

The best of productivity
with CNC flexibility

MIKRON



Productive. Accurate. Mikron
Multistar NX-24

Mikron Multistar NX-24

For an unbeatable cost per part

Do you need to machine complex and highly precise parts in large volumes with a variety of similar components? Are you machining materials such as alloy steel, brass, titanium or aluminum in max. dimensions of Ø35x65mm?

Are your lot sizes between a few hundred to many thousand parts which have to be machined cost effectively?









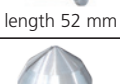

Mikron Multistar NX-24 is the ideal solution for machining tasks in a variety of different industries such as:

Your advantages:

→ **COST EFFICIENT**

→ **FLEXIBLE & VERSATILE**

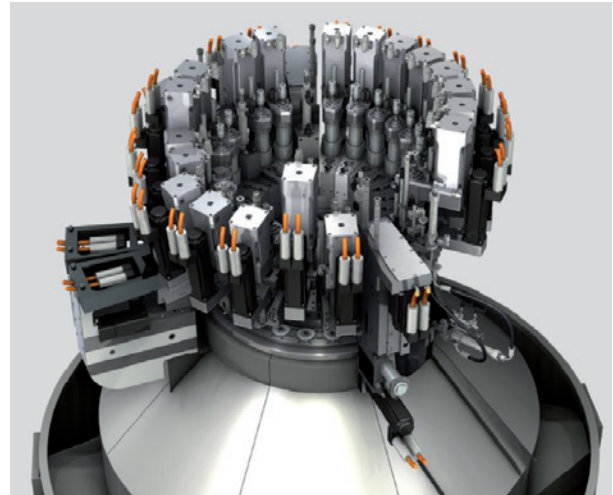
→ **HIGH ACCURACY**

	piece	s/pc	pc/min	starting from; remarks
Automotive	 Ø 16 mm	6	10	Chrome-Steel-alloy preturned blank
	 Ø 22 mm	12	5	Chrome-Steel-alloy preturned blank
	 length 50 mm	7	8.5	Chrome-Steel-alloy preturned blank
	 length 65 mm	4	15	AlSiMg alloy preturned blank; Double cycle
	 length 8 mm	3.75	16	Chrome-Steel-alloy; High precision turning
Watches	 length 3 mm	1	60	Cylindrical stainless steel blank; High quality screw
Medical	 length 18 mm	7	8.5	Titanium wire coil
Air conditioning	 length 52 mm	2.1	20	SUS303 stainless steel blank; changeover from one to the other component in 120 minutes
	 length 52 mm	3	28	
Gas	 Ø 10 mm	8	7.5	Steel blank; Complete machining including turning, slots milling, deburring



PRODUCTIVITY UP TO 30 PIECES / MINUTE

- Large number of working stations: 24
- Up to 44 machining units working simultaneously assuring a very high output rate
- Fast indexing rotary table
- Simultaneously machining from 2 sides per station: from above, below, lateral or inclined
- High performance machining spindles



High productivity with up to 44 units working simultaneously

100% PROGRAMMABLE & 100% VERSATILE

- All axis are electronically controlled for fast change-over
- Different machining operations such as:
 - Drilling, reaming, tapping, threading
 - Milling with up to 4 axis interpolating
 - Turning
 - Recessing
 - Deep hole drilling
 - 3D deburring
 - Others e.g. measuring, washing, assembly



Free programmable

EXTREMELY PRECISE

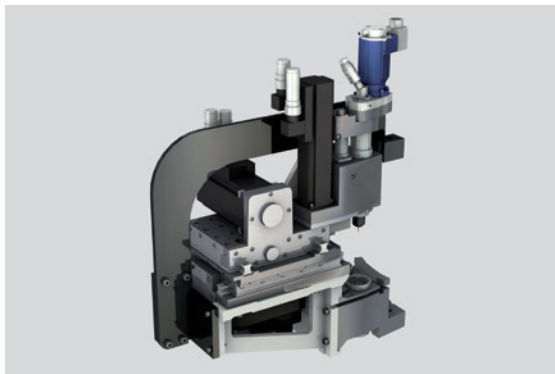
- Rigid, compact & thermal stable design
- $\pm 2.5\mu\text{m}$ table position repeatability
- High precision clamping collets
- High Tech Mikron spindles
- In process gaging; tool & clamping compensation
- Automatic separation of out-of-tolerance parts



Mikron accuracy

Machining units: maximal flexibility & versatilit

Extended range of possible applications with the availability of a variety of machining units for all possible machining operations. Large part families can be produced easily. Reduction of change-over time due to fully programmable units.



