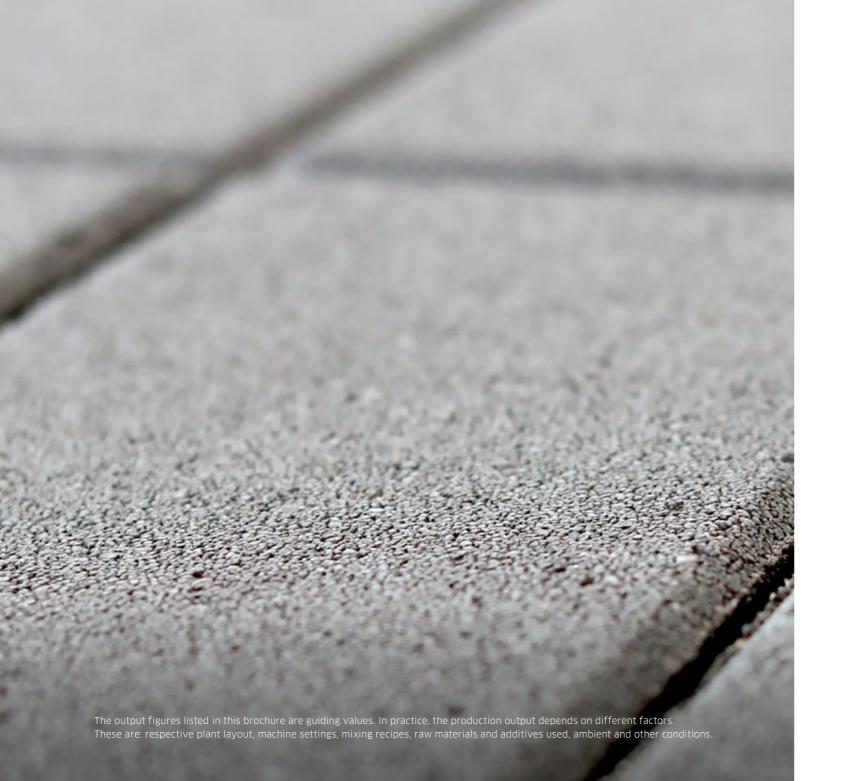


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# **Concrete Block and Paver Production**

# CONCEPTS MACHINES PLANTS



# CONTENTS

Masa - Your partner for successful building Process- and logistically optimised plants .. PH series & S 350/500: Mixing and dosing. Multi colour systems: Excellent colouring... Overview of block making machines: The ce Block making machines: Product lines L und Block making machines: Product line XL-R. Diversity: Concrete blocks and pavers in us Hydraulics and electrics: Compactly installe Wet side: Optimally prepared for curing..... Curing: Hard as rock and consistent ..... Dry side: From the cured product to cubing Storage solutions for production boards..... Cubing: Strong grip and gentle handling ..... Surface treatment: Strong partners ..... Splitting machine: Concrete products with Safety: Better safe than sorry...... Energy efficiency: Sustainable means futur Retrofit.... Consultative service: More than mechanical Values we stand for ...... Masa worldwide..

g materials production	.04
	.06
	.08
	. 12
entrepieces	. 16
d XL	. 18
	. 20
se	. 22
ed	. 24
	. 26
	. 28
g	. 30
	. 34
	. 36
	. 38
a natural character	.40
	. 42
re-proof	.44
	.46
al engineering	
	. 52
	.54

# MASA - YOUR NUMBER ONE PARTNER FOR SUCCESSFUL BUILDING MATERIALS PRODUCTION

Individual, sustainable plant solutions

Since the day we were founded, we significantly influence developments in the building materials industry. Our concepts, machines and plants, which have demonstrated leader in the design and manufacture of plants and their worth for many years, can be quickly updated or expanded if necessary. Our basic philosophy is: to provide this success is made possible by some 500 staff. flexible and intelligent solutions that enable us, as partners, to help our customers succeed.

An approach, which combined with hard work, has borne fruit: Today, we can claim to be a global market machines for the building materials industry. At present,

### FROM RAW MATERIAL TO FINISHED PRODUCT

The manufacture of concrete products, AAC products, and sand-lime bricks places high, individual demands on the production plant in question. Only when all components are compatible and the processes are optimised will the plant run economically.

### DESIGN COMPETENCE

We define machine configurations as well as logistically and process-optimised plant layouts together with you, based on your requirements for the products to be manufactured, the desired production output and the local conditions at your site.

- Fully automatic machines for the manufacture of concrete products. AAC products as well as sand-lime
- Several decades of experience gathered by competent professionals
- Service centres all over the world
- Reliable spare parts supply and customer support

The close-knit interaction between design, engineering, production and service leads to complete solutions which can encompass all relevant elements of a production plant:

- Preparing, dosing and mixing of the raw materials
- Manufacturing the products
- Handling
- Packing
- Surface treatment
- Plant control
- Further equipment

