Outstanding consumables for ultra-fast plane grinding

Constant, high material removal = Short plane grinding times
Maximum planeness = Short following preparation time
Reduced preparation time = Reduced preparation cost

Plane grinding is the first preparation step and crucial for the total preparation time. With grinding stones from Struers a high material removal is obtained while deformation is kept at an absolute minimum. This makes it possible to go directly from high speed plane grinding to a fine grinding step, where 9 µm diamonds are used. This reduces the entire grinding operation to two steps only and results in absolutely plane specimens with perfect edge retention.

Different grinding stones for different materials

To cater for a wide range of materials we have developed a variety of different grinding stones. There are stones for normal and hardened steels as well as for soft and ductile materials. For extremely hard materials like sintered carbides or ceramics, we have diamond grinding discs which reduce the plane grinding time significantly.

Grinding stones require specific equipment that can provide the required high speeds for grinding and the necessary safety measures. The grinding stones mentioned on the opposite page have been especially developed for the Struers plane grinding or fully automatic preparation equipment.

Hexamatic is a fully automatic grinding and polishing machine for the uninterrupted preparation from plane grinding to final polishing. All cleaning and transportation operations are included as well.

On AbraPlan-30, grinding stones of 356 mm dia. are used. This allows for the preparation of specimen holders up to 200 mm dia., which again makes it possible to prepare large or many specimens in a very short time.

All machines are equipped with an automatic dresser to keep the stone plane and sharp. This guarantees the shortest possible grinding times.
Grinding stones/diamond grinding disc | Hexamatic | AbraPlan/MAPS
--- | --- | ---
Non-ferrous metals | 2S27 | 2S36
Plane grinding of nickel-based alloys (turbine blades) and stainless steels | 3A27 | 3A36
Plane grinding of metals >HV 250 | 4A27 | 4A36
Plane grinding of very hard steels/stees containing many carbides | 6A27 | 6A36
Plane grinding of ceramics and sintered carbides | 8D27 | 8D36

Product | Cat. no.
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270 mm dia. grinding stones/diamond grinding disc for Hexamatic
Grinding stone 6A27 #150 | 4080181
Aluminium oxide grinding stone, for plane grinding of very hard steels/stees containing many carbides.
Grinding stone 4A27 #150 | 4080179
Aluminium oxide grinding stone, for plane grinding of metals >HV 250.
Grinding stone 3A27 #150 | 4080182
Aluminium oxide grinding stone, for plane grinding of nickel-based alloys (turbine blades) and stainless steels.
Grinding stone 2S27 #150 | 4080180
Silicon carbide grinding stone, for plane grinding of non-ferrous metals.
Diamond grinding disc 8D27 #120 | 4080183
Resin bonded diamond grinding disc, for plane grinding of ceramics and sintered carbides.

356 mm dia. grinding stones for AbraPlan and MAPS
Grinding stone 6A36 #150 | 4080177
Aluminium oxide grinding stone, for plane grinding of very hard steels/stees containing many carbides.
Grinding stone 3A36 #150 | 4080178
Aluminium oxide grinding stone, for plane grinding of nickel-based alloys (turbine blades) and stainless steels.
Grinding stone 4A36 #150 | 4080010
Aluminium oxide grinding stone, for plane grinding of metals >HV 250.
Grinding stone 2S36 #150 | 4080007
Silicon carbide grinding stone, for plane grinding of non-ferrous metals.
Diamond grinding disc 8D36 #120 | 4080020
Resin bonded diamond grinding disc, for plane grinding of ceramics and carbides.

Stuers’ equipment is in conformity with the provisions of the applicable International Directives and their appurtenant Standards. (Please contact your local supplier for details)

Stuers’ products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.