

Dear Customer

The table below provides an overview of the most common marking methods. In the case of "in-process marking", there is a significant difference compared to all other procedures: the marking is carried out fully automatic without any manual intervention, i.e. each workpiece comes ready-marked from the CNC machine and can be processed directly. This saves on personnel costs and at the same time increases process reliability.

The gravostar marking tool is stored in the tool change magazine and is automatically changed via the tool changer. The marking program is an integral part of the machining programme, so that the marking is carried out fully automatically in real time, as text, serial numbering, logo, QR code or data matrix code, etc.☐

	Personnel costs			Error risk	Reliability	Quality	Marking time
	one-off	per series	per production part				
Marking with gravostar on the processing machine	programming	no costs	no costs	no risk of errors (marking is part of the machining programme)	high	constant; fully automatic and wear-less	short
Engraving on the processing machine	programming	no costs	no costs	no risk of errors (marking is part of the machining programme)	risk of tool breakage	depends on state of the tool	long
Marking with stationary micropercussion 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
Marking with 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 with 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