05

# EXPERT ADVICE **EXCELLENT OUALITY AND** CUSTOMER-ORIENTED SERVICE

# PROCESS- AND LOGISTICALLY OPTIMISED PLANTS

Value creation from the very first product

**01** Dosing and mixing plant

03 Multi colour system

06 Paver washing unit

**10** Curing and ventilation

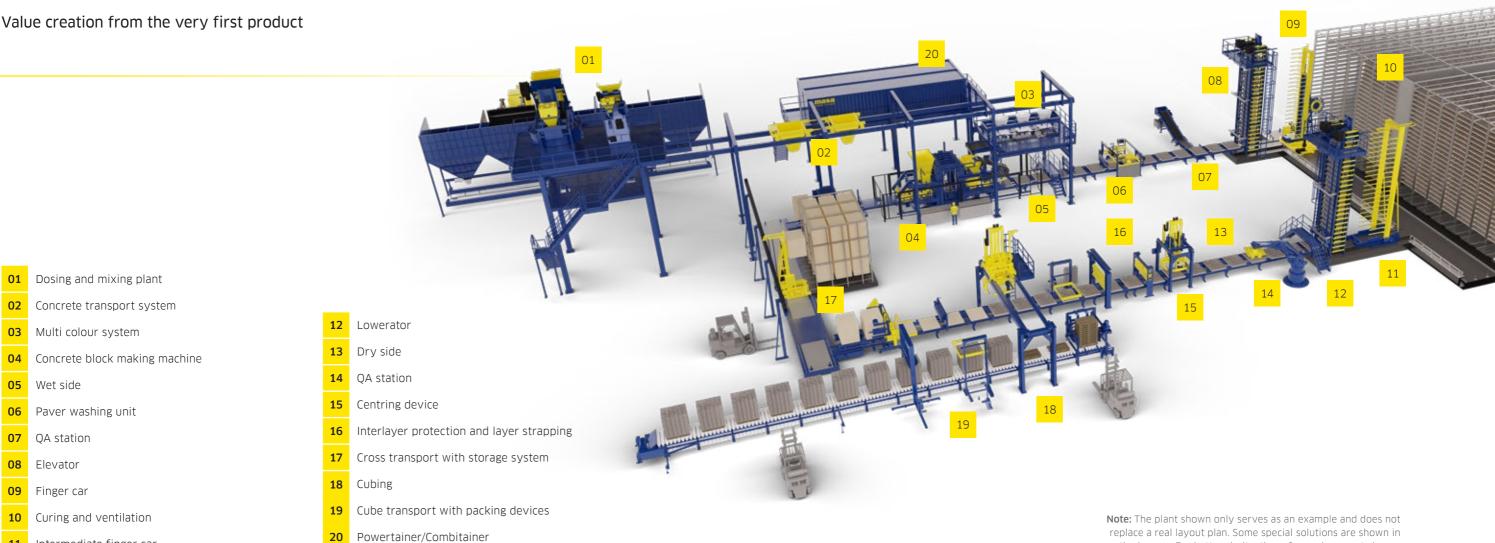
11 Intermediate finger car

05 Wet side

**07** QA station

08 Elevator

09 Finger car



replace a real layout plan. Some special solutions are shown in the images. For better clarity, the safeguards are not shown. IT'S ALL IN THE MIX!

The quality of the aggregates as well as the grade and homogeneity of the concrete are determining factors for the production of high-quality concrete products. To achieve optimal treatment of the mixed material, efficient mixing plants are indispensable.

Our PH series stationary planetary main concrete mixers and our S 350/500 face mix mixer enable you to produce concrete that meets the demands of high-quality concrete blocks and pavers. As always, these mixers feature innovative mixing technology. The result: Consistent and fast homogenisation of the mix and short mixing times. Mixer doors open on both sides to enable easy maintenance and cleaning.

# MASA DOSING SYSTEMS

Our various dosing systems enable efficient and precise feeding of the aggregates sand, cement, water, colour or other additives by means of precise weighing. The components available for this are just as diverse as our customers' requirements.



# MIXING AND DOSING FOR EVERY APPLICATION PH SERIES & S 350/500

For a mixture that has it all

The small one for the finer things: Our S 350/500 is perfectly suited to the production of face mix concrete which is used to finish and individualise products such as pavers. The combination of our S 350/500 and a PH series mixer has proven to be ideal for demanding gardening and landscaping products. Our largest mixer, the PH 3000/4500, is ideal for high-volume main concrete production in short cycles. It demonstrates its full potential as a high-performance mixer in the production of concrete for solid blocks, wall elements or kerbstones.

# HIGH-CLASS MIXING TECHNOLOGY PH SERIES & S 350/500

Robust, durable, reliable, flexible

We have always been committed to manufacturing high-quality and highly reliable mixing plants – with regard to both the concrete produced and the actual component. That is why Masa mixers are characterised by their particularly solid and robust construction, which is reflected in all components. This is the basis of their high stability and long durability.

We make use of several different modes of modular wear protection: all plates and other elements such as scrapers are screwed and therefore removable. This allows easy and targeted replacement of individual components, which in turn has a positive effect in terms of costs and sustainability.

### THE ADVANTAGES OF MASA MIXERS AT A GLANCE

- Short mixing times and optimum homogenisation
- Efficient use of energy, water, cement and other aggregates
- Maximum service life due to the extremely robust construction
- Simple and targeted replacement of all wear parts due to the modular design
- Easier cleaning, care and maintenance due to the wing doors that can be fully opened on both sides
- Highest level of safety standard
- Application-oriented controls and process visualisation



# PRODUCTION CAPACITIES OF MASA CONCRETE MIXERS

MODEL	DRY FILLING LEVEL (LITRES)	OUTPUT CAPACITY (LITRES)	MAX. FILLING LEVEL (KG)
S 350/500	500	350	750
PH 1500/2250	2,250	1,500	3,375
PH 2000/3000	3,375	2,250	5,062
PH 3000/4500	4,500	3,000	6,750



Robust mixing tools with wear protection ensure a long service life and optimum mixing results in the main concrete mixer. A humidity probe is integrated in the side scraper (optionally in the bottom as a Bluetooth probe).



