

Fact Sheet
Milling Heads & Spindle Quills



Milling Heads with High Frequency Spindle (Type on Customers Request)

Type	Name	Tool-interface	Spindle		Spindle		Axis		Axis	
			Speed (rpm)		Torque (Nm)	Power (kW)	A-Axis (Nm)		C-Axis (Nm)	
			n rated	n max	M rated	P rated	Tilting Torque	Clamping Torque	Tilting Torque	Tilting Torque
1-Axis-Forktype	MH04-1NC-DMF	HSK-A63	6.990	20.000	51	40	318	1.200	-	-
1-Axis-Forktype	MH08-1NC-DMF	HSK-A63	6.000	24.000	66	42	800	1.600	-	-
1-Axis-Forktype	MH12-1NC-DMF	HSK-A100	2.000	12.000	200	42	1.200	2.000	-	-
1-Axis-Forktype	MH25-1NC-FMF	HSK-A100	2.000	10.000	450	94	2.555	6.000	/	/
2-Axis-Forktype	MH04-2NC-D/FMF	HSK-A63	6.990	20.000	51	40	318	1.200	620	1.080
2-Axis-Forktype	MH08-2NC-D/FMF	HSK-A63	6.000	24.000	66	42	800	1.600	700	1.600
2-Axis-Forktype	MH12-2NC-D/FMF	HSK-A100	2.000	12.000	200	42	1.200	2.000	1.200	2.500
2-Axis-Forktype	MH25-2NC-D/FMF	HSK-A100	2.250	12.000	224,9	53	1.600	4.680	2.300	6.000
2-Axis-Forktype	MH25-2NC-FMMF	CAT50	2.000	10.000	450	94	2.555	6.000	2.500	4.200
2-Axis-Forktype (with automatic Spindle-pickup)	MH25-2NC-FMF-ASC	HSK-A100	8.950 / 11.900	14.900 / 18.000	295 / 79	63 / 100	2.555	6.000	3.000	6.000
1-Axis-45°-Universal	MH08-1NC-DMU	HSK-A100	2.000	12.000	200	42	738	2.040	-	-
2-Axis-45°-Universal	MH25-2NC-D/FMU	HSK-A100	2.000	12.000	200	42	738	2.040	2.300	2.760
2-Axis-Orthogonal	MH25-2NC-FMO	HSK-A63	6.000	24.000	66	42	2.600	2.800	2.600	6.000
2-Axis-Orthogonal	MH40-2i-MO	HSK-A63	6.000	24.000	66	42	200	Hirthring	200	Hirthring

Milling Heads with mechanical driven Spindle

1-Axis-Forktype	MH32-1NC-SGF	SK50 / HSK-A100	/	3.000	800	ca. 40	3.200	3.900	/	/
1-Axis-Forktype	MH32-1NC-SGF	SK50 / HSK-A100	/	3.000	1.000	ca. 40	3.200	6.000	/	/
1-Axis-Forktype	MH40-1NC-SGF	SK50 / HSK-A100	/	4.000	1.500	ca. 50	4.000	8.000	/	/
2-Axis-Forktype	MH32-2NC-SGF	SK50 / HSK-A100	/	3.000	800	ca. 40	3.200	3.900	3.900	8.000
2-Axis-Forktype	MH32-2NC-SGF	SK50 / HSK-A100	/	3.000	1.000	ca. 40	3.200	6.000	3.900	8.000
1-Axis-Forktype + Linear Axis	MH32-2NC-LSGF15	SK50 / HSK-A100	/	3.000	800	ca. 40	3.200	3.900	Linear Axis, Stroke=300mm, F=12kN, V=12m/min	
2-Axis-45°-Universal	MH50-2NC-FGU/20	SK50 / HSK-A100	/	3.000	2.150	63	5.000	16.000	5.000	16.000
90°-Angle	MHA90-G12	SK50 / HSK-A100	/	3.000	1.200	ca. 40	/	/	manual	Hirthring
90°-Angle	MHA90-G30	SK50 / HSK-A100	/	2.500	3.000	ca. 50	-	-	-	-
90°-Angle	MHA90-G40	SK60	-	2.000	4.000	ca. 80	-	-	-	-
Straight	MHS-G12	SK50 / HSK-A100	-	3.000	1.200	ca. 40	-	-	-	-
Straight	MHS-G30	SK60	-	2.500	3.000	ca. 50	-	-	-	-

