



FocusCNC®

FCL-140/A

FCL-200/S/HT/MC

FCL-300/P/MC

Linear Way Series **CNC Lathes**



Linear Way Series

CNC Lathes

FCL-140/A

FCL-200/S/HT/MC

FCL-300/P/MC



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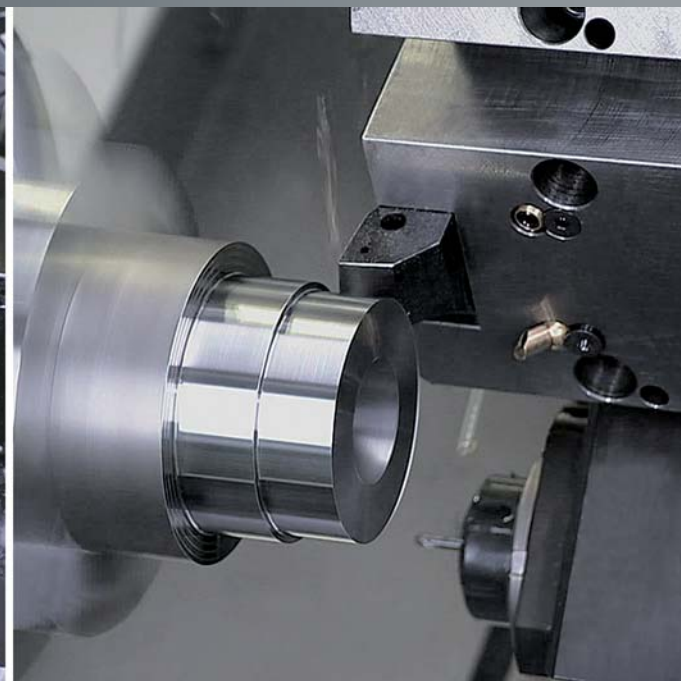
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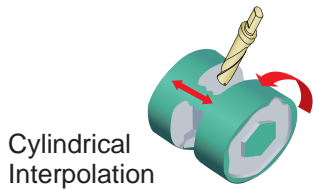
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FCL-200/HT/MC
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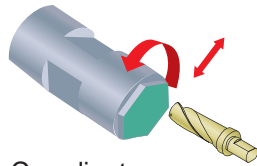


Controller

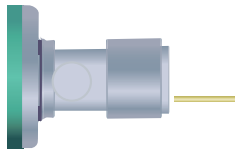
FANUC



Cylindrical Interpolation



Polar Coordinate Interpolation



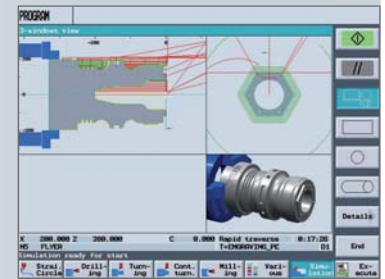
Manual Guide i (opt.)
Conversational editing with 3D simulation available.

SIEMENS



Uses a 10.4" screen for easy operation. Optional Shop Turn function with integrated operating system. Finish programming without having to use G code.

- 2 window view dynamic simulation
- 3D finished part simulation (opt.)
- 3D section view (opt.)



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FCL-200/S/HT/MC
System Diagram

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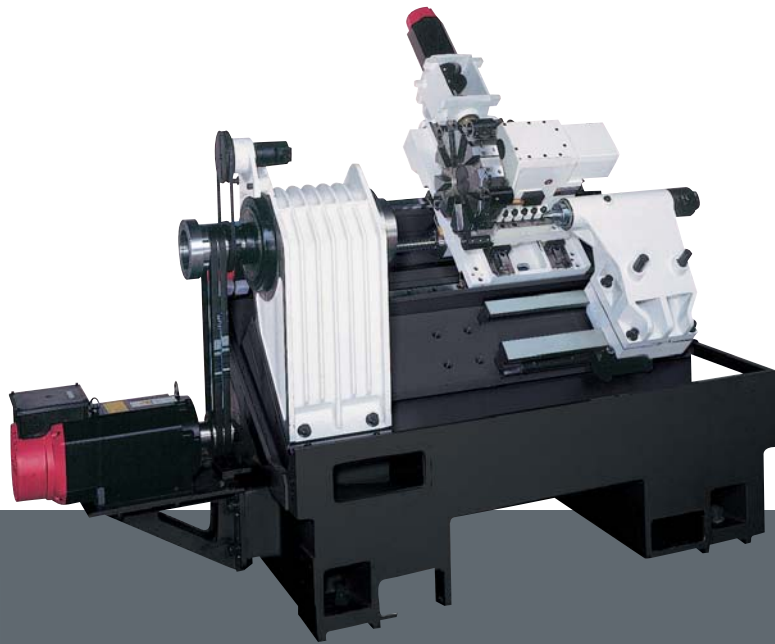
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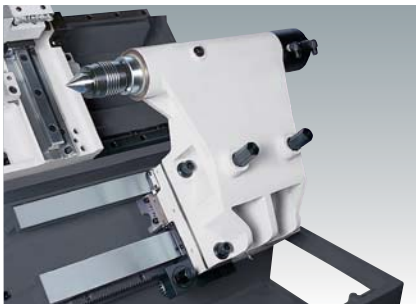
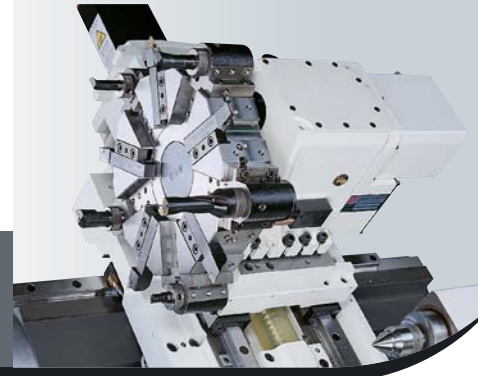
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Specifications



FCL-140/A Series



High speed and high precision hydraulic cam tool turret holds 10 tools, 0.3 second tool change, repeatability accuracy up to 0.002mm.



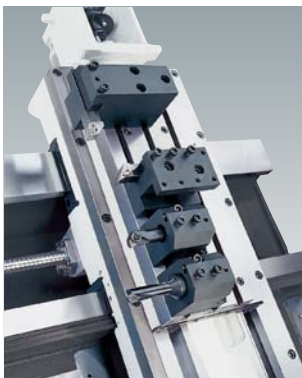
MT4 hydraulic tailstock.



Spindle with $\varnothing 90\text{mm}$ large diameter angular bearings for heavy-duty high precision machining.

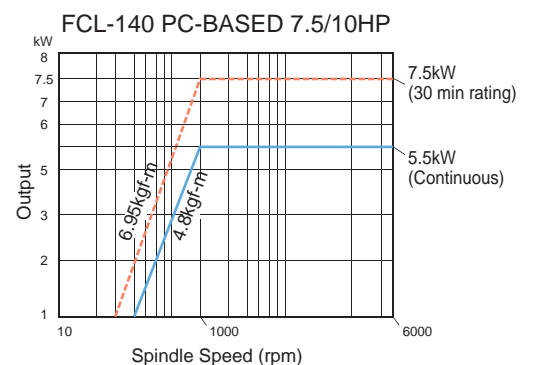
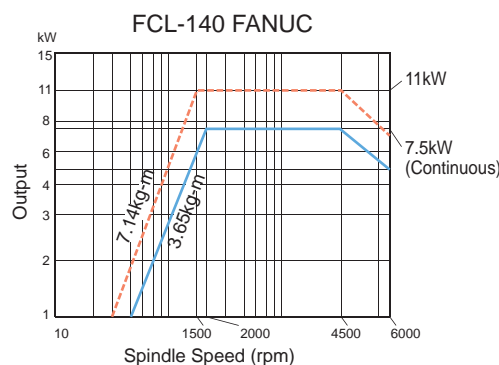


Chip removal outlet may be arranged at rear or side part of the machine. Coolant tank may be pulled out to clean for compact factory floor usage.



