

# MANURHIN K'MX SWING

Innovative technology



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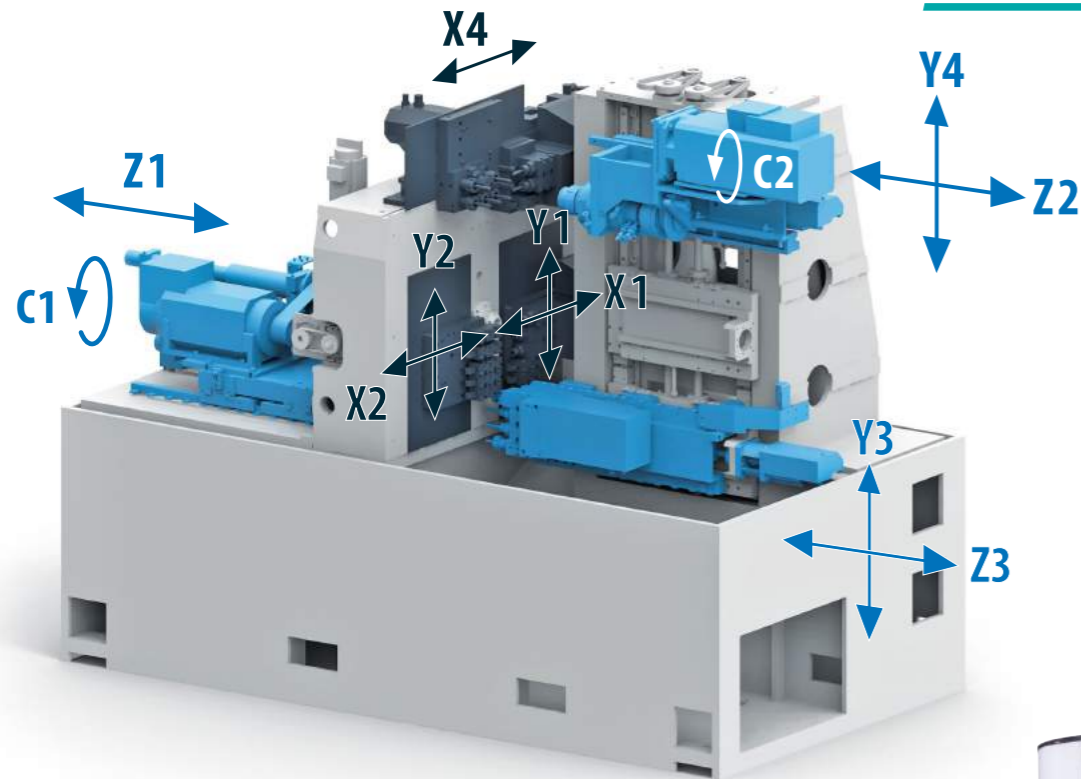
## Innovative technology

MANURHIN K'MX SWING is designed for machining complex parts from bar material up to  $\varnothing 26$  (\* $\varnothing 32$ ) mm. K'MX SWING machines enable machining a workpiece with up to 4 tools simultaneously and sliding headstock with the stroke 250 mm enables to machine simultaneously several parts on one clamping. There are available 23 tool positions. Because 14 of these position can be

