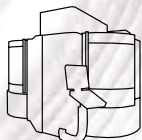




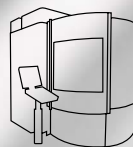
High-speed Milling

Across a wide variety of industries and applications, manufacturers of precision tools and molds and dies enjoy a competitive edge, thanks to the fastest, precise machining delivered by our high-speed Milling solutions.

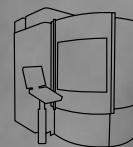
Three- and five-axis



MILL X 400
MILL X 400 U

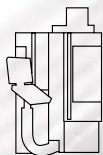


MILL X 600
MILL X 600 U

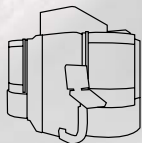


MILL X 800

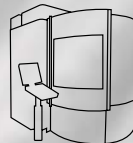
Five-axis



HSM 200U LP

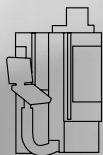


MILL S 400 U
MILL S 400 U Precision

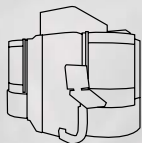


MILL S 600 U

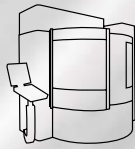
Three-axis



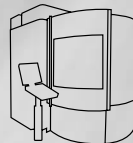
HSM 200 LP



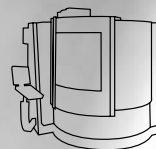
MILL S 400
MILL S 400 Precision



HSM 500 (Graphite)
MILL S 500 (Graphite)
MILL S 500 Precision



MILL S 600



HSM 700



MILL S 800

200

400

500

600

700

800

X travel (mm)