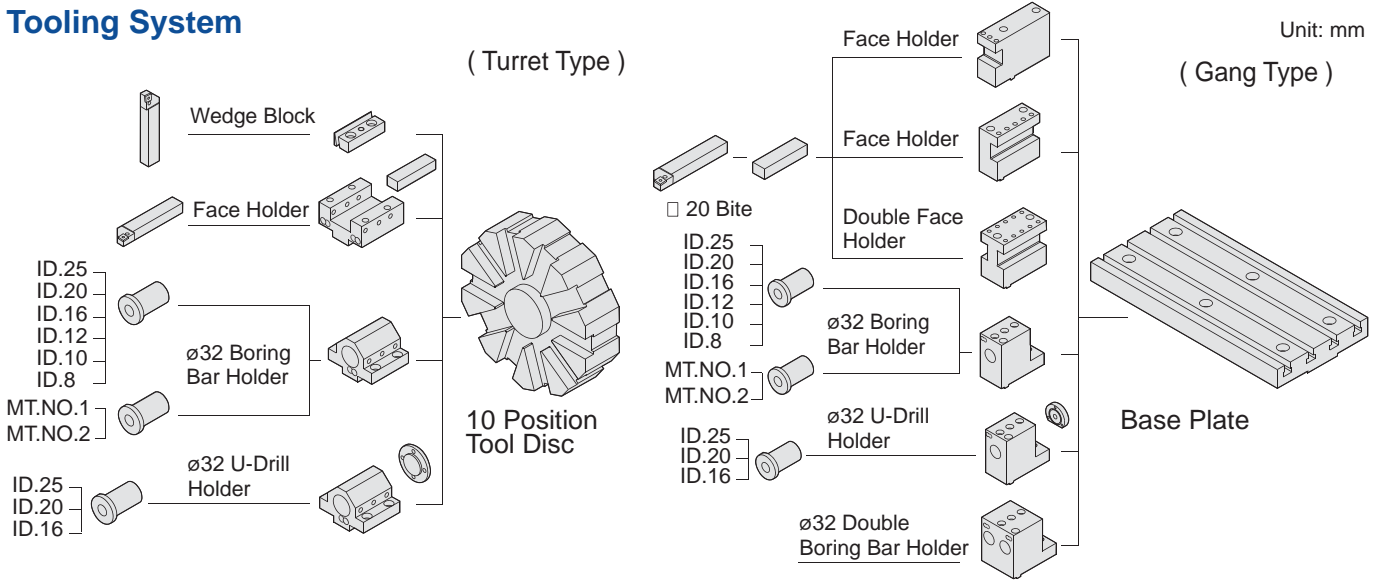
Gang type tool base features efficiency and added value.

