

## UNION F1 Travelling-Column Miller

The F1 Travelling-Column Miller addresses to customers who want to combine the size of a boring mill with the universal and dynamical features of an up-to-date miller. This machine is of particular interest for manufacturers of one-offs or small batches thanks to the possibility of five-sided cutting in one setup, associated with high machine dynamics and precision.

- Five-sided cutting in one setup thanks to the use of various milling heads, automatically changeable on request
- High machine dynamics because of rapid feed rates up to 40 m/min and axis acceleration rates up to 5,5 m/s<sup>2</sup>
- Spindle speed of milling heads up to 5000 rpm
- Sturdy and rigid ram with combined sliding/antifriction guideways
- Sagging compensation of ram, hydraulically adjustable
- Stand-alone or travelling tool magazine in various configurations of 24 to 240 pockets
- Central arrangement of all service units at one location only



**UNION**  
boring & milling

**NEW:** Five-sided cutting in one setup – by using of the new F1 Travelling-Column Miller

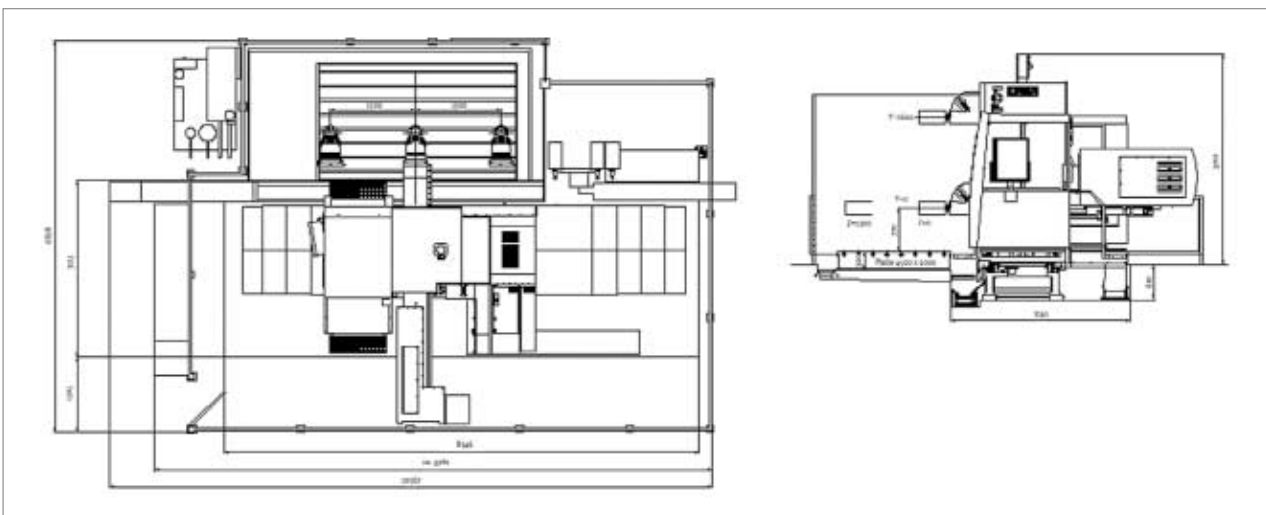
## Technical data Layout

### Technical data

Horizontal / Vertical Milling head	axis		
Speed range, indefinitely variable		min <sup>-1</sup>	5...3500 (5000)
Drive power, max.		kW	37
Torque, max.		Nm	1000
Tool taper according to DIN 69871		ISO	50
<b>Traverses</b>			
Column cross traverse	X	mm	3000
optional extension in steps of	X	mm	1000
Cross slide traverse	Y	mm	1600 (2100, 2600)
Milling RAM traverse	Z	mm	1300 (1600)
<b>Feeds / rapid traverses</b>			
Feed range of all axis		mm/min	1...15000
Rapid traverse		m/min	20 (40)
Acceleration		m/s <sup>2</sup>	2 (5,5)
Feed force, max.		N	10000
<b>Automatic tool changer</b>			
Number of tool pockets in the magazin			24 (40 - 240)
Max. tool diameter, if magazin is complete tipped		mm	125
Max. tool diameter, if adjacent pockets are empty		mm	160
Max. tool lenght		mm	400
Max. tool weight		kg	25
<b>Net weight of the basic machine</b>		kg	ca. 18000

data in brackets = options

### Layout



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