# EXCELLENT COLOURING MULTI COLOUR SYSTEMS

Accents for a unique character

The indispensable components if you want your product portfolio to stand out visually: our proven multi colour systems for unique and high-quality colouring. We offer various systems for the colour refinement of your concrete products - to match your individual product requirements. There is one thing that all our systems have in common: they all serve to fulfil individual demands.



# A SYNONYM FOR MAXIMUM REPRODUCIBILITY: THE MULTI COLOUR SYSTEM "PREMIUM"

You want to produce pavers of high quality, all with their own personal optical touch. Our Premium systems feature easy-care stainless steel silos (volume of 2,250 I for main mix and 580 I for face mix) with cleaning access and load cells for each silo, as well as swivelling belts and a frequency-controlled collecting belt. The different colour combinations are stored individually and recipe-specific and are therefore precisely reproducible.

**T** Ir i( C S V



# MULTI COLOUR SYSTEMS "PREMIUM" AND "EASY"

Coloured surfaces for your products

#### Masa | Concrete block production



# THE COMPACT VERSION: THE MULTI COLOUR SYSTEM "EASY"

In nature, you will never find any two stones that are identical. Our multi colour system "Easy" enables you to colour your products with a natural look. One of the advantages of this system is its extremely compact design, which can also be retrofitted on the machine silo of the block making machine.

# 15

## FURTHER POSSIBILITIES

Do you have any questions, concerns or ideas? Contact us! In addition to the varieties presented, we offer further solutions and components for the successful production of coloured end products, regardless of whether you are investing in a new plant or expanding your existing plant. We will be happy to advise you in detail and help you find the right system for your needs and purposes.

# **CENTREPIECES**

The block making machine is the heart of every production plant for concrete blocks and pavers. It plays a decisive role in a producer's success. With the Classic and Premium Line, Masa enables you to cover the entire range of concrete block and paver production. The L 6.1 and L 9.1 machines are perfect machines for market entry into the professional building material production. The XL and XL-R machines convince with their large

L 6.1

The Compact One

XL

The All-Rounder

production ranges and impressive production capacities. No matter how flexibly the machines of the respective product line are used in the various international markets, they all have several aspects in common: energy efficiency, optimum product quality, reliability and continuity during operation.

16

L 9.1 The Expandable Machine

The Cycle Time Professional

**XL-R** 



masa

# CLASSIC LINE **PRODUCT LINES L AND XL**

Block making machines for individual requirements

We have developed the Masa Classic models to be multi-talented contemporary concrete block making machines. The machines of the L and XL series convince with well-engineered and proven technology. Each model is the product of decades of experience and continual further development. This is your guarantee that they are reliable, solid and sustainable machines. In addition to the features shown, we offer a wide range of additional equipment to optimally adapt your machine to your product requirements. We offer modular expansions of the production plant for the L 6.1 and L 9.1 models, enabling them to be turned into a complete ring plant with fully automatic finger car and curing area.

tion

L 6.1 | THE COMPACT ONE

 Masa plant control software (Basic)

# L 9.1 THE EXPANDABLE MACHINE

- · Compact, stable frame construc-
- Hard-chromed, low-wear guide columns, 80 mm

- Mould and tamper are synchro-
- Reinforced guide columns, 100 mm
- Synchronous filling box drive via mechanical swing arms for faster and more uniform filling (relative to the possible concrete quantity)
- Vibration system either frequency or amplitude controlled