Spindle Torque Diagram

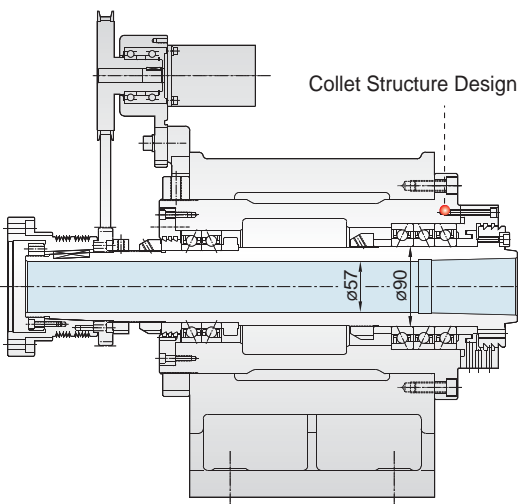


FCL-140 System Diagram

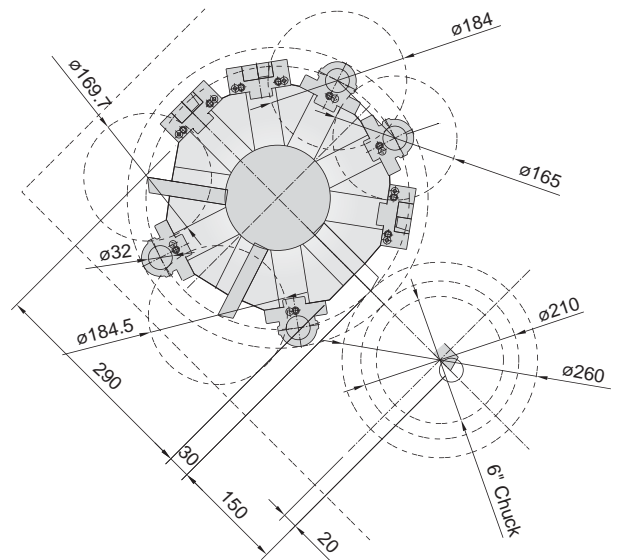
Tooling System



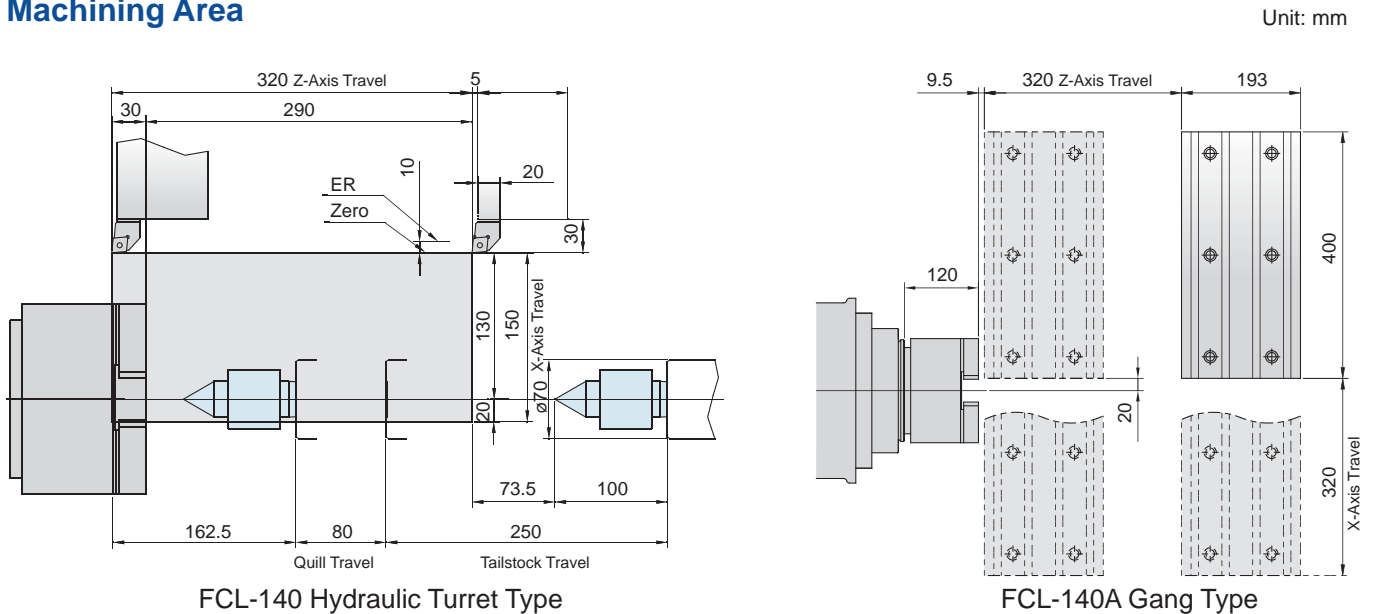
Spindle Structure



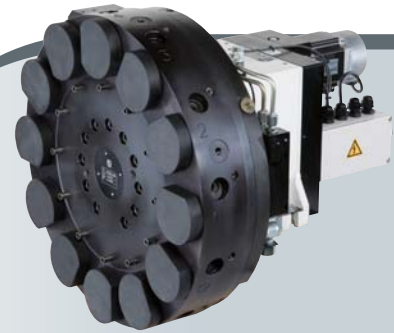
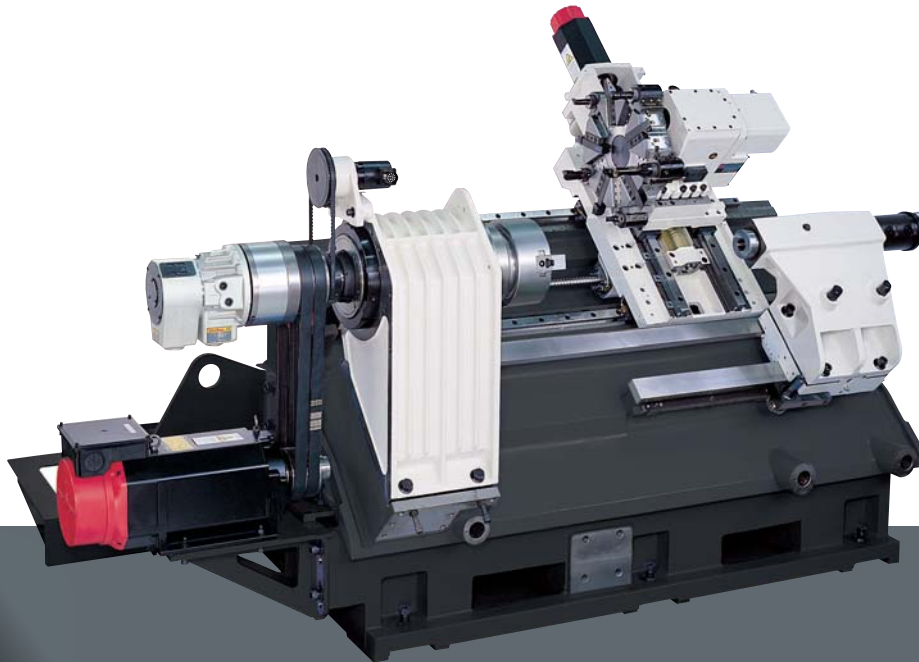
Tool Interference



Machining Area

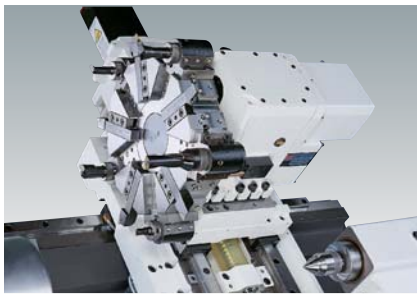


FCL-200/S/HT/MC Series



FCL-200MC Powerful Milling and Turning System

Adopts the latest tool selection systems, the fastest servo turret, 3-disc clutch gear positioning and fast hydraulic locking. Tool-to-tool change 0.2 second. Powerful drilling, milling, turning, tapping as well as end milling capabilities for high efficiency integrated machining.



FCL-200 High Speed and High Precision Hydraulic Cam Turret

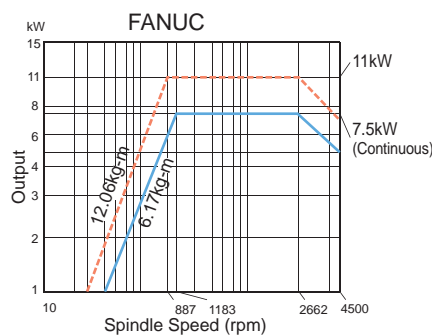
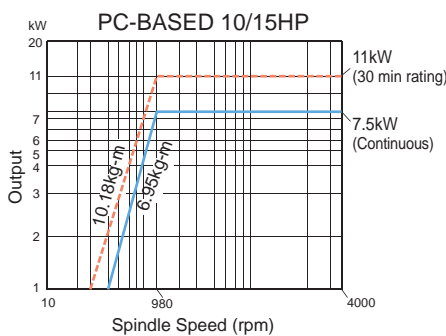
Holds 10 tools, 0.3 second tool change, repeatable accuracy up to 0.002mm.

FCL-200MC High Accurate CS Indexing Spindle System

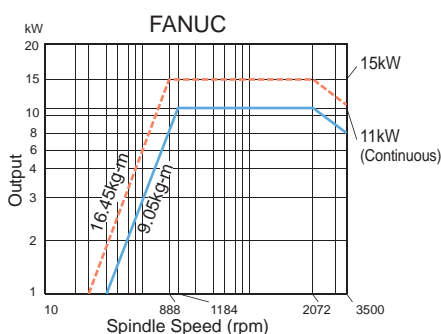
High accuracy CS indexing spindle driven by CS high accuracy servo motor, high resolution feedback device.



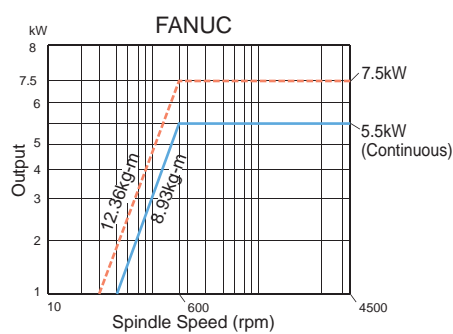
FCL-200 Spindle Torque Diagram



FCL-200HT



FCL-200MC



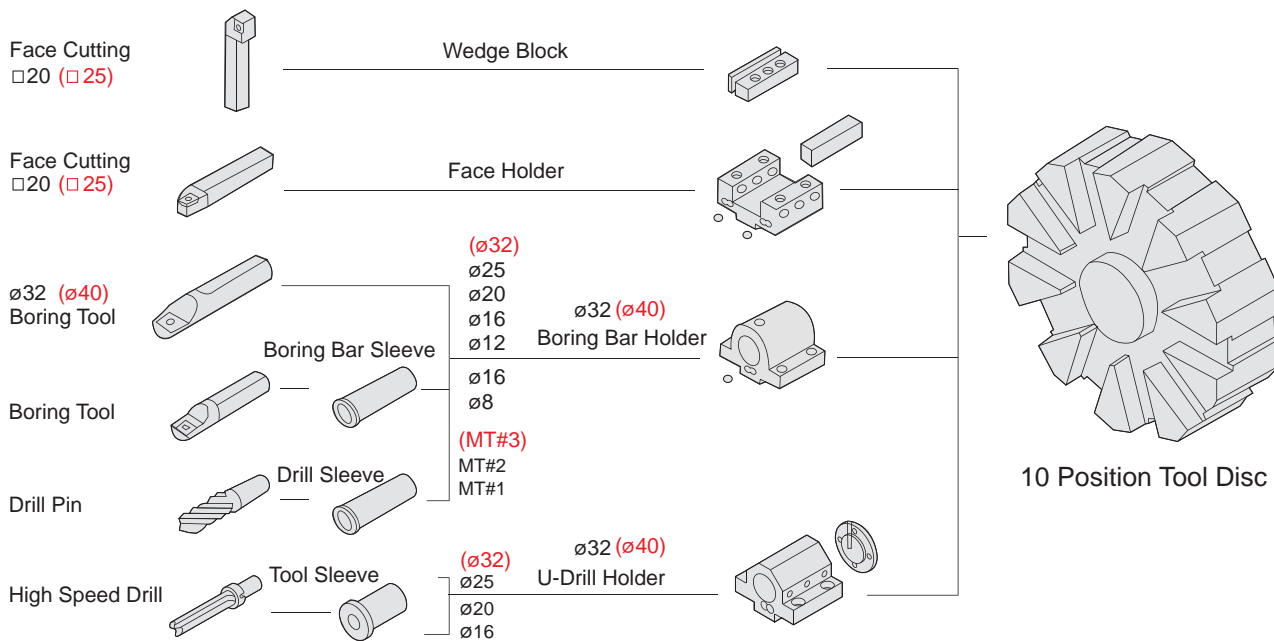
FCL-200 High Precision Spindle System

Spindle with $\varnothing 100\text{mm}$ large diameter highly accurate angular ball bearings sturdy collet type design for precision machining.

