

UTB Baranowski, Poland

Trio® screens, cone crusher and coarse washer

WEIR

Minerals

Success Story



INDUSTRY

Aggregates

CUSTOMER

UTB Baranowski

APPLICATION

Sand and gravel extraction

EQUIPMENT

Trio® TIO6203 inclined screen

Trio® TTH6203 horizontal screen

Trio® TC36 cone crusher

Trio® TTCW3618 coarse washer

A new Trio® sand and gravel plant delivered and commissioned within 10 weeks

Background

UTB Baranowski have been operating quarries in the north west of Poland since 1992. In its sites located in Krzywín and Parsów the company primarily extracts and processes sand and gravel.

UTB Baranowski recently acquired a third sand and gravel quarry at Chelm Górny. Weir Minerals Poland was asked to design and build a sand and gravel extraction and processing plant at the site. This would be UTB's first static plant, as the company chose to use mobile machinery at its other sites.

The challenge

UTB did not want to buy the machinery which had been used on site by the previous owner. Instead, they wanted a new, modern, efficient and cost-effective plant.

The biggest challenge was the timescale set by UTB, who needed the new plant to be operational within 10 weeks.

This timescale meant that the Weir Minerals team had to coordinate the delivery and commissioning of the equipment perfectly in line with the site preparation being managed by UTB.

The solution

After learning about Weir Minerals' range of Trio® comminution equipment, UTB asked Weir Minerals to design a sand and gravel plant.

Based on UTB's process and product requirements, the Weir Minerals engineering team used a mass flow simulation to calculate the correct machine sizes for the new plant that would optimise efficiency, maximise production and produce cleaner materials.

The team proposed a fully automated, crushing, screening and washing plant for natural gravel, with a feed capacity of 250 TPH, using:

- Trio® TIO6203 inclined screen – a screen for the basic classification of the feed to the washer, screening out sand and separating oversize material for the cone crusher.
- Trio® TTCW3618 coarse washer - for cleaning the material by removing organic contamination and clay.
- Trio® TC36 cone crusher - for crushing oversize rocks to the required size.
- Trio® TTH6203 horizontal screen - for classification of final products.





Top: Aerial view of the installation.

Middle: Trio® TC 36 cone crusher.

Bottom: Trio® TIO6203 inclined screen.

The results

Tomasz Baranowski, owner of UTB, said: “Weir Minerals have significantly increased both the quality of my end product and the overall performance of my plant. By lowering my operating costs the team have helped us to become even more competitive within the market. A valued partner, I now look forward to continuing to work with Weir Minerals to service and maintain my new machinery.”

Weir Minerals’ on-site team completed the modifications, preparations and installation of the machinery, ensuring each piece of equipment was tailored to meet UTB’s exact requirements.

Weir Minerals built the new sand and gravel plant in just 10 weeks which met the required capacity of processing sand and gravel at 250TPH.

The new plant allows UTB to maximise the production of the valuable coarser gravel, which previously was stuck in clay and sent to waste. In addition, UTB benefits from lower operational costs associated to this new plant, as it is fully automated and less people are required to operate the site. The electric-powered machinery provides an additional cost saving to UTB compared to the diesel powered mobile plants used on other sites. Overall the static plant for UTB is easier, cheaper and predominantly safer to maintain due to the plant’s wide walkways positioned around key service points.

The Products

The Trio® TIO series screen range is designed for continuous operation in the most demanding wet and dry applications. TIO screens are available in 2, 3 and 4 deck configurations with a feed acceptance size up to 200mm (8”). Screen support decks can be supplied to accommodate all media types, including woven wire mesh, urethane, rubber mats, self-cleaning mesh and punch plate.

The Trio® TCW series coarse washers are a cost-effective method to clean, classify and dewater coarse material. The twin shaft TTCW series doubles the capacity.

Our Trio® TC series cone crushers deliver a proven approach to processing primary, crushed ores and quarry rock products from 250mm to -8mm. These crushers are designed to be reliable, simple to operate and maintain, while incurring low operational costs. Our Trio® TC cone crushers feature a design which is universally accepted as the global standard for heavy duty, reliable secondary and tertiary crushing.

The Trio® TTH series horizontal screens are high G triple shaft screens available in sizes from 4’ x 14’ to 8’ x 20’. They are designed to provide high performance screening, even with difficult materials.