PRODUCTION CAPACITIES OF MASA BLOCK MAKING MACHINES						
PRODUCTION BOARD	HOLLOW BLOCKS 400 x 200 x 200 mm (8")		) RECTANGULAR PAVERS WITHOUT FACE MIX 200 x 100 x 80 mm		RECTANGULAR PAVERS WITH FACE MIX 200 x 100 x 80 mm	
<ul> <li>Standard board size</li> <li>max. effective area</li> <li>max. product height</li> </ul>	<ul> <li>Cycle time <sup>(1)</sup></li> <li>pcs/cycle</li> </ul>	Pieces/8h (2)	<ul> <li>Cycle time <sup>(1)</sup></li> <li>pcs/cycle</li> </ul>	m²/8h <sup>(2)</sup>	<ul> <li>Cycle time <sup>(1)</sup></li> <li>pcs/cycle</li> </ul>	m²/8h (2)
<ul> <li>1,400 x 900 mm</li> <li>1,300 x 850 mm</li> <li>350 mm</li> </ul>	■ 16s ■ 12	18,360	■ 15s ■ 48	1,567	■ 17s ■ 48	1,382
<ul> <li>1,400 x 1,100 mm</li> <li>1,300 x 1,050 mm</li> <li>500 mm</li> </ul>	■ 15s ■ 12	19,584	■ 15s ■ 54	1,763	■ 17s ■ 54	1,555
<ul> <li>1,400 x 1,100 mm</li> <li>1,300 x 1,050 mm</li> <li>500 mm</li> </ul>	■ 12s ■ 12	24,480	■ 12s ■ 54	2,203	■ 14s ■ 54	1,888
<ul> <li>1,400 x 1,300 mm</li> <li>1,300 x 1,250 mm</li> <li>500 mm</li> </ul>	■ 15s ■ 18	29,376	■ 12s ■ 66	2,693	■ 14s ■ 66	2,308
	PRODUCTION BOARD         - Standard board size         - max. effective area         - max. product height         - 1,400 x 900 mm         - 1,300 x 850 mm         - 350 mm         - 1,400 x 1,100 mm         - 1,300 x 1,050 mm         - 500 mm         - 1,400 x 1,100 mm         - 1,400 x 1,050 mm         - 1,400 x 1,250 mm	PRODUCTION BOARD         HOLLOW E 400 x 200 x 2           Standard board size max. effective area max. product height         Cycle time (1) pcs/cycle           1,400 x 900 mm 1,300 x 850 mm         16s 12           1,400 x 1,100 mm 1,300 x 1,050 mm         15s 12           1,400 x 1,100 mm 500 mm         12s 12           1,400 x 1,050 mm         12s 12           1,400 x 1,050 mm         12s 12	PRODUCTION BOARD         HOLLOW BLOCKS 400 x 200 x 200 mm (8")           • Standard board size max. effective area max. product height         • Cycle time (1) • pcs/cycle         Pieces/8h (2)           • 1,400 x 900 mm 1,300 x 850 mm         • 16s • 12         18,360           • 1,400 x 1,100 mm • 1,300 x 1,050 mm         • 15s • 12         19,584           • 1,400 x 1,100 mm • 1,300 x 1,050 mm         • 12s • 12         24,480           • 1,400 x 1,300 mm • 1,300 x 1,250 mm         • 15s • 12         29,376	PRODUCTION BOARD         HOLLOW BLOCKS 400 x 200 x 200 mm (8")         RECTANGULA WITHOUT F 200 x 100 x           • Standard board size max. effective area max. product height         • Cycle time (1) pcs/cycle         Pieces/8h (2)         • Cycle time (1) pcs/cycle           • 1,400 x 900 mm 1,300 x 850 mm         • 16s 12         18,360         • 15s • 48           • 1,400 x 1,100 mm • 1,300 x 1,050 mm         • 15s • 12         • 19,584         • 15s • 54           • 1,400 x 1,100 mm • 500 mm         • 12s • 12         • 14,800         • 12s • 54           • 1,400 x 1,100 mm • 1,300 x 1,050 mm         • 12s • 12         • 12s • 54         • 12s • 54           • 1,400 x 1,100 mm • 1,300 x 1,050 mm         • 12s • 12         • 12s • 54         • 12s • 54	PRODUCTION BOARD         HOLLOW BLOCKS 400 x 200 x 200 mm (8")         RECTANGULAR PAVERS WITHOUT FACE MIX 200 x 100 x 80 mm           • Standard board size max. effective area max. product height         • Cycle time (1) pcs/cycle         Pieces/8h (2)         • Cycle time (1) pcs/cycle         • Cycle time (1) pcs/cycle         • Cycle time (1) pcs/cycle         • Cycle time (1) pcs/cycle         • M²/8h (2)           • 1,400 x 900 mm • 1,300 x 850 mm • 350 mm         • 16s • 12         18,360 • 12         • 15s • 48         1,567           • 1,400 x 1,100 mm • 1,300 x 1,050 mm • 500 mm         • 15s • 12         19,584 • 12         • 15s • 54         1,763           • 1,400 x 1,100 mm • 1,300 x 1,050 mm • 500 mm         • 12s • 12         24,480 • 54         • 12s • 54         2,203           • 1,400 x 1,100 mm • 1,300 x 1,050 mm • 1,300 x 1,250 mm         • 15s • 12         29,376         • 12s • 54         2,693	PRODUCTION BOARD         HOLLOW BLOCKS 400 x 200 x 200 mm (8")         RECTANGULAR PAVERS WITHOUT FACE MIX 200 x 100 x 80 mm         RECTANGULAR WITH FAC 200 x 100 x 80 mm           • Standard board size max. effective area max. product height         • Cycle time (1) pcs/cycle         Pieces/8h (2)         • Cycle time (1) pcs/cycle         • Cycl

<sup>(1)</sup> Cycle time in seconds (Masa machine listed in combination with Masa ring plant) <sup>(2)</sup> Production quantity per 8 h shift at 85% efficiency

 Modular frame construction nised by a hydraulic flow divider

# XL THE ALL-ROUNDER

- Modular, exceptionally solid frame construction
- Improved synchronisation of mould and tamper through mechanical mould levelling device
- 120 mm guide columns
- Modular frame design enables adjustment to local installation situations
- Hydraulic system with flexible multi-pump concept allows simultaneous control of several functions with constant hydraulic pressure
- Mould change system to reduce set-up times, also available fully automatic

# PREMIUM LINE PRODUCT LINE XL-R

Block making machines for innovative applications

# HIGHLY EFFICIENT AND CYCLE TIME OPTIMISED: THAT IS OUR XL-R!

Since we have designed this model series particularly for the requirements of the gardening and landscaping sectors as well as large products, we equip the Premium Line machines right from the start with many product and cycle time-oriented features for modern concrete block and paver production. The energy-efficient servo technologies we use should be specifically mentioned in this regard.





