

# Bonfiglioli engineers set new group standards

Recent engineering design successes completed in South Africa for local and global projects are setting new benchmarks for the Bonfiglioli Group as the most complex that the company has undertaken. The company's MD, Henco du Plooy (PhD), explains.



**H**aving over 30 years' experience in the power transmission market, Bonfiglioli South Africa has a proven capability as a market leader in providing solutions that exceed the requirements of the most arduous applications.

The company has the range of products to match virtually any combination of output speed and power. From auxiliary drives of only 10 Nm, through to drives capable of over 1 000 000 Nm, Bonfiglioli is able to configure its products to match customer needs. "Our most common applications include conveyor drives, thickener and flotation drives and feeders of a variety of designs, where our offering has set standards globally," says Henco du Plooy, the company's MD.

## Recent successes

Bonfiglioli South Africa is a leader within the global group in the development of complex drives to meet the harshest of applications. Bonfiglioli products have developed an enviable reputation in the industry for the combination feeder drives where their compact size, owing to their modular design, makes them ideal for applications such as underground stockpiling where space can become extremely confined.

Bonfiglioli South Africa has recently supplied five compact bevel helical/planetary combination feeder drives to a global player. These drives range in peak torque from 200 000 Nm through to 600 000 Nm and have output speeds of just 5.0 rpm. They will be used to provide proven long service to the end users.

A further success story that highlights this customer-based approach was the development of an ultra-heavy duty underground shiftable conveyor drive for use in the coal industry. Development of this complex solution was undertaken in South Africa and several global firsts were achieved.

The project involved the supply of 25 units in two sizes with installed powers of 250 kW and 110 kW, respectively. The power packs comprised the renowned HDO range of bevel helical gearboxes in combina-

tion with explosion proof motors, suitable fluid drives and rigid output couplings.

A proven unit was selected to meet the specifications, but the solution required a number of bespoke components to be incorporated and manufactured according to Bonfiglioli's exacting standards. These included the design of skid-type base plates and custom bell housings to accommodate the full range of accessories.

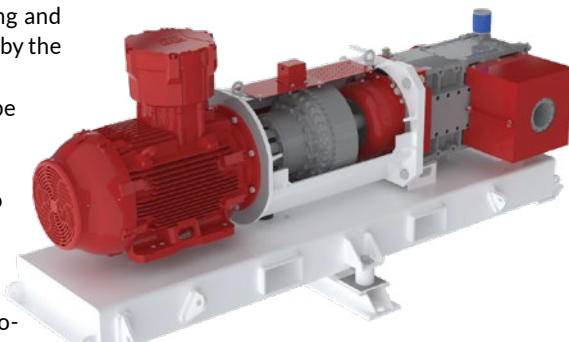
The innovative alignment-free bellhousing and support arrangement allows for easy operation and ensures that the input assembly remains correctly aligned, even after the conveyors are repeatedly moved closer to the advancing mining face. To further ease the operation of these units, the motors were required to be fully suspended from the bellhousing, which was extended to accommodate the required cooling and the soft start requirements provided by the fluid couplings.

In addition, the skid base had to be designed to handle the rigors of the underground environment, including routinely dragging them into new positions using underground load-haul-dump (LHD) trucks. Increased machine reliability has been achieved from engineering solutions to resolve the operational 'pain-points' that were noted during discussion with the customer.

"With a strong market share and numerous successful projects both locally and overseas, Bonfiglioli South Africa is able to provide a strong value proposition to large drive customers who partner with our highly competent sales, support and engineering teams. Bonfiglioli can help to generate innovative tailored solutions that exceed expectations on all fronts," Du Plooy concludes.

Bonfiglioli South Africa's commitment to solving drive challenges will be on show at Electra Mining Africa from September 5 to 9 at the Nasrec Exhibition Centre in Johannesburg, where the company's latest 'first-of-a-kind' engineering solutions will be on show. Visitors are can find Bonfiglioli in Hall 6 Stand G20.

[www.bonfiglioli.com](http://www.bonfiglioli.com)



A 3D design model of the compact bevel helical/planetary combination feeder drive designed by Bonfiglioli South Africa.



A view of the compact feeder drives on the assembly floor at Bonfiglioli's Linbro Park facility in Sandton, South Africa.