

MCC Engineered Accessories

Designed for CITIZEN Machines

Cincom



Miyano



Specially Engineered Accessories for Cincom & Miyano

Marubeni Citizen-Cincom Inc. provides innovative solutions to the problems faced in the automatic CNC machining field. Fueled by the needs of our customers, MCC's Technical Center has developed a

series of products for **CINCOM** and **MIYANO** machines that have helped increase productivity and throughput while providing solutions to the daily demands of manufacturing.

- ◆ **Laser Systems**
- ◆ **Cool Blaster® High Pressure Coolant Systems**
- ◆ **Cool Blaster® Mist Control Systems**
- ◆ **Thread Whirling**
- ◆ **High Speed Spindle Systems**
- ◆ **Adaptive Guide Bushings**
- ◆ **Parts Handling Systems**

MCC Technical Center

Marubeni Citizen-Cincom Inc.

Laser System L2000

Conventional and Laser Machining on a Single Machine



Laser Cutting and Welding
Near Endless Geometric Shape Possibilities
Multiple Operations in a Single Set Up
Minimal Burrs
Faster Than EDM Machining
Machine Accuracies .00001"

Specifications and Benefits

- IPG Photonics leading provider of fiber lasers in the world
- Air cooled
- 400 watt output power
- 10 micron delivery fiber
- Internal Pulse Generator with endless parameter possibilities
- Cutting path and offsets FULLY controlled and edited in machine control



Optical Head Specifications

- Optional QCW (Quasi Continuous Wave) multi mode unit offers much higher cutting power in pulse mode (available in 150 and 300 watt models for power bursts up to 3000 KW)
- CCD integrated camera for optical viewing and alignment
- Fine X, Y beam adjustment for beam alignment to nozzle
- 75mm focal length available
- Head assembly is completely liquid tight
- Head is 100% made and supported in USA
- Kerf widths down to 20 microns

High Pressure Coolant Systems

Cool Blaster High Pressure Coolant Systems

High-pressure coolant is an exceptional tool for performing deep hole operations such as gun-drilling and boring. Properly applied, high-pressure coolant is an effective solution for all chip control problems.

Direct high-pressure coolant can either break or control the chip away from the tool and workpiece thereby increasing tool life and improving finishes.

Cycle time for drilling can be reduced 40 - 70% with direct high- pressure coolant. The material is less likely to work harder, making drilling easier and in many cases eliminating the need for peck drilling cycles!

- **High-speed Drilling Operations**
- **Chip Control For Turning And Grooving**
- **Improved Surface Finish**
- **Increased Tool Life**
- **Reduced Cycle Time**
- **Greater Throughput**

5 Line System for CINCOM Machines

Model CB105V

Features

- Coolant is continuously filtered through 5 micron filter
- 5 independent high pressure coolant lines
- Washable air inlet filter
- Space saving vertical design
19.5" W x 51.4" L x 43.4" H



5 & 10 Line Systems with Heat Exchanger for CINCOM Machines

Model CB510 Available in Horizontal & Vertical Designs



Specifications

- 2,000 PSI, 6.5 GPM
- 7.5 HP
- 5 micron filtration
- Heat exchange system
- PLC control integration
- Electrical interface harness
- Installation kit (HP hoses, fittings, manifold blocks for coolant distribution)
- Diagnostic indicator lights
- Restricted filter automatic shut off
- Voltage: 200/230V 40.0 full load amps (optional 440/480V 30.0 full load amps)

Features

- 2,000 CFM heat exchange system standard
- Vertical or horizontal design
- Available in 5 or 10 independent high pressure coolant lines



Dual Filter High Pressure Coolant System for CINCOM Machines

Model CB610V 10 line system with Heat Exchanger

The CB610 dual filter system is designed to automatically change-over to the secondary filter when the primary filter becomes clogged. The filter change-over will not

stop production, therefore unattended or third shift operations can continue without disruption.