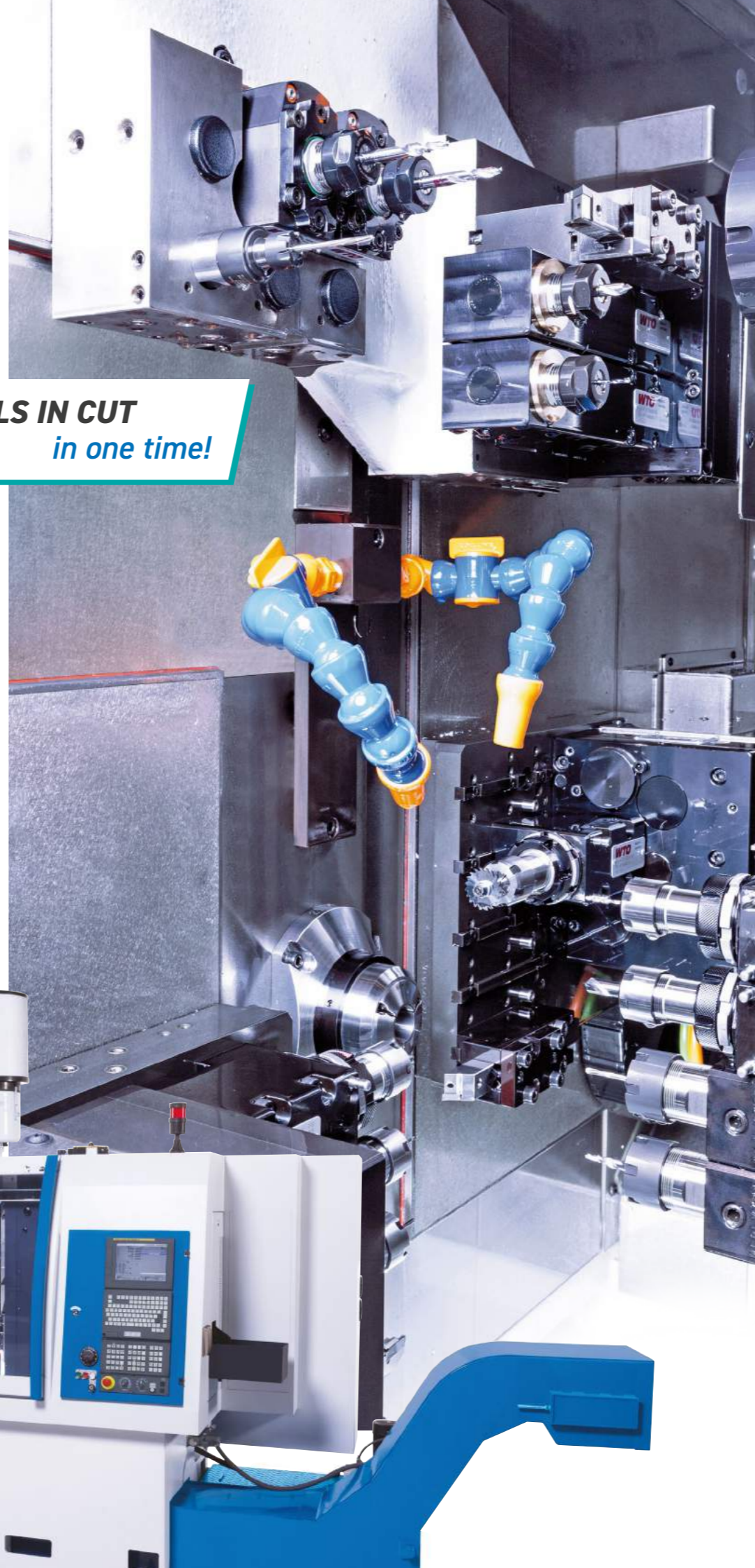
driven, the Swing can machine in one operation the most complex parts, which many companies today machine in several operations at various types of machine tools.

