

■ Masa AG, 56626 Andernach, Germany

Redsun commissions second high performance concrete block plant

In the last few years Redsun Garden Products GmbH & Co. KG from Kevelaer has become a major supplier of garden products in the Benelux and Germany. Redsun was originally „Ger Van Ommeren Natursteen“ a Dutch company, which sold natural stones in Belgium and The Netherlands. They started off importing natural stones in Europe, particularly from Italy, Portugal and Scandinavia. After that they additionally offered natural stones and wood from the Far East, South

America and Africa for sale. In 2001 Redsun supplemented this with the production of high quality decoration paving and garden building materials made from concrete at a Masa stone manufacturing plant. Since autumn 2006 the daily output of concrete paving stones with and without facing layers, washed and aged paving stones and kerbstones has been doubled with a second Masa stone manufacturing plant.

Ger van Ommeren, the owner and founder of Redsun Garden Products in Kevelaer is very persistent. He does not regret the decision made a good six years ago to construct his own precast concrete block plant: Despite the use of a system that was specifically designed for high performance production Redsun was barely able to meet the growing demand over the last two years. „We have an up-time of more than 90% on the Masa plant including mould change and we produce 24/7“, says Ger van Ommeren. „We can only progress further and cover the demand of our customers by having a new machine. We are not only looking at market share in the Benelux.“

The „green light“ for a second concrete block plant was given at the beginning of 2006: Due to the excellent experience made with the first Masa block making plant, it was an easy decision, to buy another Masa machine. „We want to work together with the strongest and most reliable partner and as far as we were concerned in 2006 and for the future this is the Masa Group.“, says van Ommeren justifying his choice. Ger van Ommeren is convinced about Masa due to it's high quality machines, excellent service and high machine up-time. This is why in 2004, Ger van Ommeren glorified his first machine by calling it „Masa 1“ the „most powerful block making plant in the world“ (see BWI 06/2004).

As in 2001 this new works had to fulfil the following conditions:

- The products made meet the highest quality requirements.
- Paving stones can be produced in various forms and colours.
- All products for garden and landscaping, especially paving and kerbstones can be produced.
- The annual capacity with 3-shift operation is at least 1 million m² of high quality paving stones.



The second Masa plant has been commissioned at Redsun in Kevelaer

Masa supplied a complete block making plant for this, consisting of a Masa mixing and metering system with two Masa horizontal compulsory mixers and a Record 9001 XL/fast block making machine, with a cycle time of about 9 seconds for paving stones without fair face or about 11 seconds for paving stone with fair face. Even the complete ring and the packaging, i.e. the transport system for the concrete products from the machine to the finished packet in the yard come from Masa.

Masa AG and it's subsidiaries is one of the leading global suppliers of machines and plant for manufacturing concrete

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Plant and Machinery for the production of:

- Concrete blocks
- Concrete slabs
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- Sand lime bricks

The Masa Group has participated in many developments in the production of building materials.

The prerequisites for this are a good team and a feeling for the needs of the market.

We are well experienced in this area as are our customers. And this is the solid foundation from which we will address the requirements of the future.

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blocks (e.g. paving stones, kerb stones or hollow blocks) as well as porous concrete and limestone.

The Masa group delivers turnkey plants for customers in the building materials industry from the supply of raw materials to finished stone. Main markets for this are the Middle East, the USA as well as East and West Europe. Manufacturing plants are located in Germany and South Korea. With branch and sales offices in China, Dubai, Korea, the USA, Russia und the Ukraine MASA is always close to the customer.

