

CT Series

TURRET TYPE TURN & MILL CENTER

Solve your tool arrange problem.
+ 16 / 32 / 48 Live Tooling Positions



52mm-76mm Large Size Spindle Capability

The CT series have all of the cutting versatility to complete your complex parts machining in a single set in record time



CT1

- + Built-in Spindles: 2
- + Power Turret: 1
- + Y Axis: 1
- + C Axes: 2
- + Number of Live Tool: 16
- + Max. Bar Feeding Dia.: **ø76mm**

CT2

- + Built-in Spindles: 2
- + Power Turrets: 2
- + Y Axis/Axes: 1 or 2
- + C Axes: 2
- + Number of Live Tool: 32
- + Max. Bar Feeding Dia.:
52Type-ø51mm
76Type-ø76mm

CT3

- + Built-in Spindles: 2
- + Power Turrets: 3
- + Y Axes: 2
- + C Axes: 2
- + Number of Live Tool: 48
- + Max. Bar Feeding Dia.:
52Type-ø51mm
76Type-ø76mm

Applications

- + Automotive, motorcycle and bicycle parts
- + Electronic and electrical parts
- + Instrument parts
- + Pneumatic and hydraulic parts
- + Sanitary and toilet wares
- + Hardware accessories



CT1-76YM
72.5^(L)x50^(W) mm



CT1-76YM
ø64x497 mm



CT2-52Y2M
ø63x110 mm



CT2-76YM
ø64x147 mm



CT3-76Y2M
180^(L)x109^(W) mm



CT3-76Y2M
ø64x299 mm

Turret

- + *Tool Holder - BMT 65*
- + *Efficient Chiller System*
- + *Avoids Thermal Deformation*

With the CT Series, you get the benefit of 1-3 power turrets to make all of your complex parts easy to complete. All positions on these turrets are fully driven to give you a huge range of tooling options to suit your work piece requirements.

The servo turrets are designed and built by CC Machinery especially for the CT series and combine rapid positioning with an efficient chiller system to avoid thermal deformation and an oil mist lubrication system to make sure the turrets run smoothly for years.

Massive Range of Tooling Options

- + *16/32/48 Live Tooling Positions*
- + *Mitsubishi Live Tooling Motor: 3.7/5.5kw*
- + *Fanuc Live Tooling Motor: 4.5kw*

Built-in Spindle

The built-in spindle of the CT series is mounted with the rotor and stator of Fanuc / Mitsubishi, it has the powerful cutting capability and high-resolution magnetic ring encoder to provide C-axis high-precision contour machining.



Oil Mist Lubrication

- + *No Heating Issues*
- + *Low Maintenance*

The integrated oil mist lubrication system constantly renews the oil which is a significant advantage over older grease based lubrication that causes heating issues and needs to be regularly cleaned and replaced.

- + *Done-in-One*
- + *Increase Productivity*



45° Carriage Bed Design

The CT series all use one-piece casting to enhance rigidity and precision as well as ensuring an excellent surface finish. This casting is stress relieved to ensure long term, deformation free performance. The casting is also heavily ribbed to minimize vibration and increase structural strength.

Increased Stability 90° Structure

The special structure design of the CT series uses a rigid 90° angle for the turret carriage so you maintain superb rigidity and stability in machining. Additionally, this allows you to use a more simple controller specification, reducing programming complexity and saving you money at the same time.

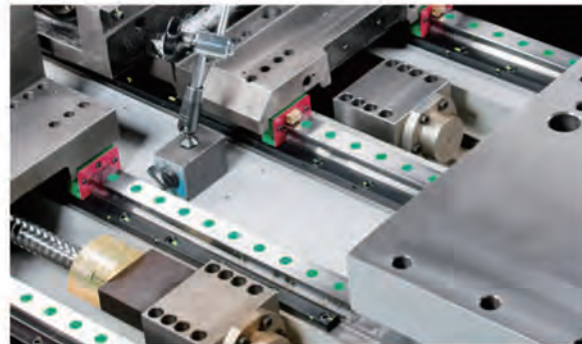
Simplified Control

CC Machinery's unique turret design for the CT series put the Y-axis on the X-axis block, saving space and simplify control while delivering increased stability and precision cutting.



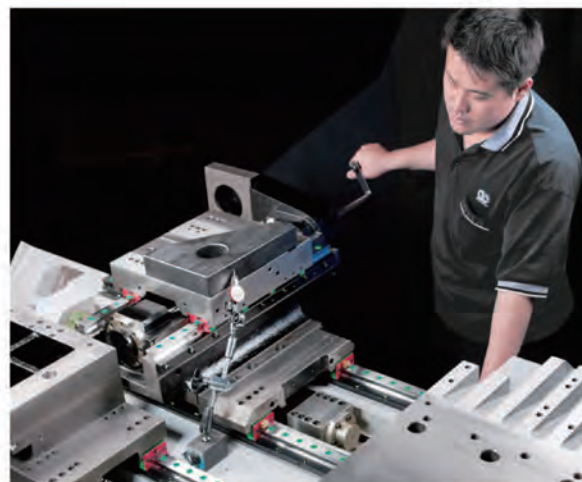
Roller Type Linear Guide

XYZB axes roller type linear guides provide smooth axial movement and excellent repeatable accuracy.



Precision

The main structure is horizontally assembled on a jig to maintain the highest precision, with all components thoroughly certified before the final assembly.



Distributed & Standardised Installation

CC Machinery is unique in being one of the very first manufacturers in Taiwan to fully adopt the international standard DESINA specification for cabling and interconnections. This is vital, as it allows for fast, easy maintenance for all of the machines, reducing your downtime and offer your engineers convenience.

CC Machinery also provides a customer friendly design for the relay panel, with clearly marked spares, so that in the event of relay failure, your engineer can simply plug in one of the spares.

- + UL, CSA, CE, CCC Certified Cables
- + Fast Problem Discovery & Maintenance



Optimum Performance

These machines go through a combination of laser inspection, motion simulation and calibration testing so that each of these CC Machinery machines will deliver optimum performance from day one.



Finish Parts Catcher & Conveyor

The part catcher can collect the part.