Features

- Automatic change over from clogged filter to clean filter occurs without loss of production
- Air purge system automatically removes coolant from clogged filter canister
- Washable air inlet filter provides clean air flow for heat exchange system
- Space saving vertical design: 19.5" x 51.4" x 43.4"

Specifications

- 2,000 PSI, 6.5 GPM
- 7.5 HP
- 5 micron filtration
- Heat exchange system
- PLC control integration
- Electrical interface harness
- 10 independent high pressure coolant lines
- Installation kit (HP hoses, fittings, manifold blocks for coolant distribution)
- Diagnostic indicator lights
- Voltage: 200/230V 40.0 full load amps (optional 440/480V 30.0 full load amps)



High Pressure Coolant Systems for MIYANO Machines



Model CB101VM

Features

- 5 micron filtration
- Single high pressure coolant line
- Washable air inlet filter
- Space saving vertical design
19.5" W x 51.4" L x 43.4" H

Model CB103VM

Features

- 3 independent high pressure coolant lines
- 2,000 CFM heat exchanger
- Washable air inlet filter
- Space saving vertical design
19.5" W x 51.4" L x 43.4" H



Mist Control Systems

Cool Blaster

Mist Control 1000

Features

- High efficiency mist & smoke removal
- Variable speed controller
- Low maintenance cost
- Easy installation
- Performance guaranteed
- Low operating costs
- Fused overload protection
- E stop interlock
- Four year parts warranty on complete unit; ten year warranty on electronic filters



Exclusive Quadruple Pass ESP Technology combines unequalled efficiency in a compact, easy to install system.

- Airflow:** 50-1000 CFM
- Installed Weight:** 133 pounds
- Dimensions:** 26" L x 13.88" W x 30.5" H
- Power Supply:** 208-230v 60 HZ, 2 amps.

Optional Accessories

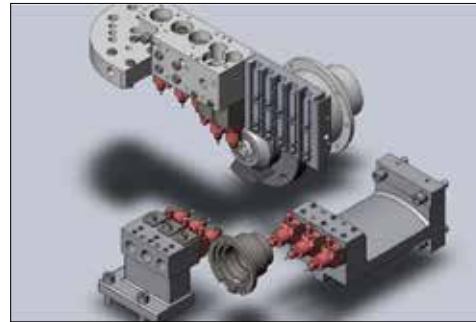
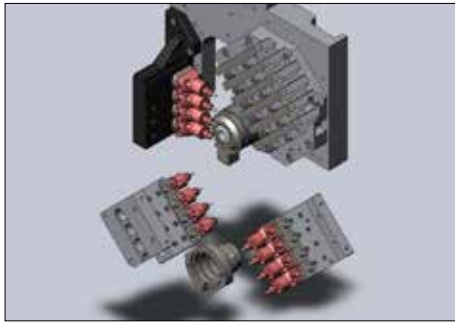
- 6th State HEPA 99.97% @ .3 micron
- Source capture plenum
- Pedestal stand
- Machine mount stand for non-Cincom machines
- Ceiling hanging kit
- Flex duct

High Speed Spindle Systems



Features

- 2,000 - 80,000 rpm high speed spindle
- Control unit
- Custom interface
- Air control unit
- Mounting kit
- Compact spindle design
- Easy installation



Thread Whirling

Bone Screws are complex threaded components usually requiring numerous hours of process development, setup, debugging and cycle time. Thread whirling is the most efficient means to produce difficult OD threads by providing a solution that minimizes development to production time, with faster cycles.

The flexibility that thread whirling offers enable cost reductions with setup simplification, faster cycles and greater throughput.

Thread variations

- Deep acme & buttress threads
- Taper threads
- Variable lead threads
- Extra long threads
- Miniature threads



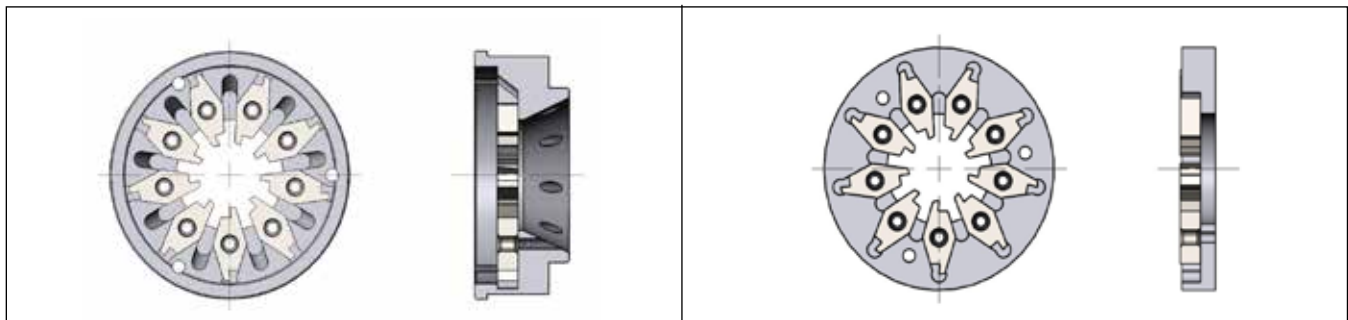
Thread Whirling (continued)