## XL-R | THE CYCLE TIME PROFESSIONAL

- Servo hydraulics with hydraulic accumulators
- Mould bearing synchronisation via servo-controlled hydraulics
- Cycle time optimisation through:
  - Intelligent drives
  - Servo-controlled, fast feed of the production boards in combination with a synchronised V-belt lowering device
  - Overlapping movements
  - More energy-efficient drive systems

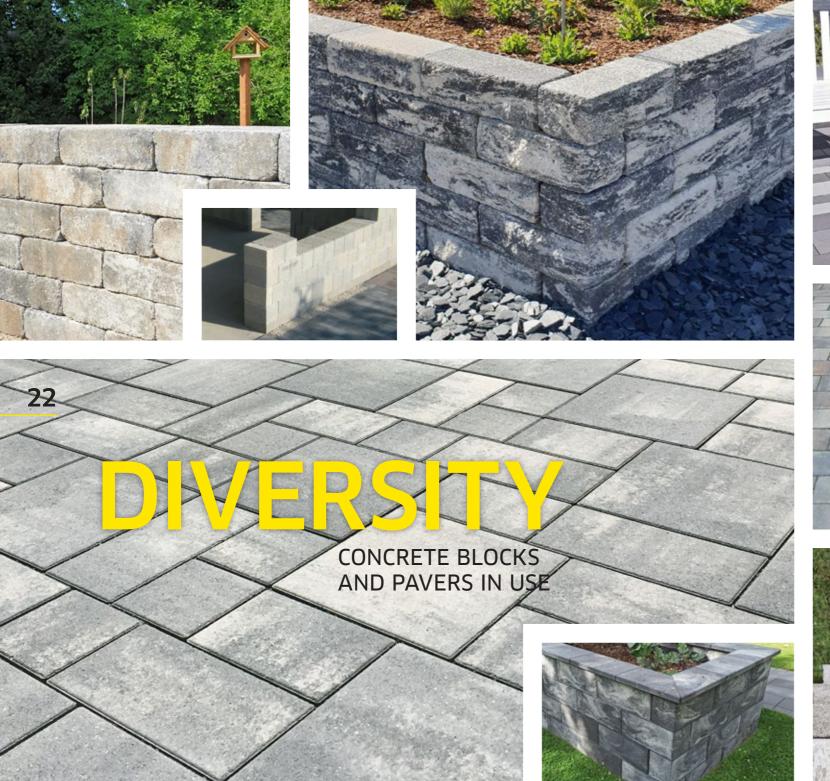
	PRODUCTION C	APACITIES OF MASA B	LOCK MAKING	MACHIN	
	MODEL	PRODUCTION BOARD	HOLLOW BLOCKS 400 x 200 x 200 mm (		
		<ul> <li>Standard board size</li> <li>max. effective area</li> <li>max. product height</li> </ul>	<ul> <li>Cycle time <sup>(1)</sup></li> <li>pcs/cycle</li> </ul>	Pieces/8ł	
	XL-R 9.1	<ul> <li>1,400 x 1,100 mm</li> <li>1,300 x 1,050 mm</li> <li>500 mm</li> </ul>	■ 11.5s ■ 12	25,544	
-	XL-R 9.2	<ul> <li>1,400 x 1,300 mm</li> <li>1,300 x 1,250 mm</li> <li>500 mm</li> </ul>	■ 14s ■ 18	31,474	
	XL-R 9.3	<ul> <li>1,500 x 1,350 mm</li> <li>1,400 x 1,300 mm</li> <li>500 mm</li> </ul>	■ 14s ■ 18	31,474	

<sup>(1)</sup> Cycle time in seconds (Masa machine listed in combination with Masa ring plant) <sup>(2)</sup> Production quantity per 8 h shift at 85% efficiency



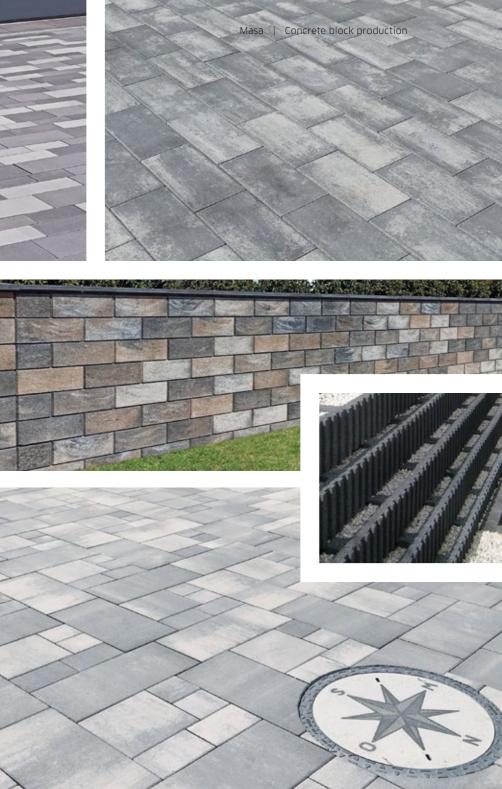
- Set-up time optimisation through magnetic clamping of the filling box rails
- Laser-controlled level measurement in the filling box
- Larger configuration possibilities
- Extensive standard equipment
- Automation applications to support intuitive opera-
- tion and reliable plant performance

