

Masa AG, 56626 Andernach, Germany

Network for production of concrete pavers expanded by new site

The German EHL AG started up a new concrete plant in Ahlhorn in Lower Saxony in spring this year. The completely new plant represents the filling of a gap in the EHL network in North-West Germany. The former Damme site has been integrated in the new Ahlhorn site and its production has now been relocated to Ahlhorn. Production at the new site is mainly focussed on the entire garden and landscape building assortment. This includes, among other items, pavers, kerbstones, borders, planting rings and plantable wall solutions. The requisite block making machine was supplied by the German company Masa AG from Andernach, who, as main supplier, also supplied most of the other equipment.

The EHL company was founded in 1976 by Bernhard Ehl with the purchase of a dis-used pumice stone factory in Krufth. Since then, products for garden and landscape building have been produced under the name EHL Beton. The first branch factories opened in the 1980s and, following the German reunification, the first production site in the former East Germany was started up with a plant in Dessau. In the course of a consistent succession plan, the EHL company became an independently managed subsidiary of the CRH Group in May 2002. CRH plc, whose head office is in

Dublin, Ireland, is active in 34 countries with more than 3,500 sites and, with over 92,000 employees, is one of the world's leading companies in the building material and concrete block industry.

In opening the factory in Ahlhorn, EHL AG is setting a clear example. Four years have passed since the last factory was opened in 2004, and EHL AG is now looking to expand the EHL network further. It is intended to fill more gaps in future, with the planned goal of being present throughout Germany with concrete plants. The nationwide production network with

at present more than 30 sites enables EHL AG to strongly orientate its production to needs.

Besides the good location with extremely favourable traffic connections, the possibility to build a completely new plant "on a green meadow" spoke in favour of the Ahlhorn site. The entire machine pool is situated in two large production halls. The complete warehouse area was built with a water-permeable floor covering.

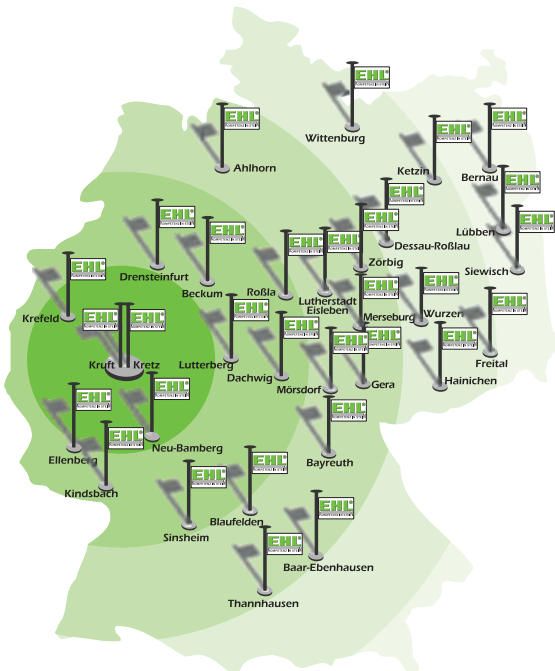
Including the employees taken over from the closed plant in Damme, over 20 employees work at the new plant in Ahlhorn.



The new EHL concrete plant in Ahlhorn



The plant also features a sample exhibition, which is typical for EHL and which is open around the clock for customers, as well as the advice days on Friday and Saturday of each week. Here, for example, the customer is offered a modern form of advice thanks to EHL DigiSolution, a software that can place EHL products in an existing



EHL AG produces at over 30 sites in Germany. EHL thereby relies on powerful logistics and comprehensive service. Together with sales partners, EHL offers fast availability of products and know-how throughout the country.

picture with photographic realism. Delivery is then made via retailers.

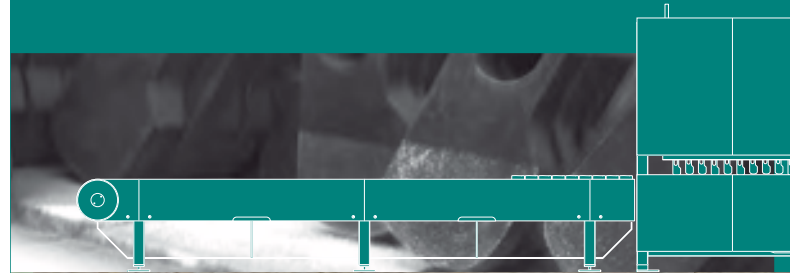
The Ahlhorn plant shows that EHL places great importance on the health and safety of its employees. Everything that is state of the art in labour protection has been implemented in the new plant according to regulations. Hence, the block making machines have been housed in noise insulated enclosures, leading to a significant reduction in noise levels at this production site.

