

HM800S/HM1000S

Gear Head

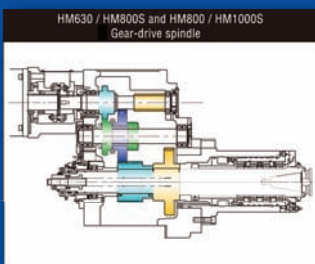
OKK

RELIABILITY & PRECISION

The Production Professional

Out-Produces Box Way Machines

- **Powerful three step geared spindle head (923 Ft-lbs of torque at 20~168 RPM)**
- **Box Way Performance with Oversized Linear Roller Guide**
- **1,889 IPM Rapid, 0.5G Acceleration**
- **High Load Capacity and Agile Response**



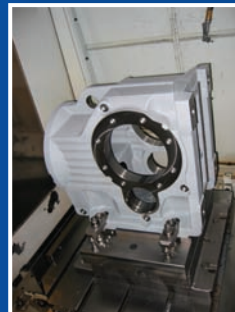
Three step gear delivers speed and performance. Less vibration is achieved by well balanced gear assembly by OKK craftsmen. Attain enormous power at low RPM and less vibration at high RPM



Machining Table
Material: Gray Cast Iron



Machined Aerospace Part
Material: Titanium



Gear Box
Material: FCD450



Die Mold
Material: H13 (Mold Material)

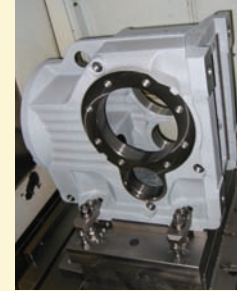
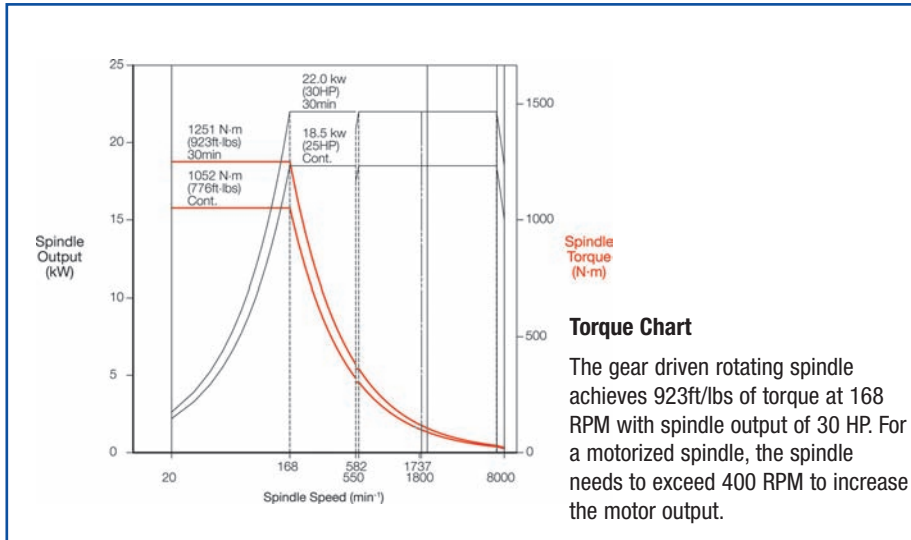
HM800S/HM1000S Gear Head

HM800S Specifications

Travel on X axis (Column Right/ Left)	mm	1050 (41.34")
Travel on Y axis (Spindle head up/down)	mm	900 (33.43")
Travel on Z axis (Table back/ front)	mm	880 (34.65")
Pallet work surface area	mm	800 (31.50")
Max weight loadable on pallet	kg	1200 (2645 LBS)
Minimum indexable angle of table	deg	0.001
Spindle speed	min-1	20~8000
Spindle motor torque	ft. lbs	923
Spindle motor	HP	30/25
Spindle taper		No.50
Rapid traverse rate	m/min-1	XYZ: 54 (21.26 ipm)
Cutting feed rate	mm/min-1	XYZ: 1 ~ 40,000 (0.04 ~ 1574 ipm)
Magazine capacity	tools	60 tools (Option 116,176, 236)
Controller type		FANUC 31-iA5

HM1000S Specifications

Travel on X axis (Column Right/ Left)	mm	1400 (55.12")
Travel on Y axis (Spindle head up/down)	mm	1100 (43.31")
Travel on Z axis (Table back/ front)	mm	1000 (39.37")
Pallet work surface area	mm	1000 X 1000 (39.37" X 39.37")
Max weight loadable on pallet	kg	2500 (5500 LBS)
Minimum indexable angle of table	deg	0.001
Spindle speed	min-1	20~8000
Spindle motor torque	ft. lbs	923
Spindle motor	HP	30/25
Spindle taper		No.50
Rapid traverse rate	m/min-1	XYZ: 48 (1889 ipm)
Cutting feed rate	mm/min-1	XYZ: 1 ~ 40,000 (0.04 ~ 1574 ipm)
Magazine capacity	tools	60 tools (Option 116,176, 236, 300)
Controller type		FANUC 31-iA5



Compared with a motorized spindle, gear head spindle achieves 3 times greater horsepower and torque at lower RPM cutting applications.

Gear Box - detailed example of boring a cast iron gear box

Tool Used: Boring dia. 270mm, 2 insert

Spindle RPM: S120

Work Material: FCD450



Face Milling	Dia. 125mm (4.9")x6 - blade	HM 1000S 1200 RPM (MS)	HM 1000S 8000 RPM (Gear)
	Spindle Speed	300 min-1	300 min-1
	Cutting Width	100 mm (3.94")	100 mm (3.94")
	Cutting Depth	6 mm (0.24")	6 mm (0.24")
	Feed Rate	600 mm/min (23.6 in/mm)	1100 mm/min (43.3 in/min)
	Cutting Amount	360 cm(3)/min (22 in(3)/min)	600 cm(3)/min (40 in(3)/min)

HM1000S gear driven spindle has a higher torque output which achieves 80% higher material removal rate compared to a motorized spindle.



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