

Travelling multilayer block machine thoroughly upgraded

Company Niva 000 in St. Petersburg started paver and curbstone production with Zenith 940 in May 2009



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Successful production start with new Zenith 940 in St. Petersburg

Text and photos: M. Frerichs

For the majority of concrete block-machine manufacturers, the years 2007 and 2008 were characterized by a very satisfying order situation. A slight decline in performance-oriented large-pallet machines became evident, however, already as early as in the summer of 2008. Zenith reacted promptly to the upcoming developments and early on decided to thoroughly upgrade a number of their automatic block machines in the lower price segment – particularly the 940. They soon saw successful results of their decision. A number of the new machines were already sold in the first half of 2009, with most of them already delivered and installed.

Zenith Maschinenfabrik GmbH is one of the major suppliers to the concrete block industry. The company's most

comprehensive product line of floor-level block machines, stationary and travelling multilayer block machines, pallet machines and complete single pallet plants with handling systems makes the company a market and technology leader in many sectors according to their own figures.

Niva OOO in St. Petersburg, Russia has operated successfully in several sectors of the construction industry and infrastructure projects for many years. At the beginning of 2009, the company management decided to engage also in the manufacture of construction products, specifically for use in road and underground construction. In the face of the global recession, not knowing how business would develop in the long or short term, the investment sum would have to be kept

within reasonable limits. But the new production system should be able to manufacture the complete civil engineering program, e.g. curbstones, paving blocks, angular supports, palisades and other special products up to a production height of 1,000 mm economically and with a very high quality standard. For this, Niva OOO decided on the Zenith 940. The machine was delivered and installed in April 2009. In May, Niva started up the production of paving blocks and curbstones.

The Zenith 940 can be used both as universal machine or as special machine for special products and as supplement to the single pallet plant system for the production of niche products. The machine is able to manufacture two-layered concrete prod-



Fig. 1 Hydraulically driven grate for feed drawer



Paver production at company NIVA OOO



Curbstone production at company NIVA OOO

ucts both with or without hardfacing unit for face concrete.

The Zenith 940 manufactures man-hole rings, precast components and even high products, e.g. palisades up to 1.000-mm for garden and landscape construction, very economically and in highest quality. Small-sized products, such as paving stones and masonry blocks, can be manufactured in multilayer method. The individual block layers are here separated and protected by layers of sand or, alternatively, plastic sheets. The great advantage is that the complete block package only needs to harden and to be packaged. Many in-between transport steps can be eliminated.

Zenith quality and reliability ensure a low-maintenance and trouble-free production process. The control units

are clearly arranged, easily accessible and provide an operator-friendly working environment. The input of data takes place via a new touch panel. New is also the hydraulic control with proportionally controlled movements of the four main axles and the higher performance of the pumps. The use of digital position sensors on the filling equipment, mould and tamper head is possible. With all the universality and multitude of features, the machine still remains uncomplicated. It is so conceived that the machine operator can operate the machine very soon without supervision after having been carefully trained by the technicians of the manufacturer.

The construction of the Zenith 940 is especially robust to enable it to master the many different uses and production conditions.

Equipment features at a glance

- ▶ An optional hydraulically driven grate can be installed in the base concrete feed drawer to further improve and additionally speed up mould filling. The attachment is recommended in particular for high products and hollow blocks with low wall thickness (Fig. 1).

- ▶ The main tamper head plate can be equipped with a hydraulically activated quick-change unit for rapid mould change. If curbstones are to be manufactured transversely to the filling direction, the tamper blades can be cleaned with the brushes from the feed drawer with the optional rotary mechanism for the tamper head.

- ▶ The self-explanatory, menu-controlled touch panel has greatly simplified the operation of the machine. The production parameters for the wide range of moulds and production programmes are input and saved via the clearly arranged menu masks. A fast Siemens PLC takes care of internal processing of the signals (Fig. 2).

- ▶ When production takes place without hardfacing unit for face concrete, the machine can, in addition, be outfitted with a polystyrene insertion device for the manufacture of insulated blocks or a rotating roller brush for cleaning the block surfaces (Fig. 3).

Additional useful equipment features, e.g., frequency control device for the vibration system, additional mould vibrators, cleaning brushes, concrete silo extensions and a highly varied program of mould equipment are available for the Zenith 940.



Fig. 2 Touch Panel of the new machine



Fig 3 Device for insertion of polystyrene cores

Zenith 844 SC – The Paver Champion

The technically most perfected Zenith 844 SC on its way to South America



Zenith 844 SC – Speed and Comfort. This name is an obligation and says a lot about this stationary multilayer machine which became an absolute top seller during the recent years.

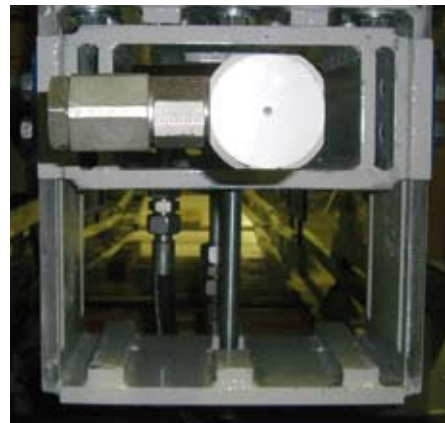
However, the Zenith 844 can do a lot more than producing pavers of highest quality.

Curbstones, split stones, wall retainer blocks and large-sized special elements can be produced most economically with this machine. Just recently a Zenith 844 SC equipped with a colour mix unit, adjustment unit of vibrating table cylinder for easy mould change and other technical innovations was delivered to a customer in South America.

The Zenith 844 SC has an increased production capacity of 25% compared to the standard version. Therefore, most customers decide for a Zenith 844 in Speed and Comfort version.



Additional connection capabilities for special moulds hydraulically driven



Vibrating table cylinders can be adjusted for quicker mould change



Hydraulic drive for turning flap

Multilayer production today

The multilayer production always existed at Zenith and it is consequently perfected by Zenith Technicians only.

More than 500 sold machines worldwide show that this technol-

ogy is not only working but also most successful. Germany, Russia, South America, Africa, Canada or the USA - Zenith multilayer machines are used worldwide either as stationary or mobile machines.

Multilayer production technology from Zenith is always the right choice.