- + Diameter < Ø76mm
- + Length < 120mm
- + Weight < 4.5kg



CT1

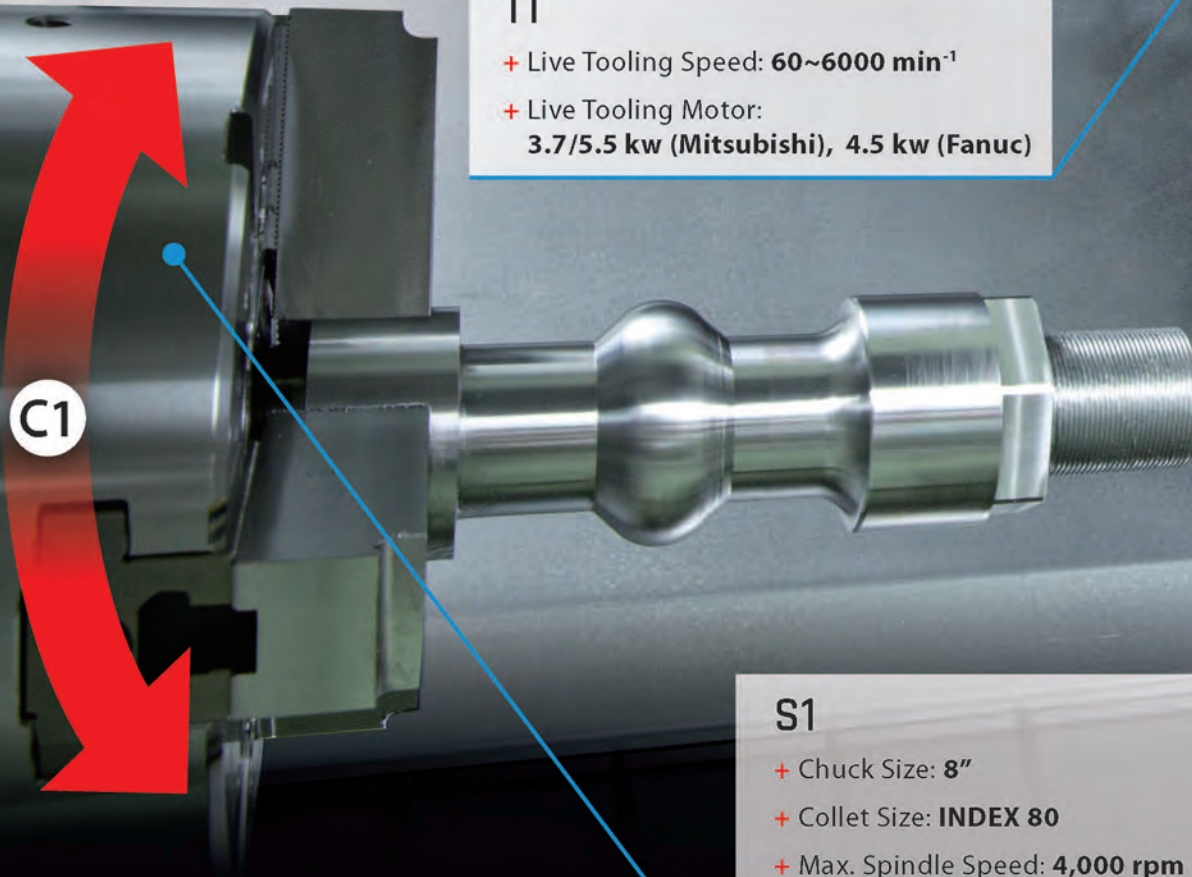
A Standard in Precision Machining

The machine is designed with a combination of the main spindle, sub spindle, and a single turret. This permit a complicated workpiece to be machined at one time. More simple structure, reduce costs and increase productivity, satisfy your demands for precision machining on workpieces.

- + $\phi 76$ mm enlarged spindle bore is ideal for turning large workpieces.
- + The 16 position power turret with Y axis, it can complete machining on parts in the main or sub spindle. In addition, tools can be placed facing either the main or sub spindle.
- + Y-axis travel : ± 50 mm

T1

- + Live Tooling Speed: 60~6000 min⁻¹
- + Live Tooling Motor: 3.7/5.5 kw (Mitsubishi), 4.5 kw (Fanuc)



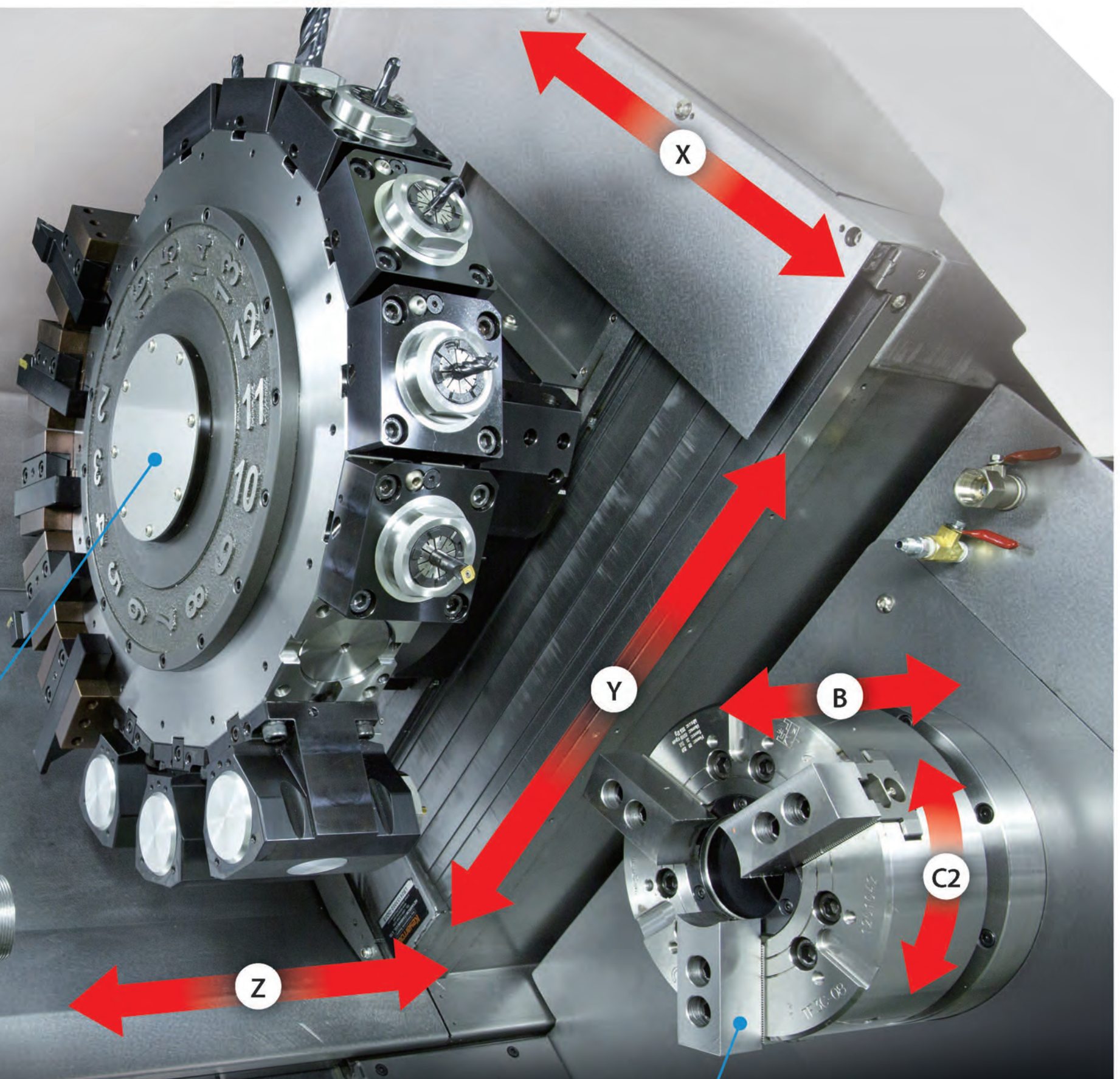
S1

- + Chuck Size: 8"
- + Collet Size: INDEX 80
- + Max. Spindle Speed: 4,000 rpm
- + Spindle Motor: 15/22 kw (Mitsubishi), 18/22 kw (Fanuc)

S2

- + Chuck Size: 8"
- + Collet Size: BA 70
- + Max. Sub Spindle Speed: 4,000 rpm
- + Spindle Motor: 7.5/11 kw (Mitsubishi), 18/22 kw (Fanuc)

