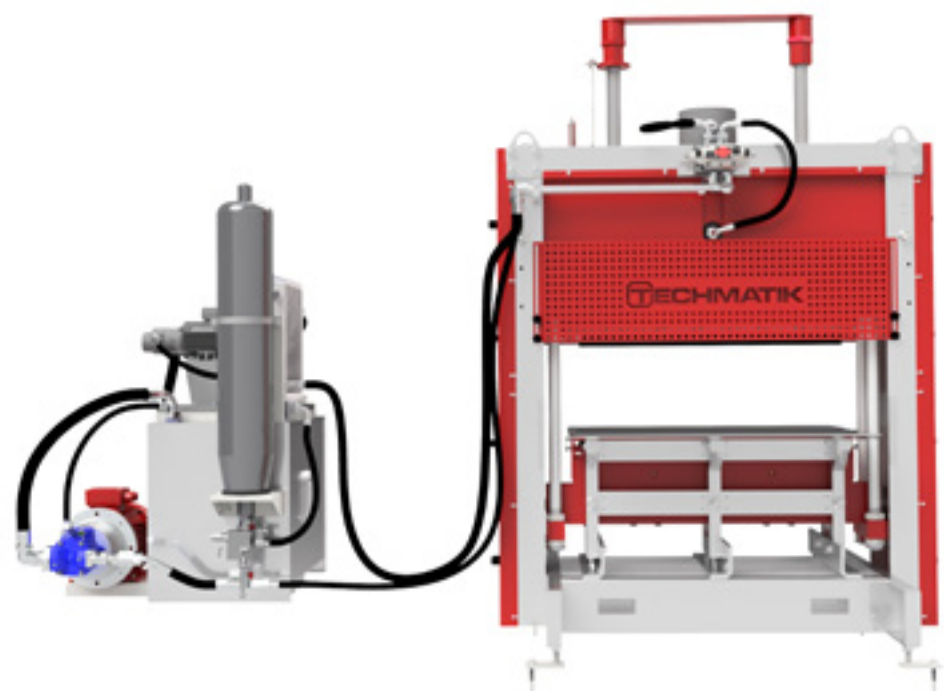
TOP AND BOTTOM ACTUATOR 760 kN; LATERAL ACTUATORS 220 kN

365 mm

660 x 300 mm

16,1 kW

## SPLITTER 1000

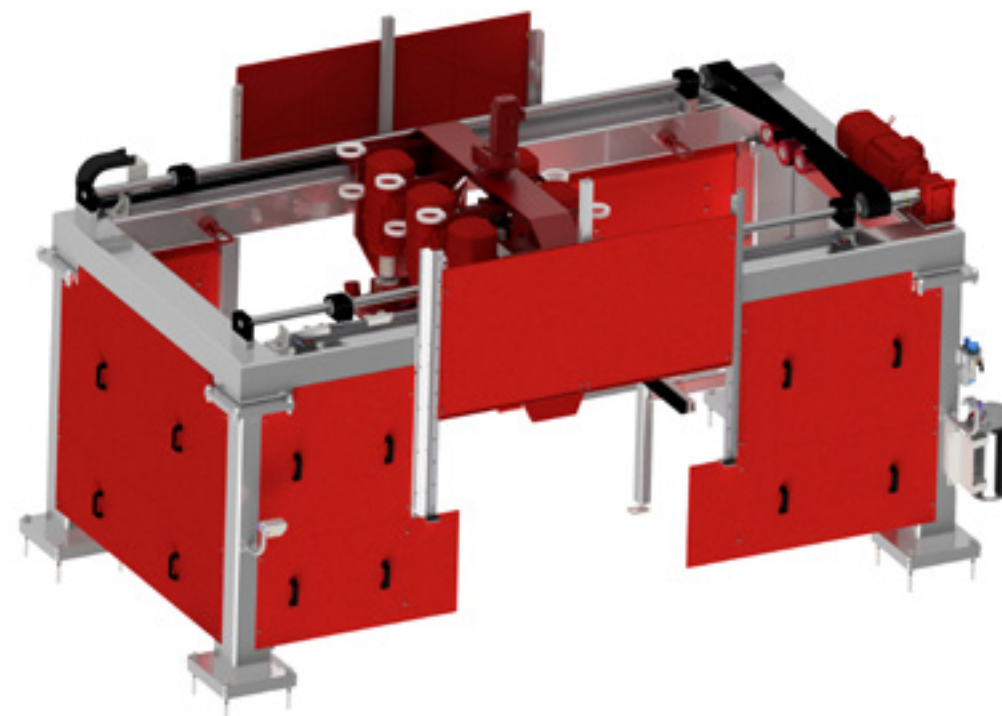


SEE THE MACHINE

### Splitter

A machine from the product category used for product refinement. Thanks to its application it is possible to obtain products with irregular decorative surfaces, giving the effect of natural stone.

## GRINDER



SEE THE MACHINE

### Grinder

It is designed for the surface treatment of concrete products for which the accuracy of the height dimension is an important parameter. The machine checks the height of the products before grinding and automatically takes a measurement after grinding, informing the operator of the result. The device is assembled in-line. Ability to grind on boards



Design of knives adapting to the surface of the product to be split



Precise splitting of large packages - wide workspace



Effective splitting force



High performance hydraulic station



Durability and reliability of the structure



An option to automate the splitting process by adding additional equipment to the splitting line

SPLITTING STRENGTH	760 kN
ACTUATOR STROKE	365 mm
CONNECTION POWER	1040 x 350 mm
MOC PRZYŁĄCZENIOWA	15 kW
SUPPLY VOLTAGE	3 x 400 V / 50 Hz



Can be ground directly on production boards



Ensures product repeatability



Continuous control of product height

PRODUCT HEIGHT	100 - 330 mm
MIN. PACKAGE WIDTH	860 mm
MAX. PACKAGE LENGTH	1050 mm
OVERALL DIMENSIONS	2260 x 4250 x 2450 mm
WEIGHT	5050 kg