Vertical 3 axis machining unit

CNC 3 axis machining units

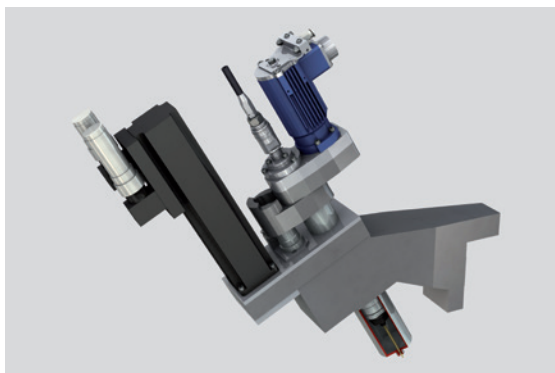
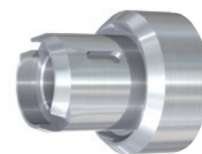
- Very accurate machining unit, suitable for multiple drilling, milling or deburring operations
Up to 4 axis with simultaneous interpolation (with C axis) possible
- Vertical, horizontal and inclined versions
- Also available in compact version



Horizontal 2 axis turning unit

CNC 2 axis machining units

- Ideal for multiple drilling, milling operations up to 3 axis interpolation (with C axis)
- Vertical, horizontal versions
- Suitable for turning operations (with rotation collet or C axis) for external or internal turning operations (horizontal or vertical version)



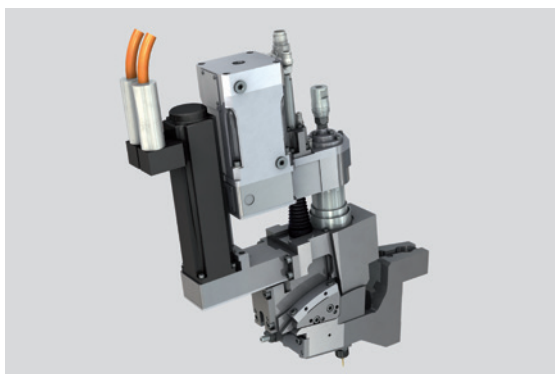
Inclined deep hole drilling unit with moving guide bushing

Deep hole drilling unit

- The right solution for precise deep holes
- With or without moving guide bushing
- High rotation speed and programmable high pressure cooling
- Vertical, horizontal & inclined version

Single axis machining unit

- Good price/performance ratio
- Available in vertical, horizontal and inclined adjustable version



Single axis unit manually inclinable

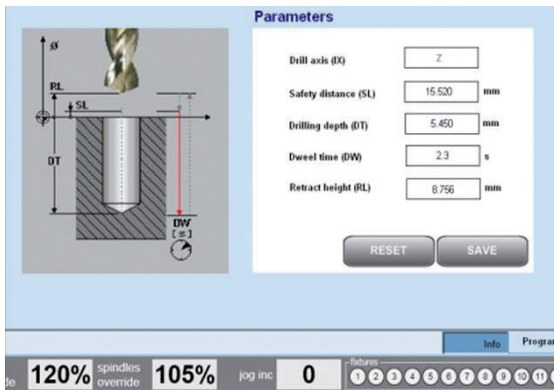
Recess unit

- Perfect solution for high precision grooving, also in eccentric position
- Vertical, horizontal and inclined version
- Complex profiles can be machined with CNC axis interpolation



Simple and fast change-over

All axis are electronically controlled. The Multistar NX-24 is equipped with a well structured user interface, developed by Mikron to change the machine easily from one application to the other.



