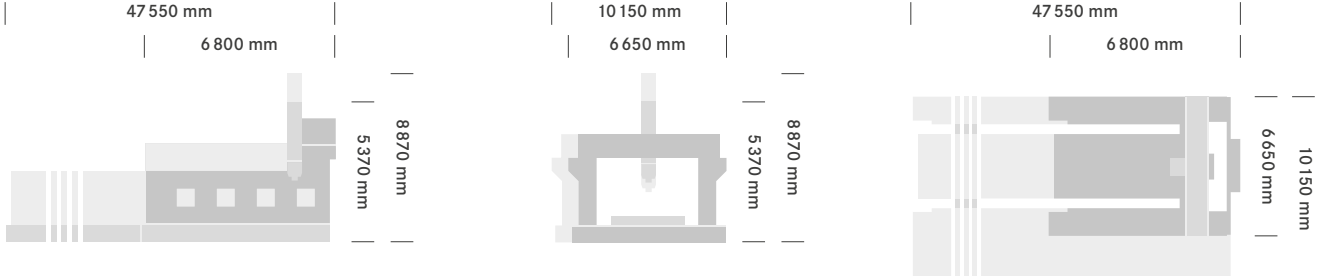


FZ37

5-AXIS PORTAL MILLING MACHINE

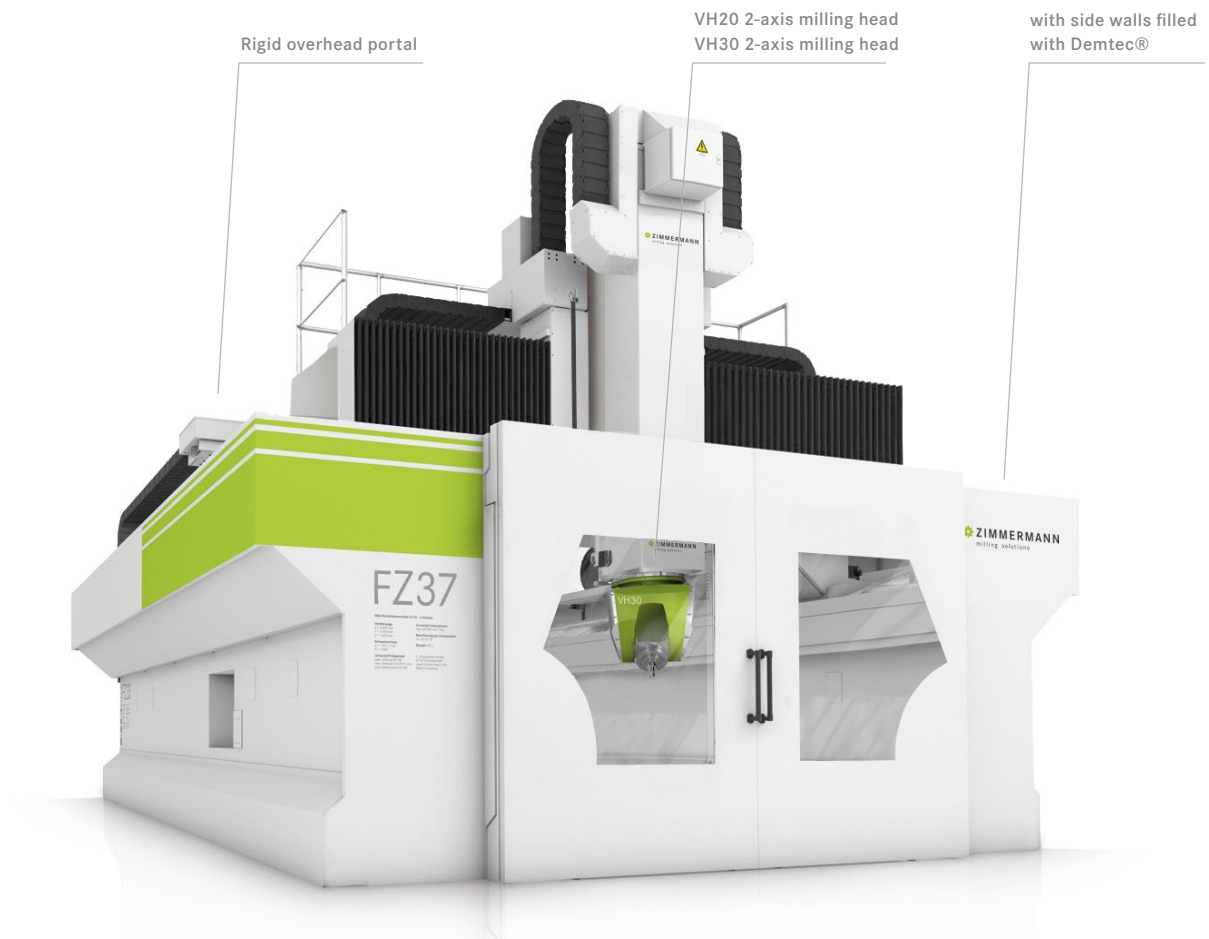


Illustrations are similar.
Subject to technical modifications.

5 AXES FOR EXTREME VERSATILITY: THE FZ37.

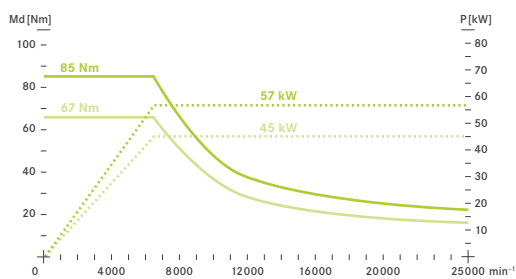
Precise and powerful:
the FZ37 universal machine from
Zimmermann.