Robust, stable construction



Precise power transmission through the use of ball screws and servo-motors



Fully automated manufacturing process



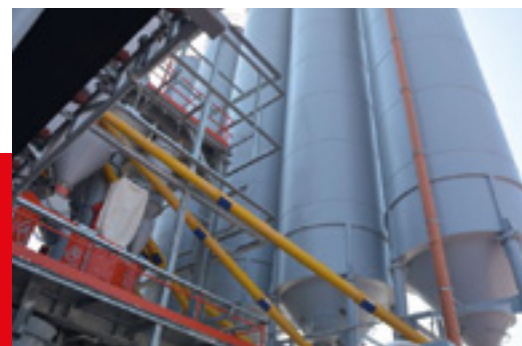
## CONCRETE BATCHING PLANTS



SEE THE MACHINE

### Concrete batching plants

They are designed for the production of concrete used in the manufacture of concrete block products. Concrete production at the concrete batching plants is carried out automatically with full visualisation of all manufacturing process phases. The batching plant comprises: equipment for storage and transport of raw materials, manufacturing concrete mix and the control system. The concrete mix is transferred to the manufacturing line or other transport equipment.



Raw material storage facilities	Conveying equipment for raw materials and concrete	Raw material metering equipment	Concrete making equipment	Control system
<ul style="list-style-type: none"> <li>Multi-chamber aggregate storage tank</li> <li>Cement silos</li> </ul>	<ul style="list-style-type: none"> <li>Batching belt conveyors</li> <li>Screw conveyors</li> <li>SKIP charging truck</li> </ul>	<ul style="list-style-type: none"> <li>Cement weighing scale</li> <li>Weighing belt conveyor</li> <li>Water weighing scale</li> <li>Dye batcher</li> <li>Chemicals batcher</li> </ul>	<ul style="list-style-type: none"> <li>Planetary mixers</li> </ul>	<ul style="list-style-type: none"> <li>Control panels with the manufacturing process visualisation</li> <li>Control cabinet</li> <li>Dedicated control software</li> </ul>

## SPM MIXERS



SEE THE MACHINE

### Planetary mixers

They provide a rapid mixing cycle. Precise mixing is achieved through the use of an optimum number of different blade types (agitators, scrapers: side, top and corner). The high degree of homogeneity of the mix is achieved by using a high-speed rotor - the wirbler. The wear-resistant, easily replaceable linings ensure reliable and longlasting operation of the mixer.

### ADD-ON OPTIONS:

Wirbler  
Moisture measurement probe  
Additional hydraulically-operated dump flaps  
Sight-glass  
Extension of the warranty to 8 years