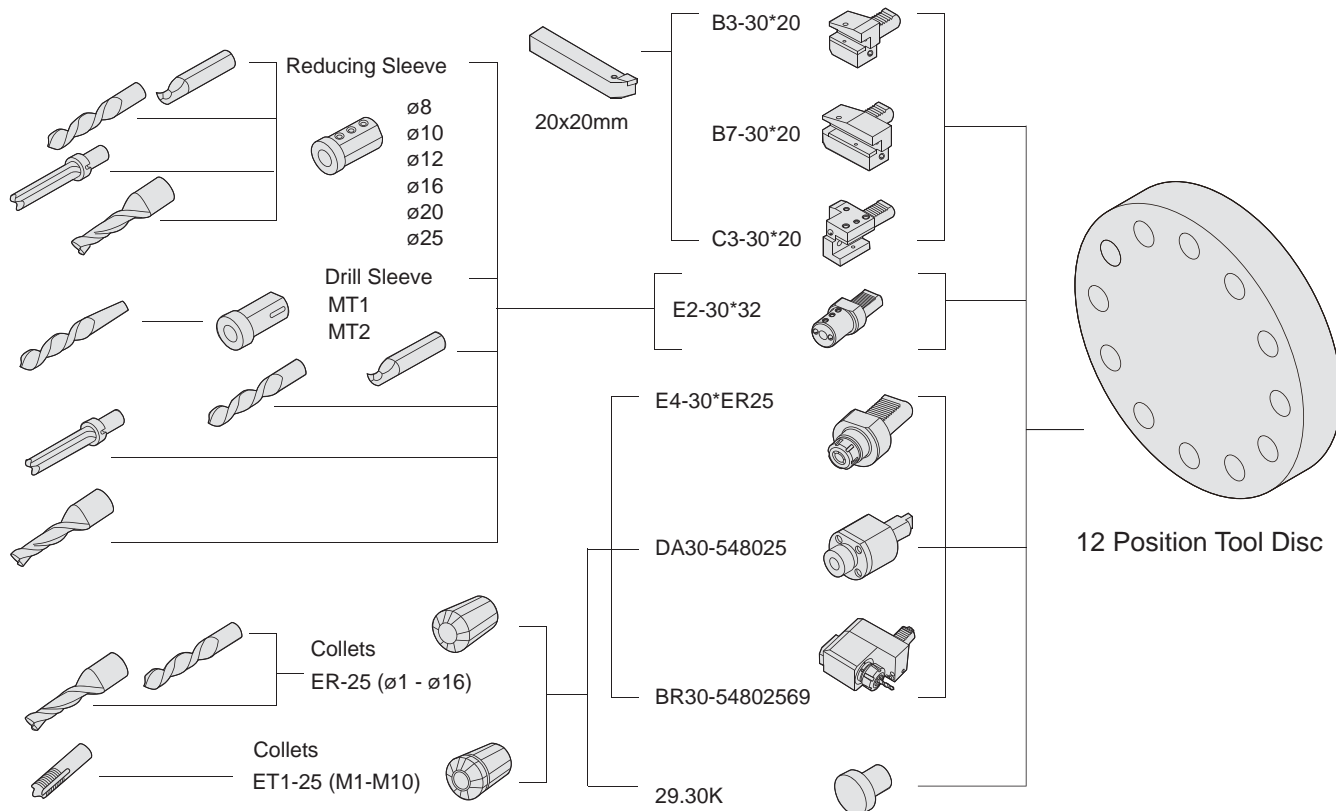
FCL-200/HT/MC Tooling System

FCL-200 Tooling System () FCL-200HT specifications in brackets.

Unit: mm



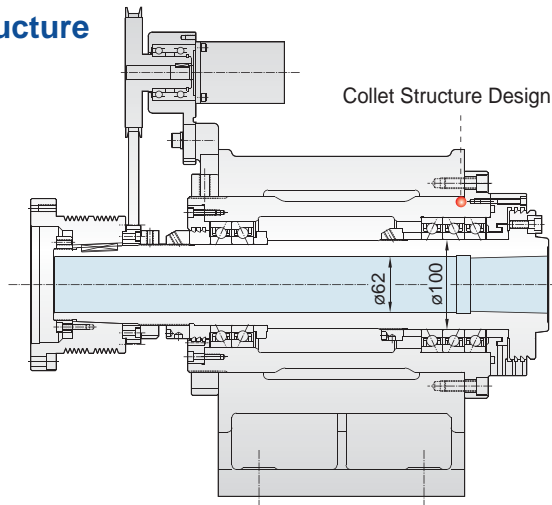
FCL-200MC Tooling System



FCL-200/S/HT/MC System Diagram

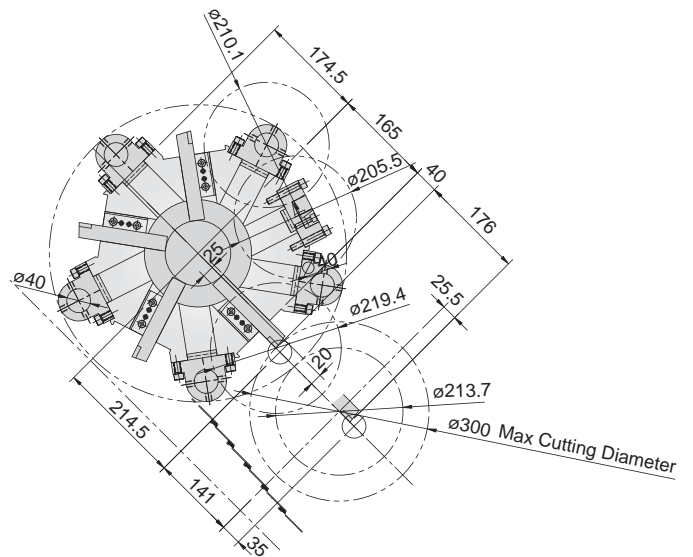
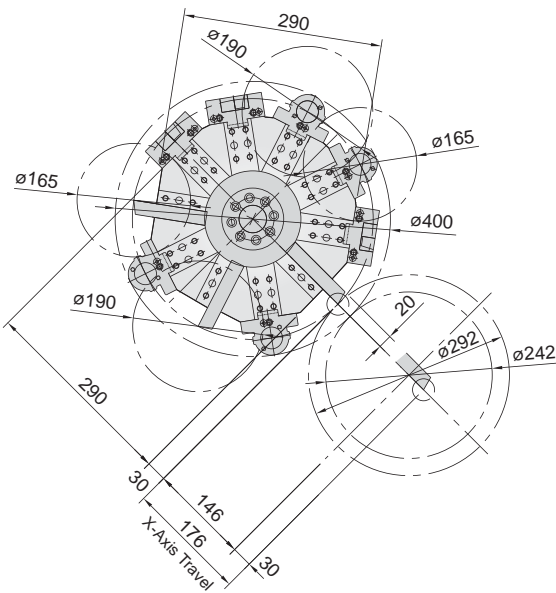
FCL-200/HT/MC Spindle Structure