The other parts of the plant, which were almost exclusively installed by Masa AG as the main supplier, are also secured by means of appropriate safety precautions, such as fences and light barriers. EHL's decision to choose Masa as the supplier of the production machines was based, among other reasons, on compatibility with other plants in which production machines by Masa are already in use. Besides the block making machine, Masa also supplied the dosing and mixing equipment, the drying chamber with all elements and the packaging unit for the new Ahlhorn plant.

Dosing and mixing units

Dosing units

Masa supplied the complete dosing units for the optimum, efficient weighing of additives (sand, cement, water, colourants). The cement is stored in three silos.



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The two mixers are fed via lifts.



Individual colouring takes place via a 4-colour dosing unit.

The Masa controller units can adapt to the individual specifications and changing additives. Hence, the optimum concrete quality can always be guaranteed.

For individual colouring of the concrete, liquid colourants by the Scholz company are used, which are added to the concrete via a 4-colour dosing unit.

Mixing unit

Two horizontal compulsory mixers by Masa, which can be supplied with a mixing capacity of 40 – 360 m³ of concrete per 8-hour shift, provide for a constant, sufficient supply of fresh concrete to the block making machine. A 0.5 m³ mixer produces the facing concrete and a 1.5 m³ mixer the

core concrete. The concrete is then transported to the block making machine via a double bucket conveyor. Continuous production is hence ensured.

Masa XL 9.1 block making machine

The production of the concrete goods takes place exclusively on steel pallets. Through the use of steel pallets EHL expects concrete goods of a higher quality and, in the long run, an economic advantage due to the durability of the pallets. After cleaning, the pallets are deposited in a store and then returned automatically to production. Before they enter the block making machine, the production pallets are coated with a release agent by an oil spraying roller.

With a total weight of over 40 tonnes, the XL version of the Masa 9.1 is the top model in Masa's range of block making machines. The machine enables the production of all kinds of concrete blocks with particularly precise heights, but at the same time short cycle times and hence highest daily production quantities whilst maintaining optimum product quality. Suitable board sizes for the XL versions lie between 1,400 x 550 and 1,400 x 1,300 mm.

The series standard scope of delivery includes an automatic mould changer including automatic height adjustment of the core and facing table. Exclusively moulds by renowned manufacturers are used.

Most of the product range from pavers to concrete slabs and palisades are manufactured on the Masa XL 9.1 in Ahlhorn. The plant is designed for product heights of 40 to 500 mm.

The frequency-controlled vibration – optionally also amplitude-controlled – is controlled by the Siemens S7-400 controller. The machine operator supervises the controller via a 15" TFT touchscreen on which all functions are visualised.

Drying chamber

The pallets with the fresh concrete goods are automatically collected in the drying chamber by the lifting ladder. Once the lifting ladder has accepted the maximum number, these pallets are taken up by the vehicle group and brought to the allotted place in the high-bay rack. Subsequently, the vehicle group brings a stack of pallets with cured products to the lowering ladder on the dry side. The lowering ladder separates the pallets. The pallets are subsequently



Two horizontal compulsory mixers by Masa produce facing and core concrete for the block production (shown in the picture with a Masa Powertainer).

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Masa Aktiengesellschaft

Masa-Str. 2
56626 Andernach
Germany

Phone: +49 (0) 2632 9292-0
Fax: +49 (0) 2632 9292-12
e-mail: info@masa-ag.com
www.masa-ag.com

Masa Henke Maschinenfabrik GmbH

Osterkamp 2
32457 Porta Westfalica
Germany

Phone: +49 (0) 5731 680-0
Fax: +49 (0) 5731 680-183
e-mail: info@masa-henke.com
www.masa-henke.com

Office Dorsten
Barbarastr. 70
46282 Dorsten
Germany

Phone: +49 (0) 2362 9516-0
Fax: +49 (0) 2362 9516-16
e-mail: info@masa-dorstener.com
www.masa-dorstener.com

Branch offices

Moscow – Russian Federation, info@masa.ru
Dubai – UAE, masa_me@emirates.net.ae
Green Bay – USA, sales@masa-usa.com
Bangalore – India, maniaraja@yahoo.com
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Daegu – South Korea, mh@masa-handuk.co.kr

transported further on the dry side. The vehicle group returns in the meantime to the lifting ladder on the wet side.

Powerainer

The complete electrical control cabinets for the entire block production are located in two separate containers. These containers, which Masa refers to as powerainers, are climatized and installed on a framework above the production. The powerainer is delivered to the plant virtually pre-installed and hence saves the time-consuming, complete electrical installation when equipping the plant.