Mikron

HSM 200 LP HSM 200U LP

Highly productive, compact solution for highest precision part and mold makers

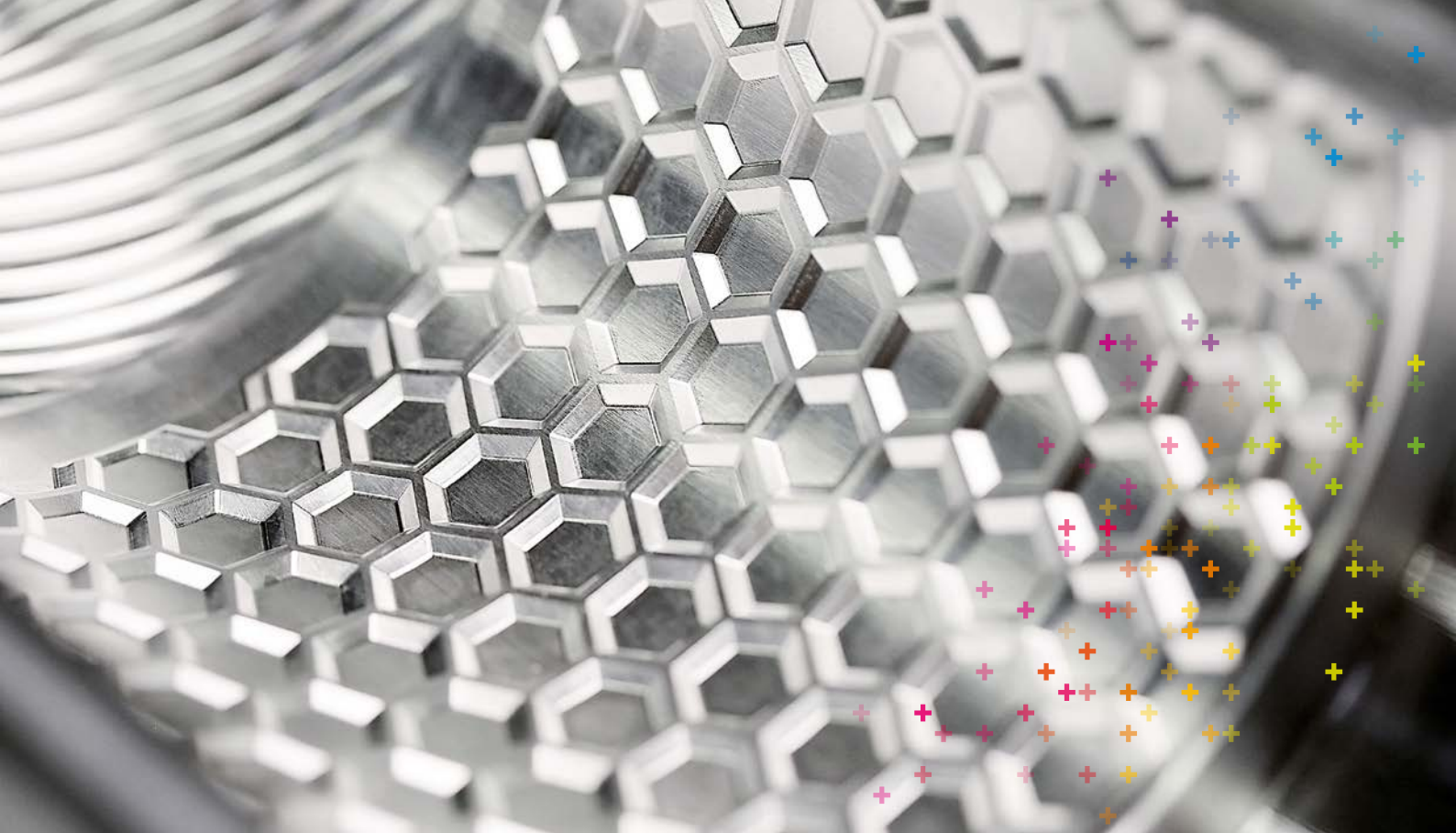


- + Highest precision, best surface finish
- + Fastest high-precision solution on the market
- + Most compact fully automated precision cell
- + Integrated measuring and control system



Main specifications		HSM 200 LP	HSM 200U LP
Travel X, Y, Z *	mm (in)	160 x 160 x 200 (6.3 x 6.3 x 7.87)	160 x 160 x 200 (6.3 x 6.3 x 7.87)
Swiveling axis / tilting axis	°	- / -	+30 / -120 / n x 360
Working Spindle (40 % ED, S6)	rpm / kW / Nm	50 000 (HSK-E32) / 8.5 / 3.4	50 000 (HSK-E32) / 8.5 / 3.4
Rapid traverse X, Y, Z	m / min (ipm)	42 (1653)	42 (1653)
Rapid traverse: swiveling / rotating	rpm	- / -	150 / 250
Clamping surface / max. load (incl. pallet)	mm / kg (lbs)	in accordance with pallet / 20 (44)	in accordance with pallet / 8 (17.6)
Tool magazine	piece	30 / 60 (HSK-E32)	30 / 60 (HSK-E32)
Automation: pallet size / number	mm / piece	GPS 120/14, 70/20 MacroMagnum 156/12 Macro 116/14, 70/20, 54/20 ITS 148/12, 115/14, 72/20	GPS 120/14, 70/20 MacroMagnum 156/12 Macro 116/14, 70/20, 54/20 ITS 148/12, 115/14, 72/20
Max. load (incl. pallet)	kg (lbs)	20 (44)	8 (17.64)
Control unit	Heidenhain / FANUC	iTNC 530 HSCI / 31i B5	iTNC 530 HSCI / 31i B5

* Longitudinal x lateral x vertical



Mikron

MILL S 400 (U/Precision) MILL S 500 (Precision/Graphite)

Perfect surface finish, very high accuracy, unbeaten speed for mold and die makers



