



Sustainability Report 2019

Targets and Accomplishments





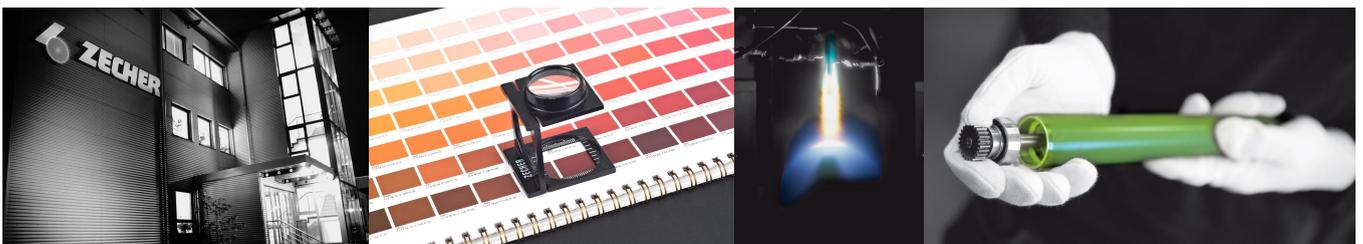
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1. About Zecher GmbH

The Zecher GmbH was founded in 1948 by Kurt Zecher in Paderborn, Germany, as the world's first company to produce routinely engraved anilox rollers.

Within our more than 70 years of history, we have developed from a small anilox roller producer of an just emerging market in the DACH region to an international high-quality supplier of innovative anilox-roller solutions, while maintaining all of the production at our headquarter in Paderborn, Germany. In total we operate seventeen laser-engraving units and ten mechanical laser-engraving units across four production plants, employing more than 170 employees. This lead towards a production of around 12.000 anilox rollers and a turnover in excess of €22 million annually.

Our more than 70 years of experience and technological developments allow us to not just provide the most recent trends in the industry but also individual anilox roller solutions for our customer's needs and additional services. All this helped us to build important relationships within the printing industry, working intensively with machine manufacturers and end-users.





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2. Our values and goals

We, at Zecher GmbH, are trying to improve our production and working methods continuously while maintaining economic efficiency. This helps us to not just provide the highest possible standard of quality for our products but also being a reliable and helpful partner to our customers and partners, so they are able to properly manage their supply chain and therefore being able to improve their production process.

Another part of our corporate responsibility are our employees. By providing sufficient wages, high social standards and the required work safety standards, we are able to reduce sick days and increase productivity. This allows us to have a more reliable work-planning, and reduce avoidable production losses.

By acknowledging the development of environmental consciousness in society, we decided to make the shift towards a more sustainable production process. These goals do not just include lowering our CO₂ emissions but also trying to find more sustainable alternatives to methods, which have a high environmental impact. This helps our customers to improve the sustainability of their supply chain in comparison to our competitors.





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3. Responsible energy consumption

Due to being an energy intensive industry (3.172.439 kWh/a (2018)), we see an enormous saving potential in our electricity consumption. Our electricity mix for 2018 contained 55,5% renewable, 14% nuclear, 23% coal , 6,6% gas and 1% of other fossil based electricity, which equals to around 291 g/kWh CO₂ and 0,0004 g/kWh of radioactive waste. The exact numbers for 2019 will be available in the first quarter of 2020. We are also planning to increase the share of renewable energy continuously in the near future.

Yet, we do not just aim for a change of our electricity sources but also to decrease our energy need in total, by replacing older energy intensive equipment, with more energy efficient alternatives. A bigger replacement for this year was the change of one of our compressors, reducing the energy need by 25% or 27.000 kWh/a, with the other compressors being exchanged as well, starting in early 2020.

In 2018 we also partnered with the company Deutsche Lichtmiete Vermietgesellschaft mbH, to upgrade our lighting system to LED. Through this partnership we are able to save around 66,88 % of the electricity used for lighting, which equals to around 262.621 kWh per year.

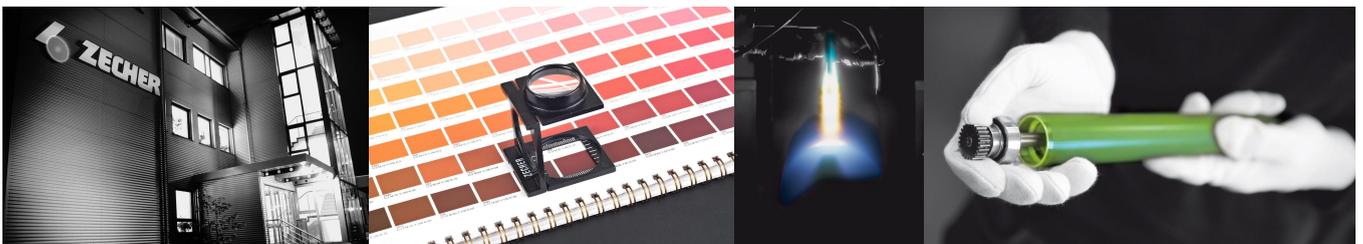




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3. Responsible energy consumption

Because of the high energy consumption of many of our machines, we have a lot of unused excess heat. To tackle this waste, we have already transformed all of our recently bought equipment to capture this heat and use it for the heating of our offices and other facilities. We are planning to apply the capturing of thermal discharge to most of our machines, if the technical characteristics allow it. We started this with the earlier mentioned compressors, as well as with a new air filter, which will be mentioned in a later point.