Unit: mm

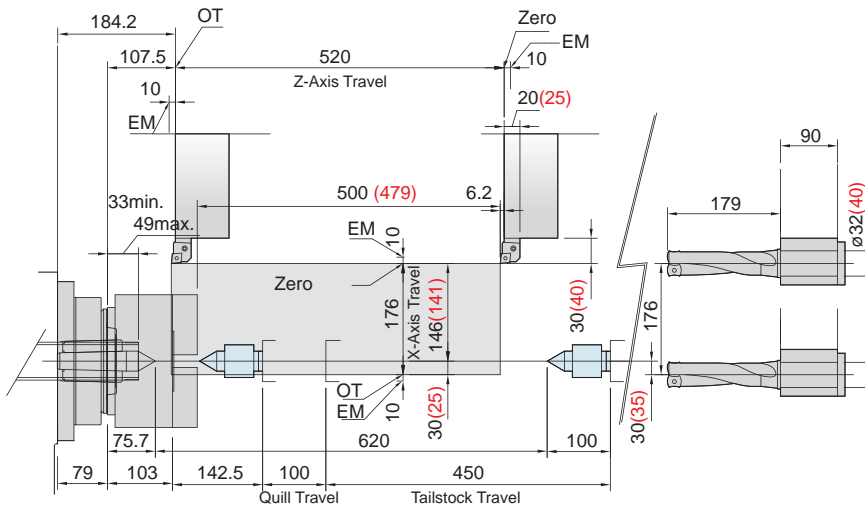


FCL-200 Tool Interference

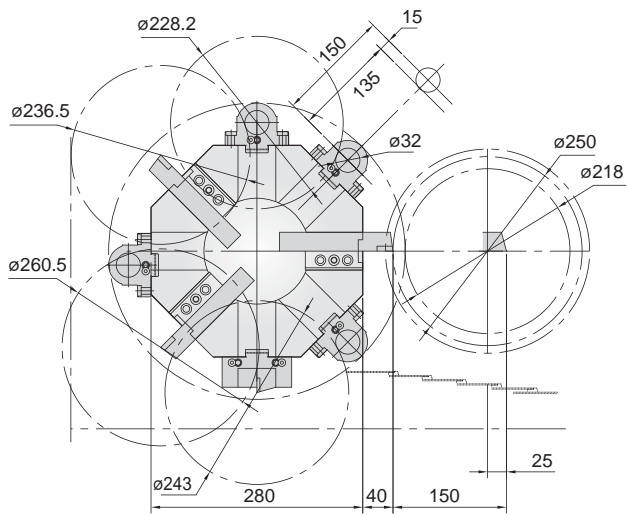
FCL-200HT Tool Interference



FCL-200 Machining Area () FCL-200HT specifications in brackets.

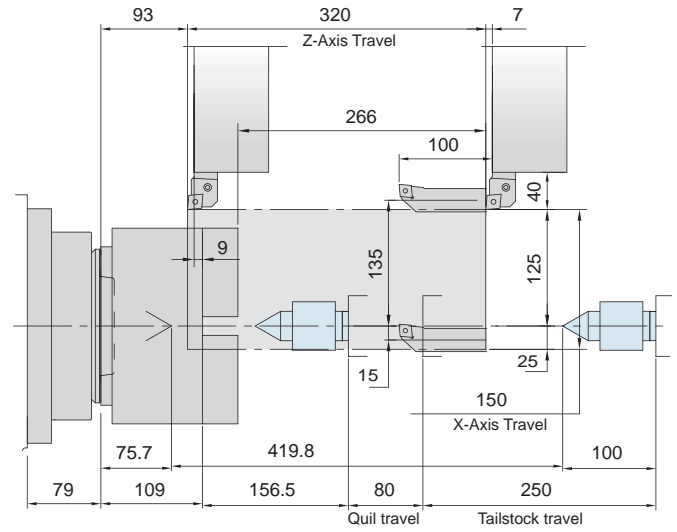


FCL-200S Tool Interference

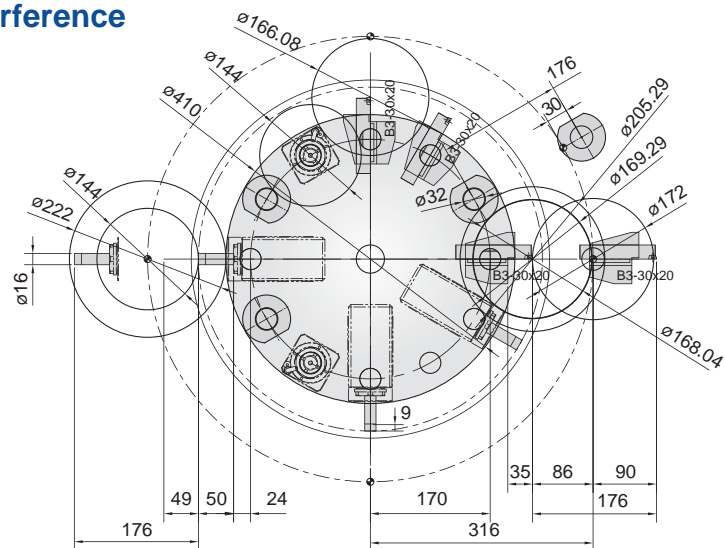


FCL-200S Machining Area

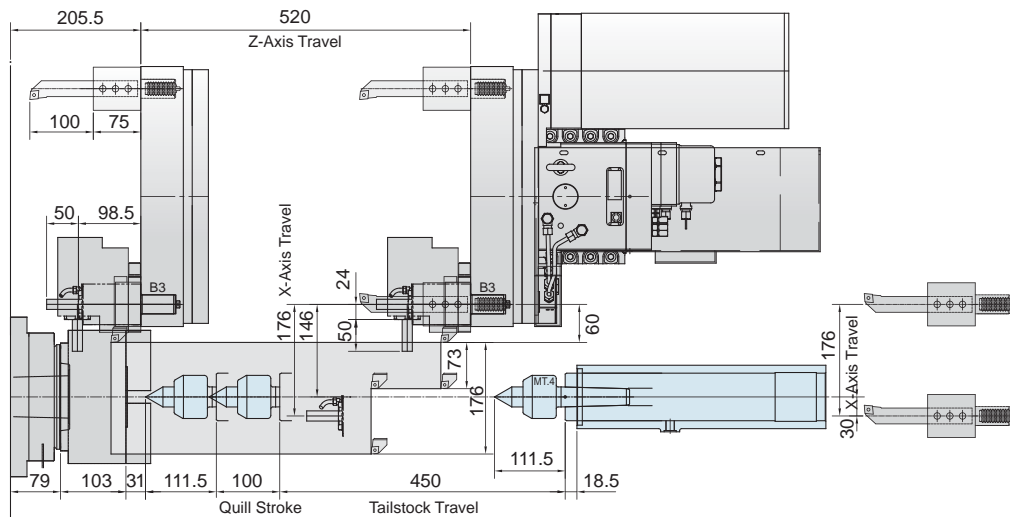
Unit: mm



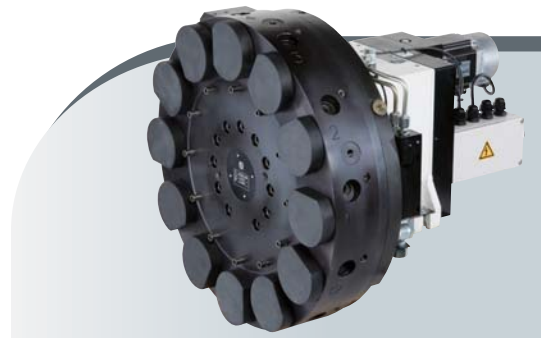
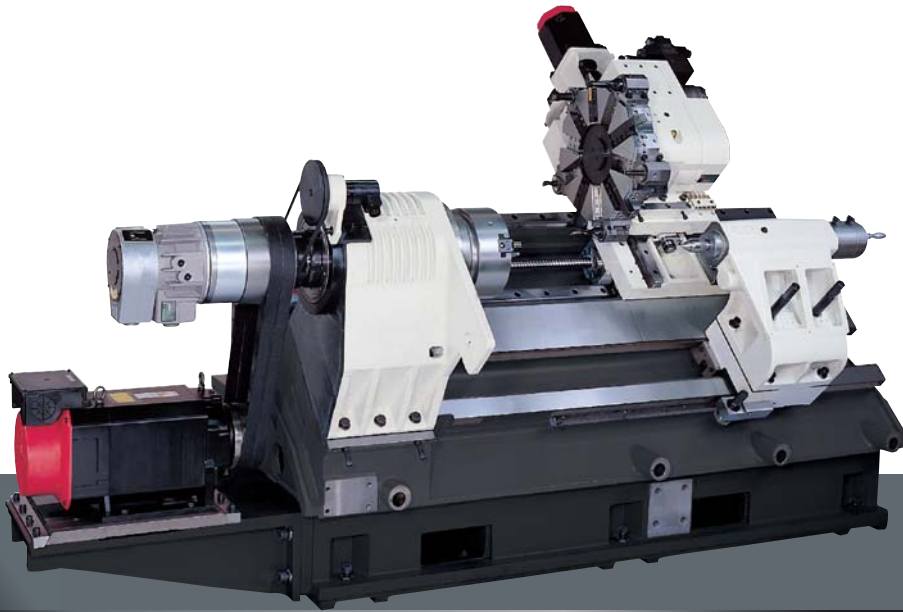
FCL-200MC Tool Interference



