

03

# Technical data . C 650



# 03.1

## Technical data . C 650

<b>Working area</b>	Traverse	X-axis	1050 mm
	Traverse	Y-axis	900 mm
	Traverse	Z-axis	600 mm
	Rapid linear traverses	X-Y-Z	35 - 35 - 35 m/min
	Linear acceleration	X-Y-Z	6 m/s <sup>2</sup>
	Linear feed force	X-Y-Z	7000 N
	Max. vertical table clearance		775 mm
	Max. workpiece diameter		Ø 900 mm
	Max. workpiece height		600 mm
	Collision circle (A-axis) in 0° position		Ø 1100 mm
	<b>Main spindle drive</b>	Speed	15000 rpm
Main power/Torque		20% c.d.f.	42 kW / 148 Nm
Speed		18000 rpm	HSK A 63 ○
Main power/Torque		20% c.d.f.	42 kW / 148 Nm
<b>Control unit</b>	Heidenhain		TNC 640 ●
<b>Tool changer (pick-up)</b>	Interface		SK 40 / HSK A 63 ●
	Magazine pockets		42 items
	Chip-to-chip time		approx. 6 s
	Maximum tool length		350 mm
	Max. tool diameter with corresponding adjacent pocket allocation		Ø 80 mm Ø 125 mm
	Max. tool weight		8 kg
	Max. magazine load		168 kg
	<b>Extension of tool storage capacity</b>	Additional tool magazine ZM 50 (SK 40 / HSK A 63)	
Additional tool magazine ZM 88 k (SK 40 / HSK A 63)			additional 88 pockets ○
Additional tool magazine single ZM 216 (HSK A 63)			additional 216 pockets ○
Additional tool magazine double ZM 528 (HSK A 63)			additional 528 pockets ○
Max. tool diameter with corresponding adjacent pocket allocation in additional tool magazine			Ø 80 mm Ø 125 mm
Max. tool weight			8 kg

- Included in standard delivery
- Available upon request

<b>Chip drawer</b>	Removable chip drawer	●	
<b>Chip conveyor</b>	Scraper belt conveyor	○	
	Hinged belt conveyor	Advanced / Advanced 250 ○	
	Ejection height	at least 940 mm	
	Chip cart	450 l	
<b>External cooling lubricant supply</b>	Capacity of standard tank	315 l ●	
<b>Internal cooling lubricant supply with paper band filter</b>	Capacity of standard tank	112 l ○	
	Capacity of cooling lubricant tank	1100 l with 80 bar / 570 l with 40 bar	
	Pressure (adjustable up to)	max. 40 bar / 27 l/min max. 80 bar / 22 l/min ○	
	Power consumption	up to 22,5 kVA	
<b>Table variants</b>		Swivelling rotary table	Rigid clamping table
	Clamping surface	Ø 900 x 750 mm	1250 x 982 mm
	Swivelling range	+ / -115°	-
	C-axis drive mode	Worm	-
	Swivelling axis A speed: Tandem drive	25 rpm	-
	Speed rotary axis C:	25 rpm	-
	Max. table load	1500 kg	3000 kg
	T grooves parallel	7 / 18 H7	9 / 18 H7
<b>Positional uncertainty</b>	A in X-Y-Z axes according to ISO 230-2 (calculated at a constant ambient temperature of 20 °C +/-1 °C. Our products are subject to the German Export Law and require authorization since the attainable precision may be less/greater than 6 µm.)	≤ 0,006 mm ●	
<b>Hydraulics</b>	Operating pressure	120 bar ●	
<b>Central lubrication</b>	Minimum grease lubrication quantity	●	
<b>Connected loads (machine)</b>	Mains connection	400 V / 50/60 Hz	
	Power consumption	up to 48 kVA	
	Compressed air	6 bar	
<b>Weight</b>	(standard version without optional extras, attachments, work-pieces and cooling lubricant)	approx. 15,4 t	