

Comparison of various marking methods

Dear Customer

This table gives you an overview of the most common marking methods. In the case of "in-process marking", there is a great difference with respect to all other procedures: Marking is carried out fully automatic without any manual intervention. This saves personnel costs and at the same time process is enhanced. This is an important advantage in the manufacture of small series or individual components. Once the gravostar has been positioned in the automatic-tool-change magazine, the marking of each part takes place automatically, as this feature is integrated into the machining programme.

	Personnel costs			Error risk	Reliability	Quality	Time
	One-off	Per series	Per production part				
gravostar on processing machine	programming	no costs	no costs	no risk of errors (machining programme contains marking function)	high	constant; fully automatic and wear-less	short
engraving on the processing machine	programming	no costs	no costs	no risk of errors (machining programme contains marking function)	risk of tool breakage	depends on state of the tool	long
independently working micro-percussion machine	programming	open programme + adjustment of component positioning	part handling + gripping or clamping	error in programme selection; positioning error	depends on staff	generally constant	short
laser-marking equipment	programming	open programme + adjustment of component positioning	part handling + activation of safety device	error in programme selection; positioning error	depends on staff	constant; generally automated	very short
engraving machine	programming	open programme + adjustment of component positioning	part handling + clamping	error in programme selection; positioning error	depends on staff	depends on state of the tool	long
marking on stamping press	machine set-up	clamping of stamping die + adjustment of component positioning	part handling	incorrect stamping die; positioning error	depends on staff	depends on state of the tool and adjustment set-up	very short
stamping with manual punch	no costs	no costs	part handling + manual stamping	incorrect punch; positioning error	depends on staff	depends on staff	short
marking with electric engraver	no costs	no costs	part handling + manual stamping	marking error	depends on staff	depends on staff	long