

PROCESSING OF ADDITIVELY MANUFACTURED COMPONENTS

Additively manufactured components in particular often require final improvements to their surface quality. With the help of abrasive flow machining (AFM), it is possible to process the surfaces of internal channels and complex component geometries specifically and to achieve excellent results.

AFM is always a customised process, which depends on certain component parameters, such as the type, material, geometry or surface quality.



Abrasive flow machining is particularly suitable for:

- + to generate high quality surface finishes on interior and exterior contours
- + for targeted precision deburring of intersections
- + for the defined edge rounding with reproducible work results



MicroStream
Abrasive Flow Machines
Comfort Line



Streamer



The required abrasive medium is called a streamer. It is individually adjusted to suit the material to be processed, the corresponding component geometry and desired surface quality.

The figure shows an additively manufactured element which could be processed successfully using abrasive flow machining.

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Example 1:	Measurements before	Measurements after
Average Ra	5.600 µm	0.560 µm
min. Ra	0.412 µm	0.229 µm
max. Ra	12.027 µm	0.891 µm
Average Rz	27.760 µm	2.650 µm
min. Rz	3.671 µm	1.448 µm
max. Rz	55.259 µm	4.409 µm
Material	Ti6Al4V	
Dimensions	ø 70 x 30 mm	
Process time	90 minutes	

Example 2:	Measurements before	Measurements after
Average Ra	10 µm	1.200 µm
Average Rz	50 µm	7.300 µm
Material	1,2709	
Dimensions	ø 200 x 300 mm	
Process time	120 minutes	



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