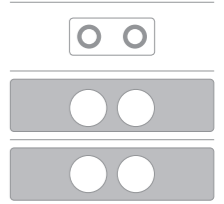
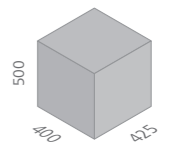




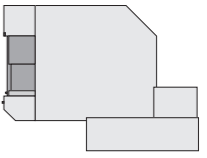
Working range	
X-axis	400 mm
Y-axis (toolchange position)	500 mm (775 mm)
Z-axis	425 mm
Spindle distance	400 mm
Workpiece carrier	
Swivel carrier / counterbearing with crown gear: swivel time 0 / 180°	approx. 3,5 s
A- and U-axis, prepared for mounting a fixture plate, up to max.	ø 550 mm x 1030 mm
Drive system	Torque motor
Load capacity	2 x 450 kg
Speed range A-, U-axis	1 - 50 rpm
C- and W-axis*	2 / 4 satellites
Work spindle	
	HSK-A63
Spindle bearings ø	< 0,9 s
Run up time 0 - n _{max}	80 mm
Typ 1 Power / Torque (40% duty cycle)	2 x 35 kW / 80 Nm
Speed range	1 - 10 000 rpm (1 - 17 500 rpm)*
Typ 2 Power / Torque (40% duty cycle)	2 x 45 kW / 125 Nm
Speed range	1 - 10 000 rpm (1 - 17 500 rpm)*
Typ 3 Power / Torque (25% duty cycle)	2 x 27 kW / 200 Nm
Speed range	1 - 10 000 rpm
Feed drive	
Drive system	Ball screw
Rapid traverse X / Y / Z	55 / 70 / 70 m/min
Axis acceleration X / Y / Z	8 / 8 / 15 m/s ²
Max. feed thrust X / Y / Z	15 000 / 15 000 / 12 000 N
Accuracy	
Position measuring system	Direct, absolute
Positioning tolerance X / Y / Z	Tp = 0,008 mm
Tool magazine	
Toolchange system	Pick-Up
Capacity	2 x 36 (2 x 60 / 2 x 92 / 2 x 116)*
Max. tool ø	80 mm / 160 mm (-o-)
Max. tool length	300 mm
Max. tool weight	10 kg
Toolchange	
Chip-to-chip time	approx. 2,75 s
Weight / Dimensions	
Total weight	approx. 14 500 kg
Transport dimensions W x H x L	3,27 m x 3,05 m x 4,40 m
Machine installed W x H x L	4,38 m x 3,10 m x 7,00 m
Connected load	
Operating voltage	3 x 400 Volt, 50 Hz, TN-S/TN-C Netz
Total connected load	105 kVA
Mean air consumption	0,6 Nm ³ /min (6 bar)
CNC control system	
Siemens	SINUMERIK 840D sl
Bosch-Rexroth*	IndraMotion MTX
Fanuc*	31i



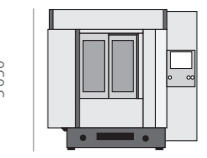
DOUBLE SWIVEL CARRIER
2 OR 4 ROTARY TABLES*



WORKSPACE PER SPINDLE



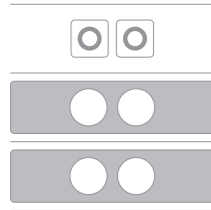
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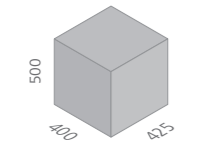
3050
3270

*optional, **on request, -o- occupancy of multiple magazine positions. Details depending on equipment. Technical data according to project planning. Deviation +/- 15% reserved. Subject to change without notice.

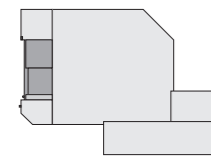
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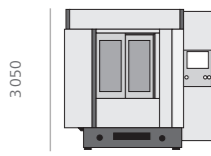
DOUBLE SWIVEL CARRIER
2 OR 4 ROTARY TABLES*