FCL-200MC Machining Area

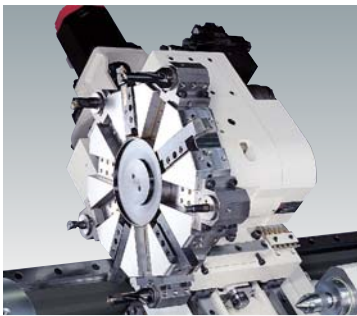


FCL-300/P/MC Series



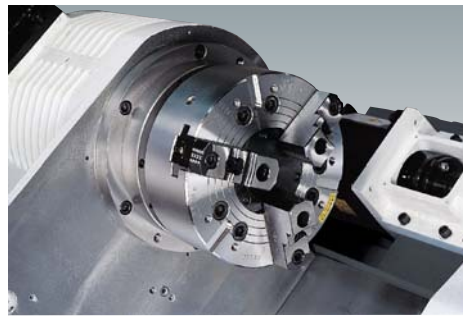
FCL-300MC Powerful Milling and Turning System

Adopts the latest tool selection systems, the fastest servo turret, 3-disc clutch gear positioning and fast hydraulic locking. Tool-to-tool change 0.2 second. Powerful drilling, milling, turning, tapping as well as end milling capabilities for high efficiency integrated machining.



FCL-300/P High Speed and High Precision Hydraulic Cam Turret

Holds 10 tools, 0.3 second tool change, repeatable accuracy up to 0.002mm.

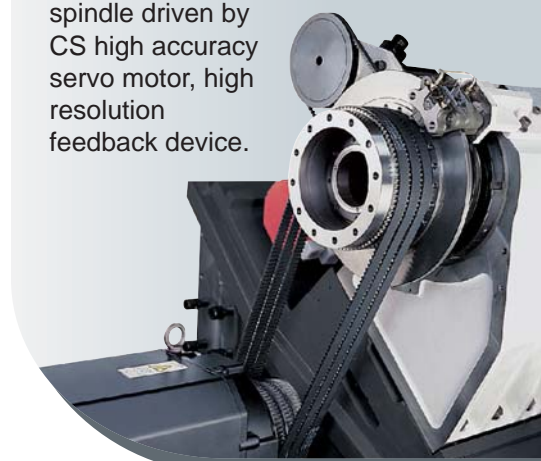


FCL-300P High Precision Spindle System

Front and rear end of spindle uses high rigidity 2-column NN type ball bearings. Middle section spindle with $\phi 130\text{mm}$ large diameter, high precision angular ball bearings for heavy duty machining at low speed.

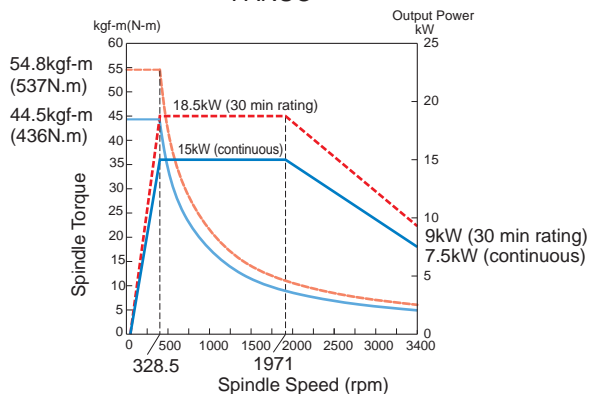
FCL-300MC High Accurate CS Indexing Spindle System

High accuracy CS indexing spindle driven by CS high accuracy servo motor, high resolution feedback device.

