

Multi-Segmented Girth Gears

Application-based multi-segmented girth gears matched to customer specifications

If you need large diameter girth gears in your process or machinery, then you need a product you can rely on. David Brown Santasalo are pioneers of the multi-segmented girth gears which are used to rotate large drums, kilns and mills from diameters of 3 metres and up; in fact, no upper limit exists. The multiple segment design of David Brown Santasalo girth gears provides significant advantages for precision manufacturing, transportation, installation and maintenance with added benefits of high fatigue and wear resistance. With hundreds operating worldwide and so far up to 9 metres diameter, the multi-segmented girth gear design has proven durable and reliable in minerals, steel, chemical, sugar and pulp and paper applications.

Key benefits:

- Multi-segmented girth gears with a complete drive package
- Spur and helical designs
- Diameter of 3 metres+, no upper limit exists
- Advanced ADI material (Austempered Ductile Iron) minimises gear wear
- High reliability with more accurate tooth geometry
- Low transportation costs
- Easy and cost-effective replacement of individual segments
- Machined to exact tolerances, up to AGMA10 or ISO7 for certain applications

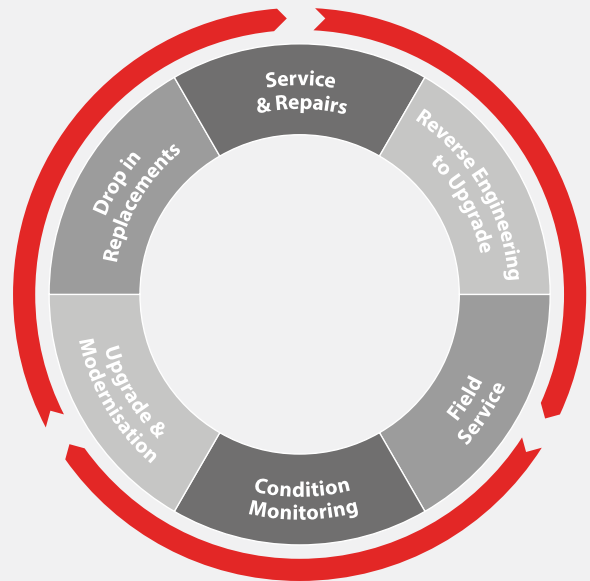


Spur & helical designs available

David Brown Santasalo helical gears run smoothly and quietly, offering a refinement over spur gears in certain applications. Thrust bearings are required to carry the additional load along the axis of helical gears and a specific lubricant is used to cope with the sliding friction between the meshing teeth.

Improved logistics

Traditionally large girth gears have been made from two or four segments bolted together for machining and therefore require large machining centres. Multi-segmented girth gears can be manufactured in a normal machining centre, one segment at a time. Heat treatment, transportation and handling can also be easier and cheaper. The David Brown Santasalo girth gear consists of 10 to 20 segments bolted together to make immensely strong and precise large diameter gears. The length and number of segments depends on gear diameter and is optimised for each application. The result is a significant reduction in lead-times as well as easier and less costly transportation. Assembly on-site presents less difficulty, with the compact segments being easier to lift and position.



Lower lifecycle costs

Gear wear is minimised by the use of (ADI) in castings. ADI has the high torque/weight ratio required together with high resistance to fatigue and wear for long ring gear life. Highly accurate production and assembly techniques minimise vibration and further enhance the long service life of the gear. Condition monitoring tools enable the performance of a drive to be followed either in real-time or as a part of regular inspections. If damage to the gear should occur, individual segments are replaced instead of changing the whole gear, making it possible to carry spare parts for critical applications.

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