Graphics make the programming easier



Good machine overview

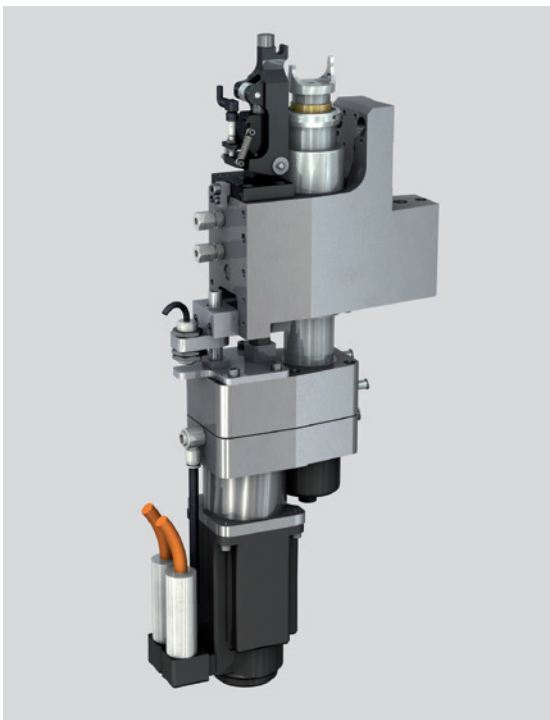
- Simple management of programs & tool compensation to reduce change-over time and cycle corrections
- Self-explanatory graphics
- Contour-milling, turning, profile processing, 4 axis interpolation and 3D deburring are easily achievable
- Exact diagnostics: the control unit recognizes & reports all anomalies
- Maintenance activities are automatically scheduled, fast remote diagnostics
- Integration of shop-floor information system (CAD CAM, SAP)
- Several languages are supported, for easier interaction

Customer benefit

- Short change-over
- Extended manufacturing possibilities
- Higher machine availability
- Integrated statistical analysis

Fixed or rotating clamping device: flexibility at 360

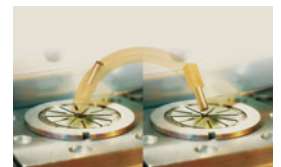
Mikron clamping systems assure high accuracy, repeatability and reliability, suited for a wide range of applications.



CNC clamping rotating device

Fixed clamping collet:

- For bigger components
- Possibility to turn-over the part and perform operations on the previous clamping area
- Re-positioning of part possible



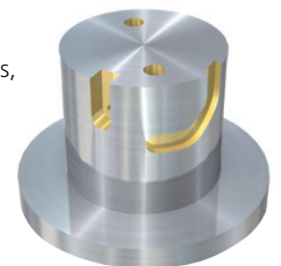
e.g: from square to round section

Rotating clamping collet:

- Allows turning operations
- High rotation speed
- Collet rotation driven from below or above table