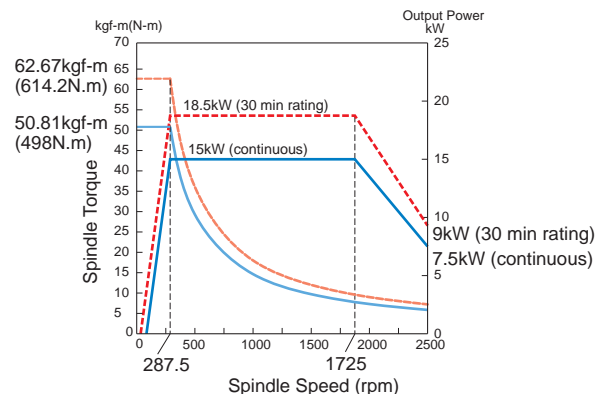


FCL-300 Spindle Torque Diagram

FCL-300/MC (ANG-TYPE) 3000RPM FANUC

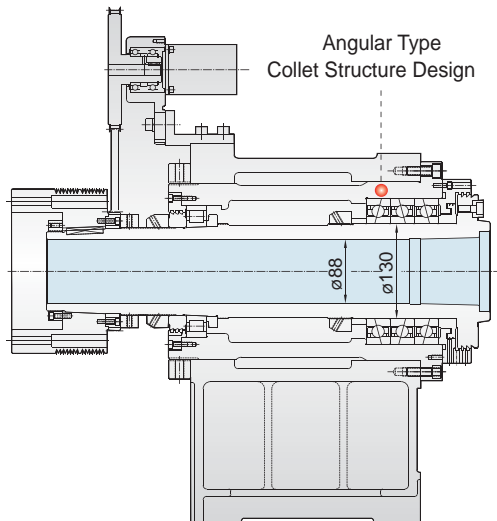


FCL-300P (NN-TYPE) 2500RPM FANUC



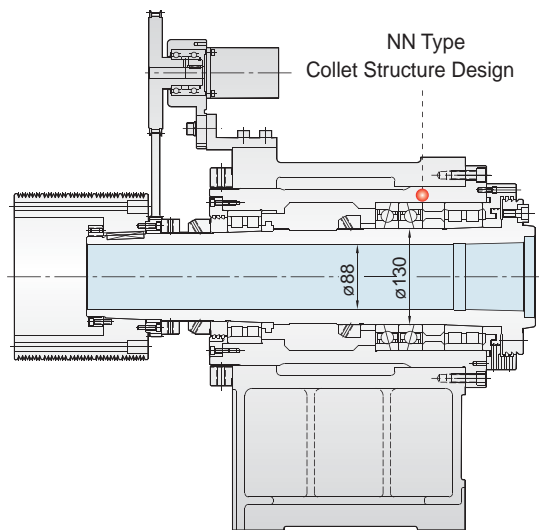
FCL-300/P/MC System Diagram

FCL-300/MC Spindle Structure

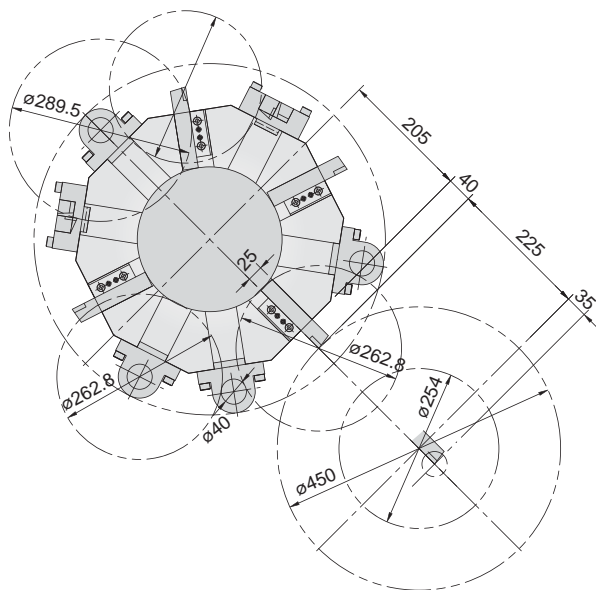


FCL-300P Spindle Structure

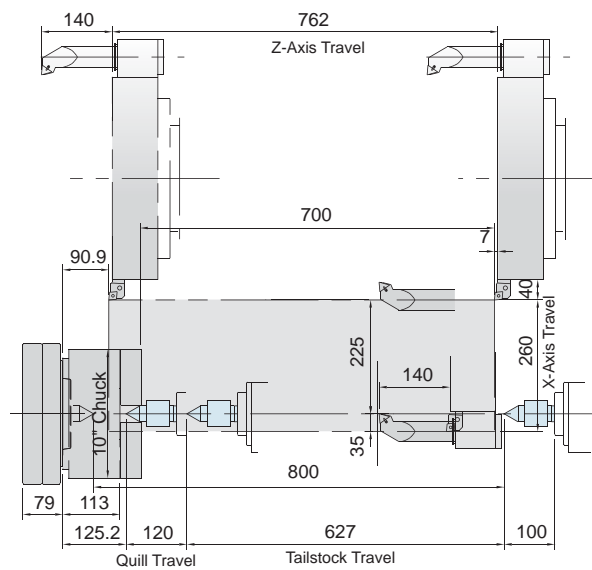
Unit: mm



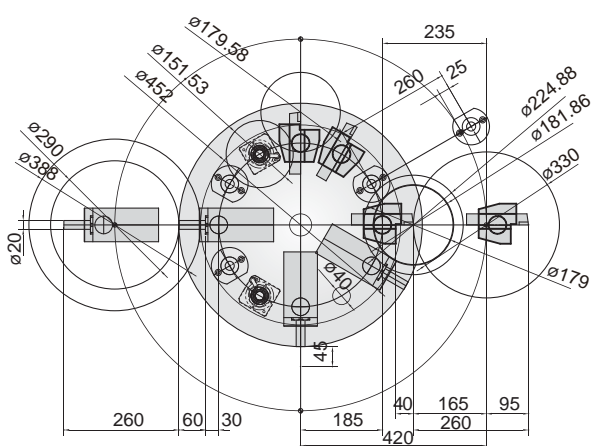
FCL-300 Tool Interference



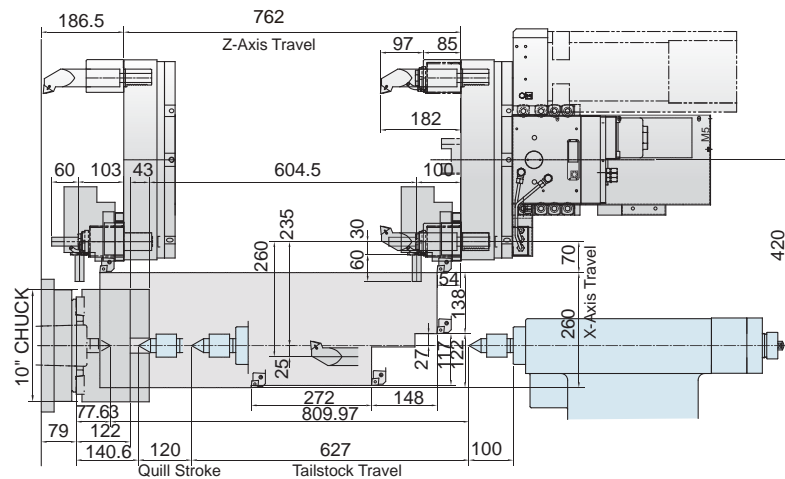
FCL-300 Machining Area



FCL-300MC Tool Interference



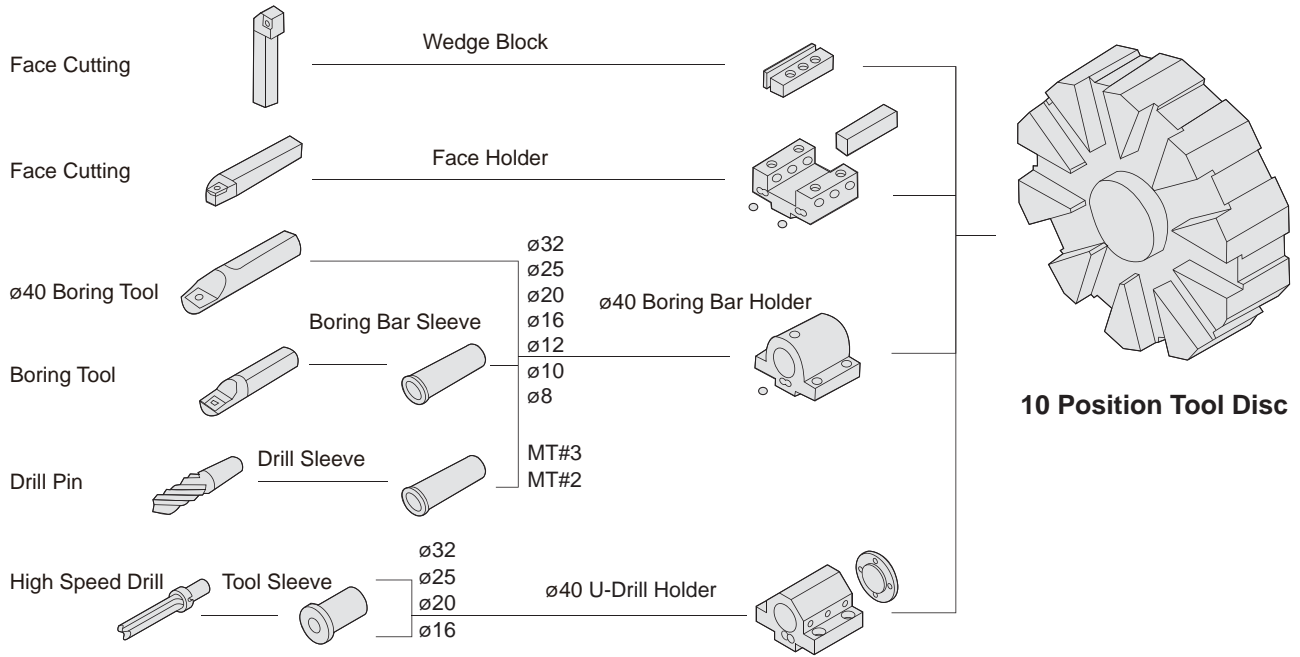
FCL-300MC Machining Area



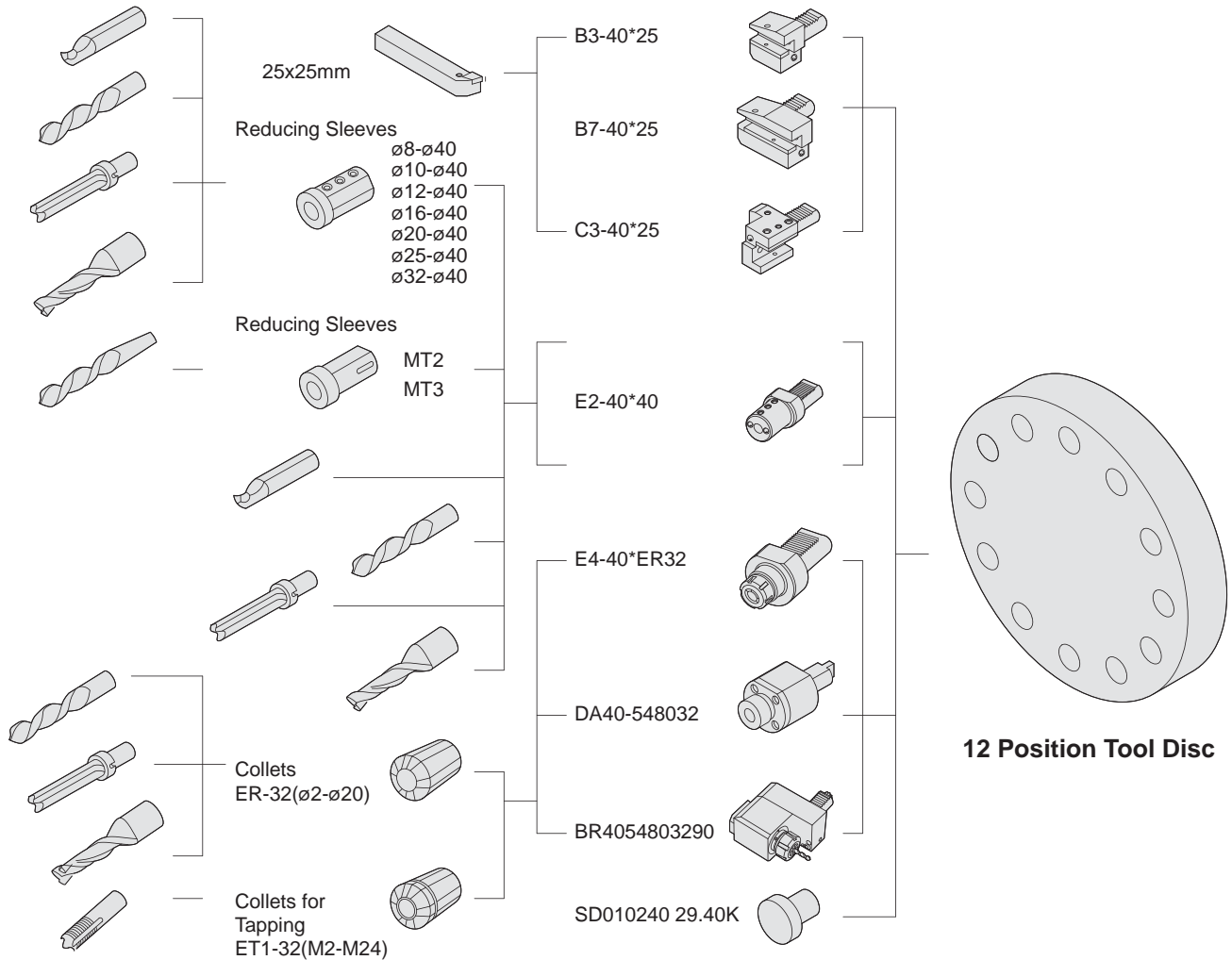
FCL-300/MC Tooling System

Unit: mm

FCL-300 Tooling System



FCL-300MC Tooling System



Standard & Optional Accessories

● Standard △ Optional

MODEL	FCL-140A Gang Type	FCL-140	FCL-200S	FCL-200/HT	FCL-200MC	FCL-300/P	FCL-300MC
6" Hydraulic chuck	●	●	-	-	-	-	-
8" Hydraulic chuck	△	△	●	●	●	-	-
10" Hydraulic chuck	-	-	-	-	-	●	●
Hard jaws (set)	6"x1	6"x1	8"x1	8"x1	8"x1	10"x1	10"x1
Soft jaws (set)	6"x1	6"x1	8"x1	8"x1	8"x1	10"x1	10"x1
Hydraulic turret	●	●	●	●	-	●	-
Servo turret	△	△	△	△	-	△	-
VDI power turret	-	-	-	-	●	-	●
Boring bar holder	1	5	4	5	-	5	-
Face holder	1	2	1	2	-	2	-
Tool sleeve (set)	1	1	1	1	-	1	-
O.D. tool holder	1	-	-	-	-	-	-
Bidirectional tool holder	1	-	-	-	-	-	-
Radial power tooling holder	-	-	-	-	△	-	△
Axial power tooling holder	-	-	-	-	△	-	△
Coolant system	●	●	●	●	●	●	●
Moveable coolant tank	●	●	●	●	●	●	●
1 set leveling bolts and pads	●	●	●	●	●	●	●
Grease lubrication system	△	△	△	△	△	△	△
Centralized lubrication system	●	●	●	●	●	●	●
Work lamp	●	●	●	●	●	●	●
Foot pedal for hydraulic chuck	●	●	●	●	●	●	●
Tool kit	●	●	●	●	●	●	●
Manual	●	●	●	●	●	●	●
Chip conveyor and bucket	●	●	●	●	●	●	●
MT3/MT4 live center	-	△	△	●	●	●	●
Programmable tailstock	-	-	-	△	△	△	△
3 color warning light	△	△	△	△	△	△	△
Parts catcher	△	△	△	△	△	△	△
Manual tool setting probe	△	△	△	△	△	△	△
Auto tool setting probe	△	△	△	△	△	△	△
Oil skimmer	△	△	△	△	△	△	△
Oil mist collector	△	△	△	△	△	△	△
Transformer	△	△	△	△	△	△	△
CE safety accessories	△	△	△	△	△	△	△
Automatic door (pneumatically driven)	△	△	△	△	△	△	△
Pedal switch for tailstock	△	△	△	△	△	△	△
Bar feeder and interface	△	△	△	△	△	△	△
Collet chuck	△	△	△	△	△	△	△