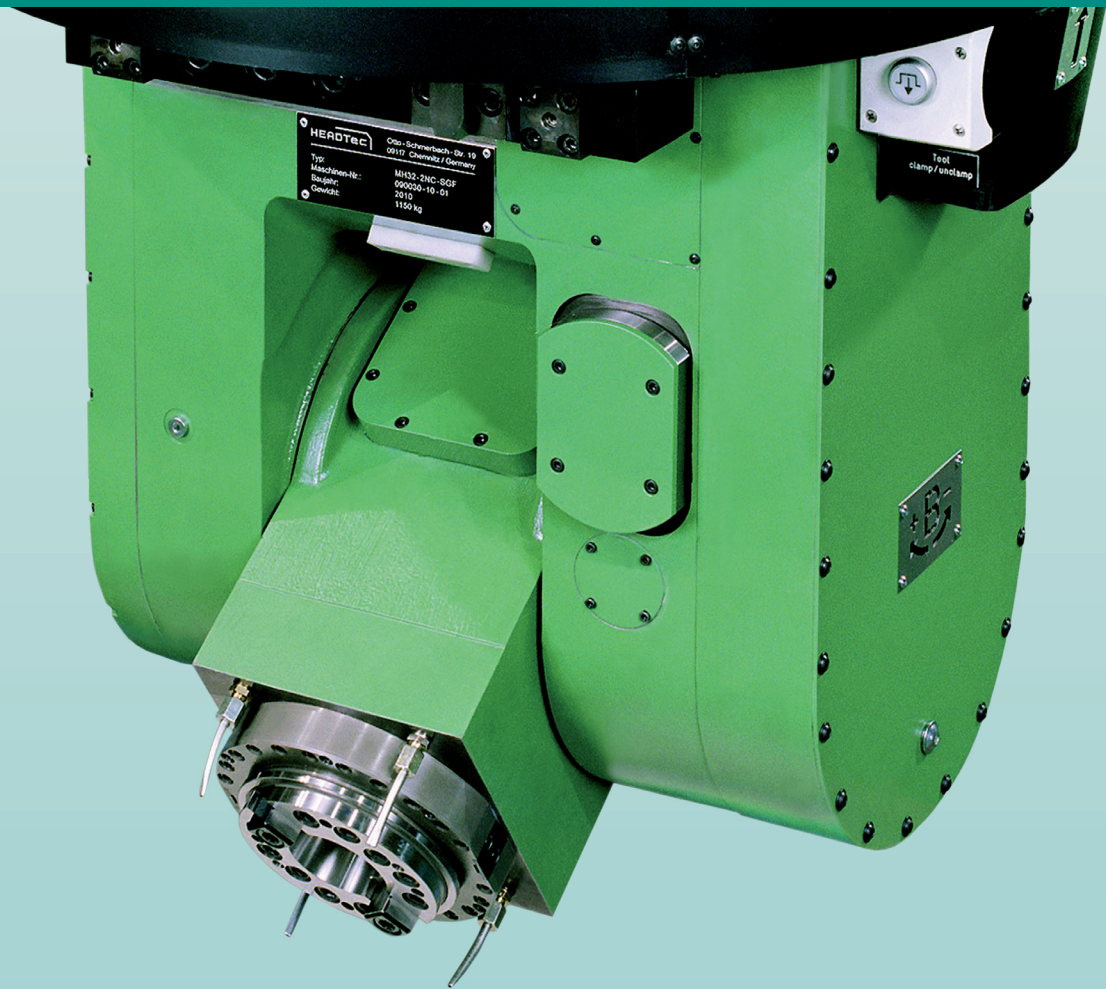
Spindle quill series

Type	Q13-50	Q15-75	Q16-75	Q16-100	Q18-100	Q20-100
Quill diameter D	130 mm	150 mm	160 mm	160 mm	180 mm	200 mm
Travel W	500 mm	750 mm	750 mm	1.000 mm	1.000 mm	1.000 mm
Tool interface	SK50/HSK-A100	SK50/HSK-A100	SK50/HSK-A100	SK50/HSK-A100	SK60/HSK-B125	SK60/HSK-B125
max. RPM (steel bearings)	3.500 rpm	3.000 rpm	2.500 rpm	2.500 rpm	1.800 rpm	1.300 rpm
max. RPM (hybrid bearings)	5.000 rpm	4.000 rpm	4.000 rpm	3.500 rpm	3.000 rpm	2.500 rpm
max. torque	1.500 Nm	2.800 Nm	3.500 Nm	3.500 Nm	4.200 Nm	5.800 Nm
suggested drive power	30...50 kW	30...50 kW	40...70 kW	40...70 kW	50...80 kW	50...80 kW
max. feed force -W / +W	15 kN / 8 kN	28 kN / 17 kN	36 kN / 20 kN	36 kN / 20 kN	40 kN / 22 kN	40 kN / 22 kN
max. radial force W=0 / -200	15 kN / 10 kN	28 kN / 20 kN	32 kN / 22 kN	32 kN / 22 kN	37 kN / 25 kN	42 kN / 28 kN
spindle bearings	Ø180 mm	Ø 200 mm	Ø 220 mm	Ø 220 mm	Ø 240 mm	Ø 260 mm
feed bearings	Ø60 mm	Ø 60 mm	Ø 70 mm	Ø 70 mm	Ø 80 mm	Ø 80 mm
quill cooling	yes	yes	yes	yes	yes	yes
inner & outer coolant	yes	yes	yes	yes	yes	yes