- + Double Built-in Spindle
- + Single Turret
- + Y Axis

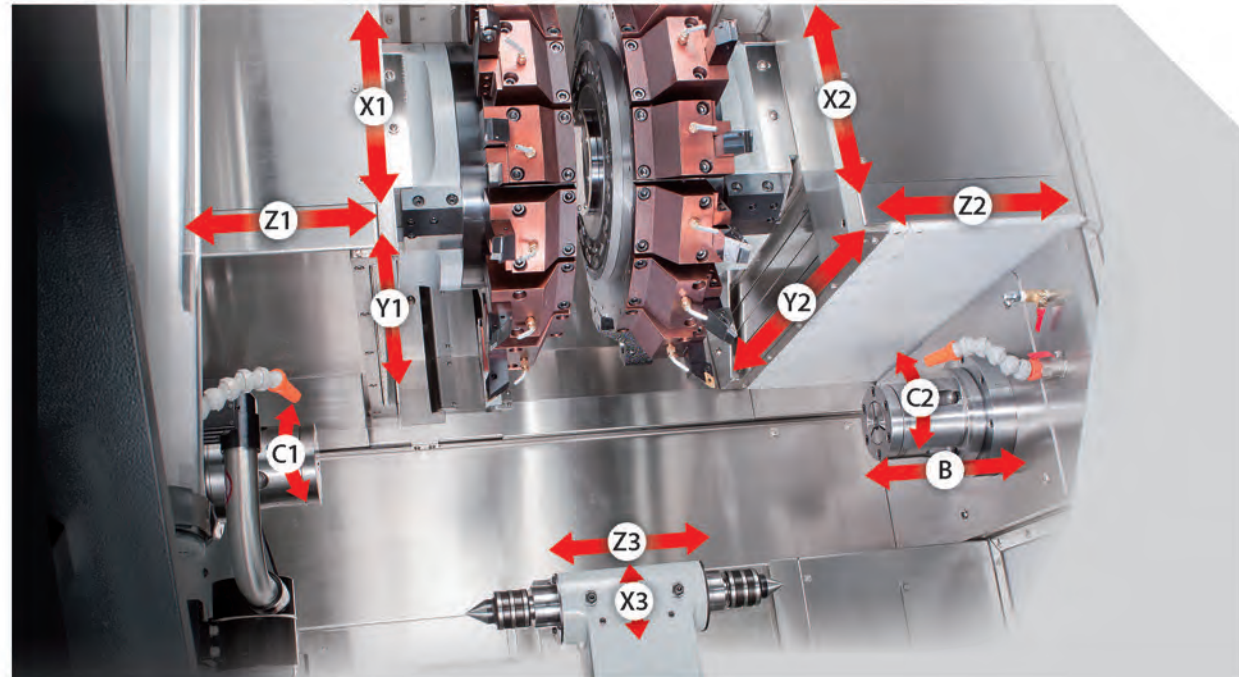


CT2

Significant Increase in Production

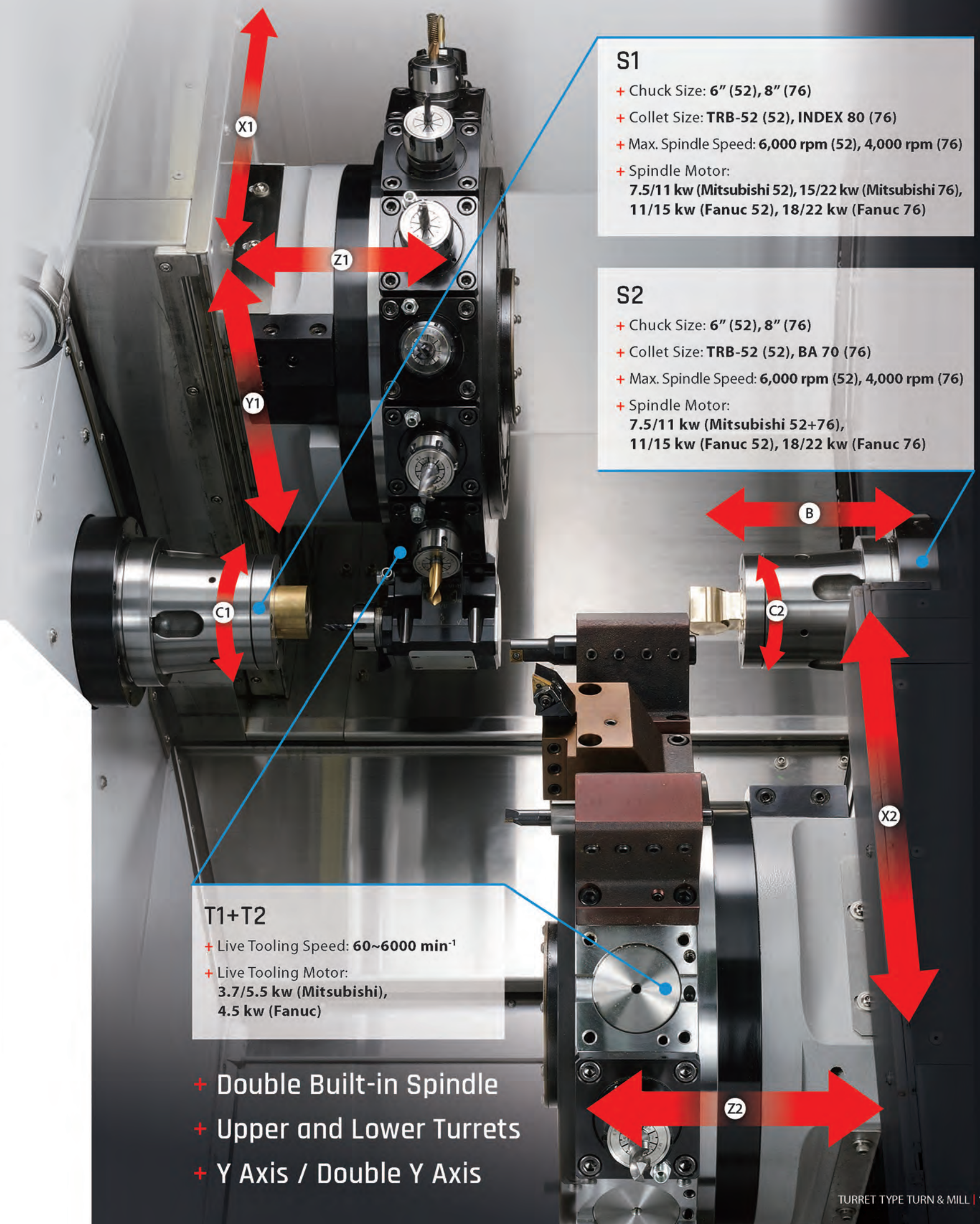
The CT2 features two spindles working with the 16 positions upper power turret and a 16 positions lower power turret, so you can complete all of your complex components cutting in a single operation.

The shareable Y axis on the CT2, it can achieve machining in both main and sub spindle areas, promising greater processing capacity.



Programmable Tailstock (CT2-52Y2MS)

With the CT2-52Y2MS, both turrets are located at the top of the machine to allow customers the option of a central tailstock for longer workpiece stability.



S1

- + Chuck Size: 6" (52), 8" (76)
- + Collet Size: TRB-52 (52), INDEX 80 (76)
- + Max. Spindle Speed: 6,000 rpm (52), 4,000 rpm (76)
- + Spindle Motor:
7.5/11 kw (Mitsubishi 52), 15/22 kw (Mitsubishi 76),
11/15 kw (Fanuc 52), 18/22 kw (Fanuc 76)

S2

- + Chuck Size: 6" (52), 8" (76)
- + Collet Size: TRB-52 (52), BA 70 (76)
- + Max. Spindle Speed: 6,000 rpm (52), 4,000 rpm (76)
- + Spindle Motor:
7.5/11 kw (Mitsubishi 52+76),
11/15 kw (Fanuc 52), 18/22 kw (Fanuc 76)

T1+T2

- + Live Tooling Speed: 60~6000 min⁻¹
- + Live Tooling Motor:
3.7/5.5 kw (Mitsubishi),
4.5 kw (Fanuc)

- + Double Built-in Spindle
- + Upper and Lower Turrets
- + Y Axis / Double Y Axis

CT3

Maximum Flexibility of Machining

For customers needing the most complex component machining, CC Machinery offers the CT3 Mill Turn center, the amazing machine.

The CT3 offers 48 live tooling positions and double Y-axis, allows you to perform complex Y-axis cutting for both front and back machining without to share the turret.

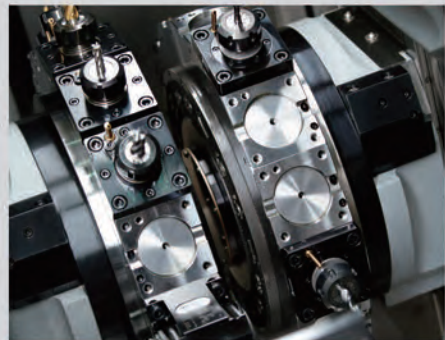
This drastically decreases your cutting cycle time, increasing your production efficiency.