Main specifications		MILL S 400	MILL S 400 U	MILL S 500
Travel X, Y, Z *	mm (in)	500 x 450 x 360 (19.68 x 17.72 x 14.17)	500 x 240 x 360 (19.68 x 9.45 x 14.17)	500 x 450 x 360 (19.68 x 17.72 x 14.17)
Swiveling axis / tilting axis	°	- / -	+110/-110 / n x 360	- / -
Working Spindle (40% ED, S6)	rpm / kW / Nm	42 000 (HSK-E40) / 13.5 / 8.8	42 000 (HSK-E40) / 13.5 / 8.8	42 000 (HSK-E40) / 13.5 / 8.8
Rapid traverse X, Y, Z	m/min (ipm)	61 (2401)	61 (2401)	61 (2401)
Rapid traverse: swiveling / rotating	rpm	- / -	165 / 250	- / -
Clamping surface / max. load **	mm / kg (lbs)	in accordance with pallet / 120 (265)	in accordance with pallet / 25 (55)	590 x 450 / 200 (440)
Tool magazine	piece	20 / 40 (HSK-E32) 18 / 36 / 68 / 168 / 308 (HSK-E40)	20 / 40 (HSK-E32) 18 / 36 / 68 / 168 / 308 (HSK-E40)	20 / 40 (HSK-E32) 18 / 36 / 68 / 168 / 308 (HSK-E40)
Automation: pallet size / number	mm / piece	GPS 240/10 Dynafix 280/7, 350/7 UPC 320/7	MacroMagnum 156/18 ITS 148/20	-
Max. load (incl. pallet)	kg (lbs)	90 (198)	25 (55)	-
Control unit	Heidenhain	iTNC 530 HSCI	iTNC 530 HSCI	iTNC 530 HSCI
Optional Spindles		60 000 (HSK-E32) / 8.5 / 3.5 42 000 CoolCore (HSK-E40) / 13.5 / 8.8 30 000 (HSK-E40) / 13.5 / 8.8		

* Longitudinal x lateral x vertical ** incl. pallet



- + Five-axis pioneer with best configuration for mold and die
- + Fastest High Speed Milling HSM solution on the market
- + High precision, best surface finish over long machining processes
- + Integrated Automation and measuring system



MILL S 400 Precision	MILL S 400 U Precision	MILL S 500 Precision	MILL S 500 Graphite
500 x 450 x 360 (19.68 x 17.72 x 14.17)	500 x 240 x 360 (19.68x9.45x14.17)	500 x 450 x 360 (19.68 x 17.72 x 14.17)	500 x 450 x 360 (19.68 x 17.72 x 14.17)
- / -	+110/-110 / n x 360	- / -	- / -
42 000 (HSK-E40) / 11 / 3.5	42 000 (HSK-E40) / 11 / 3.5	42 000 (HSK-E40) / 11 / 3.5	42 000 (HSK-E40) / 13.5 / 8.8
42 (1653)	42 (1653)	42 (1653)	61 (2401)
- / -	165 / 250	- / -	- / -
in accordance with pallet / 120 (265)	in accordance with pallet / 25 (55)	550 x 450 / 120 (265)	590 x 450 / 200 (440)
18 / 36 / 68 / 168 / 308 (HSK-E40)	18 / 36 / 68 / 168 / 308 (HSK-E40)	18 / 36 / 68 / 168 / 308 (HSK-E40)	20 / 40 (HSK-E32)
			18 / 36 / 68 / 168 / 308 (HSK-E40)
GPS 240/10 Dynafix 280/7, 350/7 UPC 320/7	MacroMagnum 156/18 ITS 148/20	-	-
90 (198)	25 (55)	-	-
iTNC 530 HSCI	iTNC 530 HSCI	iTNC 530 HSCI	iTNC 530 HSCI

Mikron

MILL S 600 (U) MILL S 800

High accuracy, perfect surfaces, best speed for medium-size, multi-cavity molds



- + Five-axis pioneer with best configuration for mold and die
- + Fastest high-speed Milling (HSM) solution on the market
- + Powerful and user-friendly smart machine module
- + Best ergonomics and integrated Automation