\*necessary to adjust end of the bars to  $\varnothing 29$  mm

## KINEMATICS

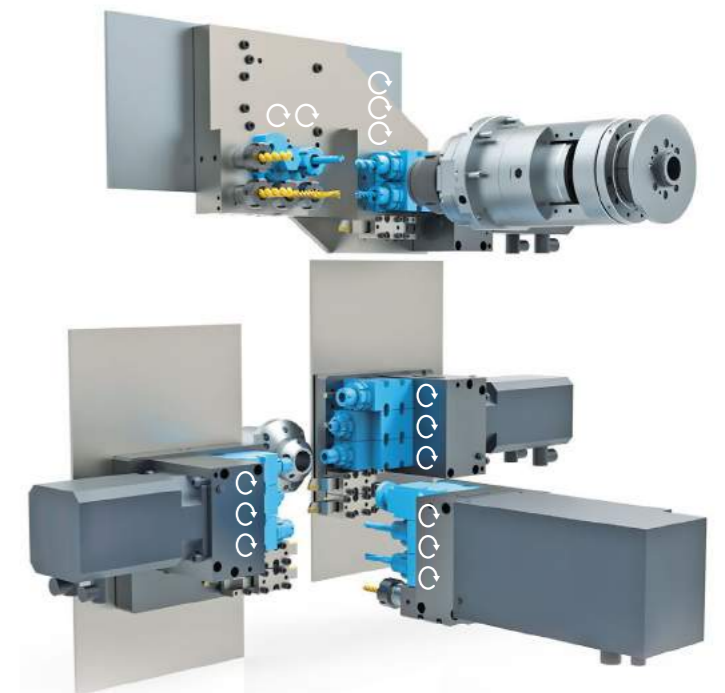


**4 TOOLS IN CUT**  
in one time!



# MANURHINKMX®

Big advantage is turning or milling with up to free tools on the main spindle and finishing operations on the counter spindle simultaneously. Optionally each tool rack can be equipped with gearbox for powered tools. The machine is typically equipped with an automatic 3 m bar feeder with encoder and magazine. Easy and quick tool change with the compatible tool holder cartridge system.

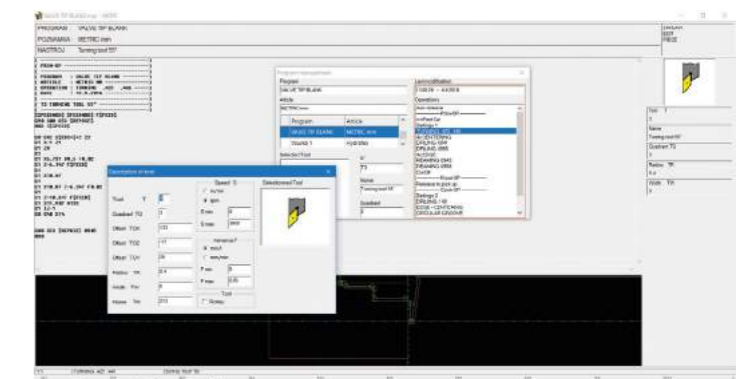


## PROGRAMMING SOFTWARE K'MX PLUS

Program was developed specifically for machine MANURHIN K'MX SWING and works under MS Windows. Each tool is programmed separately. When programming in K'MX Plus we consider only X and Z axes are programmed in ISO code. K'MX Plus then compiles all programs for each tool, and tries (if the situation allows) to run all tools simultaneously. To each tool position can be determined the maximum allowed cutting values.

After compiling the program we can at any time with a simple click on checkbox activate or deactivate any tool or a tool rack. K'MX Plus can be operated directly on the machine or externally on the PC. Automatic management of tools, many already predefined machining cycles - threading, deep drilling...

K'MX Plus also allows - graphical simulation of complete cycle or only considered operations, automatic management of parallel operations, automatic design of optimal solutions with maximum use of the potential of parallel operations, tool offset during programming, program test without moving the axes, numerical counter of pieces, cycle time display.