Double Y Axis Machining

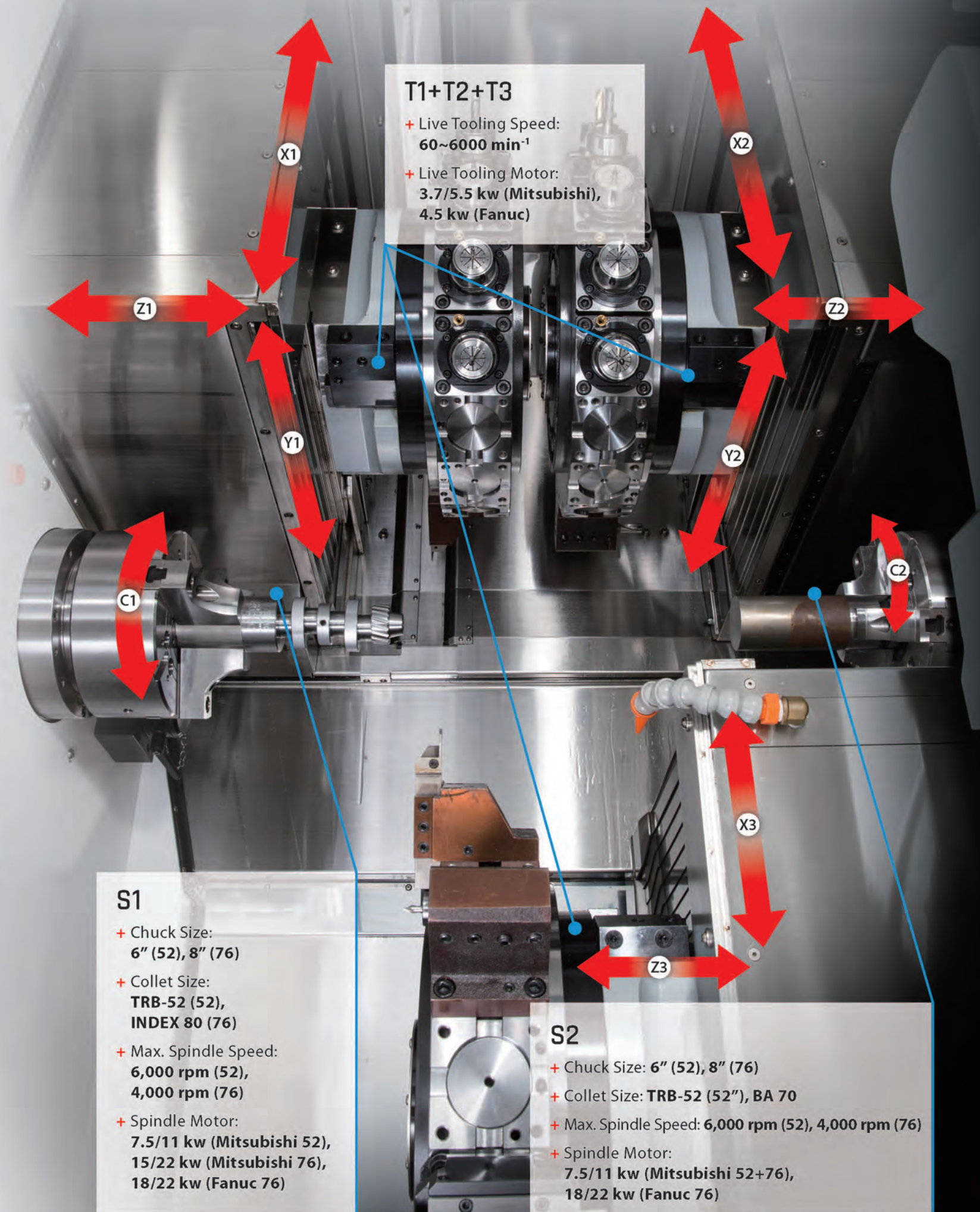
- + Vastly Reduced Cycle Times
- + Increase Your Productivity

Independent Front / Back Y axis

- + No Turret Sharing



- + Double Built-in Spindle
- + 3 Power Turrets
- + 2 Separate Y Axes



Cell Automation Options

Mitsubishi RV-3SD

This type of robot offers the highest rewards in unattended production

This Mitsubishi RV-3SD delivers maximum freedom of movement to suit the most complex geometry requirements. This type of robot offers the highest rewards in unattended production.

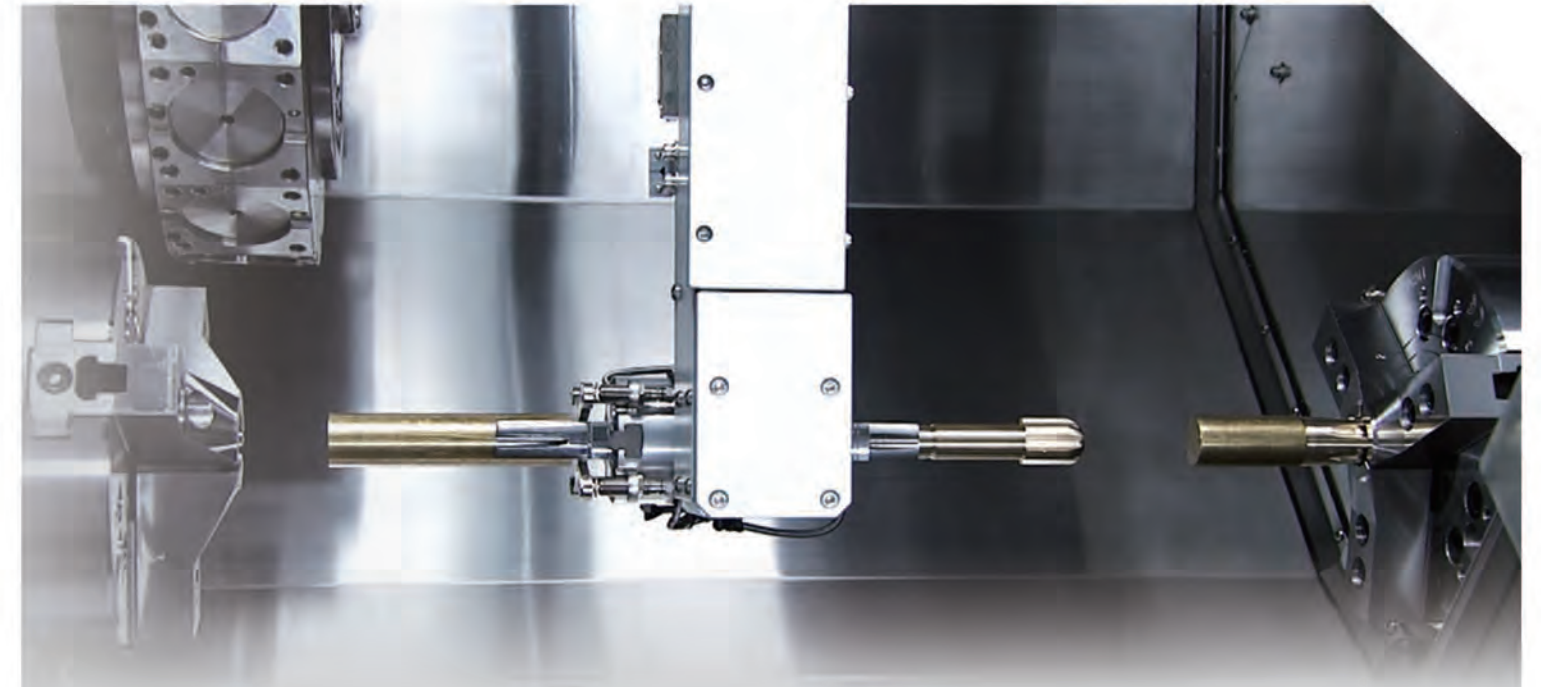
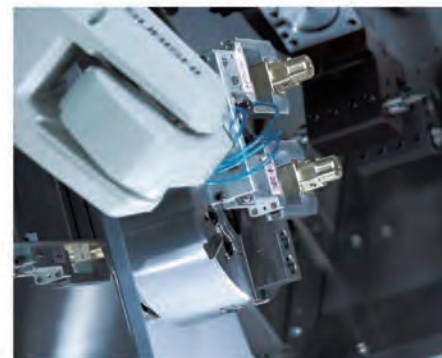
The arm feeds a new piece into the chuck, then goes to the back spindle to remove the finished workpiece, takes it to the out-feed and then returns to pick up another blank ready to feed in.