Main specifications		MILL S 600	MILL S 600 U	MILL S 800
Travel X, Y, Z *	mm (in)	600 x 600 x 500 (23.62 x 23.62 x 19.68)	800 x 600 x 500 (31.49 x 23.62 x 19.68)	800 x 600 x 500 (31.49 x 23.62 x 19.68)
Swiveling axis / tilting axis	°	- / -	+30/-110 / n x 360	- / -
Working Spindle (40 % ED, S6)	rpm / kW / Nm	36 000 (HSK-E50) / 33 / 21	36 000 (HSK-E50) / 33 / 21	36 000 (HSK-E50) / 33 / 21
Rapid traverse X, Y, Z	m/min (ipm)	61 (2401)	61 (2401)	61 (2401)
Rapid traverse: swiveling / rotating	rpm	- / -	60 / 150	- / -
Clamping surface / max. load **	mm / kg (lbs)	900 x 600 / 500 (1102)	in accordance with pallet / 120 (265)	900 x 600 / 1000 (2204)
Automation: pallet size / number	mm / piece	600/800 x 600 / 4	GPS 240/10 Dynafix 280/7, 350/7 UPC 320/7 90 (198)	600/800 x 600 / 4
Max. load (incl. pallet)	kg (lbs)	500 (1102)		800 (1764)
Control unit	Heidenhain	iTNC 530 HSCI	iTNC 530 HSCI	iTNC 530 HSCI
Optional Spindles		42 000 CoolCore (HSK-E40) / 13.5 / 8.8 42 000 (HSK-E40) / 13.5 / 8.8 30 000 (HSK-E40) / 13.5 / 8.8		
Tool magazines (piece)		18 / 36 / 68 / 168 / 308 (HSK-E40) 15 / 30 / 60 / 120 / 170 / 220 (HSK-E50)		

* Longitudinal x lateral x vertical ** incl. pallet

Mikron

HSM 500 (Graphite) HSM 700

Complement to our die-sinking EDM for mold, die and especially electrode making



- + The original HSM machine
- + Highest manufacturing dynamic and speed in this range
- + Ideal for quick setup and changing jobs
- + Great ergonomics



Main specifications		HSM 500	HSM 500 Graphite	HSM 700
Travel X, Y, Z *	mm (in)	500 x 450 x 350 (19.68x17.72x13.78)	500 x 450 x 350 (19.68x17.72x13.78)	700 x 600 x 500 (27.56x23.62x19.68)
Swiveling axis / tilting axis	°	- / -	- / -	- / -
Working Spindle (40% ED, S6)	rpm / kW / Nm	42 000 (HSK-E40) / 13.5 / 4.2	42 000 (HSK-E40) / 13.5 / 4.2	42 000 (HSK-E40) / 13.5 / 4.2
Rapid traverse X, Y, Z	m / min (ipm)	20 / 42 (787 / 1642)	20 / 42 (787 / 1642)	20 / 40 (787 / 1564)
Rapid traverse: swiveling / rotating	rpm	- / -	- / -	- / -
Clamping surface	mm	550 x 450	550 x 450	900 x 600
Max. load (incl. pallet)	kg (lbs)	200 (440)	200 (440)	800 (1764)
Tool magazines	piece	18 / 36 (HSK-E40)	18 / 36 (HSK-E40)	18 / 36 (HSK-E40)
Automation: pallet size / number	mm / piece	-	GPS 240/10 Dynafix 280/7, 350/7 UPC 320/7	-
Max. load (incl. pallet)	kg (lbs)	-	90 (198)	-
Control unit	Heidenhain	iTNC 530 HSCI	iTNC 530 HSCI	iTNC 530 HSCI
Optional Spindles		30 000 (HSK-E40) / 12 / 8.8 36 000 (HSK-E50) / 32 / 20 **		

* Longitudinal x lateral x vertical ** HSM 700

Mikron

MILL X 400 MILL X 400 U

Maximum flexibility, highest productivity for small, complex, light parts



- + Highly dynamic and reliable
- + Powerful and user-friendly smart process improvement module
- + High precision, best surface finish over long machining processes
- + Integrated Automation and measuring system