Reliable design and long service life



Built from A to Z at a single plant in Poland / EU



Rapid mixing cycle



Precise mixing of concrete



Centrifuge for high homogeneity of the mix



Easy maintenance



Easy replacement of wear parts



Planetary gear immersed in oil bath prevents overheating



Integrated hydraulic station



Use of top-quality components



Rapid mixer emptying system



Quality control in every manufacturing phase



Safe operation



Quiet running



Reliable maintenance



Global support

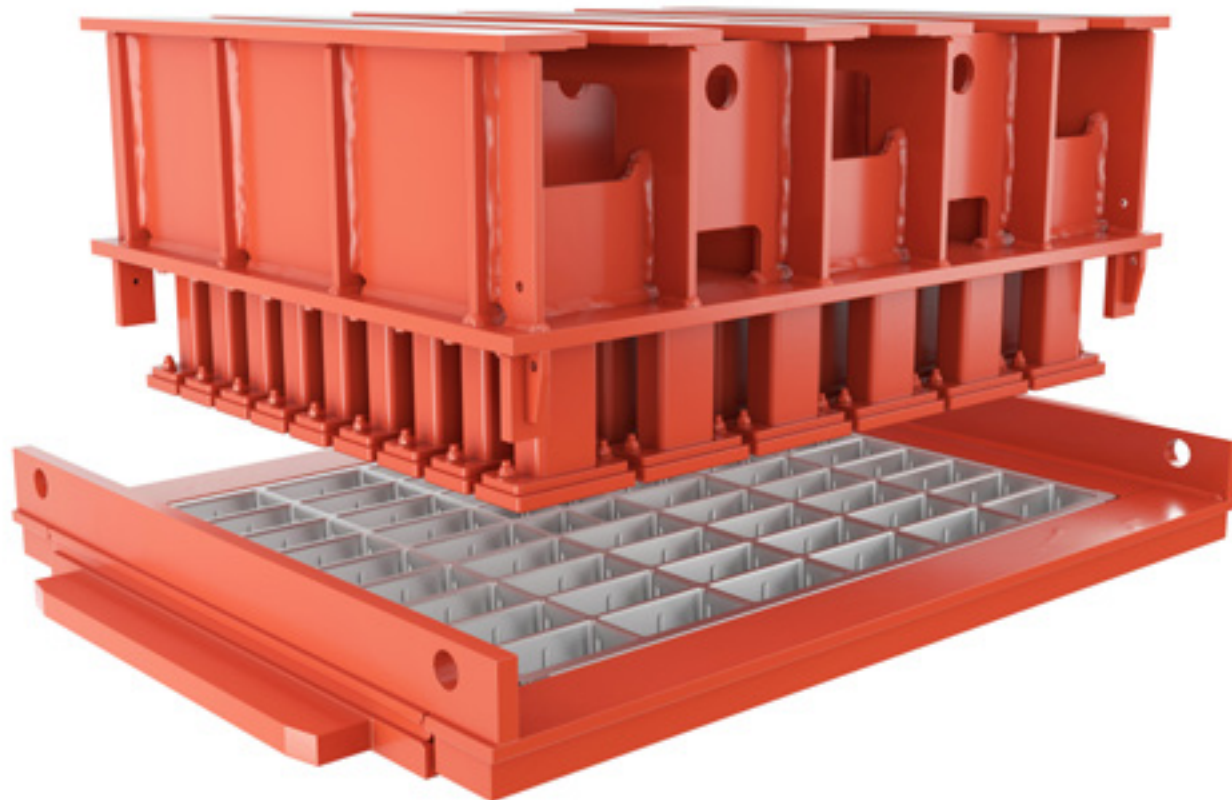
# TECHNICAL DATA OF MIXERS



MIXERS	SPM-375	SPM-500	SPM-750	SPM-1125	SPM-1750	SPM-2250	SPM-3000	SPM-3750
BATCH CAPACITY	375/600 [l/kg]	500/820 [l/kg]	750 / 1200 [l/kg]	1125 / 1800 [l/kg]	1750 / 2800 [l/kg]	2250 / 3600 [l/kg]	3000 / 4800 [l/kg]	3750 / 6000 [l/kg]
UNIT CAPACITY PER CYCLE	0,25 [m³]	0,33 [m³]	0,5 [m³]	0,75 [m³]	1,15 [m³]	1,5 [m³]	2 [m³]	2,5 [m³]
MINIMUM BATCH SIZE	150 [kg]	200 [kg]	300 [kg]	450 [kg]	700 [kg]	900 [kg]	1200 [kg]	1500 [kg]
MIXER WEIGHT	3100 [kg]	3200 [kg]	4100 [kg]	4230 [kg]	7350 [kg]	7370 [kg]	8900 [kg]	13600 [kg]
DRIVING POWER (SPMW - WIRBLER)	9,2 (+11) [kW]	15 (+11) [kW]	2x9,2 (+15) [kW]	2x15 (+15) [kW]	2x22 [kW]	2x30 [kW]	2x37 [kW]	2x55 [kW]
NO. OF DISCHARGES	1	1	1	1	1	1	1	1
TOTAL HEIGHT INCLUDING MOTOR	2220 [mm]	2220 [mm]	2340 [mm]	2440 [mm]	2740 [mm]	2860 [mm]	2920 [mm]	3275 [mm]
MIXER HEIGHT INCLUDING SUPPORTS	1325 [mm]	1325 [mm]	1520 [mm]	1520 [mm]	1690 [mm]	1690 [mm]	1720 [mm]	1865 [mm]
MIXER HEIGHT WITHOUT FLANGED SUPPORTS	920 [mm]	920 [mm]	1020 [mm]	1020 [mm]	1150 [mm]	1150 [mm]	1160 [mm]	1335 [mm]
MAXIMUM TOTAL DIAMETER	1940 [mm]	1940 [mm]	2200 [mm]	2200 [mm]	3000 [mm]	3000 [mm]	3220 [mm]	3785 [mm]
MIXER HEIGHT	690 [mm]	690 [mm]	735 [mm]	735 [mm]	900 [mm]	900 [mm]	900 [mm]	1030 [mm]
INTERNAL DIAMETER OF MIXER	1560 [mm]	1560 [mm]	1986 [mm]	1986 [mm]	2680 [mm]	2680 [mm]	2900 [mm]	3455 [mm]
NO. OF MIXING STARS	1	1	1	1	2	2	2	2
NUMBER OF AGITATOR BLADES	2	2	2	2	4	4	4	6
NUMBER OF UPPER SCRAPERS	-	-	1	1	2	2	2	2
NO. OF SIDE SCRAPERS	1	1	1	1	1	1	1	2
NO. OF CORNER SCRAPERS (SPMW - WIRBLER)	1 (wirbler)	1 (wirbler)	1 (wirbler)	1 (wirbler)	2	2	2	2



## PAVING BLOCK MOLDS



## TAILOR-MADE MOLDS FOR OUR CUSTOMERS

We manufacture customised moulds for our customers. We make every effort to ensure that the moulds we produce are characterised by the longest possible service life and guarantee high quality concrete products. The manufacturing process is based on our in-house quality standards. A qualified staff of designers and process engineers ensures the top quality of the moulds offered by Techmatik by continuously improvement of technological processes. The implementation of new solutions is preceded by thorough testing, which gives us the opportunity to control quality and continuously improve the manufacturing process. We identify customer needs on an on-going basis and strive to meet the growing market requirements. We also offer a full range of maintenance services related to the rebuilding and repair of moulds.

## SELECT **TECHMATIK**

- **In TOP 3 globally** - in the area of manufacturing steel moulds for concrete products
- Know-how backed by long-term experience
- We manufacture moulds for concrete block machines of all manufacturers
- Top-quality steel grades from reputable suppliers
- Experienced design, engineering and production personnel
- Modern machinery base, in a 24,000 sq. m production room.
- Innovative DYNABOND heat treatment method for high abrasion resistance
- Full control of the manufacturing process in a single plant
- Global reach of sales and maintenance services
- Comprehensive logistical support
- We develop partnerships and provide the customer with a sense of security, surrounding them with after-sales care

## MOLD DESIGNS

### WELDED LOW | HIGH

All mold elements are welded.

The low mold insert is made from a block module characterised by high dimensional accuracy and wear resistance, achieved by heat treatment. Elements of the high molds are made from separate details, in tempered steel, and then welded together with the frame elements.



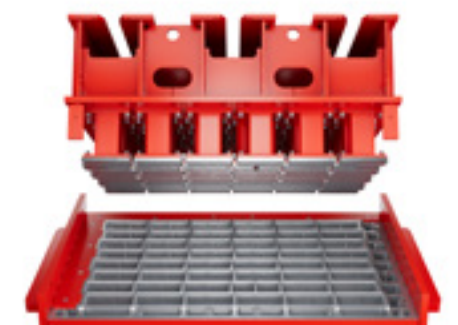
### BOLTED LOW | HIGH

All molding part consumables are replaceable. The contribution of low molds is made of a block module characterized by high dimensional accuracy and wear resistance, obtained in the heat treatment process. This element is bolted to the frame and must be replaced. Elements of high molds are made of separate details, of heat-treated steel, and then bolted together with the frame elements.