Franz Scharnweber,
Technical Manager



HEADTec



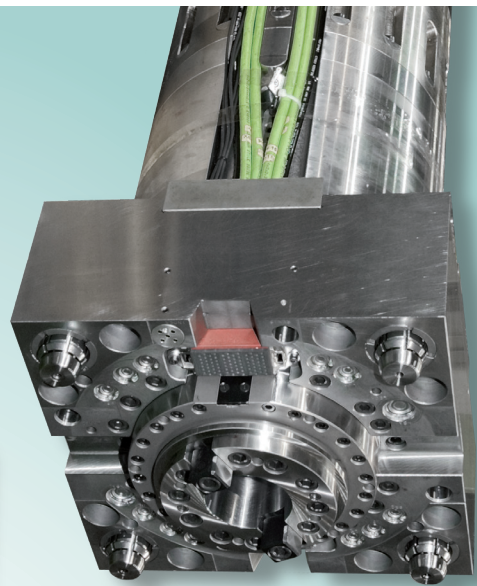
Smart engineering

Complete machining
System integration
Heavy-duty cutting
Automatic pick-up

► MH32-2NC-SGF



► RBU 1.200



► MH25-2NC-D/FMF



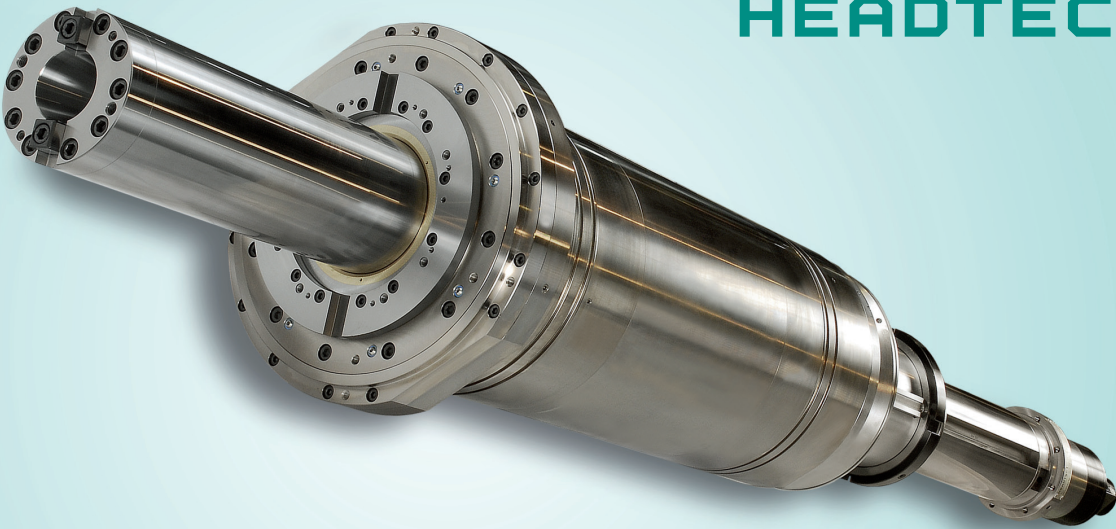
Highlights of our products

- n × 360° through slip ring in C axis
- Extra linear axis, particularly for vertical turning and boring mills
- As drive subassembly, combined with our RBU series cartridge, including pick-up interface for head change
- Full and semi-automatic change of motor spindle for roughing and finishing
- Custom pick-up interface

Milling Heads & RAM Built Units

Our high-performance single and twin-axis roughing and finishing heads in different designs perfectly suit to heavy-duty and high-performance cutting in gantry milling machines, bore, drill & mill machines, and vertical turning and boring mills.

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Quill units

HEADTec’s high-speed quill units are available as ready-to-install high precision subassembly for bore, drill & mill machines and machining centers. Usually fitted to the head slide, they may also be integrated in the machine’s RAM as a complete sub-assembly, including the main drive and the feed drive.

Use of high-quality basic components

- Milling spindles are designed with hybrid bearings
- Mechanical self locking tool clamping system
- Tooling insert with cooling to shield heat created by machining
- Quill cooling to ensure constant gap between the quill and milling spindle