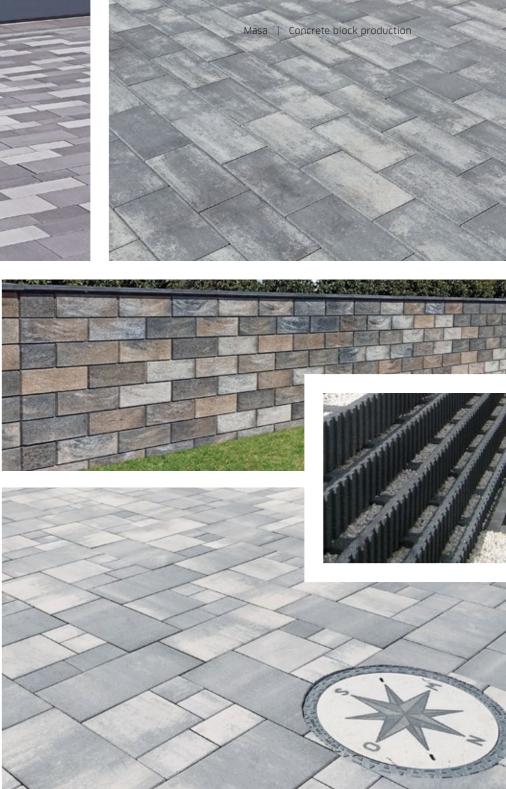
IES RECTANGULAR PAVERS RECTANGULAR PAVERS (8") WITHOUT FACE MIX WITH FACE MIX 200 x 100 x 80 mm 200 x 100 x 80 mm Cycle time (1) Cycle time (1) m<sup>2</sup>/8h <sup>(2)</sup> m<sup>2</sup>/8h <sup>(2)</sup> pcs/cycle pcs/cycle **9.5**s <mark>=</mark> 11.5s 2,783 2.299 **5**4 **5**4 **9.5**s <mark>-</mark> 11.5s 3,401 2,810 **6**6 **6**6 <mark>9.5s =</mark> <mark>=</mark> 11.5s 3,711 3.065 **7**2 **7**2











Being a forerunner in the innovative use of containers for the compact installation of hydraulics and electrics, we have many years of experience in this field. Our concept of a protected, safe and clean site has long proven its worth in practice.

These container solutions bring everything together for you, not only in one place, but in the right place, optimised in all regards for the components.

Masa containers are turnkey rooms with optimum ease of assembly. They also offer further advantages which become evident as soon as these containers are taken into use:

## POWERTAINER

The plug-and-play Powertainer serves as the central electrical control room.

- Easy climate control
- Prepared for EMC-compliant installation and pre-wired
- All switch cabinets for the plant neatly and clearly arranged at one central location
- No additional cost and effort for building a control room required

Our basic idea for the Powertainer has led to another two practical units, the Hydrautainer and the Combitainer.

## HYDRAUTAINER

Block making machines are hydraulically driven. The Hydrautainer is an enclosed space offering the following benefits:

- Space for the hydraulic station
- Integrated oil collecting pan
- Safety
- Easy climate control
- Sound insulation

### COMBITAINER

Everything neatly organised: Our Combitainer consists of two separate and functionally optimised rooms which combine the central control room of the Powertainer with the Hydrautainer.











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# INNOVATIVE CONTAINER SOLUTIONS **CENTRAL THEME - CENTRALLY SOLVED**

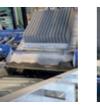


Tough outside, smart inside: our container concepts combine practicality, safety and low maintenance.

#### Sorting device

Device to directly detect and remove non-flawless products, minimising subsequent loss of time on the dry side.





















#### Paver washing unit

The washing unit as a multi-station configuration to accentuate the high-quality face mix materials on the product surface.

products.

#### Surface control

Weighing

of the production board The fresh raw density is determined by weighing the full production board.

Visual quality checks, alternatively also 3D, manually or automatically, optionally with removal of the production boards.

#### Height control

Laser measuring equipment measures and records the product height.

#### Concrete block making machine

High-quality products are supplied to the handling cycle.



#### Wet side transport

Fully electric transport systems via walking beam conveyors or modular V-belt conveyors.

# WET SIDE

Optimally prepared for curing

#### Elevator

The downstream elevator collects the products for further transport to the curing area.



27

Liquid coatings are applied to protect the surface or finish the



# CURING

# Hard as rock and consistent

In the curing area, the fresh products obtain the strength required for their further handling. The fully automatic Masa finger car is a reliable solution for loading the curing racks.

Depending on the plant layout and product portfolio, the finger car can be designed with a turning device and lifting mast adjustment. Various position measuring systems and data transmission options ensure safe and reliable processes. Storage and retrieval logistics with highly informative monitoring for the plant operator enables optimum utilisation of the available storage capacities in the chamber.

The complete curing rack as well as elevator, finger car and lowerator are installed in a coherent climate zone. The Masa ventilation system can optimise the curing process by creating uniform climate conditions in the curing chamber. It consists of horizontally arranged recirculation fans in a separate fan shaft, vertically arranged exhaust fans and diagonally arranged humidity and temperature sensors. The sensors monitor the recirculated air, and the recirculation or exhaust fans are controlled accordingly. The objectives of regulating temperature and humidity

The objectives of regulating temperature and humidity in the curing chamber are to avoid colour differences in similar products, to realise faster curing and ultimately to use cement and colours more effectively.

> THE CURING MAKES THE DIFFERENCE

# **DRY SIDE**

From the cured product to cubing

The dry side is the handling area for the cured products. In addition to quality assurance tasks, this involves preparation for cubing and the initial packing tasks. Here, too, various transport devices are available, such as the continuous servo-controlled walking beam conveyor or, alternatively, modular V-belt conveyors.

> SEVERAL DIFFERENT POSSIBILITIES FOR QUALITY ASSURANCE, HANDLING AND PACKING



#### Horizontal layer strapping

To secure the layers of the products and ensure accurate cube formation.

#### Doubler

In order to relieve the cubing unit in high-speed systems, the doubler places two layers of products on top of each other. An optional horizontal turning unit turns the individual product layers. All drives, both on the centring device and on the doubler, are servo-controlled.









