EFFECTIVE DEBURRING, ROUNDING AND RELIABLE SEPARATION

SHOCK ABSORBER DISCS

Deburring and rounding with Disc Finishing Technique

Stamped parts are used in a wide variety of applications in the automotive industry and are used, for example, in shock absorbers. The main processing task is deburring and rounding of the edges. Due to the thickness of the components of less than 0.5 mm, some challenges arise during surface finishing. As the workpieces are often very thin, there is a risk that they get bent. This must be avoided during the finishing process. In addition, in conventional processes the process times are very long. It is also important that there is no mixing of parts of different batches during processing. The parts must also be separated from the media after processing. This requires a reliable process.

Stamped part

Up to now, stamped parts have been processed in vibratory or tumbler systems. Disc finishing machines have not been applicable due to the gap between the disc and the upper cylinder. For thin and light parts, the processing intensity in vibratory machines is very low, which results in very long process times. After processing, the workpieces must be separated from the media, like ceramic or plastic chips. In vibrators, the separation process is often difficult because the thin parts stick and remain on the container wall and cannot be emptied completely. Workpieces left in the process container may cause mixing of parts of different batches. Vibrators also have a very

high space requirement and produce a lot of noise, which results in an unpleasant working environment.

CF 1x50

The OTEC disc finishing machines of the series CF allow that sensitive stamped parts will be deburred and rounded quickly, absolutely reliably and process capable. The effect of the different centrifugal forces between workpieces and media results in very intensive finishing. This can be 20 times more effective than conventional vibrators. Shock absorber discs are processed in a wet process using ceramic abrasives. During wet processing, a water-compound mixture is continuously added and removed, which rinses out the abrased particles. This results in a clean and corrosion-free surface of the workpieces. With OTEC machines, the punched parts can be deburred in the shortest possible time without sensitive parts getting bent. Depending on the workpiece, OTEC offers specific gap systems. With the unique zero-gap system (sliding gap system), even the smallest and thinnest parts can be processed without jamming. The gap between the rotating disc and the stationary cylinder can be reduced to zero. This enables the use of fine-grained abrasives and prevents the workpieces from getting jammed in the gap. This ensures a trouble-free process with consistent results. Thanks to the ingenious gap system, it is possible to process small and light components more effectively and faster than in conventional tumbler systems or vibrators. The use of highly wear-resistant materials and the good sealing surface with ceramic ring ensure trouble-free operation of the machine. Especially for the processing of fine and light workpieces such as stamped parts, OTEC offers spray nozzles with which the container can be completely emptied after the end of the process. This prevents media and workpieces from remaining in the process container and being mixed with other batches during the next process. Due to a special drying process with walnut granule, the stamped parts can be dried quickly

and easily after deburring. The control of the processes takes place via touch panel. This allows process parameters to be stored as programs and recalled during the next run. This user-friendly operation not only guarantees easy handling, but also ensures stable process flows. Many years of experience have been incorporated into these machines, making them the perfect solution for deburring and rounding of stamped parts. With a wide range of container sizes from 5 to 50 litres, OTEC offers tailor-made solutions for its customers.

Sieve Separation Channel SSR

In mass finishing, the subsequent separation of the workpieces from the grinding or polishing media is of central importance. In order to achieve this separation as quickly and effectively as possible, the use of an automatic separation system is recommended. This reliably separates workpieces and media. OTEC offers a large portfolio of possibilities for separation. It is particularly important that the process functions quickly and effectively and that reliable emptying of the separation channel avoids mixing of parts from different series. OTEC helps with its extensive know-how and sophisticated machine technology to optimally design the separation process for the respective workpiece. In practical tests, the individual requirements are taken into account and adapted to the corresponding granule application. OTEC has already carried out a large number of successful customer projects, including fully automated solutions with media return.