Direct packaging

The concrete goods are lifted up from the pallets by the gripper and placed on a conveyor belt. Since the products are stacked on Euro-pallets in layers, the sorting unit always forms corresponding layer

sizes. The layers are then taken by the gripper, turned through 90° and set down on the pallet.

After the concrete goods have been stacked on the pallets, the concrete goods packages are optionally wrapped with foil and strapped. The machine for these last production steps in the plant was supplied by Cyklop GmbH. Finally the pallets are transported out of the plant on the roller belt and taken up by the fork lifter.

Conclusions

EHL has filled a site gap with the new plant. Thanks to the versatility that the new equipment offers, EHL can offer virtually the entire range of products. Hence, an optimised choice of location and first-class production machines are combined at EHL to form a strong overall solution. ■

FURTHER INFORMATION



The second powerainer is arranged to the right of the machine room, in which the hydraulic units are located.



EHL Ahlhorn
EHL AG
Zeppelinring 5
26197 Ahlhorn, Germany
T +49 4435 971190
F +49 4435 9711966
info@EHL-net.de
www.EHL.de



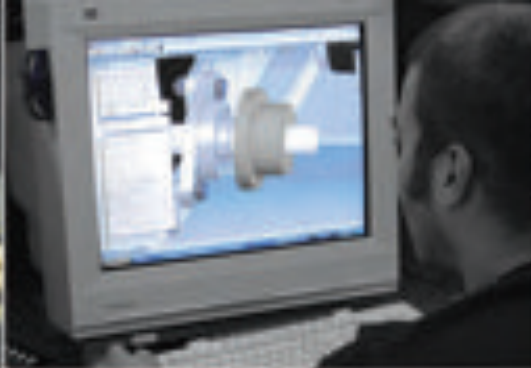
Masa AG
Masa-Straße 2
56626 Andernach, Germany
T +49 2632 92920
F +49 2632 929211
info@masa-ag.com
www.masa-ag.com



Harold Scholz & Co. GmbH
Ickerottweg 30
45665 Recklinghausen, Germany
T +49 2361 98880
F +49 2361 9888833
info@harold-scholz.de
www.harold-scholz.de



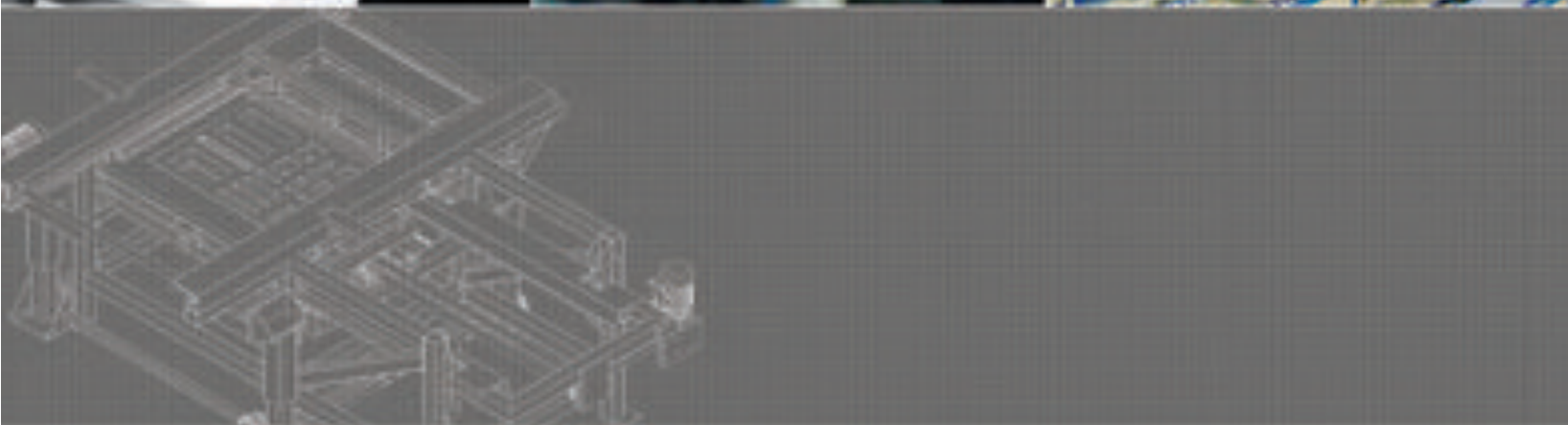
Cyklop GmbH
Industriestraße 133
50996 Köln, Germany
T +49 2236 60200
F +4902236 602578
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