### MONOLIT

The mold formliner is made of one solid piece of material with screwed top plates



## PROCESS-BASED SOLUTIONS

### SHOCK ABSORBERS

The use of shock absorbers in the production of large-size stones allows some of the stresses generated in the product to be absorbed, thus reducing the effect of cracking. Allows better distribution of the concrete mix in the formline cavities.



### CENTRING SYSTEM

The use of a centring system eliminates the possibility of collision between the formliner and the tamper head, prevents the mold from moving during manufacturing process. This solution allows to extend the service life of the mold.



### DOUBLE ACTION OF THE TAMPER HEAD

The use of a double-action tamper head allows decorative designs to be made on a single stone and enables better cleaning of the tamper shoes.



### HYDRAULIC

The application of a hydraulic system in the molds allows the production of special products, made using concrete block machines, where the manufacturing process requires the movement of the mold elements.



### HEATED

The application of a heating system allows for a better, more pronounced surface texture of the stone, and faster evaporation of the water which results in the concrete not sticking to the surface of the tamper shoes.



## QUALITY

### ■ DESIGN

The manufacturing and quality control processes begin with the correct selection of the materials needed in the advanced design phase

### ■ RAW MATERIAL (steel) and its control

The selection and validation of components and materials begins with a detailed definition of the requirements and expectations of our partners

### ■ PRECISION OF MANUFACTURE

Tests, trials and measurements are carried out in-house using specialised control and measuring instruments

### ■ MODERN MACHINERY BASE

Comprehensive and systematically expanded, including: cutting machines, CNC machine tools, welding robots, hardening furnaces - ensuring quality and repeatability of manufacturing processes

### ■ QUALITY AT A SOURCE

The self-control system implemented at each stage minimises the risk of producing defective products and prevents them from being sent for further processing.

### ■ HARDENING

Unique DYNAHARD hardening process using chamber furnaces with controlled endothermic atmosphere

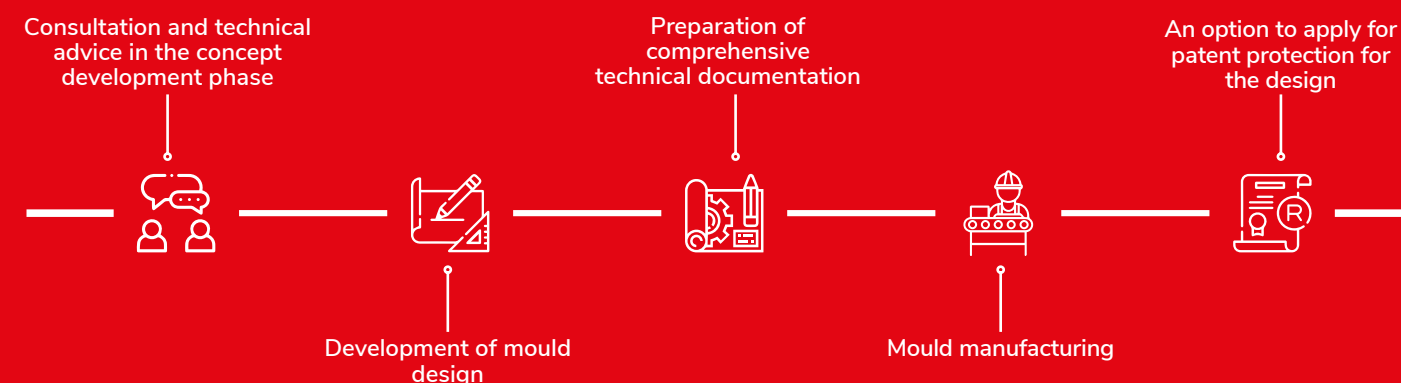
### ■ EXPERTISE & KNOW HOW

Our innovative approach backed with long-term experience we acquired in manufacturing of the concrete products, as well as the innovation and quality of our machinery, equipment and moulds have already been appreciated by several hundred customers from more than 50 countries on almost all continents

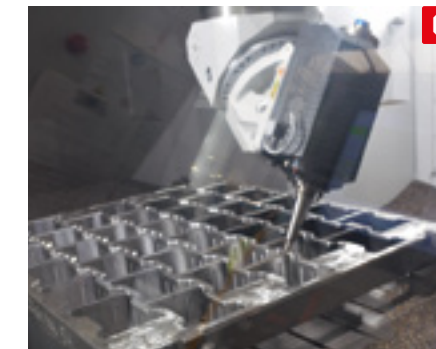
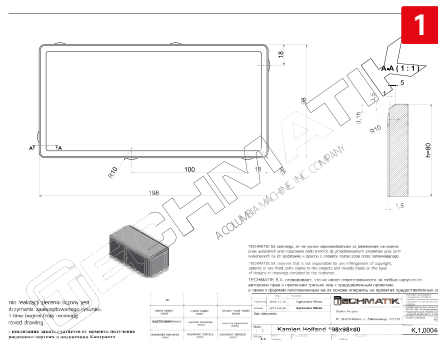
### ■ CONTINUOUS IMPROVEMENT

Our constant goal is the continuous improvement of our processes from the order receipt, through design, selection and control of suitable materials, manufacturing of components and finished goods and final approval of the products for shipment

## DESIGNING OF NEW MOLD PATTERNS







### High Vertical Integration

we carry out the entire process at the TECHMATIK manufacturing plant.

### QRM (Quick Response Manufacturing)

innovative management system, allows full control and synchronisation of manufacturing processes, boosting productivity and quality. QRM enables precise planning of lead times and delivery dates and a rapid response to changes and customer demand.

