

Techno Split s.r.l., 38050 Ospedaletto (TN), Italy

## Installation of a new splitting system in the Middle East

Techno Split, a Trento-based company, is specialized in the supply of block working systems. The company's latest international project was brought to completion in Dubai, one of the richest areas of the Middle East, where the client's output potential was more than doubled in around four months through the installation of a new splitting system. The client required a modular solution because he'd just received a big order and had to increase capacity accordingly; if activity continues, the new machine is already designed for an upgrade (the installation of automatic grippers) that will double production once again while reducing the manpower required for operation at the same time.

The Dubai Project was developed following a visit by the client to the modern splitting system built by Techno Split in Vienna. Techno Split was requested to provide in the shortest time possible a system capable of working around 50 pallets loaded with blocks per day that would let the client manage an order received from a construction site in the highlands 70 km from the nation's capital. In this case, the blocks split will be used to contain the walls, a construction technique that guarantees the vertical seal of the walls without requiring continuous castings of concrete.

The client's previous productive capacity was around 15-20 pallets a day using a machine he'd constructed himself. The client now has a clearly more efficient system capable of working as many as 50 pallets a day with just two operators: one to control the machine and the grippers, the other to run the fork lift.

The machine has already been prepared for the future installation of the automatic grippers produced by Techno Split itself.



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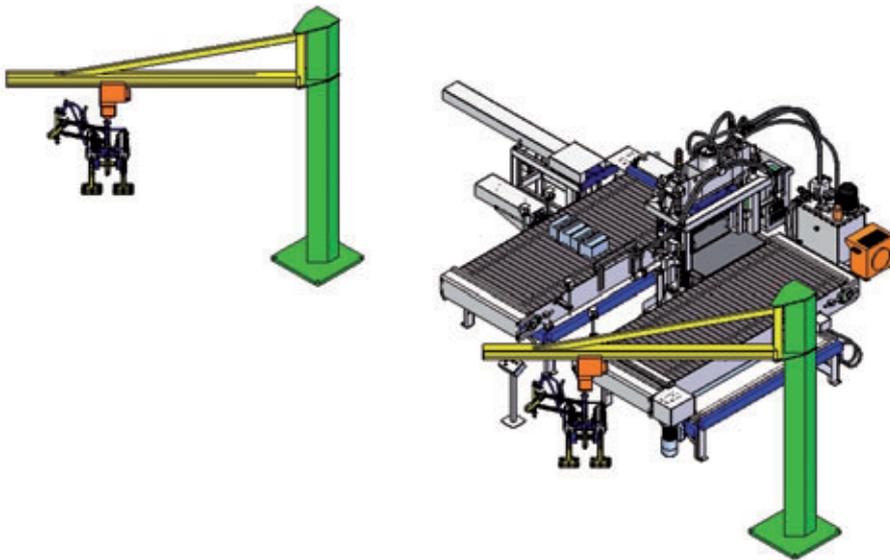
This will permit operation by one operator only and an output of 100 pallets a day.

### The system

The Dubai system features a splitting machine with a splitting length of 800 mm, 280 mm splitting height and 80 ton splitting force.

These are medium-value characteristics for Techno Split machines and the company can provide systems with splitting lengths from 600 to 1200 mm, splitting heights from 280 to 400 mm and splitting force from 60 to 120 tons. The blocks are loaded onto the slot conveyor by two pneumatic grippers that are also produced by Techno Split.

The work process is triggered by a photocell that guarantees the absence of immediate risk conditions. Safety at the workplace is a



The blocks are loaded onto the slat conveyor by two pneumatic grippers that are also produced by Techno Split

top Techno Split priority; this photocell, in fact, is only one of the safety devices and measures provided that prevent processes from being run under conditions of risk.

The blocks are moved by a pusher with a

brushless motor that is more modern than traditional hydraulic models and permits cutting to be adjusted to millimetric precision directly from the operator panel.

