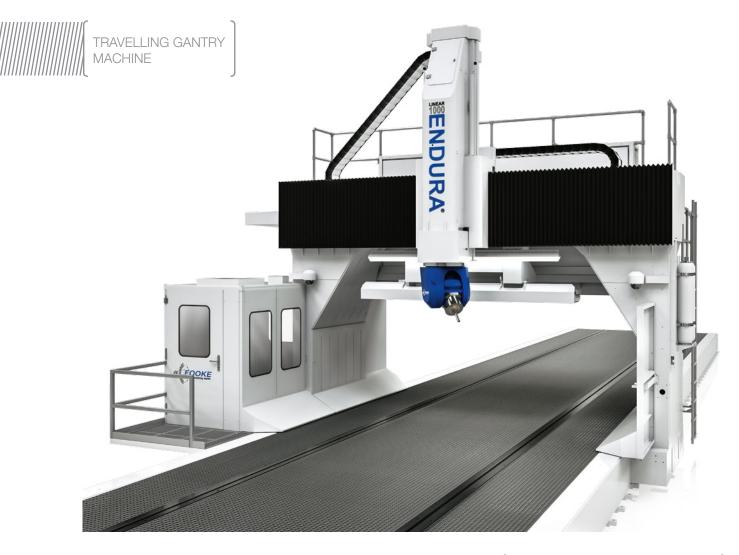


TRAVELLING COLUMN

ENDURA® 1000LINEAR



SPECIALIST FOR LARGE-VOLUME WORKPIECES



TRAVELLING COLUMN ENDURA® 1000LINEAR

TECHNICAL DATA

Traverse paths

X-axis: 5,000 - 60,000 mm Y-axis: 2,000 - 5,000 mm Z-axis: 800 - 2,000 mm

Feed rate

X-axis: 5 - 55,000 mm/min Y-axis: 5 - 65,000 mm/min Z-axis: 5 - 65,000 mm/min

Acceleration up to 5.0 m/sec²

Position accuracy

 $\begin{array}{ll} \text{in X } (P_a) & 0.080 \text{ mm} \\ \text{in Y } (P_a) & 0.030 \text{ mm} \\ \text{in Z } (P_a) & 0.025 \text{ mm} \end{array}$

Position deviation

 $\begin{array}{ll} \text{in X } (P_s) & 0.040 \text{ mm} \\ \text{in Y } (P_s) & 0.015 \text{ mm} \\ \text{in Z } (P_s) & 0.010 \text{ mm} \end{array}$

HIGHLIGHTS

- For large-volume workpieces
- Ergonomic loading
- Travelling operator cabin for optimal process monitoring

Equipment

- Modular and extremely rigid machine with an intelligent hybrid design (steel, welded, cast iron and mineral casting components).
- Resistant, highly powerful linear motor
- Direct measuring systems in all axes (X, Y, Z, C and A).
- Safety system and brakes in all linear axes.
- Linear guiding devices and drive motors are efficiently protected by bellows.

Additional equipment

- Automatic tool changer
- Cooling system (wet operation)
- Tool measuring system
- Workpiece measuring system
- Chips and dust disposal systems
- Workpiece clamping systems
- Sound insulation enclosure
- Online Service
- and much more





DIRECT MEASURING SYSTEMS IN C- AND A-AXIS



MILLING HEAD 4

C-axis

(Milling head rotary axis)

Pivoting angle: 550° (+/-275°) Pivoting torque: 570 Nm Clamping torque: 3.000 Nm Revolution: 360°/sec Axis acceleration: 1,200°/sec² Position accuracy: 15" (0.0041°) Position deviation: 10" (0.0027°)

A-axis

(Spindle pivoting axis)

Pivoting angle: 220° (+/-110°) Pivoting torque: 570 Nm Clamping torque: 2.000 Nm Revolution: 360°/sec Axis acceleration: 1,200°/sec2 Position accuracy: 15" (0.0041°) Position deviation: 10" (0.0027°)

High-frequency milling spindle 1

Tool holding fixture: HSK63 A max. power: 25 kW max. rpm: 20,000 rpm 119 Nm max. torque:

High-frequency milling spindle 4 Tool holding fixture: HSK63 A max. power: 45 kW 30,000 rpm max. rpm: 35 Nm max. torque:

High-frequency milling spindle 2

Tool holding fixture: HSK63 A max. power: 39 kW max. rpm: 24,000 rpm 32 Nm max. torque:

High-frequency milling spindle 3

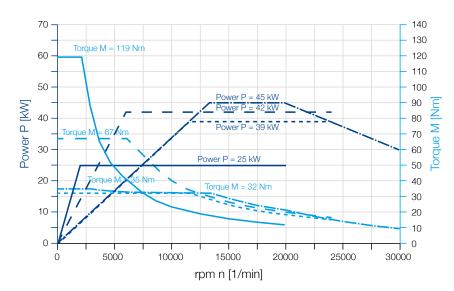
Tool holding fixture: HSK63 A 42 kW max. power: max. rpm: 24,000 rpm 67 Nm max. torque:

Milling head 4

High-frequency milling spindle HSK63 A

with 25 kW, 20,000 rpm with 39 kW, 24,000 rpm with 42 kW, 24,000 rpm with 45 kW, 30,000 rpm

Spindle also available with other performance characteristics



MATERIAL

Plastics	Blockmaterials for modelling	Composite materials (CFRP/GRP)	Aluminium	Cast Iron	Steel
+	+	+	(+)	(+)	(+)





DIRECT MEASURING SYSTEMS IN C- AND A-AXIS



MILLING HEAD 6

C-axis

(Milling head rotary axis)

Pivoting angle: 550° (+/-275°)
Pivoting torque: 1,500 Nm
Clamping torque: 6,000 Nm
Revolution: 70°/sec
Axis acceleration: 800°/sec²
Position accuracy: 15" (0.0041°)
Position deviation: 10" (0.0027°)

A-axis

(Spindle pivoting axis)

Pivoting angle: 220°(+125°/-95°)
Pivoting torque: 1,500 Nm
Clamping torque: 6,000 Nm
Revolution: 70°/sec
Axis acceleration: 800°/sec²
Position accuracy: 15" (0.0041°)
Position deviation: 10" (0.0027°)

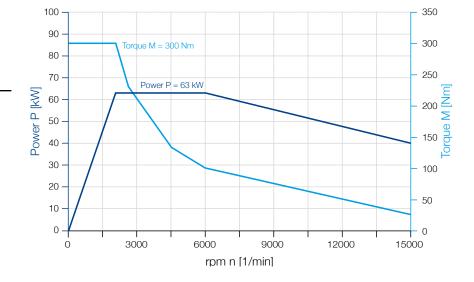
High-frequency milling spindle 1

Tool holding fixture: HSK100 A max. power: 63 kW max. rpm: 15,000 rpm max. torque: 300 Nm

Milling head 6

High-frequency milling spindle HSK100 A

with 63 kW, 15,000 rpm



MATERIAL

Plastics	Blockmaterials for modelling	Composite materials (CFRP/GRP)	Aluminium	Cast Iron	Steel
			•	(+)	(+)



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