



Rotary Solutions for castings and stampings save time, space and costs

The new CB rotary finishing vibrators from Walther Trowal can be seamlessly integrated directly into the manufacturing flow.

When it comes to surface finishing of die-castings and stampings, the optimized CB rotary vibrators from Walther Trowal combine the technical features of linear continuous flow systems with the advantages of rotary vibrators. The CB machines are ideal for processing of work pieces, which merely require a light

deburring operation. For example, in case of die-castings containing only small metal flashes or stampings demanding a slight edge deburring. Since they allow feeding the work pieces individually into the machines in a continuous flow, the CB rotary vibrators can be very easily integrated into interlinked manufacturing operations.



The CB 5 rotary vibrator from Walther Trowal.

Die-castings embedded in the media mix.

Compared to just a few years ago the on-going technical improvement of aluminium, zinc or magnesium die-casting production processes has resulted in significantly shorter cycle times for de-flashing and light deburring. Also, today many stampings have just minor burs. Likewise, the slight rounding of sharp edges nowadays can be achieved in just a few minutes of 'trowalizing'. For example, based on improved production methods a renowned die-casting company was able to reduce the cycle times for de-flashing and surface homogenization of the raw die-castings to merely five to six minutes. For this reason, in close cooperation with the customer, Walther Trowal implemented some technical changes

that allowed processing the work pieces in continuous flow mode and, therefore, made it possible to integrate the rotary vibrators directly into the manufacturing flow.

The advantages of the new rotary finishing vibrators

New is that the work pieces are no longer loaded into the work bowl in complete batches but are continuously fed into the rotary vibrator in single piece flow at the actual production rate. For example, in die-casting operations this allows linking the rotary vibrator directly to the die-casting machine so that the raw die-castings can be finished without the need for any additional material handling or intermediate



A CB rotary vibrator equipped with a magnetic separator that removes ferromagnetic work pieces from the media mix and feeds them into a drier (visible on the right side of the photo).

buffer systems.

Contrary to the rectangular work bowl in linear continuous flow systems, rotary vibrators have a spiral processing channel with a steady incline towards the machine discharge section. This is equipped with a screen that permits the separation of the media from the finished work pieces. While the work pieces are discharged from the machine, the abrasive media is falling through the separation screen back into the processing bowl.

Several customers have already made the switch from the much more intensive linear continuous flow AV systems to CB rotary vibrators. One user, who operates seven vibratory finishing systems from Walther Trowal, has confirmed that with a cycle time of five to six minutes all material flashes are consistently removed from his aluminium die-castings.

The experience from actual customer installations has shown that with a CB 400 optimal finishing results can be achieved with a cycle time of four minutes, whereas



The work pieces are transferred into the machine from the side with a conveyor belt.



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the cycle time in the much bigger CB 800 amounts to seven to eight minutes.

Christoph Cruse, sales director at Walther Trowal, identifies significant advantages for his customers: "Only four minutes for 'trowalizing' of aluminium die-castings? Until recently this would have been considered as impossible. But our customers have refined their manufacturing methods to a point, where such short cycle times for de-flashing and light deburring are fully sufficient. Under such conditions our optimized CB rotary vibrators, seamlessly integrated into the overall manufacturing flow, are especially economical. And, compared to the technically more complex linear continuous flow AV systems, their price tag is considerably lower."

Conclusion

When it comes to 'trowalizing' of die-castings and stampings, Walther Trowal can now offer two processing alternatives to its customers: for work pieces with minor burs the CB rotary vibrators are the right choice. They can be easily integrated into interlinked manufacturing processes and, because of their compact design, require a minimum of space. Whenever a high processing intensity and/or a higher throughput is needed, the linear continuous flow AV machines are still the optimum solution. They allow practically any processing time that may be required for more difficult applications. ○



Jointly conducted processing trials in the test lab in Haan so far have always produced practical and economic solutions.

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