# Remodelling

packaging format.

# Interlayer protection

To protect sensitive concrete surfaces, a granulate spreader or sheet/net dispenser can be installed on the return transport.

#### Centring device

To loosen and centre the layer of products. They are centred by a four-sided centring clamp both transversally to the transport direction and in the transport direction.

# Lowerator

To destack the production boards and to transfers them to the transport device.

#### Cured product

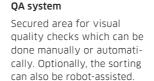
32





### Intermediate finger car

This component is located upstream of the lowerator, serves as an intermediate buffer and prevents waiting times of the finger car.



#### Masa | Concrete block production

#### Post-treatment of the production boards

To prepare the production boards for further use in the production process.







# 33

All kinds of remodelling solutions are applied whenever the production format does not match the desired

Cubing

# STORAGE SOLUTIONS FOR PRODUCTION BOARDS

Flexibility in the production process

#### FLEXIBLE CYCLE

As soon as the Cuboter has removed a finished layer of products for cubing, the empty production board is transported back to the block making machine. This closes the cycle.

This process step takes into account the individual customer requirements as well as the quality of the production boards used. The versatile solutions range from functional to complex. We will be happy to advise you in this regard. Complex storage systems store and retrieve the production boards independently of the processes on the wet and dry sides, thus offering flexible production optimisation:

- Compensation of differences in cycle times between products varying on the wet and dry sides
- Reduced production downtimes during maintenance and troubleshooting as well as during change over (e.g. changing moulds on the machine)

 Enables cleaning activities on the machine after the end of the shift

with the dry side running





# THE CONTROL SYSTEM OPTIMISES THE PRODUCTION-SPECIFIC PROCESS IN THIS AREA.



# CUBING

Strong grip and gentle handling

The concrete block production process ends at the packaging line where the cured product is made available for storage or direct shipment. To compete with the high efficiency mixers and block making machines, a fast and high-performance handling component is needed. Our technological answer: the cleverly designed Cuboter as cubing solution.



The Cuboter's versatile clamp functions enable it to forcefully grab the layers of products so that they are hold stable while being shifted. The cubes are created particularly accurately and due to the dynamically harmonious movements of the Cuboter without damaging the products. Even in its standard version, the Cuboter cubes product layers with lifting weights of up to 700 kg and product heights of up to 500 mm. Further continued quality is also ensured by professional packing!

# CONSUMPTION AND ENERGY OPTIMISATION

There are no hydraulics in the Cuboter. It operates purely by means of electric servo drives and offers maximum energy efficiency by converting deceleration energy into acceleration energy. The kinematic control is the key for precise drive curve calculation and avoidance of interfering edges. The most optimal track is consequently guaranteed. This saves energy and enables short cycle times.

Anything that does not fit is made to fit.



# LAYER REMODELLING SYSTEMS

To make full use of the capacity of our block making machines with large production boards, it may be necessary to rearrange the block layers to fit the packing sizes of smaller transport pallets. The remodelling unit reduces and completes the layer formats individually in XY direction. The reproducibility of this desired layer format is guaranteed by the recipe memory. This component also enables void layers to be created for easy transport possibilities in special markets. Given the many different applications, we recommend customers ask for specific advice tailored to their actual situation.

### INTEGRATION OF HANDLING ROBOT SYSTEMS

Robot systems can be useful for special cubing and packing requirements. We will be happy to design the right solution for your requirements together with you.



# SURFACE TREATMENT

Strong partners



Surface treatments on the wet or dry side enable you to enhance the look of your products or protect them from chemical or mechanical stresses and soiling.

On the wet side, for example, the Masa paver washing unit accentuates the special surface texture of the face mix materials. We are also happy to integrate further equipment for finishing and treating the freshly produced or cured products. With this, we provide a wide range of options, such as coating, blasting, grinding, polishing, aging or hammering, allowing you to create your unique product lines.

Paver washing unit



BLASTING

GRINDING

WASHING

See.

AGING

18 BERLE

315

SEALING

CURLING

SPLITTING

COATING

CALIBRATING

POLISHING

HAMMERING

MILLING

# SPLITTING MACHINE

Concrete products with a natural character

The Masa splitter is used to produce concrete elements or palisades with a natural stone look. The upper and lower knifes of the Splitter 1250 are flexibly mounted in an extremely robust, torsionally rigid frame construction, allowing precise splitting of large concrete elements. The Splitter can be placed both inline and offline.

A range of different, contour-dependent splitting knifes can be used to create multi-sided splitted surfaces. For smaller amounts of splitting products, the Splitter 500 is also suitable.









# BETTER SAFE THAN SORRY SAFETY

Durable and comprehensive concepts

Two aspects are particularly important to us when designing and implementing plant concepts: Maximum work safety and easy operation. Both serve to protect employees, prevent accidents in production and minimise production downtimes. Masa plants meet the highest safety standards worldwide!

# WHAT ARE OUR SAFETY CONCEPTS BASED ON?

- Applicable machinery directives and functional safety
- Country-specific functional safety concepts
- Customer-specific requirements
- Integration of cross-industry solutions
- Risk analyses and performance level calculations

# SAFETY ALWAYS COMPRISES THREE ASPECTS:

- The safety of your employees
- The safety of your production process
- The safety of your plant and its components

# **PLANT SAFETY** NON-NEGOTIABLE FOR MASA!



## Masa | Concrete block production

Since machines must never endanger personnel, neither during normal operation nor in the event of a malfunction, Masa have committed themselves to one of the highest safety levels worldwide!



