

Technical Datasheet

5-Axis CNC – Machining Center for blade applications

Manufacturer	LIECHTI Engineering
Type	Turbomill 800g
Control	SIEMENS Sinumerik 840D
Built	2010



The LIECHTI Turbomill 800g is a highly dynamic five-axis milling machine with maximum axis acceleration, designed for high-speed milling in 5 axes.

This milling machine is used for the rough and fine machining of complex shapes, especially in the engine and turbine industry (turbine blades), in mold making (die production) and in aeronautical engineering (airframe components)

CNC-Axes

Linear Axes	X, Y and Z
Rotating Axes	A / B

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5-Axis CNC-Machining center,

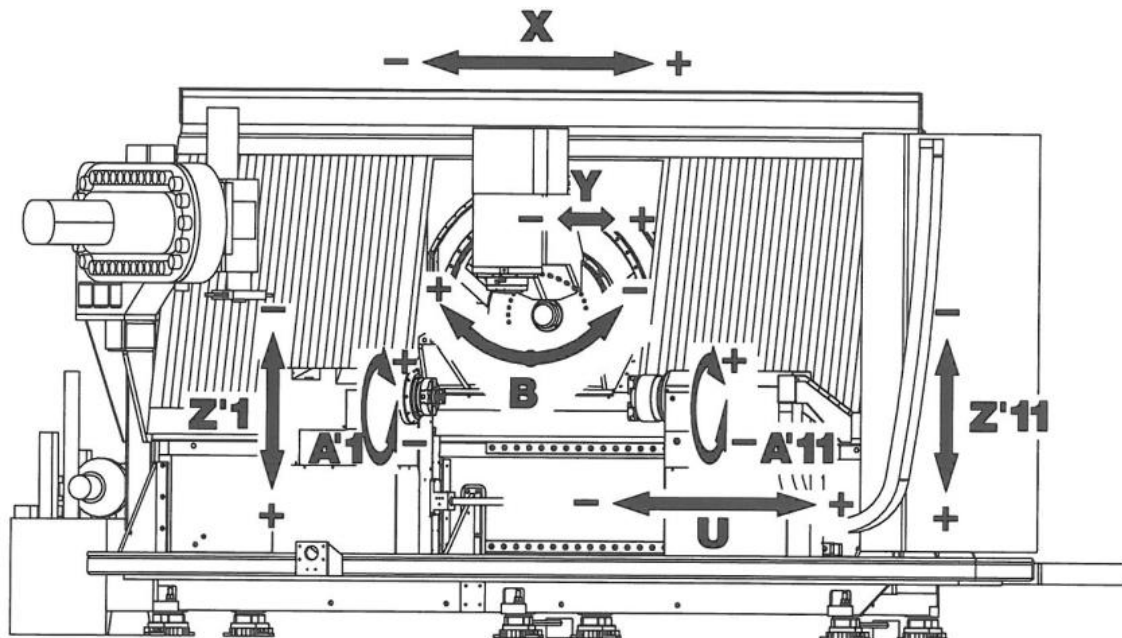
LIECHTI Turbomill 800g

Working area

Blade length in clamping range	300 - 800	mm
Max. Swing diameter	450	mm

Travels

Longitudinal movement column (X-Axis)	1.370	mm
Cross movement column (Y-Axis)	450	mm
Vertical movement (Z1 and Z11-Axis)	400	mm
Rotating axis workpiece (A-Axis)	360 °	endless
Swiveling axis working spindle (B-Axis)	100 °	
Feed movement counter spindle (U-Axis)	500	mm



Feeds

X-, Y- and Z-Axis	0 - 55.000	mm/min.
A-Axis	0 - 72.000	mm/min
B-Axis	0 - 18.000	mm/min

Milling spindle

Drive power	28	kW	(S1, 100% ED)
Speed range, infinitely variable	0 - 16.000	min-1	
Max. Max. torque	200	Nm	Up to 1.350 min-1
Min. torque	17	Nm	at 15.770 min-1
Spindle cone	HSK-63	DIN 69893 Form A	
Spindle design	DIN 69893		

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Tool changer

Number of tools	60	
Max. Tool Ø	75 mm	
Max. Tool Ø	150 mm	Auxiliary seats free
Max. Tool length	290 mm	
Max. Tool weight	6 kg	
Tool change time	ca. 4 s	

Workpiece magazine

Number of pallet spaces	16	
Max. Workpiece Ø	450 mm	
Max. workpiece length	750 mm	Incl. pallet
Max. Workpiece weight	100 kg	Incl. pallet
Workpiece change time	Ca. 45 s	

Dimensions and weight

Machine dimensions	approx. 8.0 x 4.5 x 3.2 m
Machine weight	approx. 22.000 kg

Connection data

Operating voltage	3 x 400 V
Operating frequency	50 Hz
Rated current	200 A
Rated power	140 KVA

Equipment and accessories

CNC 5-axis simultaneous milling machine for highly efficient complete machining of airfoils in a very sturdy design with NC rotary table, tool magazine and pallet changer

- NC swivel milling head (B-head) with 18,000 rpm motor spindle for 5-axis simultaneous machining
- 3D CNC control SIEMENS Sinumerik 840D
- X-axis with linear drive
- HSK 63 spindle cone with internal coolant supply
- Direct path measuring system (glass scales in all three axes)
- 60-position tool magazine with automatic changer
- Workpiece storage with 16 pallet spaces for automatic loading
- 3D IR measuring probe, made by RENISHAW
- Oil vapor extraction
- Spindle cooling unit
- Chip conveyor
- Coolant system, make KNOLL with high-pressure pump, 50 bar and 33 l/min
- VISIPOINT rotational window
- 1 set of LANG clamping fixtures
- Documentation