CITIZEN

Miyano

Preface

Dear Readers,

Citizen Machinery Europe GmbH has successfully been selling Swiss type lathes and fixed head automatic lathes of the brands Cincom and Miyano all over Germany and in large parts of Europe for many decades. With our 4 locations in Esslingen, Villingendorf, Neuss and Radebeul, we are always personally at your disposal and always in close vicinity throughout Germany to answer your questions regarding sales and other issues. In all service matters, we are there for you in whole of Europe.

Under the Cincom brand, we sell Swiss-type lathes which demonstrate their full power and performance when machining long workpieces and small diameters.

The Miyano brand measures up to all challenges when turning short workpieces in fixed-headstock applications. The machines distinguish themselves by high productivity, quality and precision and grant excellent results in diameter ranges of up to 80 mm.

Our path-breaking LFV Technology as well as laser integration have revolutionized the cutting process. We will continue to work hard on developing new innovations and provide optimum solutions to our customers. With future-oriented products, we look forward to stepping into the future together with you.

M. Reissig

Markus Reissig
General Manager Citizen Machinery Europe GmbH

BNA
42
GTY

Even faster with concistently high precision.

Hand scraped slideways offering maximum stability and rigidity are used to achieve the renowned “Miyano accuracy“. These slideways excel at extraordinarily high rigidity as well as excellent damping characteristics thus contributing to powerful machining and extended tool life. The main components of the machine, like spindles and tool slides, are installed on the stable cast bed. The machine is designed in a way that mounting faces are not distorted by the effects of heat. Even if the units are subject to thermal expansion, they are all displaced in the same direction (perpendicular to their mounting faces). This minimizes relative deviations between the workpice and cutting tools.

Advantages

Simultaneous machining with 3 tools.

Maximum productivity goes hand in hand with very short cycle

times. Highly flexible tool configuration.

Excellent machining output and efficiency.

Cycle time shortened by superimposition control.

LFV technology.