The FZ37 portal milling machine has a modular design which allows different operating ranges and the use of different makes of CNC controls. The **gantry construction with fixed side walls**, a fixed clamping table and overhead portal that travels in the X-direction makes it possible to machine components of all kinds. The machine table of the FZ37 is firmly anchored to the machine base providing a stable cutting surface for material. The milling process is highly precise, regardless of weight and size. The moving parts, consisting of the **structurally rigid portal**, the cross- and Z-slides and the **dynamic VH20 or VH30 milling heads**, facilitate a consistent, efficient milling process. Thanks to their combination of high stability and rigidity the machines are able to meet all the requirements of model making, tool and mold construction, including the demands of the aerospace and automotive industries. The versatile 5-axis FZ37 is also suitable for machining of workpieces in shipbuilding and the alternative energy industry.

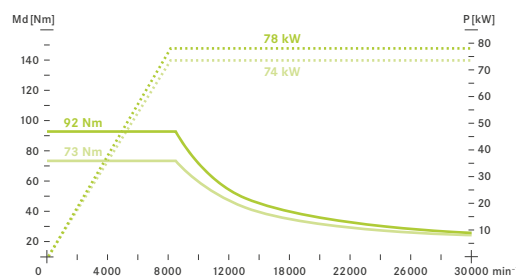


AT THE HEART OF THE FZ37: OUR VH20 AND VH30 MILLING HEADS.

The FZ37 is optionally equipped with a **dynamic 2-axis VH20** (1) or **VH30** (2) milling head (A-axis and C-axis). Both milling heads have a high-frequency spindle (HF spindle). The fork-type heads are designed as cast iron monoblock components. This design ensures outstanding temperature stability and possesses integrated oscillation and vibration damping for even greater milling precision. The A-axis is powered by a zero-play torque drive package, and the C-axis is powered directly by a torque motor. The two milling heads thus have a very low delay when starting, stopping and changing position. Moreover, they achieve high-precision positioning and repeatability in the A- and C-axes. A liquid cooling system dissipates the heat from simultaneous machining. Both heads are suitable for milling aluminum, composites, steel and cast iron.



Power/Torque VH20 – 45 kW



Power/Torque VH30 – 74 kW

TECHNICAL DATA.

FZ37

Working Ranges*

X-axis	3 000 – 40 000 mm (118"-1 575")
Y-axis	2 500 – 6 000 mm (98"-236")
Z-axis	1 000 – 3 000 mm (39"-118")

Table Size

Length	3 000 – 40 000 mm (118"-1 575")
Width	2 500 – 6 000 mm (98"-236")
Height	250 mm (10")
Table load	max. 5 000 kg/m ²
T-Slots (longitudinal)	18 ^{H12} (opt. 18 ^{H8})
Pitch of T-slots	250 mm (10")

Drives - Linear Axes

Feed rate	X-, Y-, Z-axis	up to 60 m/min (2 362 ipm)
Acceleration	X-, Y-, Z-axis	up to 5 m/s ² (up to 197 in/s ²)

Dimensions

Required space (without peripherals)	Length	6 800 – 47 550 mm (268"-1 872")
	Width	6 650 – 10 150 mm (262"-400")
	Height	5 370 – 8 870 mm (211"-349")

Accuracy

Standard accuracy	in accordance to VDI / DGQ 3441 or ISO 230-2
Special accuracy	on request

MILLING HEADS VH20, VH30

Performance

Torque rotary axes	in control	A-axis: min. 1 200 Nm (885 ft lb) C-axis: 1 047 Nm (772 ft lb) [opt. 1 279 Nm (943 ft lb)]
	clamped	A-, C-axis: 3 000 Nm (2 212 ft lb)

Swivelling Range

A-axis	± 110° or +125° / -95°
C-axis	up to 300° / 360° (opt. ∞)

Drives - Rotary Axes

Rate of feed	A-, C-axis	360° / s
Acceleration	A-, C-axis	700° / s ²
Resolution	A-, C-axis	0.0001°

Accuracy

Positioning accuracy	A-, C-axis	10"
Repeatability	A-, C-axis	6"

VH20 Milling Spindle – 45 kW (60 hp)*

Spindle power	S1 (100 %)	45 kW (60 hp)
	S6 (40 % / 2 min)	57 kW (76 hp)
Spindle speed		25 000 rpm
Torque	S1 (100 %)	67 Nm (49 ft lb)
	S6 (40 % / 2 min)	85 Nm (62 ft lb)
Constant power		6 400 – 25 000 rpm
Swivel axis – spindle nose		326 mm (13")
Tool holder		HSK-A63
Tool clamping		spring clamp
Tool unclamping		hydraulic
Lubrication		permanent grease lubrication
Coolant supply, minimum-quantity lubrication, air blowing		external and through tool

VH30 Milling Spindle – 74 kW (99 hp)*

Spindle power	S1 (100 %)	74 kW (99 hp)
	S6 (40 % / 2 min)	78 kW (105 hp)
Spindle speed		30 000 rpm
Torque	S1 (100 %)	73 Nm (54 ft lb)
	S6 (40 % / 2 min)	92 Nm (68 ft lb)
Constant power	S1 (100 %)	9 690 – 30 000 rpm
	S6 (40 % / 2 min)	8 140 – 30 000 rpm
Swivel axis – spindle nose		301 mm (12")
Tool holder		HSK-A63
Tool clamping		spring clamp
Tool unclamping		hydraulic
Lubrication		oil mist lubrication
Coolant supply, minimum-quantity lubrication, air blowing		external and through tool

* Other dimensions / spindle options on request.

We reserve the right to make technical changes without prior notice.

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