- High accurate slide pairing between quill and milling spindle
- High axial and concentric run out (true running)
- High operating & mschinging accuracies
- Free stick slip W-axis with Fail-safe running function
- High dampening created by using spezial engineered materials for the sliding components

This grants a high cutting performance over the whole quill unit travel. High machining quality is a characteristic feature.

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HEADTec is a company of the Rückle group

Cartridges and High Precision Subassemblies

As a basic unit, the ready-to-install spindle cartridge featuring hollow-shaft drive and pick-up interface offers a complete technology for boring and drilling, milling and turning on vertical turning and boring mills, gantry milling machines and bore & mill machines. High torque and high speed provides efficient machining.

Live spindles for milling and turning operations

Including:

- Ready to install into the RAM of Vertical Turning centers and Gantry Machines
- Built-in motor
- Planetary gearbox, double-stage
- Milling spindle with interface for pick-up change of the high precision subassemblies:
 - 1NC/2NC fork type milling head
 - 2NC swivel-slide milling head
 - right angle milling head
 - toolholder for lathe work

Type	RBU 800	RBU 1200	RBU 2000	RBU 4000	RBU 6000
Tool	SK50	SK50	SK50	SK50/SK60	SK60
Speed (rpm)	4.000	3.000	3.000	3.000	2.400
Torque (Nm)	800	1.200	2.000	4.000	6.000
RAM size (mm)	□ 250 ... □ 300	□ 340 ... □ 360	□ 380 ... □ 420	□ 450 ... □ 550	□ 550 ... □ 600