



Accessory Drive Gear

Industry	Pump and Compressor
Specification	Dura-Bar 65-45-12
Redesign	From 8620 steel
Design Advantage	Noise and weight reduction
Cost Savings	Part cost reduced by 33%

This gear manufacturer couldn't find any reason NOT to use Dura-Bar for his component needs. The conversion to Dura-Bar continuous cast iron from 8620 steel made a dramatic difference for the customer, seeing improvement in cost, consistent quality, machinability and availability.

Used in compressive and air hydraulic pumps in diesel engines, the accessory gear is one of the highest volume products produced by this manufacturer.

Dura-Bar's ability to dampen vibration meant a quieter gear for the manufacturer, making the component a more attractive product. Not only that but because Dura-Bar weighs less than other materials, the final weight of the gear was reduced.

The improvements did not stop there. The customer took advantage of Dura-Bar's machinability, cutting his costs by eliminating deburring and finish grinding. Also, Dura-Bar's inherent microstructure allowed for the elimination of a heat treat process.

To increase both wear resistance and tooth bending fatigue life, the customer does austemper the gear. Dura-Bar is able to control the microstructure in 65-45-12 ductile iron, providing consistent heat treat growth. Austempered ductile iron gears can actually be grown into tolerance, which dramatically reduces the amount of grinding required after heat treat. The 8620 steel gears have a tendency to distort after heat treat, making grinding more expensive.