The advance of the blocks is also set from the

operator panel, as are practically all the system's functions, which can also be pre-programmed using the appropriate "recipes". These recipes obviously need not be set from the operator panel and can also be programmed on external devices and then loaded into the machine's management system.

The operator can also use the pusher to temporarily stop the advance of the blocks in order to permit the working of the single rows. In this phase, the slats continue sliding beneath the unmoving blocks without scratching them.

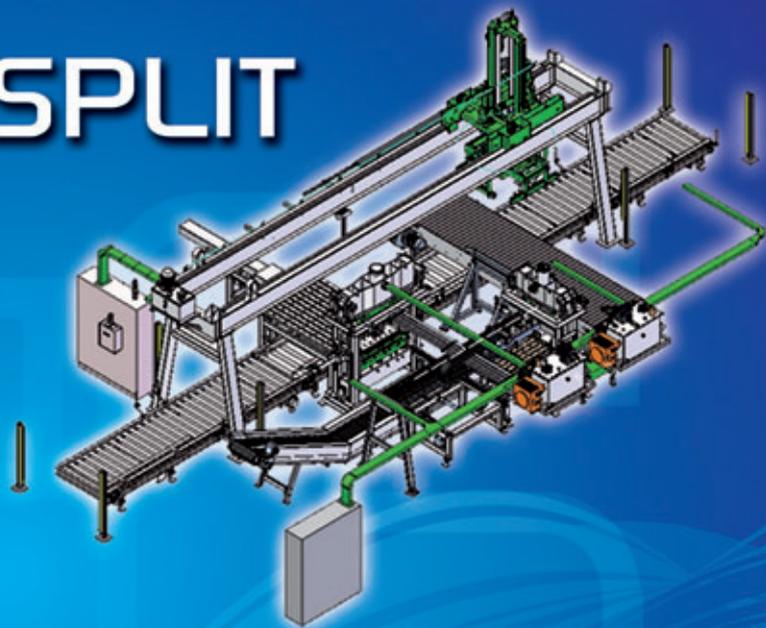
There are two lateral blades that permit the splitting of single rows of blocks. There is also a pneumatic locking mechanism for the working of multiple rows without using the lateral blades.

The automatic evacuation of the scrap can also be programmed from the operator panel: the slat conveyor opens, the pusher pushes the blocks forward and the scrap material ends up on a belt conveyor that deposits them in any container provided for the purpose. The blocks split arrive to outlet position through the partial opening and con-

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veying by the conveyor. The outlet conveyor can form rows that are different from the inlet rows.

After reaching outlet position, the blocks are positioned on the pallets using the pneumatic grippers provided with jib cranes.

### Advantages

The main advantages of the machines for the client were primarily the completeness of the offer and the Italian company's great experience in this specific type of system. The installation in Vienna, in fact, has been working now for some time and has permitted the Trento Company to optimize all its installation and productive parameters in the field. This is not a prototype and its components are not subject to productive uncertainty or experiments.

Techno Split is a specialist for reliability. Especially in their brushless versions, its systems cost little more than traditional hydraulic versions and do not require particular maintenance, apart from occasional cleaning, the greasing of a limited number of points and the changing of the filters and knife holders every 7-8 years.

All these activities can be performed by company personnel without supervision. All the most commonly required spare parts are available in the warehouse and any other particular part can be quickly built to measure by Techno Split.

All the parts used are of the highest quality, such as SEW motors; the rest of the hydraulic componentry is produced by Rexroth (Bosch Group), whereas the control instruments are produced by Siemens.

In order to get a better idea of how economical Techno Split's systems are to operate and manage, consider that the company's income from its maintenance service does not exceed 5% of its total volume of sale.

If reliability is a productive system's priority parameter, the flexibility of Techno Split production must also be remembered: the company can, in fact, create standard block splitting systems and the grippers required for such systems (buying these two parts from different suppliers can lead to problems of incompatibility) and can also use hydraulic pushers that reduce costs to a minimum or the most modern brushless technology.

The automatic scrap evacuation system by belt conveyor is a typical characteristic of systems that use brushless motors.

### FURTHER INFORMATION

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