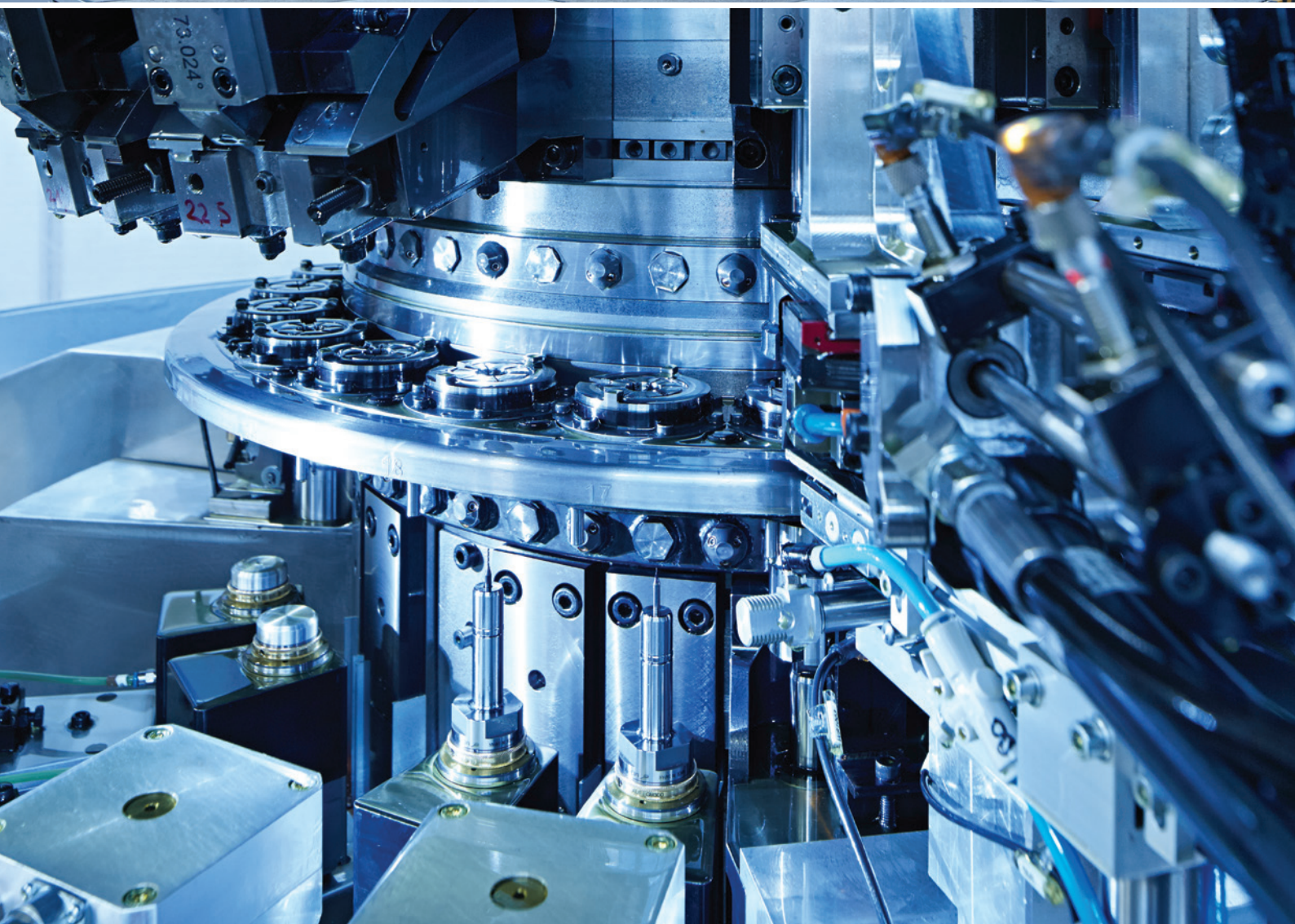
C-Axis CNC rotating collet:

- Suitable for 4 axis milling operations, combined operations & turning
- Fine resolution and high accuracy
- Fast positioning
- High rotation speed
- Collet driven from below or above table





Mikron Multistar NX-24: Up to 44 machining units operating simultaneously at 24 stations, assuring a very high output rate.



Technical Data Multistar NX-24

Machine

Number of stations		24
Max. number of machining units upper / lower, lateral		23 / 23 / 12
Number of clamping fixtures		24 / 48
Table position repeatability	µm	± 2.5
Table indexing time	sec	0.6
Max workpiece dimension	mm	ø 35 L65

Clamping devices

Max clamping ø	mm	35
Max clamping ø CNC rotating collet (positioning, interpolating)	mm	30
Max clamping ø rotating collet (free rotating collet)	mm	25
Max Rotating speed, Torque, Power (free rotating collet)	rpm, Nm, kW	9000 / 5 / 2.7
CNC rotating collet: resolution	°	0.001
CNC rotating collet indexing time	sec/180°	0.1

Machining units

CNC 3 axes machining unit; extended range version upper X / Y / Z axis stroke (X & Y from the center)	mm	-15:+12 / -19:+8 / 65
CNC 3 axes machining unit; extended range version horizontal X / Y / Z axis stroke (X from the center)	mm	±16 / 0:+16 / 40
CNC 3 axes machining unit; extended range version lower X / Y / Z axis stroke (X & Y from the center)	mm	-9:+15 / -5:+15 / 63
CNC 3 axes machining unit; standard version upper & lower X / Y / Z axis stroke (X & Y from the center)	mm	±10 / -10:+15 / 63
CNC 2 axes vertical machining unit Y / Z axis stroke (Y from the center)	mm	-10+25/ 40
CNC 2 axes horizontal machining unit Y / Z axis stroke	mm	40 / 40
Single axis; Z stroke (vertical / horizontal)	mm	63 / 40
Single axis manually inclinable; angle range / adjusting stroke	° / mm	15 / 15
Deep Hole drilling unit: Z axis stroke / Guide stroke	mm	63 / 25
Recess machining unit: Z / U axis stroke	mm	63 / 3
Programmable cooling pressure up to	bar	200

