





Total solution for engineering Integration



**CHC MACHINE CHC TOOLS MANUFACTURING** 

www.quicktech.com.tw

# Series High-efficient intelligent complex lathe

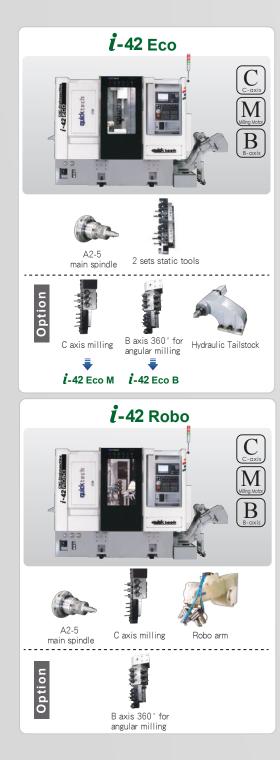
**I-series** from Quicktech this year are being seen an advanced innovation in automation industry. Combined more unique and reliable design create the greater value and performance. These universal turning and milling complex machines open a new area of precision and reliability in workshops. They are ideal for producing complicated, small, and single parts in high production demands.

Every second counts and we hope our new series can satisfy all application needs and offers the perfect solution for various bar mass production!

# Feature :

- Flexible gantry type tooling system
- Mitsubishi M80 high-end controller
- Live tools with powerful motor
- Free angle B axis 360° for all the angular tapping and drilling for some specific models

Tonata





tech

 $C_{\times 2}$ C-axes

S

**B**<sub>1</sub> Aain spind

 $\mathbf{B}_{2}$ 

A2-5

*i*-42 Ultimate

B1 axis 360° for B2 axis 360° for



This 4 axis gang tooling lathe is an affordable alternative to a turret type, C-axis lathe.



The standard i42-Eco is comes with 42mm spindle,11 OD and 9 ID tool turning to achieve the job shop mass production.

The second S1(C1)



Standard machine packed with 6 live tools and C-Axis control, many complex contours can be machined, providing a variety of options to our customers.



The milling head with 12 motorized tools and 360 degrees continuous rotating is significantly efficient productivity for small and medium lot size pieces.

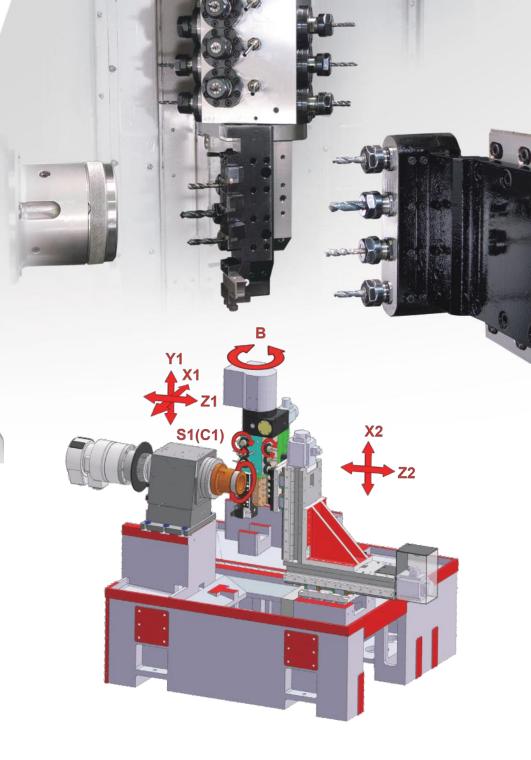
Machine Type		i-42 Eco			
Ν	Aitsubishi Controller				
	Max. Turning Dia.		100mm		
	Max. Bar Working Dia.		42mm (65mm)		
Spindle	Max. Turning Length		230mm		
Capacity	Collet Chuck Type	KK:	KK5-173E42B (KK6-185E60B)		
Capacity	Spindle Nose		A2-5 (A2-6)		
	Spindle Bore	43mm (66mm)			
	Max. RPM.		4000rpm (6000rpm)		
	Max. Turning Dia.				
	Max. Bar Working Dia.				
Sub-Spindle	Max. Turning Length				
	Collet Chuck Type				
Capacity	Spindle Nose				
	Spindle Bore				
	Max. RPM.				
C Assis	Least Command Unit		0.001°		
C Axis	Positioning Accuracy		0.02°		
	X1/Y1/Z1 axis		150 / 410 / 250mm		
Travel & Feed	X2/Y2/Z2 axis				
navel & l'eeu	Rapid Feed	30m/min			
	Repeated Positioning Accuracy		0.005mm		
	Main-Spindle	Ser	vo Spindle 7.5kw (11	.0kw)	
	Sub-Spindle				
Motor	X1/Y1/Z1 axis	AC Servo 1.0 / 1.5 / 1.5kw			
	X2/Y2/Z2 axis				
	Motorized Tool		AC Servo 1.5kw		
	OD/ID Tools Main Spindle	i- <b>42 E</b> co	i-42 Eco M	i-42 Eco I	
	OD/ID Tools Main Spinale	11 / 9	6 / 5	6/5	
A.T.C System	OD/ID Tools Sub Spindle				
<b>,</b>	Tool Shank Size		□ 20mm		
	Drill Holder Size (Main)	ER-20 / φ20mm			
	Drill Holder Size (Sub)				
	Number of Motorized Tools	i <b>-42 Eco</b>	i-42 Eco M	i-42 Eco I	
		0	6	12	
Motorized	B axis	( 360° )			
Tool	Max. RPM.	4000rpm			
	Collet Specification	ER-20			
	Max. Drilling Dia.	12.0mm			
	Max. Tapping Capacity	M10xP1.5			
Hydraulic	Hydraulic Pump / Tank Capacity	1HP/40L			
System	Max. Pressure / Flow	30 kg/cm²			
Lubrication	Lubricant Pump / Tank Capacity		25W/2L		
Lubrication	Max. Pressure		15 kg/cm²		
Coolant	Coolant Pump	Т	TPH4T5K, 5Bar, 75 L/min		
System	Hydraulic Pump				
Gystern	Coolant Tank Capacity		125L		
Machine Size	Length/ Width/ Height	320	00 (2500) / 1750 / 195	50mm	
	Weight		3780 kg		