## MACHINE PARAMETERS

Maximum bar diameter	Ø 26 (*Ø 32) mm	Stroke of tool rack above parting X4	180 mm
Maximum length of turning on one stroke	250 mm	Headstock stroke Z2	215 mm
Main spindle bore	Ø 33 mm	Rapid feed of spindle	30 m/min
Power of A.C. motor (100% / 60%)	5,5 / 7,5 kW	Stroke of counter spindle - vertical Y4	452 mm
Maximum spindle speed	8 000 rpm	Rapid feed of spindle - vertical Y4	16 m/min
Spindle direction	Left and right	Maximum bar diameter	Ø 26 mm
Headstock stroke Z1	250 mm	Maximum length of part inside the counter spindle for frontal ejection	150 mm
Rapid feed of spindle	30 m/min	Maximum length of part for frontal ejection	170 mm
Number of tool racks	2	Counter spindle bore	Ø 26,6 mm
Tool rack main - horizontal stroke X1, X2	2 x 45 mm	Maximum speed of counter spindle	8 000 rpm
Rapid feed of horizontal stroke	30 m/min	Power of A.C. motor (100% / 60%)	3,7 / 5,5 kW
Number of slides	2	Air pressure required	6 bar
Tool rack main - vertical stroke Y1, Y2	2 x 180 mm	Air connection by "Banjo" coupling	Ø 10 mm
Rapid feed of vertical stroke	30 m/min	Coolant tank capacity	200 l
Number of tools	(2 x 5) : 10	Coolant pump pressure	5,5 bar
Tools shank size OD operations	16 x 16 mm	Voltage	3 x 400 V - 50 Hz
Stroke of longitudinal tool rack - vertical Y3	343 mm	Power input	51 kVA
Rapid feed of longitudinal tool rack Y3	16 m/min	CNC control system	FANUC + MS Windows
Number of tools	4	MACHINE DIMENSIONS	3 090 x 1 550 x 2 134 mm
Stroke of longitudinal tool rack Z3	230 mm	MACHINE WEIGHT	4 250 kg
Rapid feed of longitudinal tool rack Z3	30 m/min		

\* necessary to adjust end of the bars to Ø 29 mm

## COLLETS AND GUIDE BUSHES

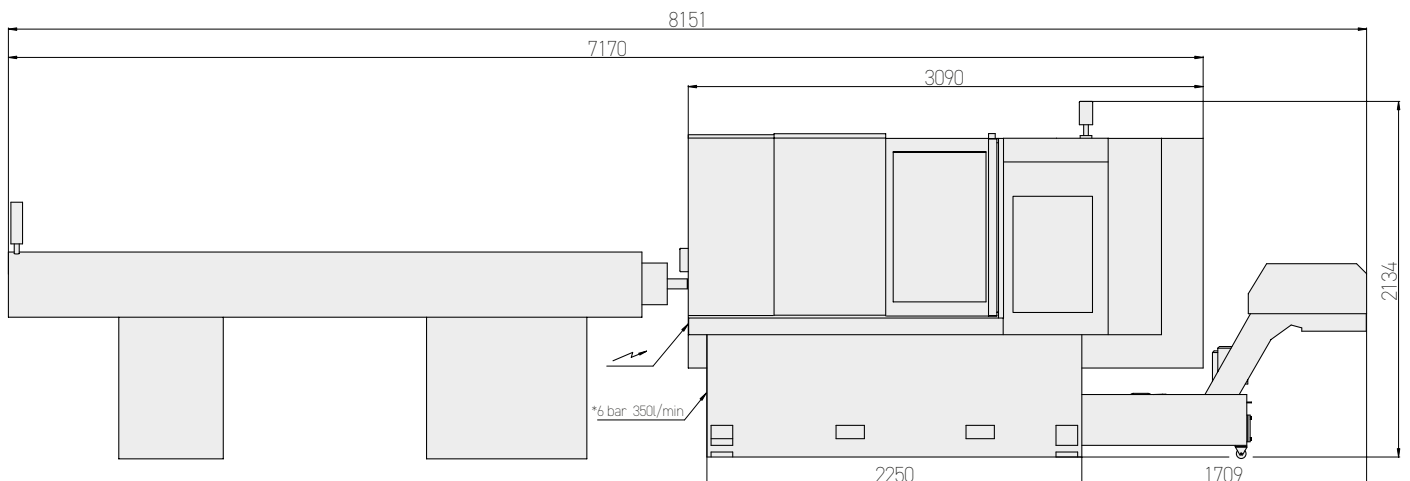


On MANURHIN K'MX SWING we use for main spindle the collets of type 164E (F38) or 161E (F32) and for counter spindle we use only the collets of type 161E (F32). We recommend steel ultra-precision collets from well-established collets manufacturers. Usually are used grooved collets or smooth collets or collets with longer nose (LN)



On MANURHIN K'MX SWING we use the guide bushes of type T227 or T229 denomination. We recommend the guide bushes with hard metal insert from renowned manufacturers.

## MACHINE DIMENSIONS



## CONTACT

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Specifications and illustrations may not always correspond with the machine latest version.