

Zato leads the way in (pre)shredding solutions

Production and quality up; explosion risk and energy costs down

Metal recycling machinery producer Zato - widely known for its Blue Devil pre-shredder - is seeing its business grow rapidly around the globe. So what explains the Italian company's success?



Piles of scrap waiting to be shredded by the Blue Devil at Alfa Recycling in Munich, Germany.

Great expertise, great equipment, great innovation and great service are among Zato's main characteristics. Another would be the fact that the company always has a machine waiting for a new customer, argues sales director Omar Della Gaspera. 'Whereas a delivery time of 18 months is quite normal, we can ship a machine within a month,' he asserts.

Based in Brescia in northern Italy, Zato has been designing and manufacturing ferrous and non-ferrous metals recycling plant and equipment for more than 20 years. It operates from a 4 000 m² factory and is employing a total of 45 people.

It was in 1999 that the company entered the metal recycling arena based on the founder's (Valerio Zanaglio) extensive metal recovery experience within the steel sector. As time passed, his commitment to the scrap sector grew stronger, especially after becoming a parent which inspired a new awareness of responsibility towards the planet and future generations.

Zato has been actively moving towards a circular economy, embracing ecological, technological and digital advancements, while promoting inclusion and social cohesion. In the past 20-plus years, the company has succeeded in designing and building a diverse range of recycling machines, including demolition shears, single- and twin-shaft shredders and also hammer mills, as well as sorting and recovery technologies.

Production boost in Bavaria

Alfa Recycling of Munich in Germany relies greatly on technology from Zato. Since March 2023, Zato's Blue Devil pre-shredder has been integral to the company's shredder operations, proving to be the ideal solution for handling medium-size ferrous and non-ferrous scrap.

'I wanted more throughput with less production time,' says Alfa Recycling's managing director Karl-David Schlehenskamp. Thanks to the Blue Devil, the company has achieved its goal of increasing scrap throughput by 30

to 40% while downtime on the actual shredder has been 'significantly' reduced.

And as for safety, no gas cylinders or petrol tanks get into the shredder, nor do any heavy parts that could damage the machine and cause excessive wear. The risk of explosions has been practically eliminated by the Blue Devil pre-shredder.

Twin-shaft advantage

The twin-shaft rotary shears allow the transmission of high torques to shred particularly difficult material and achieve maximum performance. The crushing of bulky scrap is optimised by increasing the density, thus meeting the production requirements of foundries and steel mills. The cutting shafts are equipped with four planetary gears (two per shaft) and four hydraulic motors (again, two per shaft), and can be powered by diesel or electric motor.

We're always on standby, says Zato

Providing a wide range of equipment and machines is not enough; Zato builds lasting partnerships for mutual success. A dedicated team is fully devoted to ensuring client satisfaction and goal accomplishment. From the very first consultation to seamless installation and continuous support, Zato stands by each customer's side throughout the entire journey.

Zato's excellence in customer assistance, delivering exceptional, rapid-response after-sales service and support anywhere in the world, is backed by a team with diverse skills: mechanical, electrical, hydraulic and programming.

Having in-depth knowledge of both machinery and customer materials is a significant advantage, enabling the optimisation of production processes and improvements in machine efficiency.

Remote eye

One of the innovative approaches Zato employs for customer assistance involves the use of augmented reality. This technology allows remote personnel, such as technicians and operators, to receive training and supervision during installation and maintenance tasks. By wearing glasses equipped with a viewer and camera, technicians can access mechanical drawings, instruction manuals and video guides to aid them in their work, regardless of their physical location.

The rotating shafts produce a powerful cut that generates little noise and dust.

Increasing output

With the two-shaft Blue Devil from Zato, Alfa Recycling has achieved a 30%-plus increase in the throughput of its electric-powered large shredder which has been in service since 1982, while at the same time reducing electricity costs.

The company's main product is ferrous scrap, which goes to steelworks. Around 25 tonnes of scrap can be processed (pre-shredded and shredded) per hour. Schlehenskamp confirms: 'We now have a throughput of around 250 tonnes per day.'

'Steel mills love it'

In North America, Zato has seen sales of shredding machinery explode. Among its new customers is Morris Scrap Metal of King Mountain in North Carolina where, in

December 2022, Zato installed an electric-powered Blue Devil. In the first six months of operation alone, production doubled and made buyers very happy. 'The steel mills love it,' says company owner Neil Morris.

For Morris, the shredder meets his company's need to process unprepared busheling and No. 2 steel. He first researched Zato's product by touring several European installations in 2016, ultimately deciding to purchase a Blue Devil in April 2022 in preference to replacing the company's old shear with a new one.

Morris Scrap Metal currently puts 30 to 35 tonnes per hour of unprepared busheling through the machine and 20 to 25 tonnes of No. 2 steel. The shredder runs for six or seven hours per day, processing 100 to 120 tonnes.

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Neil Morris.

'The cleaner the scrap, the lower the emissions'

Recycling companies Fiducia Srl of Parma and Baldetti Giorgio Srl of Castiglion Fiorentino in Tuscany rely on Zato's Blue Devil pre-shredder to achieve their goals of quality, efficiency and sustainability.

'Our company's choice to implement only the best technologies available on the market has allowed us to improve our techniques and

to increase our efficiency, which leads to a higher-quality final product,' says Giovanni Fiducia of Fiducia srl. 'This philosophy has

cemented our reputation of being a serious and reliable partner not only for our suppliers but, above all, for our customers.'

Investing in new technology is a continuous process, believes Daniele Baldetti of Baldetti Giorgio Srl. 'We look to the future, but also to the past,' he says. 'If we look back at what we have achieved already, we realise the importance of my father Giorgio's work; we can honestly say that we would not be where we are today without his wisdom and foresight. The results have come over the years; we have grown so much but I am convinced that there is still a long way to go and much room for improvement. I am already thinking of what equipment we will invest in next.'

Promoting change

Giovanni Fiducia agrees: 'I firmly believe that renewing and updating our machinery and equipment is a must if we want to offer a top-quality service and product. Where others follow, we at Fiducia want to lead; we want to be the promoters of change because only by leading will we meet the expectations of the steel mills and foundries who ultimately are our customers.'

'We must strive to work and deliver ever cleaner and purer grades of scrap metal,' continues Daniele Baldetti. 'The cleaner the scrap that foundries use to create new steel, the lower the emissions. The more scrap metal that we recycle, the less virgin iron ore we need to dig up from finite resources and the more economic growth the planet can sustain without overly taxing the environment.'

Adding value

For both companies, the installation of Zato's Blue Devil pre-shredder is an important step on the path towards total quality. 'It allows us to add value to our recycling process and therefore to the finished product,' Giovanni Fiducia explains. 'The Blue Devil is extremely robust and solid. Despite its weight of 56 tonnes, it was very easy to install and a piece of cake to operate.'



Zato's Blue Devil in operation.