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6/20/2017

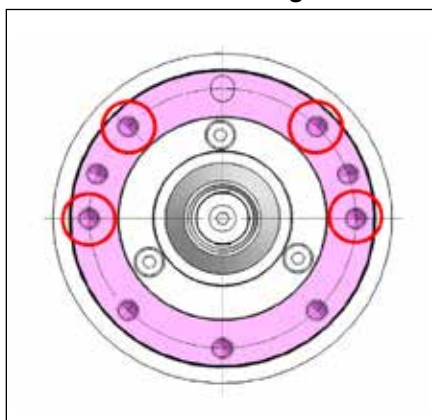
Thread Whirling Unit List

Machine	No.	Thread whirling unit [Part number]	Max adjustment amount of Helix angle	Mounting position	Max No. of Cross spindle on Gang	Type of Cutter Ring	Note
A20	1	BTW-2000-A220	25 deg.	T09	2	A	BDF2005 needs to be removed. T08 is not available.
A320	2	BTW-2000-A320	25 deg.	T09	2	A	BDF2007 needs to be removed. T08 is not available.
A32/A32	3	BTW-2000-A32	25 deg.	T10	2	A	GDF9101 needs to be removed. T09 is not available.
K16E	4	GSW-101-000	15 deg.	T13 (+T12,T14)	1	—	TW holder vendor is PCM (Gen Swiss)
L12	5	LSW-515-000	15 deg.	T10 (+T09)	2	—	TW holder vendor is PCM (Gen Swiss)
L20VIII	6	BTW-1000-L720	25 deg.	T10 (+T09)	3	A	
L20EIX/L20X	7	BTW-3000-L20E/ BTW-3000-L20X	15 deg.	T13 (+T12) on GSE3110	5	B	Need to mount GSD106 on T12. GSE3110 is required.
L20VIII, L20X	8	BTW-2000-L2032-T810	25 deg.	T11	4	A	
	9	BTW-3100-L220-L32	15 deg.	T13 (+T12) on GSE3210	5	B	Need to mount GSD107 on T12. GSE3210 is required.
L20XII	10	BTW-2000-L220-T12	15 deg.	T09 (+T08)	5	A	Many possibilities depends on B-axis angles. Consult MCC.
	11	BTW-3100-L220-L32	15 deg.	T13 (+T12) on BT-GSE-L220-T12 with B-axis	4	B	Need to mount GSD107 on T12. BT-GSE-L220-T12-ASM (B-axis Holder) is required.
	12	BTW-5000-L220	25 deg.	B-axis	3	A	4-additional tapped holes (Red marked on the Fig.) on B-Axis mounting face is required. Available from machine S/N: QF0218 (L220E/0224)
L32VIII, L32X	13	BTW-2000-L2032-T810	25 deg.	T11	4	A	Cannot be used with U30B.
	14	BTW-3100-L220-L32	15 deg.	T13 (+T12) on GSE3210	5	B	Need to mount GSD107 on T12. GSE3210 is required.
L32XII	15	BTW-3100-L32-B	15 deg.	T13 (+T12) on BT-GSE-L32-T12 with B-axis	4	B	Need to mount GSD107 on T12. BT-GSE-L32-T12-ASM (B-axis Holder) is required.
	16	BTW-6000-L32	25 deg.	B-axis	3	A	
M416VIII	17	BTW-5000-M416	15 deg.	B-axis	4	A	4-additional tapped holes (Red marked on the Fig.) on B-Axis mounting face is required. Available from machine S/N: P20143 (M416/0152)
C20/32VIII	18	BTW-1000-M32	25 deg.	T09 (+T08)	2	A	
M320/32III, V							
M420/32III, V, VII	19	BTW-2000-M42032	25 deg.	T10 (+T09)	3	A	
M432VIII	20	BTW-4000-M432	15 deg.	B-axis	4	B	Drive gear on B-axis unit needs to be changed.