Work blower	△	△	△	△	△	△	△
High pressure cooler	△	△	△	△	△	△	△



Manual, Auto Tool Setter



Parts Catcher



Robot

Specifications

MODEL		FCL-140A	FCL-140	FCL-200S
Swing over bed	mm	470	470	470
Swing over cover	mm	140	284	284
Max. cutting diameter	mm	280	260	250
Max. cutting length	mm	290	290	266
Distance between centers	mm	-	397	419
Spindle nose	ASA	A2-5	A2-5	A2-6
Chuck size	inch	6	6	8
Spindle hole diameter	mm	57	57	62
Spindle speed	rpm	6000	6000	4500
Spindle motor	kW	7.5 / 11	7.5 / 11	7.5 / 11
Spindle runout	mm	0.003	0.003	0.003
Max. bar material diameter	mm	45/52 (Opt.)	45/52 (Opt.)	52
Z axis travel	mm	320	320	320
X axis travel	mm	320	150	150
Z axis rapid traverse	m/min	30	30	30
X axis rapid traverse	m/min	30	30	30
Number of tools		5 (Gang type)	10	8
Turning tool size	mm	20 x 20	20 x 20	25 x 25
Boring tool size	mm	32	32	32
Tailstock travel	mm	-	250	250
Quill travel	mm	-	80	80
Quill diameter	mm	-	70	70
Quill taper hole	MT	-	4	4
Quill drive		-	Hydraulic	Hydraulic
Tailstock positioning		-	Manual	Manual
Dimensions (L x W x H)	M	2.1 x 1.6 x 1.6	2.1 x 1.6 x 1.6	2.1 x 1.6 x 1.6
Machine weight	lb/kg	5940 / 2700	6160 / 2800	6160 / 2800

■ Specifications are subject to change without notice.

FCL-200	FCL-200HT	FCL-200MC	FCL-300	FCL-300P	FCL-300MC
470	470	470	600	600	600
318	318	318	338	338	338
292	300	196	450	450	330
500	479	444	700	700	669
620	620	620	810	810	810
A2-6	A2-6	A2-6	A2-8	A2-8	A2-8
8	8	8	10	10	10
62	62	62	88	88	88
4500	3500	4500	3000	2500	3000
7.5 / 11	11 / 15	5.5 / 7.5	15 / 18.5	15 / 18.5	15 / 18.5
0.003	0.003	0.003	0.003	0.003	0.003
52	52	52	77	77	77
520	520	520	762	762	762
176	176	161	260	260	260
30	30	30	24	24	24
30	30	30	20	20	20
10	10	12	10	10	12
20 x 20	25 x 25	20 x 20	25 x 25	25 x 25	25 x 25
32	40	32	40	40	40
450	450	450	627	627	627
100	100	100	120	120	120
75	75	75	85	85	85
4	4	4	4	4	4
Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Manual	Manual	Manual	Manual	Manual	Manual
2.8 x 1.7 x 1.6	2.8 x 1.7 x 1.6	2.8 x 1.7 x 1.6	3.6 x 1.8 x 1.8	3.6 x 1.8 x 1.8	3.6 x 1.8 x 1.8
8487 / 3850	8598 / 3900	8487 / 3950	11000 / 5600	11000 / 5600	12570 / 5700

FOCUSCNC®

FOCUS CNC CO., LTD.

www.focuscnc.com.tw

No. 20-1, Alley 65, Lane 140, Dalin Road, Daya Dist., Taichung City 428, Taiwan

TEL: 886-4-2560-6067 FAX: 886-4-2567-7938 E-mail: focus@focuscnc.com.tw