You optimize your production output and minimize operator intervention. The operator just makes sure there are plenty of blanks available and removes the completed units from the tray once full.

This could of course be integrated with an out-feed conveyor to further increase automation.

This robot can also be removed and located to another machine if required so you are not tied to replacing the robot if you decide to upgrade the machine it is installed on to another model in the series.

- + 8.3 m/sec Rapid Positioning
- + 0.02 mm Repeatable Accuracy



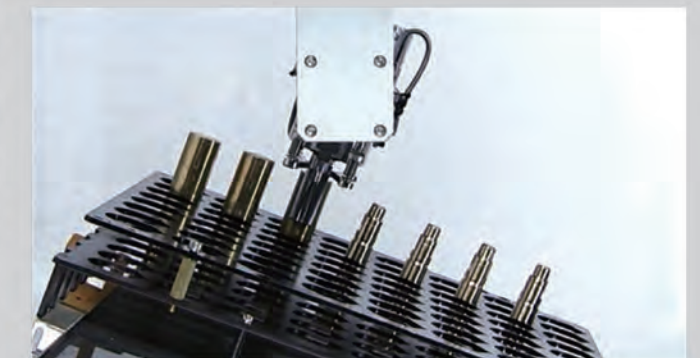
Gantry Type System

This most economical solution for production automation

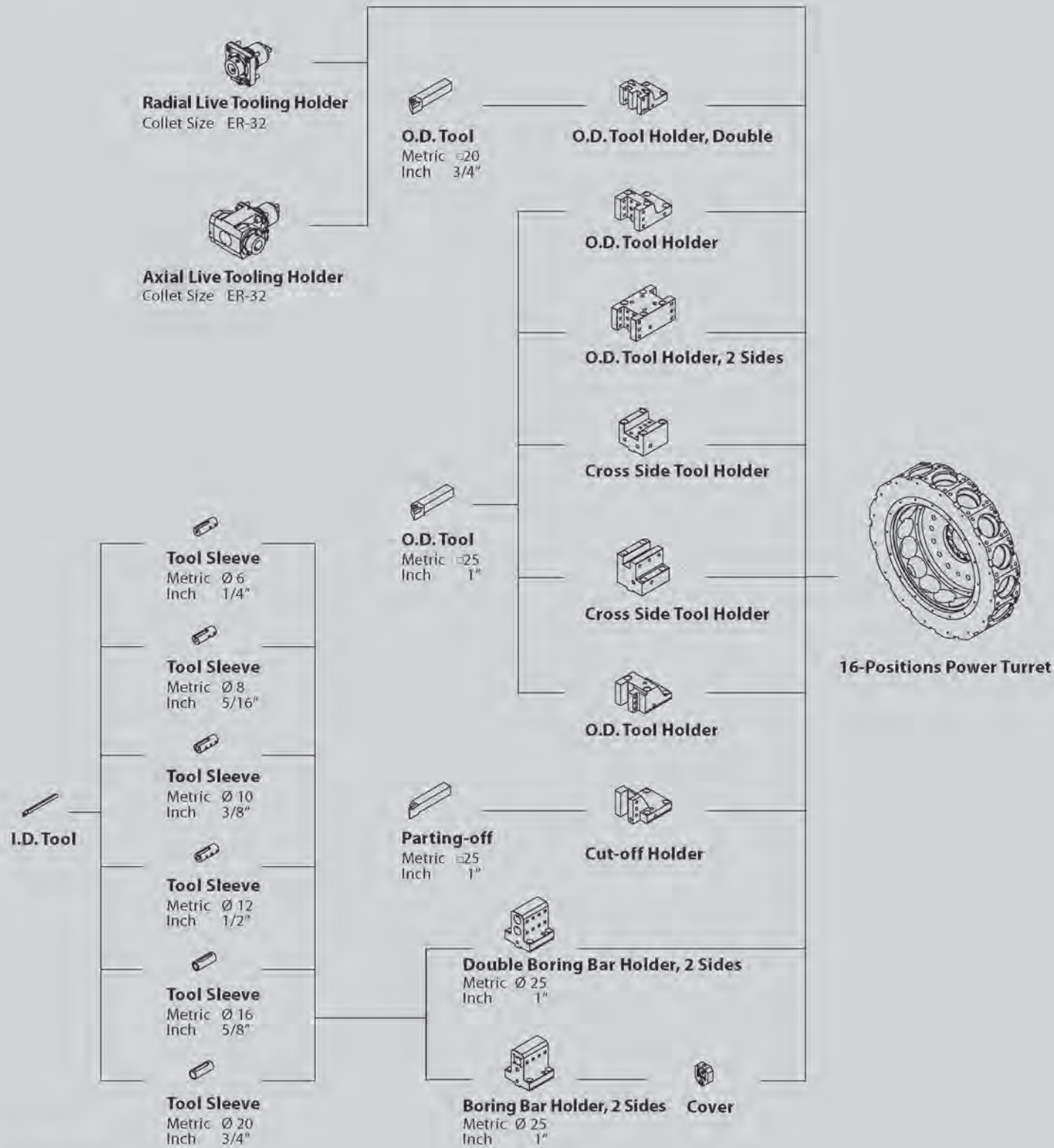
The gantry system loader/unloader delivers the most economical solution for production automation and is especially suitable for multi-cell environments. The machine features a double gripper to securely hold the parts as well as servo drive to ensure positional accuracy and smooth movement.

- + 1.5 m/sec Fast Positioning
- + 0.1 mm Repeatable Accuracy

CC Machinery offers two options for cell automation in the CT series machines. So for customers operating in multi-cell environments, you can choose either a gantry type loader/unloader or a fully robotic arm.