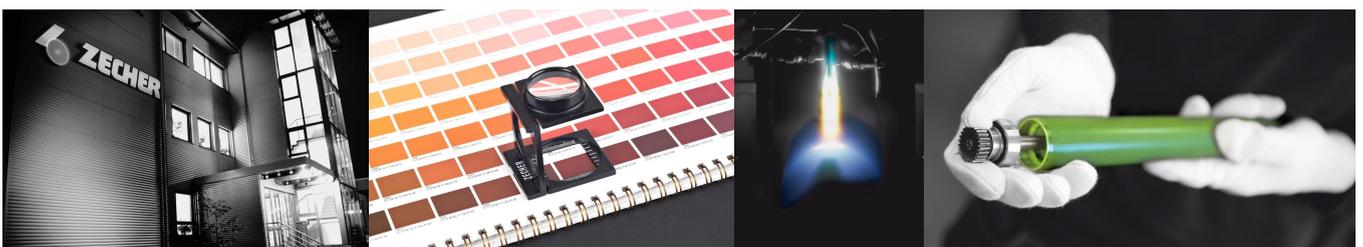
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4. Efficiency through innovation

One of our biggest innovations in recent years, was the registration of our SteppedHex patent in 2017. This new technology allowed us to offer our customers the capability to achieve a higher resolution in their printing process, without the loss of volume, while also saving up to 15% of ink consumption due to the finer lineage.

Another Zecher technology is the High Ink Transfer (H.I.T.) engraving for printing solids. Its specially modified open cell shape allows the customer to print in a higher quality, with the same amount of ink or even achieve an ink saving potential of up to 20%, depending on the individual configuration.

These two innovations can help printing companies to reduce the number of different roller specifications needed and achieve a standardization without having to compromise in quality or printing capabilities. The possibility of standardization, can help the printing business to save money by reducing the number of anilox rollers needed. This has the advantage of not just using less resources but also to avoid a stop in production due to a missing specification.





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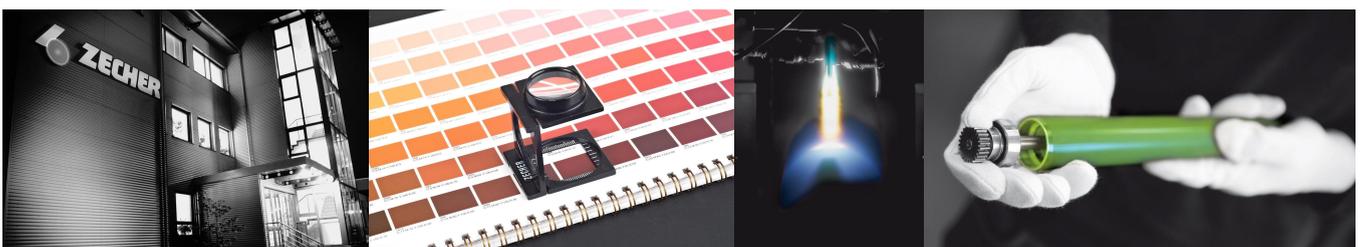
5. Laser cleaning in partnership with LaserClean

In 2019, the Zecher GmbH started a cooperation with the Dutch company LaserClean, aiming towards a sustainable and more efficient cleaning method for ceramic (anilox) rollers used in the cardboard-, flexo-, label-, and offset printing industry.

LaserClean is able to sell their machines worldwide with the help of the international network of the Zecher GmbH. But they also operate as a service provider for many companies, which are not able to afford such machines on their own or do not have the capacities for an economically viable usage.

During the cleaning process, no granulates, chemicals or water, are needed, with only the laser beam being in contact with the ceramic (anilox) roller's surface, which vaporizes the pigments and polymers of the ink. This allows the roller to be cleansed more efficiently and take less damage through the wrong use of traditional cleaning methods, helping to achieve a better printing quality and possibly longer life cycles.

This technology helps our customers to have easy access to an environmentally sustainable, yet very high quality and price competitive, cleaning process.





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6. Avoidance of harmful substances

Due to the use of not yet avoidable chemicals, the Zecher GmbH updated their exhaust air unit with a new filter system of Bemeko. This filtration system is water-based and filters the air of our chrom and chrom (6) baths with up to 28000 m³/h, to a level of at least 50% below the maximum allowed emission of 0,5 mg/m³. This allows us to significantly lower the environmental impact of the vapours of the used chemicals.

Another major problem we have been facing for a long time, is the search of an alternative for Chromium oxide ceramics (Cr₂O₃). By collaborating with different partners, like for example research centers and universities, we have been trying to find a suitable alternative, which is not just economically viable but also offers an environmental improvement. Until now we had minor successes but none of them could make a major impact, as a viable replacement.