Main specifications		MILL X 400	MILL X 400 U
Travel X, Y, Z*	mm (in)	500 x 450 x 360 (19.68 x 17.72 x 14.17)	500 x 240 x 360 (19.68 x 9.45 x 14.17)
Swiveling axis / tilting axis	°	- / -	+ 110 / -110 / n x 360
Working Spindle (40% ED, S6)	rpm / kW / Nm	42 000 (HSK-E40) / 13.5 / 8.8	42 000 (HSK-E40) / 13.5 / 8.8
Rapid traverse X, Y, Z	m / min (ipm)	100 (3937)	100 (3937)
Rapid traverse: swiveling / rotating	rpm	- / -	165 / 250
Clamping surface	mm	in accordance with pallet	in accordance with pallet
Max. load (incl. pallet)	kg (lbs)	120 (265)	25 (55)
Tool magazine	piece	20 / 40 (HSK-E32) 18 / 36 / 68 / 168 / 308 (HSK-E40)	20 / 40 (HSK-E32) 18 / 36 / 68 / 168 / 308 (HSK-E40)
Automation: pallet size / number	mm / piece	GPS 240/10 Dynafix 280/7, 350/7 UPC 320/7	MacroMagnum 156/18 ITS 148/20
Max. load (incl. pallet)	kg (lbs)	90 (198)	25 (55)
Control unit	Heidenhain	iTNC 530 HSCI	iTNC 530 HSCI
Optional Spindles		60 000 (HSK-E32) / 8.5 / 3.5 42 000 CoolCore (HSK-E40) / 13.5 / 8.8 30 000 (HSK-E40) / 13.5 / 8.8	

* Longitudinal x lateral x vertical

Mikron

MILL X 600 (U) MILL X 800

Highest productivity at maximum flexibility for precise, complex, light parts



- + Highly dynamic and reliable
- + Powerful and user-friendly smart process improvement module
- + Best ergonomics and integrated Automation



Main specifications		MILL X 600	MILL X 600 U	MILL X 800
Travel X, Y, Z *	mm (in)	600 x 600 x 500 (23.62 x 23.62 x 19.68)	800 x 600 x 500 (31.49 x 23.62 x 19.68)	800 x 600 x 500 (31.49 x 23.62 x 19.68)
Swiveling axis / tilting axis	°	- / -	+30/-110 / n x 360	- / -
Working Spindle (40% ED, S6)	rpm / kW / Nm	36 000 (HSK-E50) / 33 / 21	36 000 (HSK-E50) / 33 / 21	36 000 (HSK-E50) / 33 / 21
Rapid traverse X, Y, Z	m/min (ipm)	100 (3937)	100 (3937)	100 (3937)
Rapid traverse: swiveling / rotating	rpm	- / -	60 / 150	- / -
Clamping surface / max. load **	mm / kg (lbs)	900 x 600 / 500 (1102)	in accordance with pallet / 120 (265)	900 x 600 / 1000 (2204)
Automation: pallet size / number	mm / piece	600/800 x 600 / 4	GPS 240/10 Dynafix 280/7, 350/7 UPC 320/7 90 (198)	600/800 x 600 / 4
Max. load (incl. pallet)	kg (lbs)	500 (1102)		800 (1764)
Control unit	Heidenhain	iTNC 530 HSCI	iTNC 530	iTNC 530 HSCI
Optional Spindles	42 000 CoolCore (HSK-E40) / 13.5 / 8.8 42 000 (HSK-E40) / 13.5 / 8.8 30 000 (HSK-E40) / 13.5 / 8.8 24 000 (HSK-A63) / 28 / 28			
Tool magazines (piece)	18 / 36 / 68 / 168 / 308 (HSK-E40) 15 / 30 / 60 / 120 / 170 / 220 (HSK-E50) 30 / 48 / 120 / 170 / 220 (HSK-A63)			

* Longitudinal x lateral x vertical ** incl. pallet