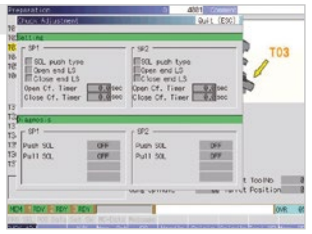
4,66 m²

Workpiece example

Name Part of a valve
Material Brass

Standard

1


2


Support screens improve operating convenience

1 Program editing
2 HMI (Human Machine Interface) is adapted

Options

1

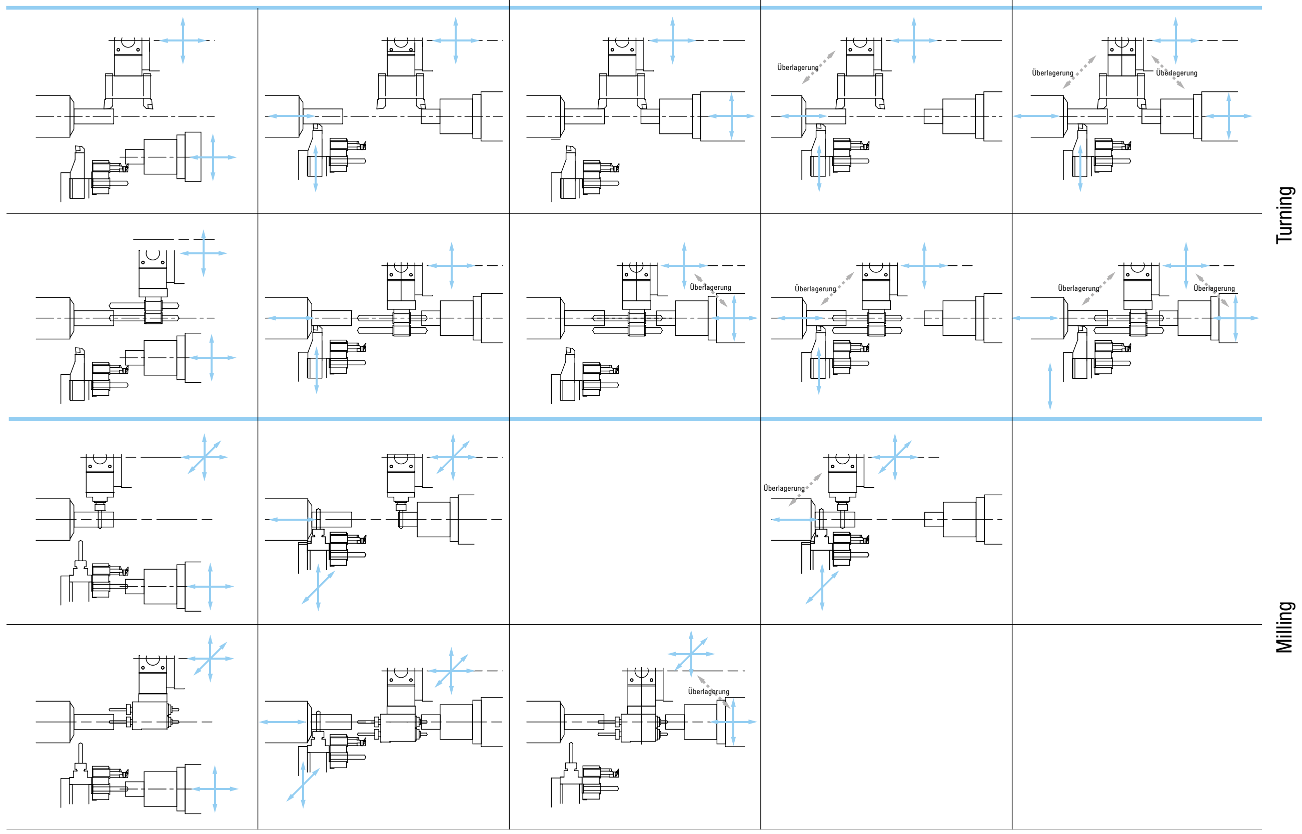

2


1 Chip conveyor
2 Barfeeder

What is more:
LFV technology as an option

Machining examples

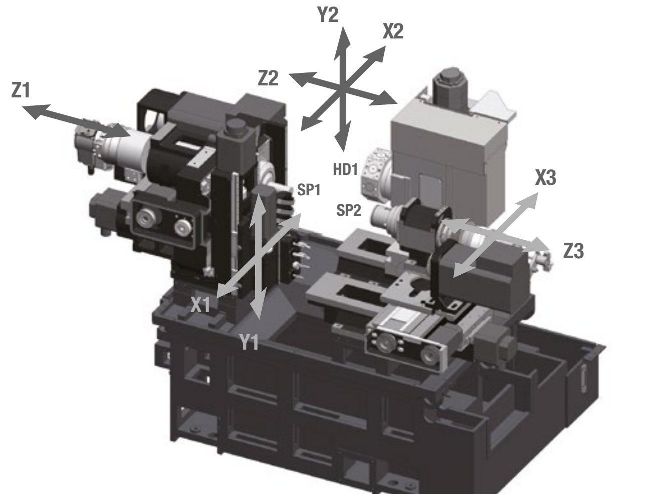
Simultaneous machining with 2 tools				Simultaneous machining with 3 tools
Independent simultaneous machining of front/ back faces		Superimposition simultaneous machining of front/ back faces	Simultaneous machining of front/ back faces	Superimposition simultaneous machining of front/ front/ back faces



Layout

1 The machines is capable of balance cutting and pinch milling in addition to 3-axis-control-group overlapping, giving exceptional machining efficiency.
2 By using 4 position toolholder and tool holders for back machining, up to 45 tools can be mounted.

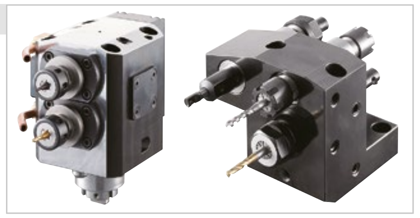
[X1/Z1 axis with LFV-technology available]



(Model with option)