# i-42 Plus B

This CNC turning machine is capable of running two NC programs simultaneously.



A total of 27 tools (12 of them powered) is designed to work on complex work pieces.



Simultaneous machining is possible from the outside as well as from the inside. Depending on the work piece, the working time can be reduced up to 48%.

i-42 Plus M

Z2 •

S1(C1

i-42 Plus

Standard machine packed with 6 live tools and C-Axis control, many complex contours can be machined, providing a variety of options to our customers.

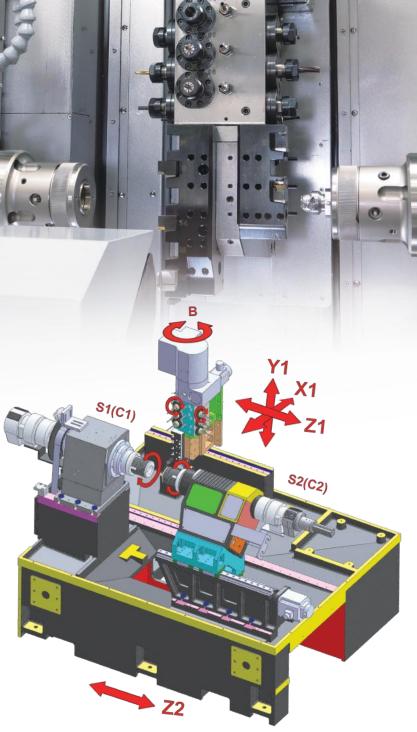
Machine Type		i-42 Plus			
Mitsubishi Controller		M80			
Spindle Capacity	Max. Turning Dia.	100mm			
	Max. Bar Working Dia.	42mm (65mm)			
	Max. Turning Length	230mm			
	Collet Chuck Type	KK5-173E42B (KK6-185E60B)			
	Spindle Nose	A2-5 (A2-6)			
	Spindle Bore	43mm (66mm)			
	Max. RPM.	4000rpm (6000rpm)			
	Max. Turning Dia.				
	Max. Bar Working Dia.				
Sub-Spindle	Max. Turning Length				
	Collet Chuck Type				
Capacity	Spindle Nose				
	Spindle Bore				
	Max. RPM.				
C Avia	Least Command Unit	0.001°			
C Axis	Positioning Accuracy		0.02°		
	X1/Y1/Z1 axis		150 / 410 / 250mm		
Travel & Feed	X2/Y2/Z2 axis		250 / / 320mm		
Travel & Feed	Rapid Feed	30m/min			
	Repeated Positioning Accuracy	0.005mm			
	Main-Spindle	Servo Spindle 7.5kw (11.0kw)		0kw)	
	Sub-Spindle				
Motor	X1/Y1/Z1 axis	AC Servo 1.0 / 1.5 / 1.5kw			
	X2/Y2/Z2 axis	AC Servo 1.0 / / 1.0kw			
	Motorized Tool	AC Servo 1.5kw			
		i <b>-42 Pl</b> us	i-42 Plus M	i-42 Plus B	
	OD/ID Tools Main Spindle	11/9	6 / 5	6/5	
A.T.C System	OD/ID Tools Sub Spindle	/ 4 (Tail)			
/ Oyotoini	Tool Shank Size		□ 20mm		
	Drill Holder Size (Main)		ER-20 / φ20mm		
	Drill Holder Size (Sub)	ER-20 / φ25mm			
Motorized Tool	Number of Motorized Tools	i <b>-42 Plu</b> s	i <b>-42 P</b> lus <b>M</b>	i-42 Plus B	
		0	6	12	
	B axis	(360°)			
	Max. RPM.	4000rpm			
	Collet Specification	ER-20			
	Max. Drilling Dia.	12.0mm			
	Max. Tapping Capacity	M10xP1.5			
Hydraulic	Hydraulic Pump / Tank Capacity	1HP / 40L			
System	Max. Pressure / Flow		30 kg/cm <sup>2</sup>		
Luch standing	Lubricant Pump / Tank Capacity	25W / 2L			
Lubrication	Max. Pressure	15 kg/cm²			
Coclost	Coolant Pump	TPH4T5K, 5Bar, 75 L/min			
Coolant	Hydraulic Pump				
System	Coolant Tank Capacity	125L			
Machine Oire	Length/ Width/ Height	32	00 (2500) / 1750 / 195	0mm	
Machine Size	Weight	4780kg			
() Option					