The second block making machine in Kevelaer – Masa II

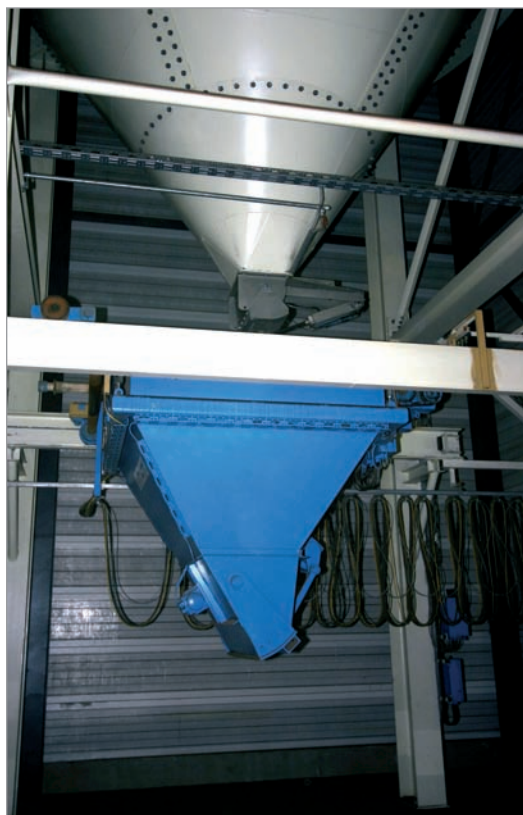
Custom made for the individual needs of Redsun, the filling system of the silo was connected to the existing plant. Four large silos (200 tons ea.) were added to the first row of silos for core concrete, and four small ones (40 tons ea.) to the row of silos for the facing concrete. The sand mixtures make their way directly into the mixing



Two high performance HM 2000/3000 and HM 1000/1500 mixers from Masa do an excellent job



The twin bucket conveyor system has a total capacity of 6.400 l



The sand mixtures make their way directly into the mixing elevators, via two transport conveyors

elevators, via two transport conveyors, by means of two pneumatically actuated metering flaps and two charging scales which weigh the different sand mixtures. Components such as cement are fed to the mixers via conveyor and distributor worms. Special scales are used for weighing liquid additives. The HM 2000/3000 und HM 1000/1500 high performance mixers produce the highest quality concrete of all grades with the shortest mixing times. A particularly uniform mixing effect is achieved by forced mixing using the counter flow prin-

ciple with agitator movement in several planes. These practically proven plants excel because of their optimised energy efficiency and low maintenance requirements.

The mix and metering system has a controller developed by Masa with PC and touch screen monitor. A virtually unlimited number of mixture recipes can be developed and stored.

The transport of the ready mixed concrete to the block making machine is carried out using a twin bucket conveyor system, which is fitted with two separate buckets

each with a capacity of 3,200 l. This enables feeding of the core or facing concrete silo, a method, which ensures absolutely pure facing concrete due to the separate concrete transport.

Record 9001 XL block manufacturing machine

The Record 9001 XL block manufacturing machine requested by Redsun stands out from the standard model with its technical rafi-



The second high performance machine at Redsun is a Masa Record 9001 XL, whose level of equipment is far above that of the standard.

ness. Shorter cycle times are achieved by means of higher pump performance, an additional hydraulic pressure reservoir as well as fitting it with a servo driven board feed. Optimised colour mixtures, which are very pleasing to the eye, are achieved by equipping the machine with a triple colour mix silo for core and facing concrete. The mixture requirements control the load cells. The colours can be controlled and positioned exactly and the colour distribution reproduced on each production board at the same time. This ensures ready-to-lay products. Precision height products can be manufactured with the heavy compaction head beam, extra long guide bearing for compaction head and mould as well as other special technical features. Instead of the usual stepless rpm control of the vibration table the Redsun machine is fitted with a patented amplitude controlled vibration system, which allows for stepless matching of the actual compression forces to the needs specified by the product. Different forces can be generated in the case of pre, intermediate and main vibration, an amplitude change can even be made during production. The rugged and simple design of the vibration system guarantees their long lifetime.

Apart from this the machine has a three section machine frame consisting of centre section with vibration table as well as core concrete and facing concrete filling section. These filling sections can be opened separately, so that the machine is much more accessible for cleaning and maintenance.

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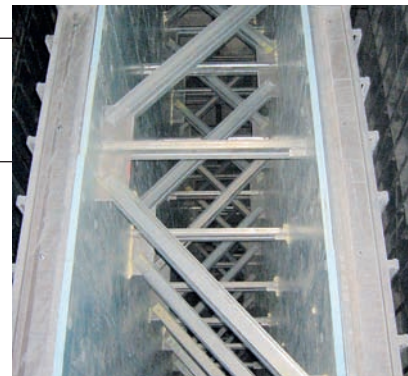


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The products are brought to the dry side by means of a lifting frame, moving platform, drying shelf and lowering frame

Steel plates were chosen as product underlays due to the long lifetime of up to 20 years with uniform production characteristics.