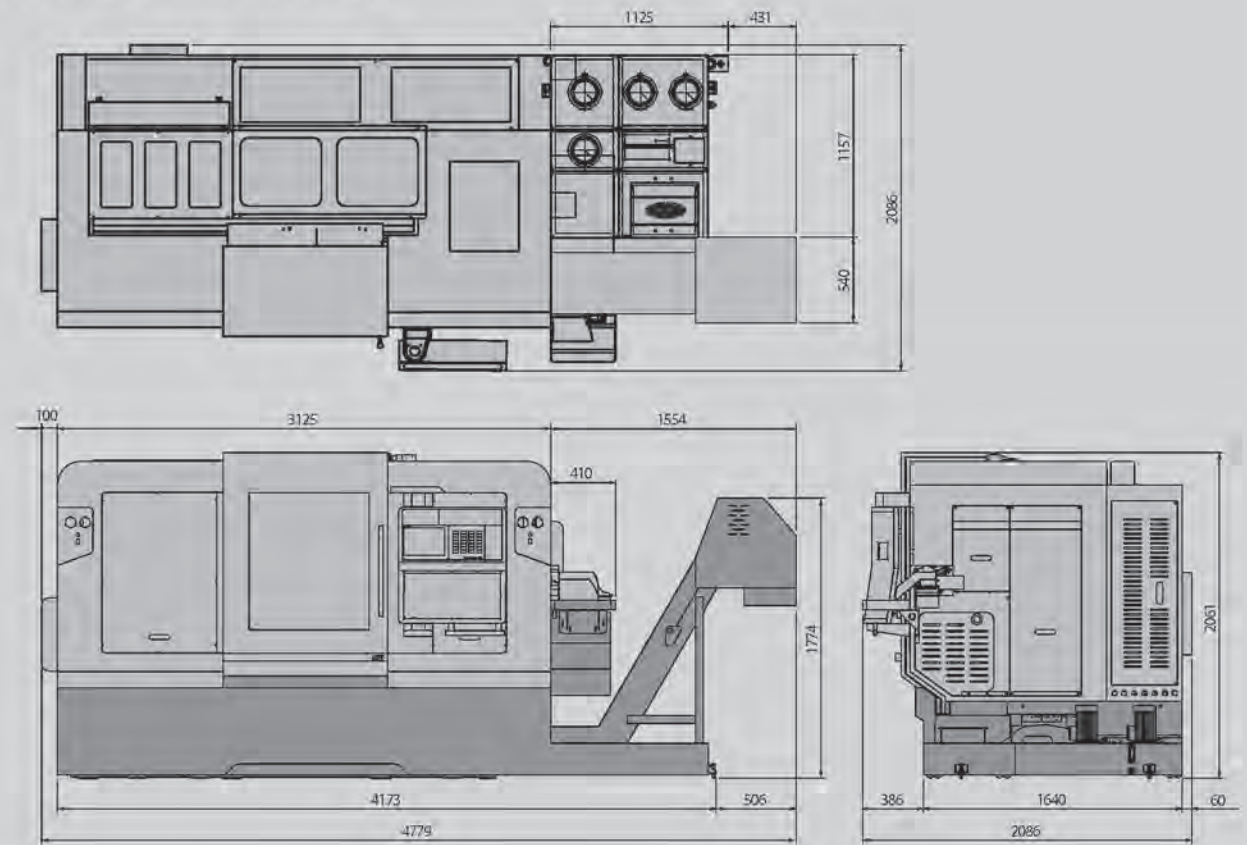


BMT-65 Tool Holder System

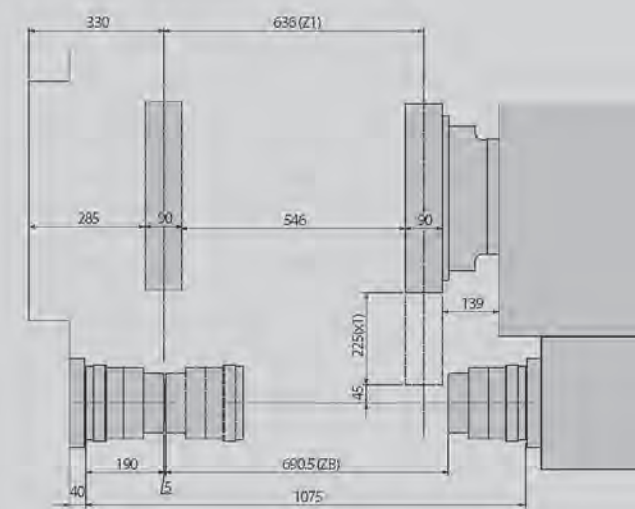


CT1

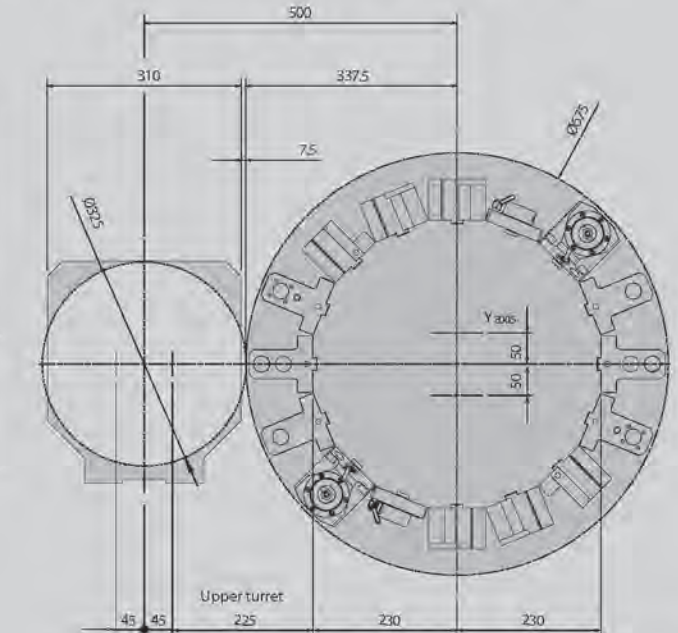
Machine Dimensions



Axes Travel Diagram



Tool Interference Diagram

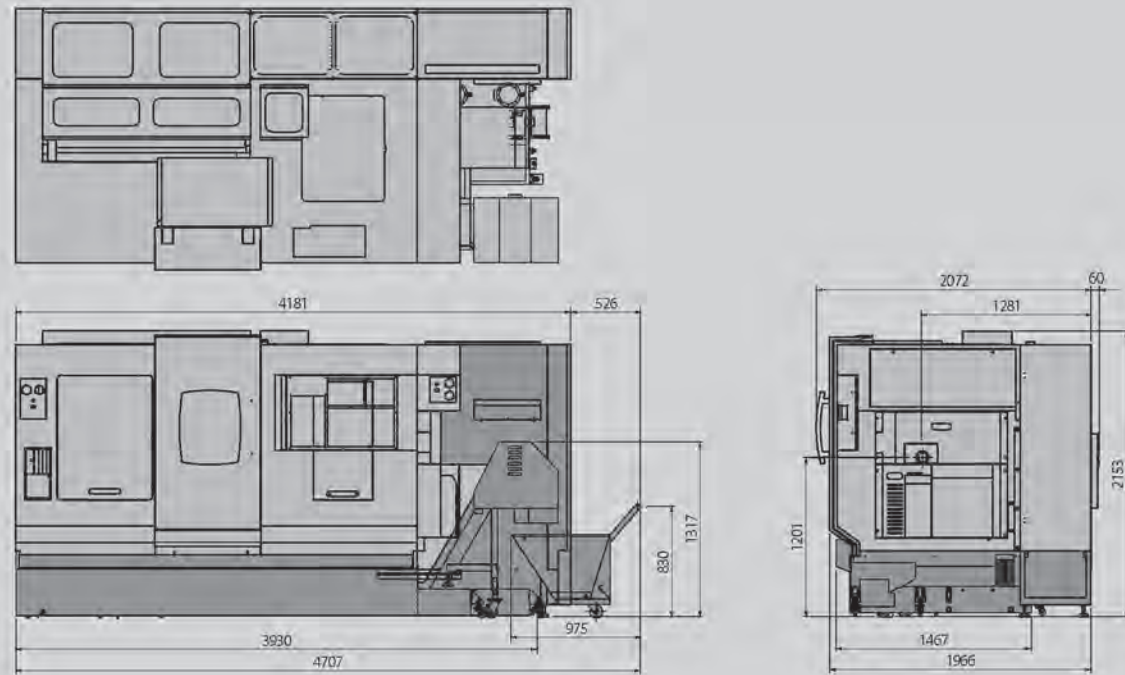


DIAGRAM

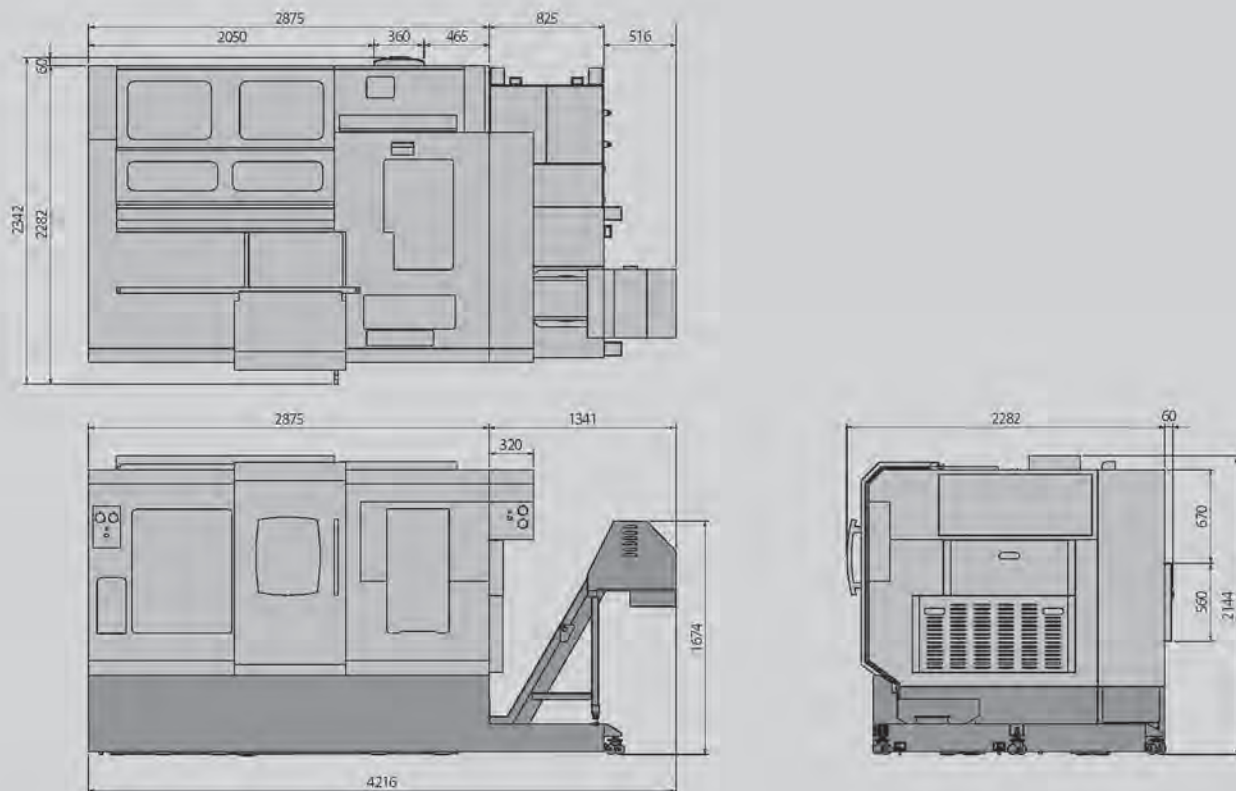
CT2

Machine Dimensions

+ CT2-52Y2M(S)