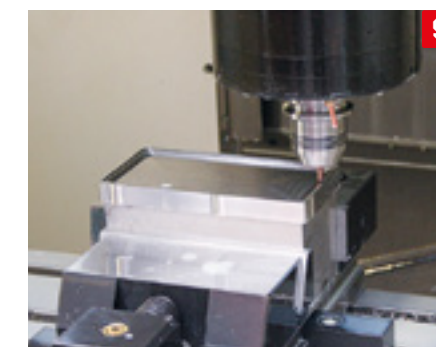
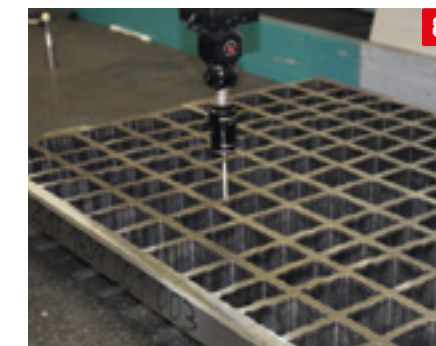
### State-of-the-art machine park

comprehensive and systematically expanded, including: cutting machines, CNC machine tools, welding robots, hardening furnaces - ensuring quality and repeatability of manufacturing processes.

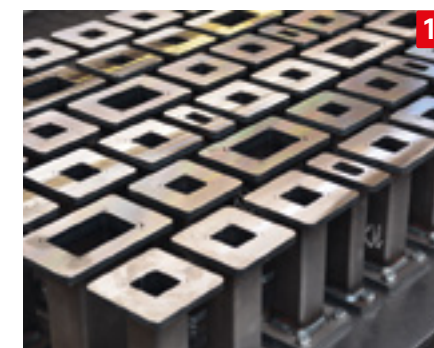
### Qualified and experienced team

designers and production staff, ensuring that the highest production standards are maintained.

- 1. Order - acceptance of drawing
- 2. Structural and technological design
- 3. Testing and quality control of steel
- 4. Burning of formliner and tamper shoes
- 5. Tamper head welding
- 6. Machining of moulding plates
- 7. Heat treatment (hardening plant)
- 8. Quality control on a coordinate measuring machine
- 9. Tamper shoes treatment
- 10. Individual tamper shoes matching
- 11. Fixing tamper shoes to the tamper head
- 12. Mould painting
- 13. Quality Control
- 14. Shipment dispatched to the customer