The products are transported to the lifting rack by means of a free lift conveyor once they are produced on steel plates in the machine. Then the products are brought to the dry side by means of a lifting frame, moving platform, drying shelf and lowering frame. The shelving units was designed in the form of a closed system with recirculating air equipment. This ensures optimised drying with a minimum expenditure of energy.

After the drying track products can be placed for rearrangement. This rearrangement generates different sized layers which are placed as a packet of blocks on a plate conveyor. Packaging of stones can be made directly if layers are not rearranged.

The transfer unit as well as the packaging unit are servo equipped. Here all movements (i.e. lifting and drive system) are made with servo motors (except from the clamps).

The packaged products are then transported outside by means of a plate conveyor. Since one stone packet is generated every 100 seconds, a package buffer crane was built outside to move the stone packets for temporary storage to set-down stations on one side of the plate conveyor. A forklift can be used to empty the other side during this time. When the store is full, the other side is filled and the forklift empties the opposite side. Due to

the packet buffer it is not necessary to have the forklift driver there all the time, so that he can do other tasks such as monitor the material feed.

After the products have been removed from the steel plates, the plates are cleaned with a metal scraper and then turned. Then pallets are stacked and fed directly back to the block manufacturing plant by means of a sheet stacking crane. When the cycle time of the machine and drying side is different, the sheet stacks formed are either transported to a storage area or stacks are fed from the storage area to the block manufacturing machine. Profibus systems network the decentralised S7 plant controller. Functions can be selected and data input directly using the colour display touch screen. The visualisation software supplied has simple graphical function displays, a user guide and unlimited recipe management. All plant conditions are classified. The built-in statistics program records all operating data, which can be transferred to external PCs. Overall this block manufacturing plant is a sophisticated, user friendly total solution, which meets the technically demanding requirements of Redsun Garden Products GmbH & Co. KG without any problems. At the same time this confirms Masa AG about it's approach towards customer oriented and company internal quality requirements, which makes the company a competent and reliable partner worldwide.



Finished products on the drying side



All movements are carried out with servo motors apart from the clamps



A packet buffer crane was installed outside



The pallet stacks are fed back to the block manufacturing plant using a sheet stacking crane

The trust Redsun has shown for Masa confirms this. More than 1.2 million m² of high quality paving stones a year on the Masa I is the best proof of this. Masa II should be capable of surpassing this. „Masa II is at least one second faster than Masa I.“, says plant manager Mike Kremers.

Further information:

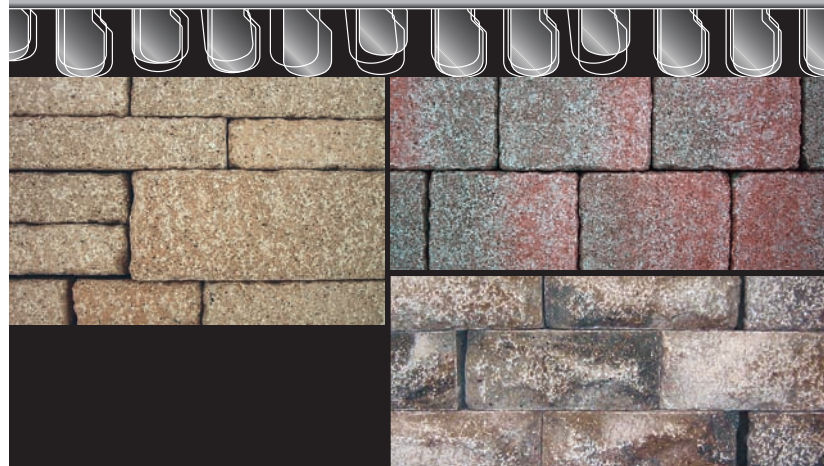


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