



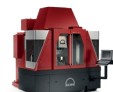


# KERN CNC machining centers: Machine comparison



Model range		KERN Micro HD	KERN Micro Vario	KERN Micro Pro	KERN Evo	KERN Pyramid Nano
						
4th and 5th axis		Yes	Yes	Yes	optional	optional
Clamping weight max.	[kg]	50	50	50	35	250
Preference spindle power S1	[kW]	15	15	7	6	15
Nominal torque S1	[Nm]	5.9	5.9	3.4	1.1	5.9
Maximum speed	[min <sup>-1</sup> ]	42,000	42,000	32,000	50,000	42,000
max. traveling distance X-axis	[mm]	350	350	350	300	500
max. traveling distance Y-axis	[mm]	220	220	220	280	500
max. traveling distance Z-axis	[mm]	250	250	250	250	400
max. feed/fast movement X-axis	[m/min]	60	30	30	16	25
max. feed/fast movement Y-axis	[m/min]	60	30	30	16	25
max. feed/fast movement Z-axis	[m/min]	60	30	30	16	25
max. acceleration X-axis	[m/s <sup>2</sup> ]	10	10	10	8	10
max. acceleration Y-axis	[m/s <sup>2</sup> ]	15	10	10	8	10
max. acceleration Z-axis	[m/s <sup>2</sup> ]	20	10	10	8	10
Amount of tools max. / type of tool holders		210/HSK 40	210/HSK 40	210/HSK 40	96/HSK 25	75/HSK 40
Control		Heidenhain TNC 640	Heidenhain TNC 640	Heidenhain TNC 640	Heidenhain iTNC 530	Heidenhain TNC 640
Length x width x height (without aspiration)	[mm]	2660 x 1634 x 2634	2660 x 1634 x 2634	2660 x 1585 x 2502	1960 x 1730 x 2190	2850 x 2830 x 3220
Weight	[kg]	5,500	5,200	5,200	3,000	8,000
Features		With its innovative, practically wear-free micro-gap hydrostatics, linear drives and advanced KERN temperature management, the KERN Micro HD is the new benchmark in precision, long-term stability and dynamics. Together with the experience of KERN customers and the know-how of KERN application engineers, the KERN Micro HD is unbeatable. The optional coordinate grinding package allows efficient milling and grinding with only one clamping.	Re-designed and with many new developments, the second generation of KERN Micro sets new standards in terms of flexibility, precision and productivity. Great footprint, trimmed for productivity and precision, flexible and application-oriented, the KERN Micro Vario generates the decisive competitive advantage.	Since its market launch, the KERN Micro combines highest precision with an utmost of flexibility and highest performance. The KERN Micro Pro is the highly process-stable solution for the efficient serial production of precision parts. The ideal solution for getting started in precise machining.	The KERN Evo is the result of years of consistent development work. The consequence of this continuous improvement is utmost precision and productivity, especially in the production of micro- and watch-parts. The Evo is a great benefit when milling higher quantities.	The KERN Pyramid Nano is designed for applications requiring the highest precision and surface quality. And the KERN Pyramid Nano is even suited for larger workpieces which require short machining times at the same time. The core of this machining center are the hydrostatically supported and driven axes, which provide virtually lifetime, free from wear, precision. The optional coordinate grinding package allows efficient milling and grinding with only one clamping.
Accuracy at the piece		< 2 µm	< 5 µm	< 10 µm	< 5 µm	< 2 µm
Automation		Internal/external	Internal/external	Internal/external	external	Internal/external
Drives / guidance systems		Linear motor/hydrostatic guide	Ball screw/bearing guide	Ball screw/bearing guide	Ball screw/bearing guide	Hydrostatic lead screw/hydrostatic guide