

African solutions for African challenges

Pilot Crushtec International, southern Africa's leading supplier of quarrying and mining equipment, has added another winner, and world first to its stable of products. The DoppiaTrac DR400 is a track mounted, self-driven, feeding, crushing and stockpiling machine for medium to hard bituminous coal crushing applications, and its fitted with a purpose designed 3636 double drum roll.

The concept for the DoppiaTrac was born, like so many great ideas, from a client requirement to which there was no ready solution.

"We were called out to a client, a contractor who gets paid per ton for processing coal, who needed a mobile crusher," explains Jorge Abelho, Technical Director at Pilot Crushtec. "He had experimented with various solutions, but nothing quite solved the problem. The idea of turning a stationary unit into a mobile one really piqued our interest so we converted his crusher and made it moveable.

"Once on site the machine worked like a charm and we received tons of interest from the industry to produce more machines. We, however, realised that our improvised solution was not practical as retrofitting different machines meant creating a new solution for each new client. It was with this in mind that we decided to start from scratch, conceptualise, design, and build our own fully mobile roll-crusher and the DoppiaTrac was born. It is a fully mobile machine that you can get onto site and be up and running within 30 minutes. That is why our biggest client base is contractors. There is a job, on a particular site, you can get there, get up and running, and deliver the goods."

From a design point of view, the three major concerns were ease of use, engine, and weight.

"When we start from scratch, a clean-sheet design, the first thing we focus on is the weight. We understand that this unit is mobile and needs to be moved often, and easily. Thereafter we find the best possible engine to run the rig, which is reliable, fuel efficient, and easily maintained. Finally, we try simplifying the operation as much as possible meaning that we don't have a programmable logic controller (PLC), and buttons are kept to a minimum. This machine is specifically built to survive the rigors of the African milieu where sites are remote, conditions are harsh, and work is hard. We looked at the European design concepts which have on-board computers, and a lot of moving parts, which we can do, but we wanted something simple that can be serviced in-situ without having to get technicians on site in the middle of nowhere. These machines run 24 hours a day, and we want to make sure that the customer can keep it running on their own accord."

According to Francois Marais, sales and marketing director at Pilot Crushtec, the DoppiaTrac is extremely cost-effective and extremely aggressively priced within the market. "There is nothing on the market that can compare with it from a pricing standpoint. This is all due to the fact that it was developed, designed, fabricated, and built in South Africa."

Part of the design process at Pilot Crushtec is exhaustive testing. This is not confined to exclusive, in-house testing, but also real-world, customer-based testing. "When in the R&D phase, we test the machine ourselves to identify all the likely inherent bugs all new projects create, and then give it to a trusted client to put it through its paces," continues Abelho. "We then take the feedback from the customer and implement the practical changes to address any issues the real-world testing has highlighted."

"This, however, is not the end of the process," says Fourie. "We constantly innovate and upgrade our products as technology and legislation changes. We have been asked what our budget is for R&D and it is very difficult to pin down. We are excited about the products

we produce, we are passionate about our industry, and when we see promise in a product, we investigate it from all angles, explore all options, until we are satisfied that it is the very best item we can produce. We love innovation, we love being leaders in the industry and, as a result, we try not to restrain the creativity within our company."

Pilot Crushtec owes much of its success to the fact that they embrace innovation and listen to their customers. "We gain so much insight from our customers, so much knowledge from real-world applications, and we listen," says Abelho. "And this really excites me about our new extended warranty. We generally don't hear from clients once the machine is gone, unless it breaks down. Now, along with our standard factory warranty of two years, 4 000 hours, we have added three years, an additional 6 000 hours extended protection plan which covers all the critical components of the unit, which means there is far more engagement with the customer. Very often a customer will come in and tell us about improvements they have made, or improvements they would like. We take this to heart and make it part of our monthly meeting to address these issues and identify which ones will be beneficial to our entire customer base."

DoppiaTrac DR 400 at a glance

- Does not produce a large amount of fines
- -40mm product can be produced in one pass
- First double roll crusher to be mounted on a tracked chassis
- Side mounted crusher drive for ease of maintenance
- Spring back drum mechanism
- Caterpillar C7, 186kW, power at 2200rpm, Tier 3/ACERT engine
- Diesel Tank 700l capacity with a low-level warning
- Hydraulic Tank 800l capacity with a low-level shutdown
- Failsafe emergency stop circuit
- Filters with clogging indicators integrated with the control panel