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Ecological layer securement and surface protection with biodegradable material

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Modern architecture places ever higher demands on the production of terrace slabs and concrete paving stones. The storage and transport of such high-quality slabs is a challenge. They can be scratched by slipping or move and break on the pallet during transport. Also, an incomplete hydration process can lead to typical white spots on the surface, the so-called efflorescence. An inexpensive and reliable remedy is a granulate dispenser.

Granulate dispenser for fully automatic layer separation and protection of concrete products

A T-Rex granulate dispenser (from KRAFT CURING) becomes more and more popular to accomplish this task. The device is inserted into the production line before packaging. The finished concrete products pass through the conveyor under the T-Rex, triggering light barriers that initiate a dosing process.



Modern architecture raises the quality demands of the market for high-quality floors and paving ever higher. Protecting the finished concrete products until they are laid is a challenge.

A preset quantity of granulate is distributed evenly over the layer. The 3 to 5 mm granulate particles create a thin layer of flexible material between the individual layers.

This process fulfils three functions that are essential for high-quality slabs and paving stones: First of all, the concrete products are separated from each other, thus protecting the high-quality surfaces from scratches. At the same time, the individual layers are securely fixed and can no longer slip or break during transport. In addition, the granulate produces a gap between the layers, enabling air circulation in order to further support the possibly still incomplete hydration process in the concrete.

The T-Rex system from Kraft Curing can also be used when there is not much space. Only 900 mm are required between the stone remover and the packer. The system can be



A T-Rex in the Kraft factory hall before shipping. The granulate dispenser can be installed by the customer himself.



"We think in concrete"



Once set, the T-Rex controls the dosing process fully automatically via proximity sensors and light barriers.

retrofitted and can be used up to a conveyor belt width of 1800 mm. A control unit (Siemens S7), which can be set up separately and positioned freely within a radius of 5.00m depending on the space available, determines working parameters such as speed, container position and dosing quantity.

Low-cost and ecological alternative

Once set, the system operates fully automatically. This can provide a further advantage over the use of mesh or fleece mats, as these usually have to be laid on manually by employees.

The layer separation and securing by means of a granulate dispenser offers more advantages. First of all, the granulate feeder requires significantly less material to separate and secure the layers than is usually necessary when laying on fleece mats or grids. With the correct machine setting, the costs for one layer of LDPE granulate are around € 0.04, while the market prices for mats or nets are usually several times higher. After the concrete products have been processed, only a fraction of the

- Semi or fully automatic manufacturing systems for both dry cast and wet cast concrete products
- Dry cast & wet cast moulds for the precast industry



The T-Rex can be delivered painted in the customer's company colours (control unit shown in front).



Biodegradable granulate made of natural fibres makes the T-Rex an environmentally friendly solution.

material otherwise required has to be disposed of. In addition, a mat or grid also creates closed outer edges between the layers and can thus prevent air circulation and promote efflorescence.

Another significant advantage results from the use of bio granulate. In addition to granulate made of LDPE (polyethylene), which is recycled from packaging material, biodegradable granulate is also available. The certified material made of natural fibres is completely biodegradable and therefore represents the most environmentally friendly method of securing and separating layers.

Advantages of the T-REX granulate dispenser

- Surface protection**
 The granulate reliably separates one layer of finished concrete products from the next. The layers have no direct contact, scratches and abrasion are avoided.
- Securing the layer**
 The mechanically flexible granulate acts like a rubber mat and secures the finished product against slipping or shifting.
- Prevention of efflorescence**
 The granulate keeps the finished concrete products at a distance and thus enables air circulation between the layers. Moisture can escape, efflorescence and stains on the stones are prevented.
- Automatic operation**
 Once set, the T-Rex works without human intervention. Light barriers detect both products and possible obstacles and ensure trouble-free operation.

- No wear parts**
 There is no contact between the T-Rex and the conveyor belt or product, making the system virtually wear-free.
- Environmentally friendly**
 Biodegradable granulate made of natural fibres reduces plastic waste and makes the granulate feeder an ecologically clean alternative.



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