# i-42 Twin

The series is a combination of cost effective and highly productive for complex work piece!



Not only having 30 tools to make it possible to process complex work piece from inside, outside and outline, it also marks the integration of the driven tools having a powerful B- axis milling for simultaneous and efficient machining. Due to this enhancement, the tools application becomes more fast and flexible for sophisticated parts. The great tool arrangement and big work area, make this outstanding, all purpose machine.



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# **TILTING MOTORIZED TOOLS**

This milling head comprises of 12 motorized tools from 360° continuous leads to even greater flexible tools arrangement and significantly efficient productivity for small and medium lot sizes.

## **ROLLER GUIDEWAYS**

The machine is equipped with high precision, HIWIN roller guideways.

The use of 35mm rails throughout the machine increases stability and accuracy, and allows heavier cuts to be achieved.

All axes are equipped with digital drives that deliver feed velocities of 30m/min.



Machine Type		i-42 Twin	
Mitsubishi Controller		M80	
	Max. Turning Dia.	100mm	
	Max. Bar Working Dia.	42mm (65mm)	
Spindle	Max. Turning Length	300mm	
Capacity	Collet Chuck Type	KK5-173E42B (KK6-185E60B)	
Cupucity	Spindle Nose	A2-5 (A2-6)	
	Spindle Bore	43mm (66mm)	
	Max. RPM.	4000rpm (6000rpm)	
	Max. Turning Dia.	100mm	
	Max. Bar Working Dia.	30mm	
Sub-Spindle	Max. Turning Length	150mm	
	Collet Chuck Type	KK5-173E42B	
Capacity	Spindle Nose	A2-5	
ľ	Spindle Bore	31mm	
İ	Max. RPM.	4000rpm (6000rpm)	
C Avria	Least Command Unit	0.001°	
C Axis	Positioning Accuracy	0.02°	
	X1/Y1/Z1 axis	150 / 415 / 300mm	
Travel & Feed	X2/Y2/Z2 axis	/ / 390mm	
navel & Feeu	Rapid Feed	30m/min	
ľ	Repeated Positioning Accuracy	0.005mm	
	Main-Spindle	Servo Spindle 11.0kw	
ľ	Sub-Spindle	Servo Spindle 3.7kw	
Motor	X1/Y1/Z1 axis	AC Servo 1.0 / 1.5 / 1.5kw	
ľ	X2/Y2/Z2 axis	AC Servo / 1.0kw	
ľ	Motorized Tool	AC Servo 1.5kw	
	OD/ID Tools Main Spindle	6 / 5	
A.T.C System	OD/ID Tools Sub Spindle	3 / 4	
A.I.C System	Tool Shank Size	□ 20mm	
	Drill Holder Size (Main)	ER-20 / φ20mm	
	Drill Holder Size (Sub)	ER-20 / φ20mm	
	Number of Motorized Tools	12	
Matarizad	B axis	360°	
Motorized	Max. RPM.	4000rpm	
Tool	Collet Specification	ER-20	
	Max. Drilling Dia.	12.0mm	
	Max. Tapping Capacity	M10xP1.5	
Hydraulic	Hydraulic Pump / Tank Capacity	1HP / 40L+25L	
System	Max. Pressure / Flow	30 kg/cm²	
	Lubricant Pump / Tank Capacity	25W / 2L	
Lubrication	Max. Pressure	15 kg/cm²	
Coolant System	Coolant Pump	TPH4T5K, 5Bar, 75 L/min	
	Hydraulic Pump	2HP+SF-30C, 25Bar, 30L/min	
	Coolant Tank Capacity	240L	
	Length/Width/Height	3500 (2900) / 1900 / 1950mm	
Machine Size	Weight	5300kg	
	TT VIGIIL	JJUNE	