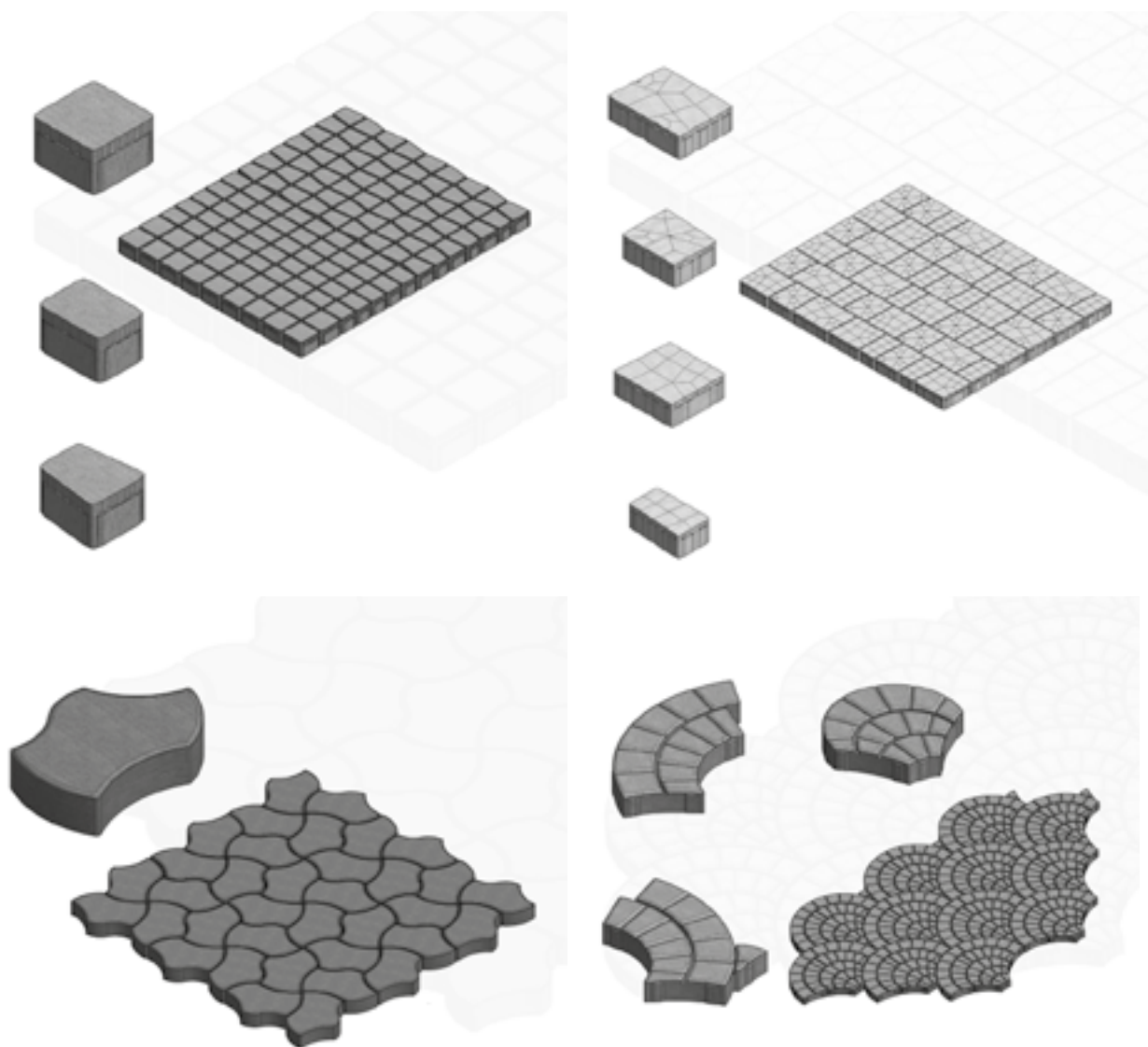


# MANUFACTURING PROCESS

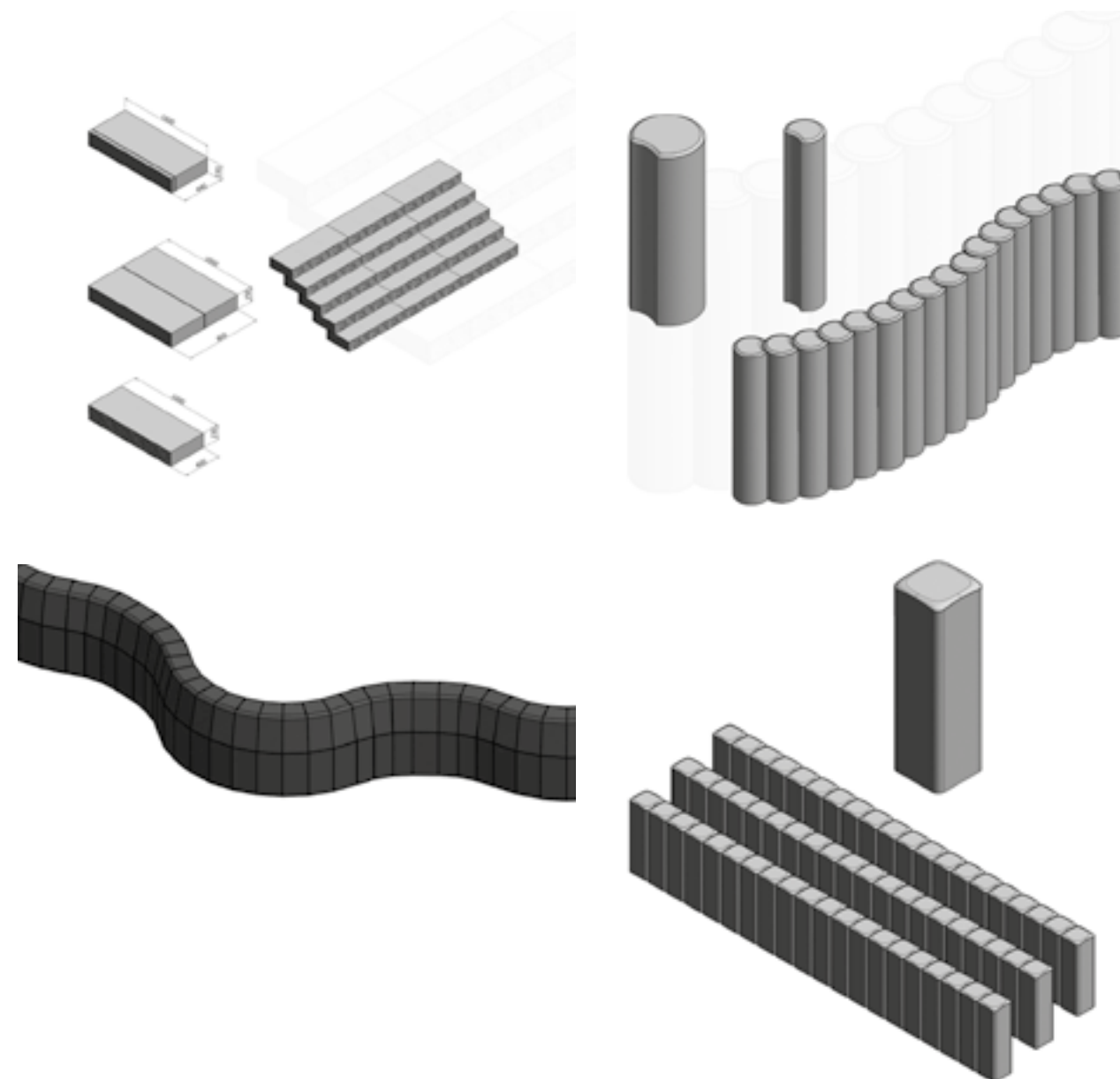




## PAVING STONES, REFINED AND DECORATIVE PANELS

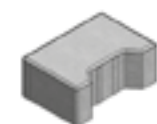
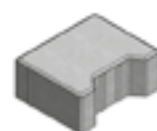
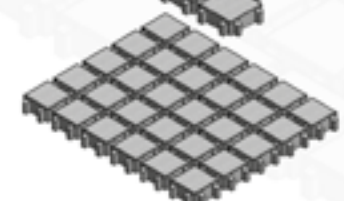
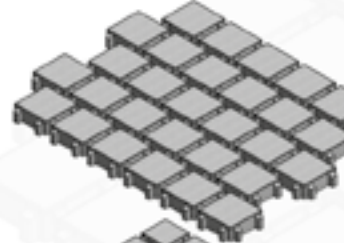
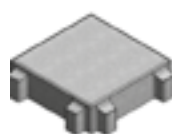
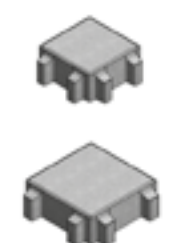
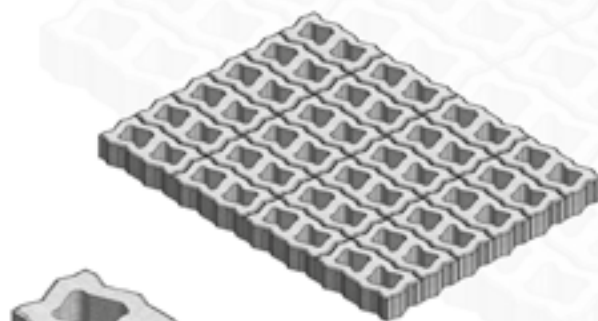
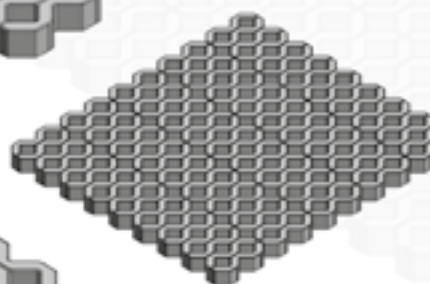