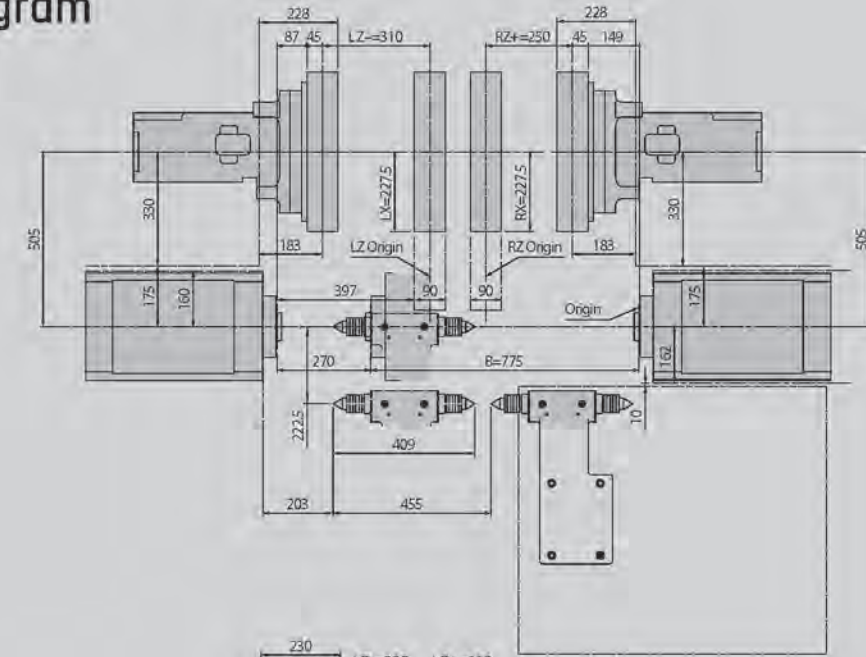


+ CT2-52YM, 76YM

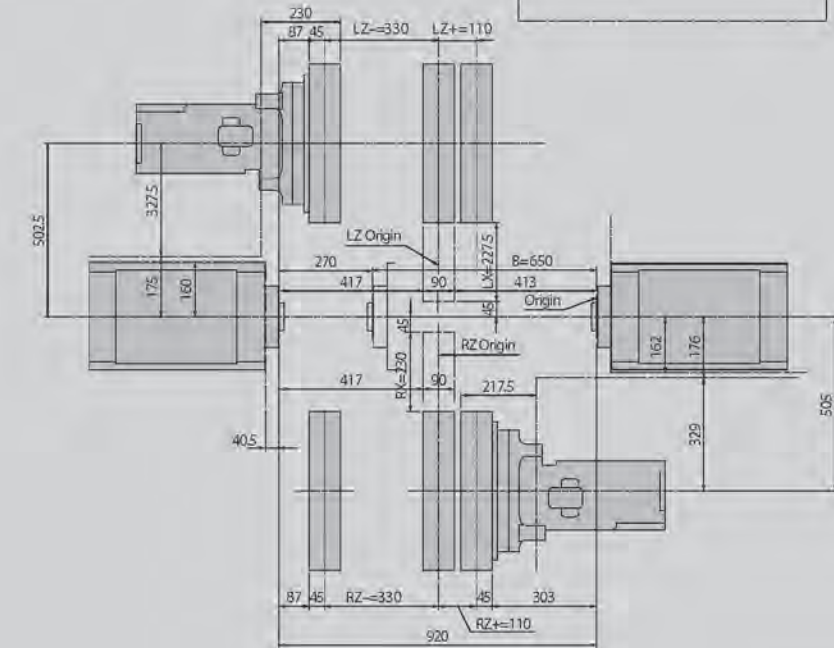


Axes Travel Diagram

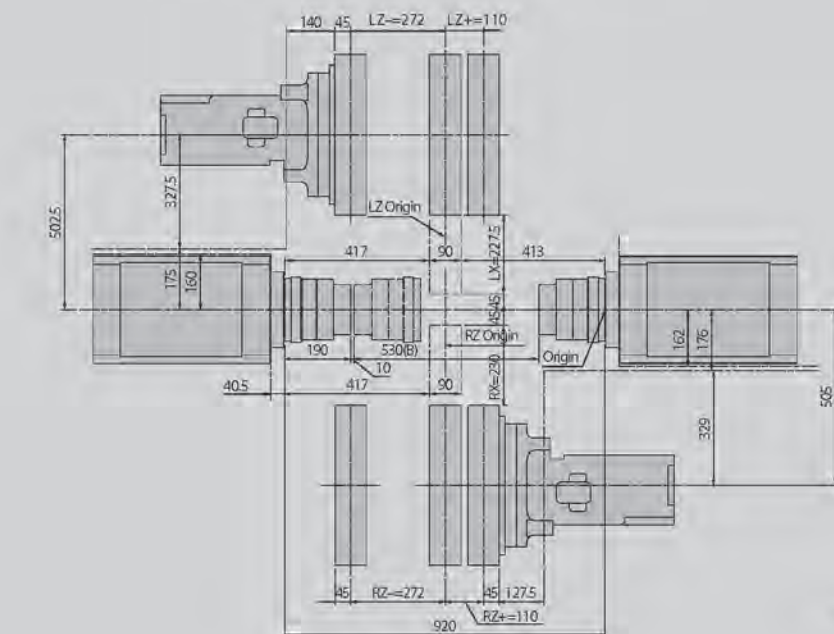
+ CT2-52Y2MS



+ CT2-52YM



+ CT2-76YM



Machine Specifications

	CT1-76YM	CT2-52	CT2-52YM	CT2-76YM
Capacity				
Controller	Mitsubishi / Fanuc	Mitsubishi	Mitsubishi / Fanuc	Mitsubishi / Fanuc
Standard cutting dia.	mm Ø210	Ø210	Ø210	Ø210
Max. cutting dia.	mm Ø325	Ø325	Ø325	Ø325
Max. cutting length	mm 560	400	440	415
Swing over bed dia.	mm Ø846	Ø830	Ø830	Ø830
Distance between 2 center spindle nose	mm 1075	920	920	920
Axes Specification				
X1/X2/X3-axes travel	mm 225	227.5/232	227.5/230	227.5/230
Z1/Z2/Z3-axes travel	mm 636	440/440	440/440	382/382
Y1/Y2-axes travel	mm ± 50	-	± 50	± 50
X/Y/Z-axes motor	kW M:2.2, F:2.7	2.2	M:2.2, F:2.7	M:2.2, F:2.7
X/Y/Z-axes rapid traverse	m/min 16/6/40	16/6/40	16/6/40	16/6/40
B-axis travel	mm 690.5	650	650	530
B-axis motor	kW M:2.2, F:2.7	2.2	M:2.2, F:2.7	M:2.2, F:2.7
B-axis rapid traverse	m/min 40	40	40	40
Min. input unit	mm 0.001	0.001	0.001	0.001
Spindle				
Spindle bore	mm Ø88	Ø60.5	Ø60.5	Ø88
Max. bar feeding dia.	mm Ø76	Ø51	Ø51	Ø76
Spindle motor	kW M:15/22, F:18/22	7.5/11	M:7.5/11, F:11/15	M:15/22, F:18/22
Max. spindle speed	rpm 4000	4000(Op:6000)	4000(Op:6000)	4000
Spindle nose	A2-6	A2-5	A2-5	A2-6
Chuck size	inch 8"	6"	6"	8"
Center height	mm 1000	1188	1188	1188
Sub Spindle				
Sub spindle bore	mm Ø88	Ø60.5	Ø60.5	Ø88
Max. bar feeding dia.	mm Ø65	Ø51	Ø51	Ø65
Sub spindle motor	kW M:7.5/11, F:18/22	7.5/11	M:7.5/11, F:11/15	M:7.5/11, F:18/22
Max. sub spindle speed	rpm 4000	4000(Op:6000)	4000(Op:6000)	4000
Sub spindle nose	A2-6	A2-5	A2-5	A2-6
Chuck size	inch 8"	6"	6"	8"
L,R,C-axes				
Min. moving unit	0.001°	0.001°	0.001°	0.001°
C-axes rapid traverse	min ⁻¹ 600	600	600	600
Live Tooling Turret				
Rotating mode	Single tool transmission	-	Single tool transmission	Single tool transmission
Tool holder & Tool size	BMT 65	-	BMT 65	BMT 65
Live tooling motor	kW M:3.7/5.5, F:4.5	-	M:3.7/5.5, F:4.5	M:3.7/5.5, F:4.5
Live tooling speed	min ⁻¹ 60~6000	-	60~6000	60~6000
Collet size	ER ERØ32	ERØ32	ERØ32	ERØ32
O.D. turning tool size	mm □25	□25	□25	□25
I.D. turning tool size	mm Ø25	Ø25	Ø25	Ø25
Hydraulic & Coolant				
Hydraulic motor	kW 3.7	3.7	3.7	3.7
Spindle coolant pump	kW 0.75	0.75	0.75	0.75
Turret coolant pump	kW 0.75	0.75	0.75	0.75
Chip flush pump	kW 0.75	0.75	0.75	0.75
Sub spindle internal coolant pump	kW 0.75	0.75	0.75	0.75
Tank Capacity				
Hydraulic tank	L 45	48	48	48
Coolant tank	L 325	360	360	360
Machine				
Power	kVA 45	60	60	60
Machine size (LxWxH) (includes chip conveyor)	mm 4779x2086x2061	4216x2342x2144	4216x2342x2144	4216x2342x2144
Machine N.W. (includes chip conveyor)	kg 8000	10200	10200	10300

Standard Accessories

- + Tool Kit & Box
- + Collet Chuck Device
- + Auto Bar Feeder Interface
- + Finished Parts Gripper & Conveyor
- + Auto Power Breaker
- + Air Conditioner for Electrical Cabinet
- + Steel Belt Chip Conveyor

- + Spindle Chiller Device