# SUSTAINABLE MEANS FUTURE-PROOF ENERGY EFFICIENCY

In line with quality and quantity

44

Environmental protection, resource conservation and sustainability? These are not the first things that are commonly associated with building materials. But these considerations play a key role in our industry as well and all the more so in the future! Resources are already scarce and will become scarcer and thus more expensive all over the world. This has urged us to constantly work on technologies to make our machines and plants ready for the future, also with regard to the ecological balance.

# WHAT MAKES PLANTS ENERGY-EFFICIENT?

- Intelligent drive concepts
- Reduction of reactive energy
- Higher efficiency factor
- Use of energy-efficient components
- Cross-component overall concepts

# SYSTEMATIC SUSTAINABILITY

We reconcile our customers' economic goals with ecological and social goals for a future-oriented coexistence.

# ECOLOGICAL RESPONSIBILITY As a manufacturing company, we acknowledge our ecological responsibility.



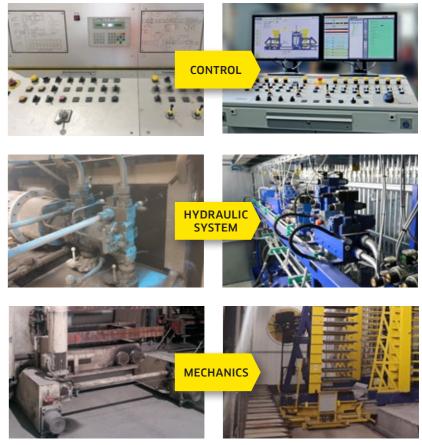
ENERGY EFFICIENCY **ALWAYS ALSO MEANS CO<sub>2</sub> REDUCTION** 

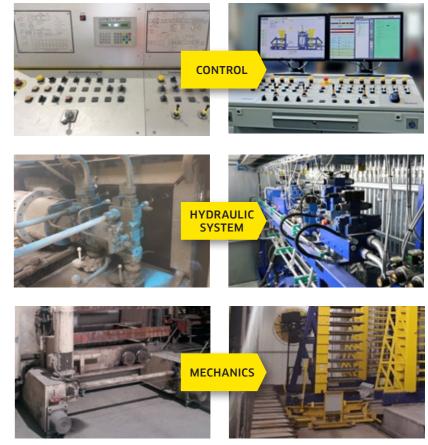


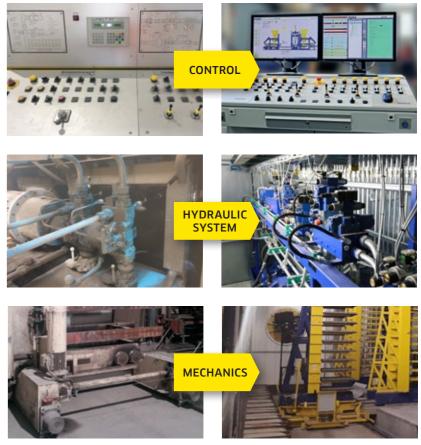
lifetime of the plant.

of the art.

# MODERNISATION OPTIONS







In order to maintain the long-term economic efficiency of an existing plant, specific modernisation or conversion measures are necessary during the

# We will be happy to support you in updating plant areas to make them state

# **ALWAYS WITHIN SIGHT**

# MORE THAN MECHANICAL ENGINEERING **CONSULTATIVE SERVICE**

We accompany you throughout the lifetime of your machines

# Why are we a good partner?

Our efforts do not stop once we have delivered a plant! The Masa Lifetime Service, which includes training and support, begins once the installation and commissioning have been completed. It is important to us that you never feel left on your own and know that you can rely on us.



Inspection and maintenance: Extend the service life of your machines.

# OUR SERVICE

Masa Support: First aid and more! We are there for you if you have any technical problems or questions and to help you with updates.

Assembly and commissioning: Masa plants and machines are installed and commissioned by our own experienced fitters.

**Customer training:** Practical content taught by competent trainers to raise your employees' qualifications to a higher level.

**Retrofit and conversion:** We make sure your plants are state of the art again.

Spare parts and spare parts logistics: Get original spare parts of proven Masa quality, perfectly matched to your equipment, in the shortest time possible.

Masa Health Check: The machine inspection "Masa Health Check" can be used for preventive maintenance and repair measures.

> Masa Smart BackUp: Our convenient and comfortable solution for efficient data backup of recipes and process data.

> > 51

Process engineering support: We

help you optimise your product quality and quantity.

> AN INSTALLED BASE OF MORE THAN 10,000 MACHINES WORLDWIDE

# VALUES **WE STAND FOR**



SUCCESS AND PARTNERSHIP Decisive for the joint success is always the close and cooperative exchange of opinions and experience with our customers.



# EXPERIENCE

In our long company history, we have experienced and significantly influenced developments in the construction materials industry. The technical and operational experience we have thus gathered greatly benefits us and our customers today.



#### SAFETY

Two aspects are particularly important to us when planning and implementing plant concepts: maximum work safety and easy operability. These two aspects serve our employees' health and continuously ensure the manufacturing processes.

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# CUSTOMER ORIENTATION AND SOLUTION COMPETENCE

Experience has shown that customised, individual solutions significantly strengthen and improve our customers' market positions.



# QUALITY

As ever, for us, "Engineered in Germany" equals our commitment to quality, stability and sustainability. Our engineering principles are applied to all development and production phases.

# FROM







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