

Bianchi Casseforme s.r.l., 43045 Fornovo di Taro (PR), Italy

# New production plant for precast elements in Romania

**Bianchi Casseforme s.r.l., through its dealer Gabor Concrete, has provided equipment for the production of precast elements, further strengthening its presence in Romania.**

SW Umwelttechnik was founded in Klagenfurt in 1910 and has been listed on the Vienna Stock Exchange since 1997. The company's pioneering role has been highlighted over the years by its expansion first in Hungary and then in Romania. SW Umwelttechnik develops and produces precast concrete elements for the construction and expansion of various infrastructures. They have an international team located in the heart of Europe, with nine branches in Austria, Hungary, and Romania. With their state-of-the-art production facilities, diversified range of products, and expertise, the company is a leader in various sectors.

For decades, SW has been committed to pursuing economic and ecological development and social responsibility. Integrating environmental conservation and protection is essential for achieving sustainability. The key elements of their environmental management include increasing environmental compatibility, minimizing environmental risks, and protecting and verifying the ecological functioning of all systems. In production, raw materials and energy are used efficiently, reducing waste and wastewater.

The portfolio of concrete products offered by the SW group in Romania is extensive and includes pipes, manholes, underground tunnels for utilities, water treatment tanks, retaining walls and electrical cabins. In addition, they produce a complete range of elements for industrial, commercial, and residential precast construction, as infrastructure dedicated to the expansion and reinforcement of the Romanian road system.

SW Umwelttechnik has decided to expand its business in Romania by establishing a brand-new production plant for precast elements. They have relied on the proven expertise of Bianchi Casseforme s.r.l., along with their representative in Romania, Gabor Concrete srl, for the supply of equipment and moulds, for the production of precast elements used in the construction of warehouses, shopping centers, multi-level parking, schools, hospitals, residential buildings and roads.

## Supply

**1 Tilting table:** The casting surface is made of 10mm thick sheet steel and stiffened using structural profiles. The table with dimensions of 12 x 4 m to produce precast panels. The whole structure sits on neoprene anti-vibration supports. The tilting mechanism involves rotating the table around a



*Tilting table*



Site for beam production

fixed point using telescopic hydraulic cylinders, which allow easy removal of the elements in a vertical position after the concrete has cured. The table is equipped with an adjustable lower side former and one lateral side former to allow the production of panels of different thicknesses. It is complimented by curing pipes and an electric vibration system.

**1 Hydraulic column mould:** Modular and entirely made of steel, this mould can produce rectangular or square columns variable in base width and height (Base 50/60/70/80/90/100 cm and height 50/60/70/80/90/100 cm). It has 2+2 pockets for corbels that can be placed in variable positions to provide flexibility in the positioning of the corbels in the precast column. The formwork consists of a base frame placed on anti-vibration supports, two modular side moulds these open and close hydraulically, included in the supply was the base 60 cm wide with a 1,5 x 1,5 cm steel chamfer. The column formwork was supplied with a vibration system.

**1 Universal casting base:** A base frame to produce pre-stressed beams, placed between the two stressing abutments, with a length of 90 m and a width of 100 cm, made of 8 mm thick plate and stiffened by metal profiles. The sides moulds are placed on the base and locked by a special clamping device.

**3 sets of strand anchoring structures:** Each designed to support a tensile load of 800 tons. The relaxations end consists of two columns inserted into pits 1.70 m deep, with an internal space of 90 cm. It includes one predrilled sliding beam, used during relaxation operations, complete with 0.6" wire holes, 2 single-acting relaxation cylinders with a load capacity of 400 tons, and 2 single-acting relaxation cylinders with a load capacity of 100 tons.

**Moulds for I/T beams:** Side moulds with a length of 30.5 m for the production of I beams (maximum length 30 m, Base 30/50 cm, Height 120/140/160 cm) and T beams (maximum



Mould for I beam

length 24 m, base 30 cm, height 120/140/160 cm). They are made of 6 mm thick sheet plate, stiffened by a frame made up of structural profiles. These sides are modular to allow the production of elements of varied sizes. They are designed for use on the universal base and equipped with clamping devices and a vibration system.

**Self-reacting mould for concrete purlin beams:** A Self-Reacting mould with a length of 54 m divided into 3 parallel channels, each capable of producing pre-stressed concrete purlins with a maximum size of B x H 14 x 60cm. The self-reacting structure has a force of 420 tons and is entirely made of steel and equipped with a vibration system.



Mould for purlin beams





Hydraulic unit

In addition, Bianchi Casseforme s.r.l has provided the complete pre-stressing system, tensioning, and relaxation: including 1 hydraulic unit pump for operating single-acting relaxation cylinders, 1 tensioning unit pump unit for operating 2 stressing jacks that can function alternately with a crane support for jack movement, and 1 of 25-ton tensioning jack.

FURTHER INFORMATION

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