WORKSPACE PER SPINDLE



4 400



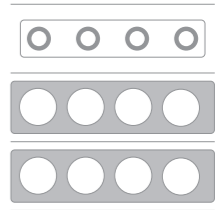
3 270

Working range	
X-axis	400 mm
Y-axis (toolchange position)	500 mm (775 mm)
Z-axis	425 mm (Z ₁ , Z ₂)
Spindle distance	400 mm
Workpiece carrier	
Swivel carrier / counterbearing with crown gear: swivel time 0 / 180°	approx. 3,5 s
A- and U-axis, prepared for mounting a fixture plate, up to max.	ø 550 mm x 1 030 mm
Drive system	Torque motor
Load capacity	2 x 450 kg
Speed range A-, U-axis	1 - 50 rpm
C- and W-axis*	2 / 4 satellites
Work spindle	
HSK-A63	
Spindle bearings ø	< 0,9 s
Run up time 0 - n _{max}	80 mm
Typ 1 Power / Torque (40% duty cycle)	2 x 35 kW / 80 Nm
Speed range	1 - 10 000 rpm (1 - 17 500 rpm)*
Typ 2 Power / Torque (40% duty cycle)	2 x 45 kW / 125 Nm
Speed range	1 - 10 000 rpm (1 - 17 500 rpm)*
Typ 3 Power / Torque (25% duty cycle)	2 x 27 kW / 200 Nm
Speed range	1 - 10 000 rpm
Feed drive	
Drive system	Ball screw
Rapid traverse X / Y / Z	55 / 70 / 75 m/min
Axis acceleration X / Y / Z	8 / 8 / 15 m/s ²
Max. feed thrust X / Y / Z	15 000 / 15 000 / 2 x 8 000 N
Accuracy	
Position measuring system	Direct, absolute
Positioning tolerance X / Y / Z	Tp = 0,008 mm
Tool magazine	
Toolchange system	Pick-Up
Capacity	2 x 36 (2 x 60 / 2 x 92 / 2 x 116)*
Max. tool ø	80 mm / 160 mm (-o-)
Max. tool length	300 mm
Max. tool weight	10 kg
Toolchange	
Chip-to-chip time	approx. 2,75 s
Weight / Dimensions	
Total weight	approx. 14 500 kg
Transport dimensions W x H x L	3,27 m x 3,05 m x 4,40 m
Machine installed W x H x L	4,38 m x 3,10 m x 7,00 m
Connected load	
Operating voltage	3 x 400 Volt, 50 Hz, TN-S/TN-C Netz
Total connected load	105 kVA
Mean air consumption	0,6 Nm ³ /min (6 bar)
CNC control system	
Siemens	SINUMERIK 840 D sl
Bosch-Rexroth*	IndraMotion MTX
Fanuc*	31i

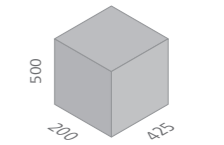
*optional, **on request, -o- occupancy of multiple magazine positions. Details depending on equipment. Technical data according to project planning. Deviation +/- 15% reserved. Subject to change without notice.

BA 442

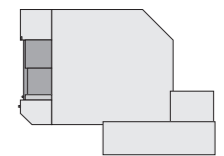
Working range	
X-axis	200 mm
Y-axis (toolchange position)	500 mm (775 mm)
Z-axis	425 mm
Spindle distance	200 mm
Workpiece carrier	
Swivel carrier / counterbearing with crown gear: swivel time 0 / 180°	approx. 3,5 s
A- and U-axis, prepared for mounting a fixture plate, up to max.	ø 550 mm x 1 030 mm
Drive system	Torque motor
Load capacity	2 x 450 kg
Speed range A-, U-axis	1 - 50 rpm
C- and W-axis*	4 satellites
Work spindle	
HSK-A63	
Run up time 0 - n _{max}	0,45 s (1,2 s)*
Spindle bearings ø	80 mm
Power / Torque (40% duty cycle)	4 x 32 kW / 4 200 rpm / 4 x 72 Nm
Speed range	1 - 10 000 rpm (1 - 17 500 rpm)*
Feed drive	
Drive system	Ball screw
Rapid traverse X / Y / Z	55 / 70 / 70 m/min
Axis acceleration X / Y / Z	8 / 8 / 12 m/s ²
Max. feed thrust X / Y / Z	15 000 / 15 000 / 12 000 N
Accuracy	
Position measuring system	Direct, absolute
Positioning tolerance X / Y / Z	Tp = 0,008 mm
Tool magazine	
Toolchange system	Pick-Up
Capacity	4 x 18 (4 x 30 / 4 x 46 / 4 x 58)*
Max. tool ø	80 / 150 mm (-o-)
Max. tool length	300 mm
Max. tool weight	10 kg
Toolchange	
Chip-to-chip time	approx. 3,00 s
Weight / Dimensions	
Total weight	approx. 14 500 kg
Transport dimensions W x H x L	3,27 m x 3,05 m x 4,40 m
Machine installed W x H x L	4,38 m x 3,10 m x 7,0 m
Connected load	
Operating voltage	3 x 400 Volt, 50 Hz, TN-S/TN-C Netz
Total connected load	123 kVA
Mean air consumption	1,0 Nm ³ /min (6 bar)
CNC control system	
Siemens	SINUMERIK 840 D sl
Bosch-Rexroth*	IndraMotion MTX
Fanuc*	31i



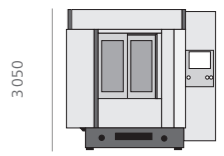
DOUBLE SWIVEL CARRIER



WORKSPACE PER SPINDLE



4 400



3 270

*optional, **on request, -o- occupancy of multiple magazine positions. Details depending on equipment. Technical data according to project planning. Deviation +/- 15% reserved. Subject to change without notice.