# i-42 Robo

This 4 axis lathe with C-axis and live tooling provides the added advantage of robotic loading for unmanned chucking operations.



This machine is a modified version of the I-42 with internal integration of a Mitsubishi 6 axis articulated robot. This requires no additional floor space, and is positioned so it will not hinder the machine operator while setting the machine, or operating the Mitsubishi M80 control system. S1(C1)



# **INTELLIGENT ROBOT**

Complimenting the standard I-42 lathe, is a fully integrated high speed, high precision 6 axis robot.

This intelligent robot has a total of 512 programs, and can easily maneuver around tooling and other obstacles within the work area.

It can handle work pieces of up to 6kg, and is ideal for billets, castings and forgings.



Machine Type		i <b>-42 R</b> obo	
Ν	Aitsubishi Controller	M80	
Spindle	Max. Turning Dia.	100mm	
	Max. Bar Working Dia.	42mm (65mm)	
	Max. Turning Length	230mm	
Capacity	Collet Chuck Type	KK5-173E42B (KK6-185E60B)	
Capacity	Spindle Nose	A2-5 (A2-6)	
	Spindle Bore	43mm (66mm)	
	Max. RPM.	4000rpm (6000rpm)	
	Max. Turning Dia.		
	Max. Bar Working Dia.		
Sub Spindla	Max. Turning Length		
Sub-Spindle	Collet Chuck Type		
Capacity	Spindle Nose		
	Spindle Bore		
	Max. RPM.		
	Least Command Unit	0.001°	
C Axis	Positioning Accuracy	0.02°	
	X1/Y1/Z1 axis	150 / 410 / 250mm	
	X2/Y2/Z2 axis		
Travel & Feed	Rapid Feed		
	Repeated Positioning Accuracy	0.005mm	
	Main-Spindle	Servo Spindle 7.5kw (11.0kw)	
	Sub-Spindle	Servo Spinule 7.5kw (11.0kw)	
Motor	X1/Y1/Z1 axis	AC Servo 1.0 / 1.5 / 1.5kw	
WIOTON		AC Servo 1.0 / 1.3 / 1.5KW	
	X2/Y2/Z2 axis		
	Motorized Tool	AC Servo 1.5kw	
	OD/ID Tools Main Spindle	6 / 5	
A.T.C System	OD/ID Tools Sub Spindle		
<b>,</b>	Tool Shank Size	□ 20mm	
	Drill Holder Size (Main)	ER-20 / φ20mm	
	Drill Holder Size (Sub)		
	Number of Motorized Tools	6 (12 with B-axis)	
Motorized	Baxis	(360°)	
	Max. RPM.	4000rpm	
Tool	Collet Specification	ER-20	
	Max. Drilling Dia.	12.0mm	
	Max. Tapping Capacity	M10xP1.5	
Hydroulio	Hydraulic Pump / Tank Capacity	1HP / 40L	
Hydraulic System	Max. Pressure / Flow	30 kg/cm²	
e yetein	Lubricant Pump / Tank Capacity	25W/2L	
Lubrication	Max. Pressure		
	Coolant Pump	15 kg/cm² TPH4T5K, 5Bar, 75 L/min	
Coolant		IPH415K, 5Bar, 75 L/min	
System	Hydraulic Pump		
	Coolant Tank Capacity	125L	
Machine Size	Length/Width/Height	3200 (2500) / 1750 / 1950mm	
-	Weight	4300 kg	

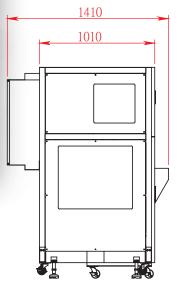
## **Robot with Flexible pallet changer**

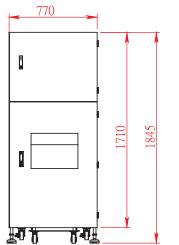
This efficient auto-pallet has equipped 5 trays and moveable cart for easy loading and unloading. No any human operation required. The operator can easily use and maintain this auto-pallet while the lathe is under mass production.