Cutter Ring Type



Latest B-Axis Mounting Face



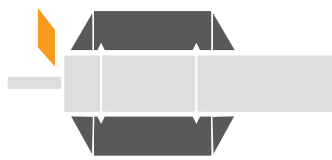
Adaptive Guide Bushing System

THE ADAPTIVE GUIDE BUSHING SYSTEM (AGB) can be used in place of standard guide bushing units for non-ground material. The AGB uses a “double taper” bushing, which will always close parallel. In addition, constant pressure is applied which allows the bushing to compensate for any bar deviation up to .008” in diameter. The pressure setting is a variable and can be changed as required for each job. The advantages are major to the customer. Since the AGB is always maintaining proper pressure, the bar is always on centerline, which enables tighter TIR’s to be maintained. Since the AGB allows for bar diameter deviation, non-ground material can be used. This saves not only the grinding expense, but also valuable delivery time. The problem of machining gummy materials, such as stainless steel, will also be eliminated.

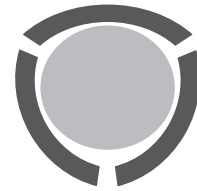
- Use of non-ground bar stock
- Allows for bar deviation of +/- .003 inch
- Constant pressure on guide bushing for greater rigidity and uniformity of set up
- Easy bushing installation



Easy bushing installation



Double taper bushing with parallel close along the full length of guide bushing



3 point contact centers bar stock

25mm Guide Bushing System

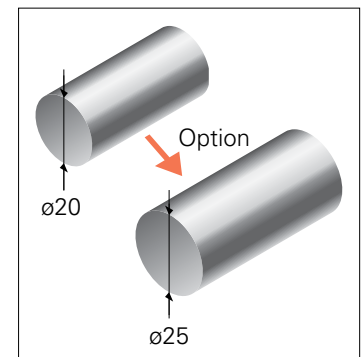
Increase bar stock capacity to 25mm

To extend the range of workpieces, the Cincom A20 and L20 models can support bar stock up to 25mm with the optional 25mm guide bushing assembly. Machining length per chucking is 188mm (200mm $\varnothing 20$ mm). The system uses standard chuck fingers, CD25 guide bushing and TF30 collets.



The system includes:

- Guide bushing assembly
- Main & sub spindle chucking device
- Spindle bushing guide for bar feed pusher
- Hand tools



$\varnothing 20$ mm maximum bar as standard; $\varnothing 25$ mm as option.

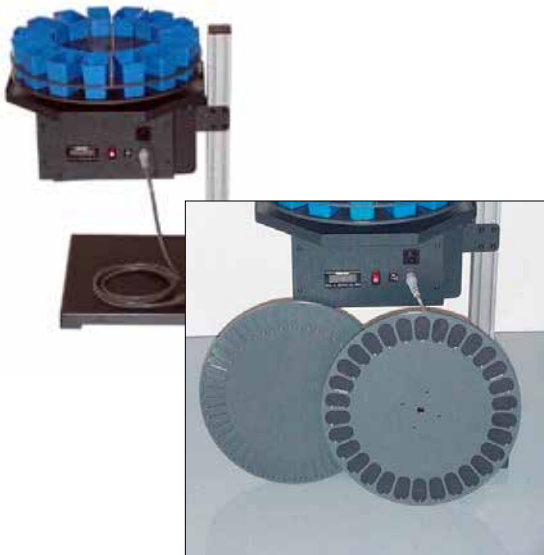
Small Part Vacuum Ejection System

The workpiece is ejected from the sub spindle into the vacuum extractor and travels outside the machine where it can be deposited into a multiple station rotary

parts carousel. Parts can be segregated in the carousel for first article inspection and other post process activities.



Rotary Parts Carousel



Delicate Parts Can Be Separated/Collected Into Individual Locations

Enables Longer Periods of Unattended Operation

SPC Production Scheduling

Features

- Quick change part collection wheels
- Chute to direct parts into carousel locations
- Includes 14 place wheel with removable bins
- Includes 30 place wheel
- Mounting hardware kit
- Easy installation and electrical interface to the Citizen machine
- User-friendly programmable parts counter

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Mission Statement

...to be the leader in the machine tool industry by providing exceptional service, innovative tooling ideas, creative machining solutions and quality machine tools.