## DECORATIVE ELEMENTS, STAIRS AND PILE WALL

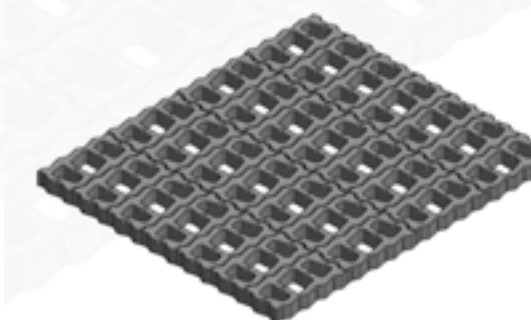
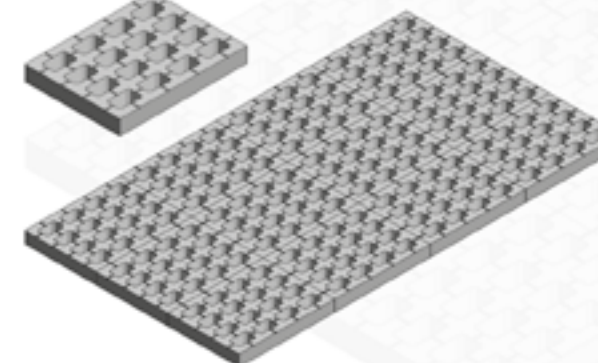
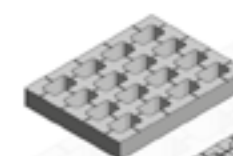




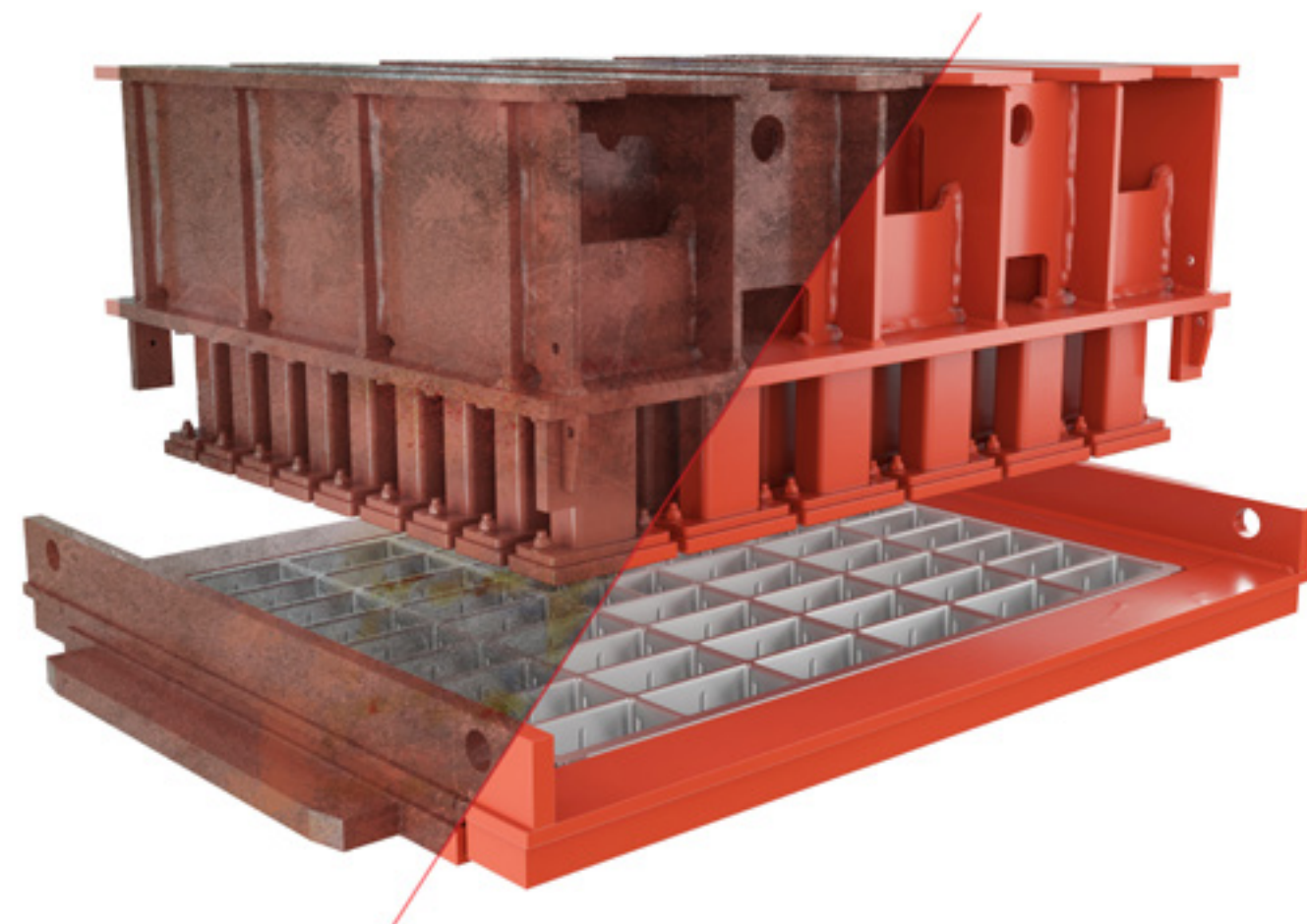
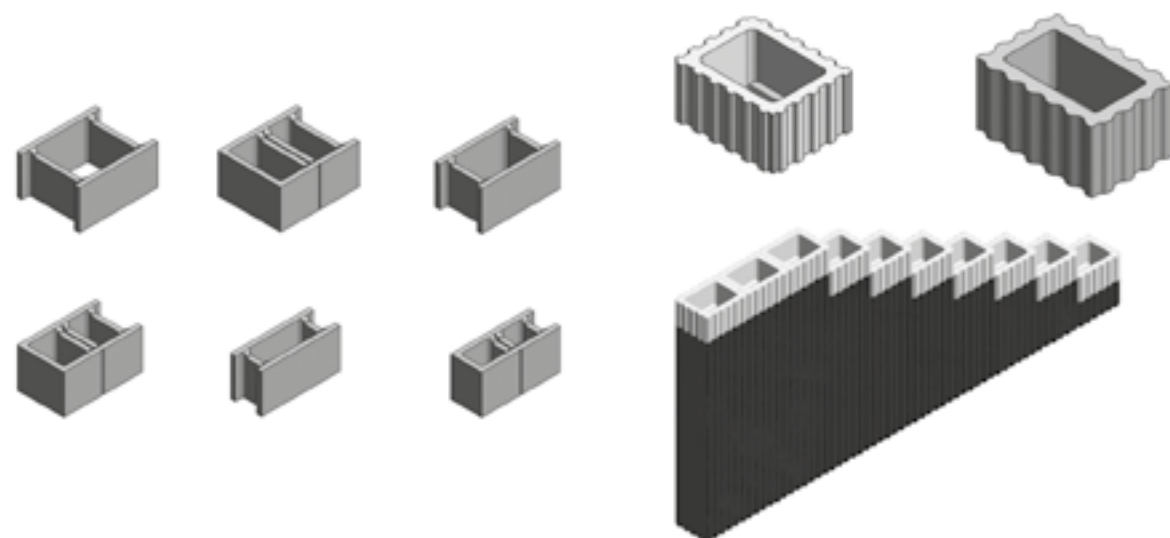
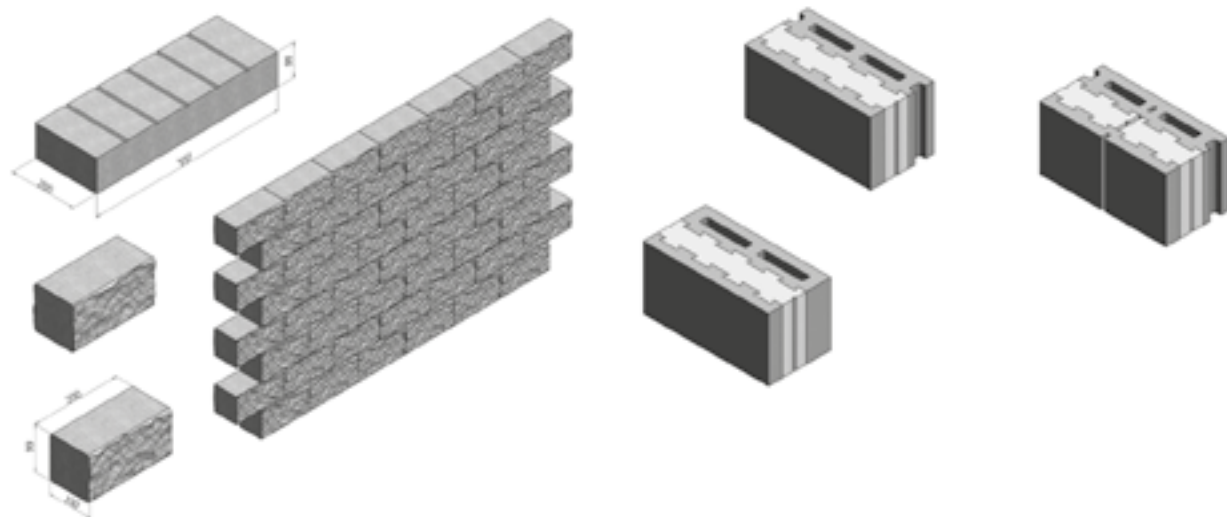
## PAVING STONES AND INDUSTRIAL TILES