CNC, User interface

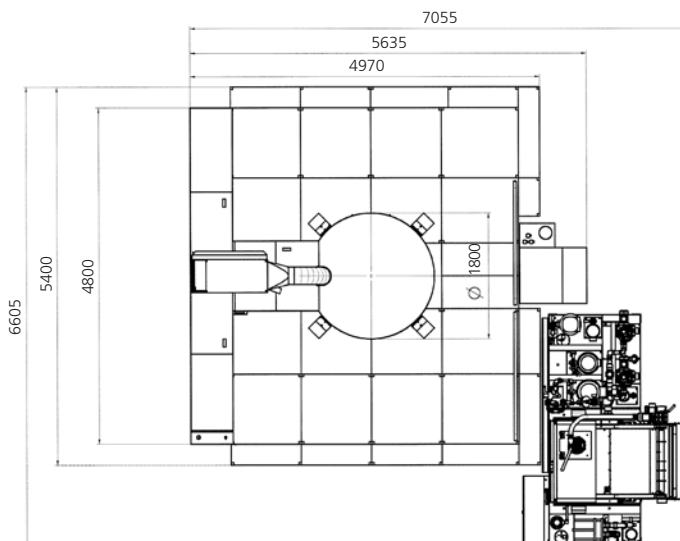
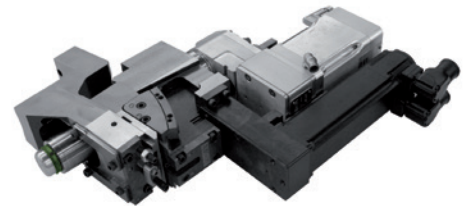
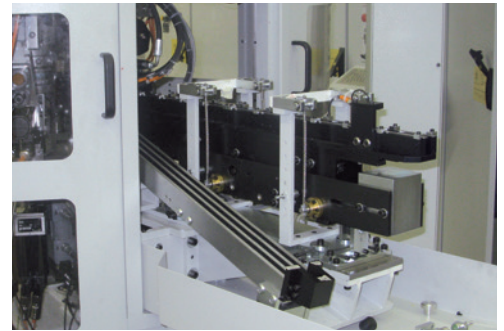
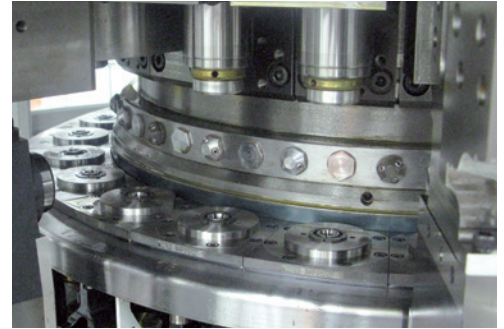
Control system		BOSCH Rexroth MTX
HMI Human - Machine Interface		Mikron
Simple management of programs & tool compensation; Self-explanatory graphics; Maintenance activities scheduling; Remote diagnostic; Several languages. Integrated statistical analysis		

Machining spindles

Max spindle speed	rpm	24000
Max spindle torque	Nm	5
Max spindle power	kW	2.7
Tool Holder		HSK25

Installation

Voltage, frequency, phases	V / Hz	400, 50 or 60, 3
Power consumption (ca.)	kW	50 - 80
Pressure of compressed air, consumption	bar, m³/h	5 / 10 - 20
Approx coolant capacity, type	l	3500 / oil
Approx weight of machine	kg	2900 - 3500
Approx layout dimension (L x W x H)	m	7.0 x 5.5 x 3.5



The technical data listed are not binding and may be changed at any time without notice

Mikron Machining

Mikron Switzerland AG, Agno **Division Machining**

Headquarter
Via Ginnasio 17
6982 Agno
Switzerland
Tel. +41 91 610 61 11
Fax +41 91 610 66 80
mag@mikron.com

Mikron Germany GmbH

Berner Feld 71
D-78628 Rottweil
Tel. +49 741 5380 0
Fax +49 741 5380 580
mro@mikron.com

Mikron Corp. Monroe

200 Main Street
P.O. Box 268
Monroe, CT 06468 / USA
Tel. +1 203 261 31 00
Fax +1 203 268 47 52
mmo@mikron.com