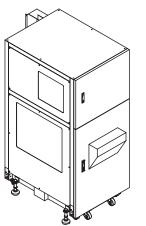




# **Pallet changer size**



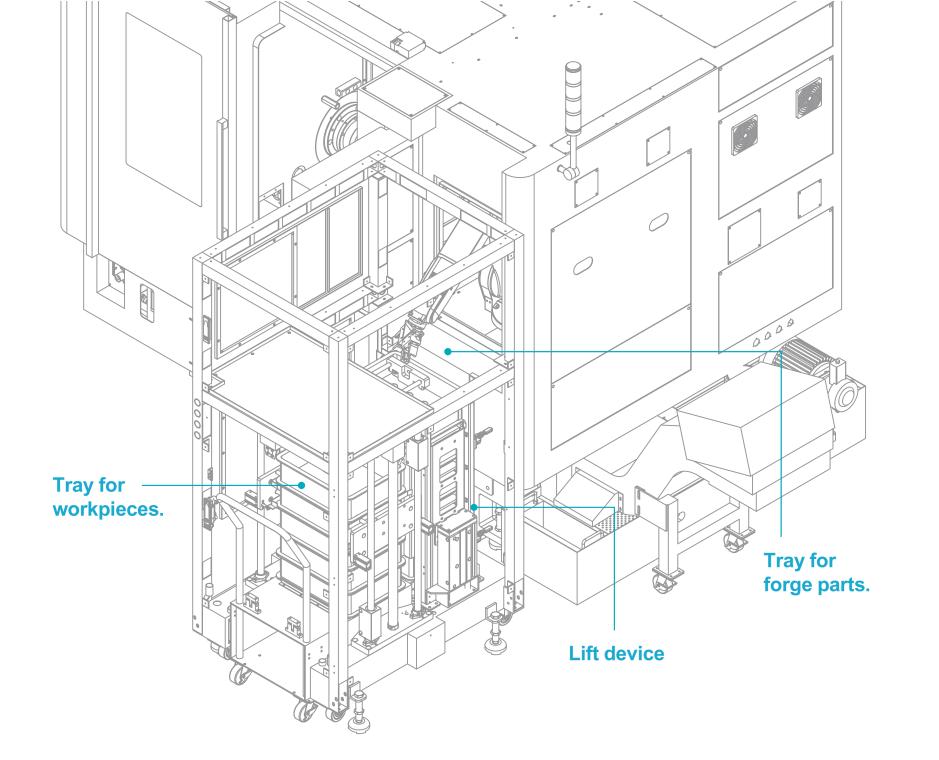




quick tech

i-42 ROEO

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With the system allows running 2 programs simultaneously, flexible gantry tools for main and sub spindle and C-axis capabilities, milling and turning applications are completed in one single machine.

They are ideal for producing complicated and single parts in high production demand.