## ROAD ELEMENTS



## BUILDING AND FENSING ELEMENTS



## RENEWAL AT TECHMATIK!



### SHORT LEAD TIME

Standard delivery time lasts 4 weeks.

During the busy period of concrete product manufacturing, something unexpected can always happen. A quick solution is then needed.

**We reduce lead time to a minimum!**

Mold regeneration:  
» in an express mode - 2 weeks  
» in a priority mode - 1 week



### TOP QUALITY

The most stringent quality controls to guarantee a long service life of the mold after regeneration.



### TIMELY DELIVERY

Our team delivers rebuilt molds on time. We help to arrange the transport of regenerated moulds



### PROFESSIONALISM

as well as customer-friendly and professional service of the REGE TEAM®.



### ENVIRONMENTAL CARE

Multiple use of steel means lower CO<sub>2</sub> emissions - lower carbon footprint t by 2.5t CO<sub>2</sub>/form or 25,000t CO<sub>2</sub> per year



## AN EXAMPLE OF MOLD REBUILDING CYCLE



①

VISUAL INSPECTION OF  
RECONDITIONING MOLD AND  
VALUATION OF REBUILDING

②

EXECUTION OF TECHNICAL AND  
TECHNOLOGICAL DOCUMENTATION  
OF THE MOLD UNDERGOING REPAIR

③

REPAIR OF WEAR,  
CRACKS AND FORMLINER  
DEFECTS

④

TAMPER HEAD REPAIR

⑤

MAKING NEW TAMPER SHOES  
AND HARDENING BY HEAT  
TREATMENT (CARBURISING,  
NITRIDING)

⑥

CONSTRUCTION OF NEW  
CORES AND CORE BARS  
(MEBA, HOLLOW BLOCK)

⑦

FITTING OF TAMPER SHOES AND  
ASSEMBLY OF THE REPAIR MOLD

⑧

DISPATCH TO THE  
CUSTOMER






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