- + Coolant through Sub Spindle
- + Cutting Fluid Pump
- + Cutting Fluid Inspection Device
- + Air Blowing Device

	CT2-52Y2M(S)	CT2-76Y2M	CT3-52Y2M	CT3-76Y2M
Capacity				
Controller	Mitsubishi / Fanuc	Mitsubishi / Fanuc	Mitsubishi	Mitsubishi / Fanuc
Standard turning dia.	mm Ø210	Ø210	Ø210	Ø210
Max. turning dia.	mm Ø325	Ø325	Ø325	Ø325
Max. cutting length	mm 310	285	310	285
Swing over bed dia.	mm Ø830	Ø830	Ø830	Ø830
Distance between 2 center spindle nose	mm 1045	1045	1045	1045
Axes Specification				
X1/X2/X3-axes travel	mm 227.5/227.5	227.5/227.5	227.5/227.5/230	227.5/227.5/230
Z1/Z2/Z3-axes travel	mm 310/250	252/250	310/250/440	252/250/382
Y1/Y2-axes travel	mm ± 50/± 50	± 50/± 50	± 50/± 50	± 50/± 50
X/Y/Z-axes motor	kW M:2.2, F:2.7	M:2.2, F:2.7	2.2	M:2.2, F:2.7
X/Y/Z-axes rapid traverse	m/min 16/6/40	16/6/40	16/6/40	16/6/40
B-axis travel	mm 775	655	775	655
B-axis motor	kW M:2.2, F:2.7	M:2.2, F:2.7	2.2	M:2.2, F:2.7
B-axis rapid traverse	m/min 40	40	40	40
Min. input unit	mm 0.001	0.001	0.001	0.001
Spindle				
Spindle bore	mm Ø60.5	Ø88	Ø60.5	Ø88
Max. bar feeding dia.	mm Ø51	Ø76	Ø51	Ø76
Spindle motor	kW M:7.5/11, F:11/15	M:15/22, F:18/22	7.5/11	M:15/22, F:18/22
Max. spindle speed	rpm 4000 (Op:6000)	4000	4000 (Op:6000)	4000
Spindle nose	A2-5	A2-6	A2-5	A2-6
Chuck size	inch 6"	8"	6"	8"
Center height	mm 1188	1188	1188	1188
Sub Spindle				
Sub spindle bore	mm Ø60.5	Ø88	Ø60.5	Ø88
Max. bar feeding dia.	mm Ø51	Ø65	Ø51	Ø65
Sub spindle motor	kW M:7.5/11, F:11/15	M:7.5/11, F:18/22	7.5/11	M:7.5/11, F:18/22
Max. sub spindle speed	rpm 4000 (Op:6000)	4000	4000 (Op:6000)	4000
Sub spindle nose	A2-5	A2-6	A2-5	A2-6
Chuck size	inch 6"	8"	6"	8"
L,R,C-axes				
Min. moving unit	0.001°	0.001°	0.001°	0.001°
C-axes rapid traverse	min ⁻¹ 600	600	600	600
Live Tooling Turret				
Rotating mode	Single tool transmission	Single tool transmission	Single tool transmission	Single tool transmission
Tool holder & Tool size	BMT 65	BMT 65	BMT 65	BMT 65
Live tooling motor	kW M:3.7/5.5, F:4.5	M:3.7/5.5, F:4.5	3.7/5.5	M:3.7/5.5, F:4.5
Live tooling speed	min ⁻¹ 60~6000	60~6000	60~6000	60~6000
Collet size	ER ERØ32	ERØ32	ERØ32	ERØ32
O.D. turning tool size	mm □25	□25	□25	□25
I.D. turning tool size	mm Ø25	Ø25	Ø25	Ø25
Hydraulic & Coolant				
Hydraulic motor	kW 3.7	3.7	3.7	3.7
Spindle coolant pump	kW 0.75	0.75	0.75	0.75
Turret coolant pump	kW 0.75	0.75	0.75	0.75
Chip flush pump	kW 0.75	0.75	0.75	0.75
Sub spindle internal coolant pump	kW 0.75	0.75	0.75	0.75
Tank Capacity				
Hydraulic tank	L 48	48	48	48
Coolant tank	L 360	360	305	305
Machine				
Power	kVA 60	60	60	60
Machine size (LxWxH) (includes chip conveyor)	mm 4181x2072x2153	4327x2335x2164	4327x2335x2164	4327x2335x2164
Machine N.W. (includes chip conveyor)	kg 10200	11200	11100	11200

Optional Accessories

- + 6" / 8" Hydraulic Chuck
- + Axial and Radial Live Tool Holder
- + Voltage Stabilizer / Transformer
- + Bar Feeder
- + Oil Mist Collector
- + 15-bar High Pressure Coolant Device with Filter
- + Automatic Door Device
- + Mitsubishi Robot
- + Gantry System