Working area

1

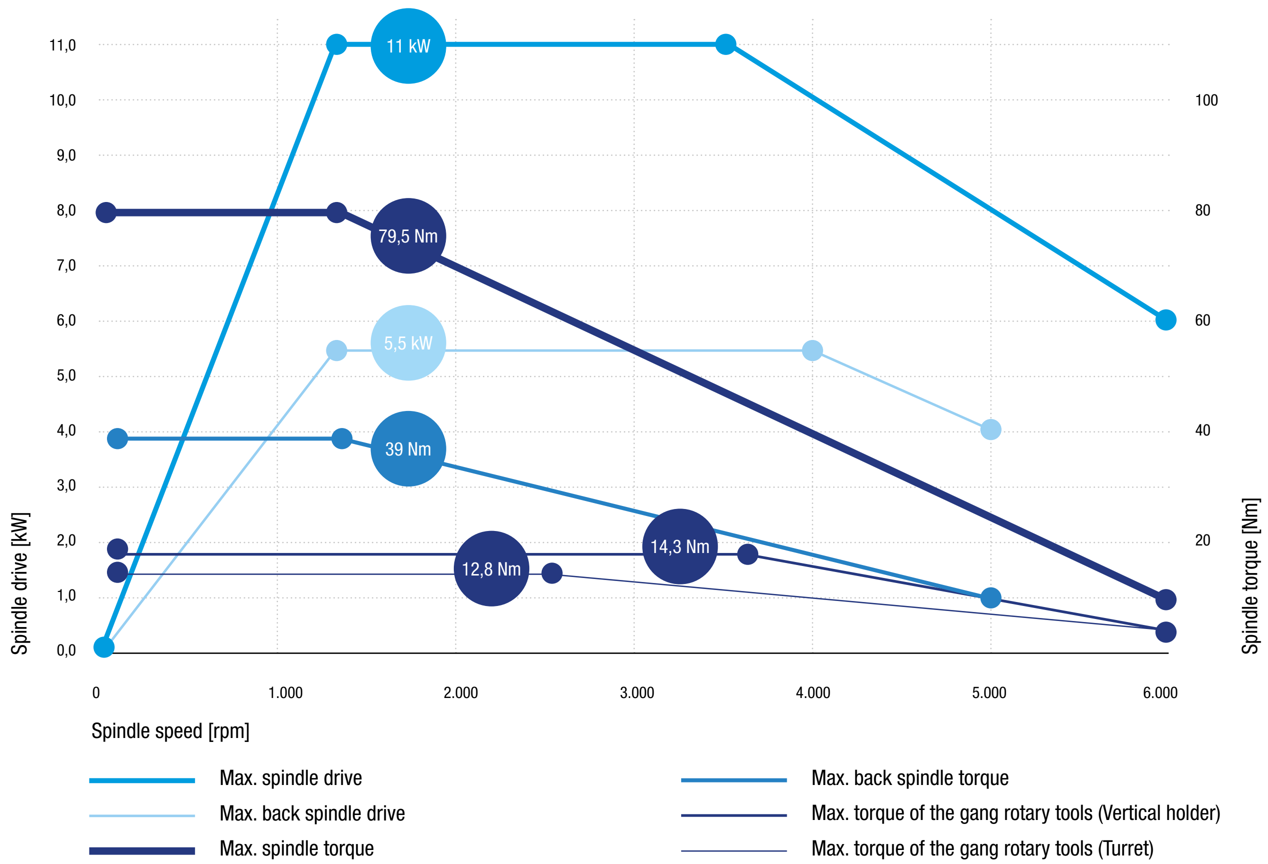

2


3

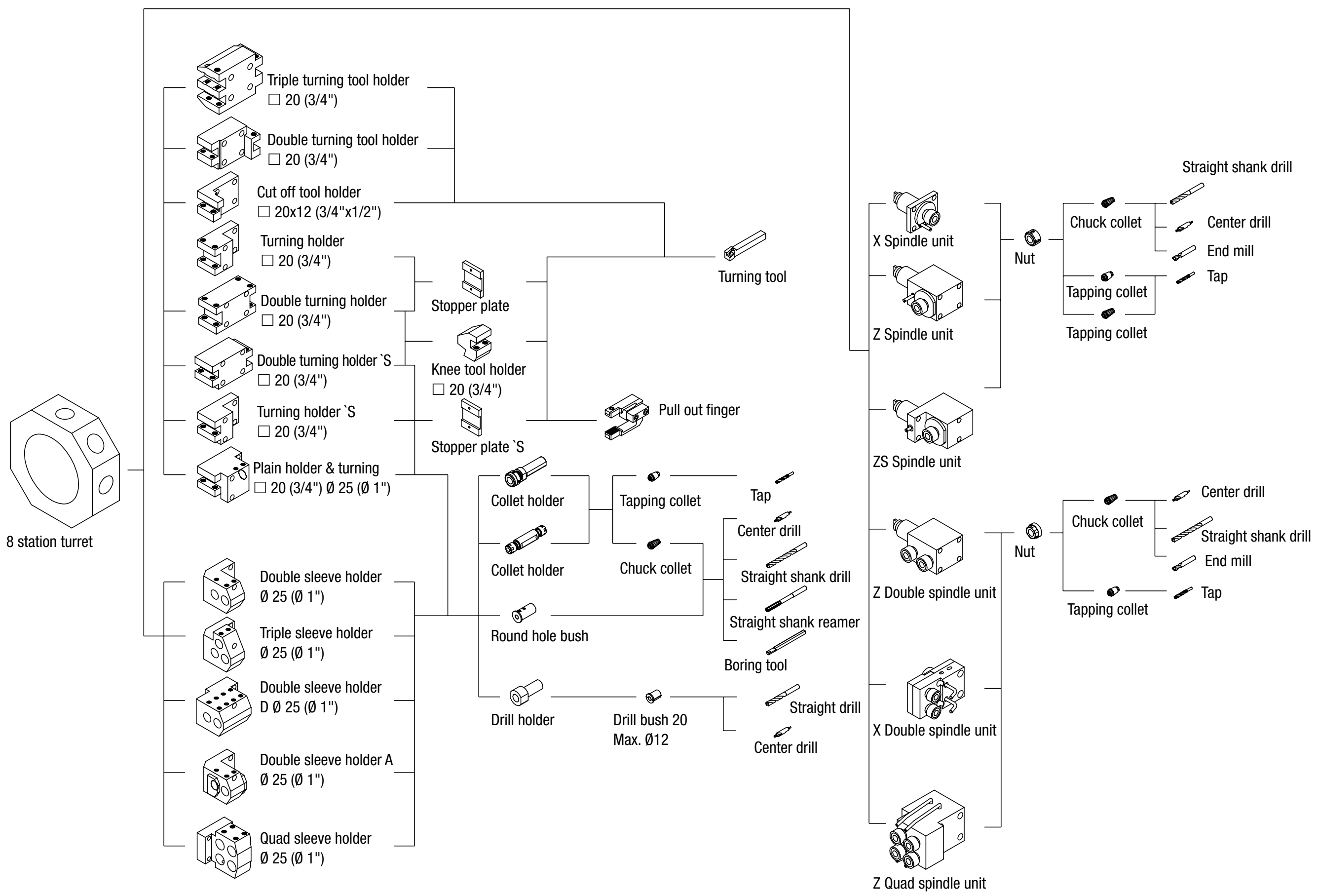

4

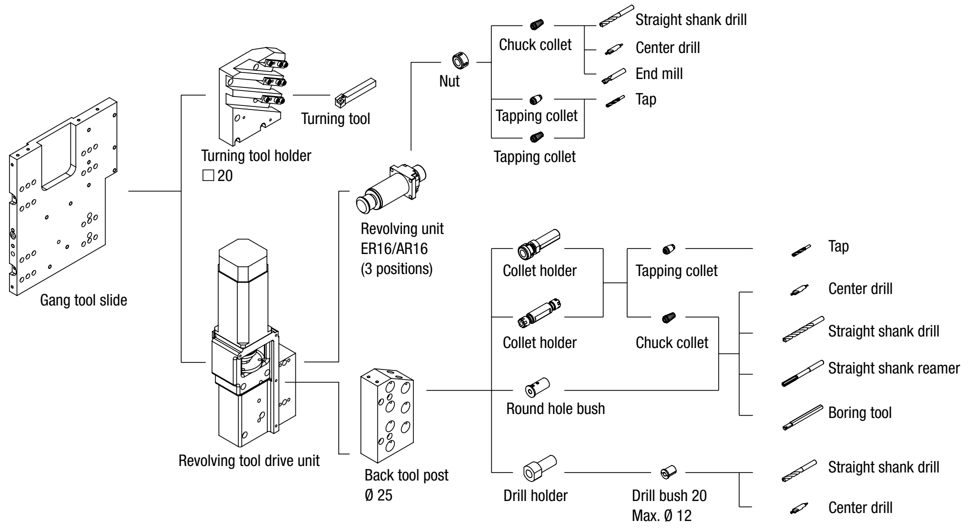

1 The turret has 8 stations, but the half-indexing mechanism makes it possible to mount tools at up to 16 positions. The use of optional multiple tool holders can further increase the number of tool positions..
2 Tool layout
3 Superimposed function control allows simultaneous cutting with two tools at the main spindle (SP1), or with three tools when the sub spindle (SP2) is included, shortening cycle times.
4 Complex machining

Performance diagram

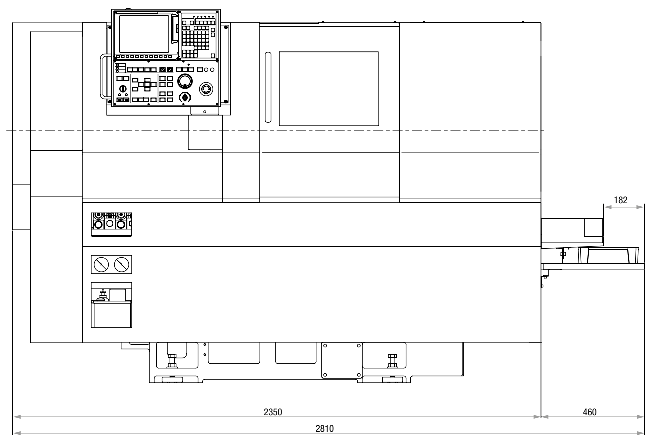


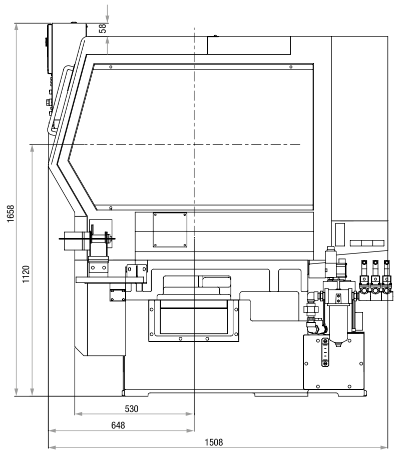
Tooling System





Floor plan





Machine specification

Item		BNA-42GTY
Machining capacity		
Maximum machining diameter for bar chuck	SP1	Ø 42 mm
	SP2	Ø 42 mm
Maximum machining length		100 mm
Spindle		
Number of tooling systems		2
Spindle speed range	SP1	6.000 rpm
	SP2	5.000 rpm
Minimum spindle positioning	SP1	0.001°
	SP2	0.001°
Turret		
Number of turrets		2
Tool for SP1	Turning	3
Drilling		
Rotary tool		3
Tool for SP2	Turning	
Drilling		7
Rotary tool		
Type of Turret		8 st.
Rotary tool		8 (Op.)
Max. number of tools		21 – 43
Shank size of turning tool		Ø 20 mm
Diameter of sleeve holder		Ø 25 mm
Rotary tool chuck		AR16 (Ø 10 mm)
Tool spindle speed range		6.000 rpm
Slide stroke		
Traverse rate/Feed rate	Z1 axis	110 mm 30 m/min
	X1 axis	95 mm 24 m/min
	Y1 axis	260 mm 30 m/min
	Z2 axis	235 mm 20 m/min
	X2 axis	140 mm 20 m/min
	Y2 axis	70 mm 12 m/min
	Z3 axis	360 mm 20 m/min
	X3 axis	190 mm 12 m/min
Motors		
Spindle drive	SP1	7.5/11 kW
	SP2	3.7/5.5 kW
Rotary tool drive unit	Turret	1.0 kW
Gang tool post		1.5 kW
Tank capacity		
Hydraulic tank		7 l
Lubricating tank		2 l
Coolant tank		165 l
Power supply		
Voltage		AC 200/220 V ± 10%
Power consumption		28 kVA
Air supply		7 bar
Machine dimensions		
Machine height		1.680 mm
Floor space		W 2.350 × D 1.490 mm
Machine weight		3.740 kg
NC specification		
Control model		MITSUBISHI M730VS
Display device		10.4-inch color LCD
Controllable axes		
Programmable axes		X1, Z1, Y1, C1 axis
		X2, Z2, Y2, C2 axis
		X3, Z3 axis
Auxiliary axes		C3, C4, TI axis
Axis control groups		3 groups
Input code		ISO
Command input system		Incremental and absolute
Feed command system		Feed per revolution and feed per minute
Cutting feed rate and rapid feed override		Max.100%
Tool offset data		80 pairs
Program storage capacity		320 m

Standard accessories

On machine program check function; Manuel feed function; Manual Data input (MDI); Operation time display; Product counter display; Cycle time check function; Preparation functions; Start position automatic return; Automatic cut-off machining function; Tool set function; Spindle speed simultaneous command for 3 spindles; 3 Sets M code simultaneous command; Control axis swap function; Control axes superimposition function; Arbitrary superimposition function; Function to superimpose 2 pairs of axes; Background editing; Simultaneous program editing for 3 axis control groups; Editing support functions; Calculator function; Code list display; Coordinate calculation function; Spindle C axis function; Constant surface speed control;Cut off confirmation; Tool nose R compensation function; corner chamfering / rounding function; thread cutting canned cycle; Spindle synchronizing control function; Milling interpolation

Option

Helical interpolation; Spindle synchronous tapping function; Synchronous tapping function for rotary tools; Custom macro; Multiple canned cycle for turning; canned cycles for drilling; Inch / metric conversion

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