Machine Type		i-42 U	
Mitsubishi Controller		M830S	
	Max. Turning Dia.	100mm	
Spindle Capacity	Max. Bar Working Dia.	42mm (65mm)	
	Max. Turning Length	230mm	
	Collet Chuck Type	KK5-173E42B (KK6-185E60B)	
Capacity	Spindle Nose	A2-5 (A2-6)	
	Spindle Bore	43mm (66mm)	
	Max. RPM.	4000rpm (6000rpm)	
	Max. Turning Dia.	100mm	
	Max. Bar Working Dia.	30mm	
Cub Caindle	Max. Turning Length	100mm	
Sub-Spindle	Collet Chuck Type	KK5-173E42B	
Capacity	Spindle Nose	A2-5	
	Spindle Bore	31mm	
	Max. RPM.	4000rpm (6000rpm)	
	Least Command Unit	0.001°	
C Axis	Positioning Accuracy	0.02°	
	X1/Y1/Z1 axis	150 / 410 / 250mm	
	X2/Y2/Z2 axis	450 / 380 / 300mm	
Travel & Feed	Rapid Feed	30m/min	
	Repeated Positioning Accuracy	0.005mm	
	Main-Spindle	Servo Spindle 11.0kw	
	Sub-Spindle	Servo Spindle 11.0kw	
Motor	X1/Y1/Z1 axis	AC Servo 1.5kw	
	X2/Y2/Z2 axis	AC Servo 1.5kw	
	Motorized Tool	AC Servo 1.5kw	
	OD/ID Tools Main Spindle	6/5	
A T C Sustam	OD/ID Tools Sub Spindle	5/9	
A.T.C System	Tool Shank Size	□ 20mm	
	Drill Holder Size (Main)	ER-20 / φ20mm	
	Drill Holder Size (Sub)	ER-20 / φ20mm	
	Number of Motorized Tools	T1=12 / T2=12	
	B axis	360°	
Motorized	Max. RPM.	4000rpm	
Tool	Collet Specification	ER-20	
	Max. Drilling Dia.	12.0mm	
	Max. Tapping Capacity	M10xP1.5	
	Hydraulic Pump / Tank Capacity	1HP / 40L+25L	
Hydraulic System	Max. Pressure / Flow		
Gyotom	Lubricant Pump / Tank Capacity	30 kg/cm² 25W / 2L	
Lubrication	Max. Pressure		
		15 kg/cm <sup>2</sup> TPH4T5K, 5Bar, 75 L/min	
Coolant	Coolant Pump		
System	Hydraulic Pump	2HP + SF-30C, 25Bar, 30L/min	
,	Coolant Tank Capacity	240L	
Machine Size	Length/Width/Height	3500 (2900) / 1900 / 1950mm	
	Weight	5600 kg	



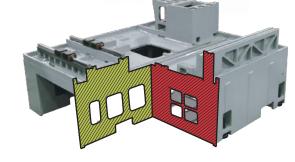
- Machine Character
- Main spindle / Sub spindle
- Tooling system
- External view / Machining applications
- Gantry Tooling interference





#### High pressure Coolant

High pressure with 25 Bar with filter



# 01

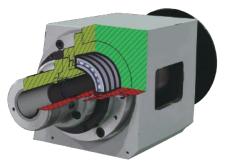
**Robust FC35 Meehanite Castings** 

Harden to over HRB 190 and tempered to relieve stress.

#### **Simple Visual Monitor**

Transparent window for the lubrication and solenoid status check.





# P4 class preload spindle bearing

Preload bearings are offered for the maximum attachment effect

02

# Mitsubishi controller Fanuc controller



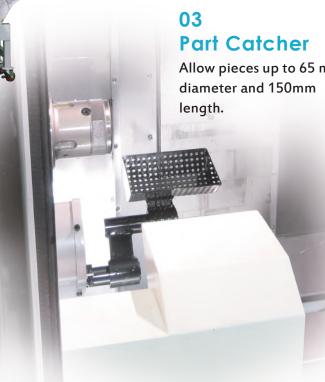


#### **Linear Guideways**

The machine is equipped with high precision HIWIN 35mm Linear guideways. Increase the stability and accuracy, allows heavier cut to be achieved.



Short and Long Bar Feeder are available



quicktech

the machine

LED Extended display

Help you to monitor easily status of

Allow pieces up to 65 mm



# **Chip Conveyor**

Standard and high type depends on your production request

# Mitsubishi AC Servo 7.5 kw A2-5 spindle with 44 mm bore

47.7

35.0

11.9

6000

[orque[N.m]



#### 

Torque[N.m]

Hydraulic Tailstock

Rotation speed[r/min]

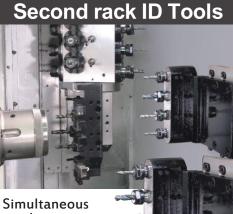
4500

7.5kw 15-minute rating

5.5kw Continuous rating



Design especially for support long work pieces securely, is also provided.



Simultaneous machining is possible from the outside and from the inside, depending on the work piece, the working time can be reducing up to 48%.

# Intelligent Robot



high precision 6 axis robot. This intelligent robot has a total of 88 programs and can easily move around tooling and other obstacles inside the working area.

7.5

5.5

0

Output[kw]

47.7 N.m

1500

35.0 N.m

#### Tooling system



the standard i42-Eco is coming with 42mm spindle,11 OD and 9 ID tool turning to achieve the job shop mass production.

# C axis

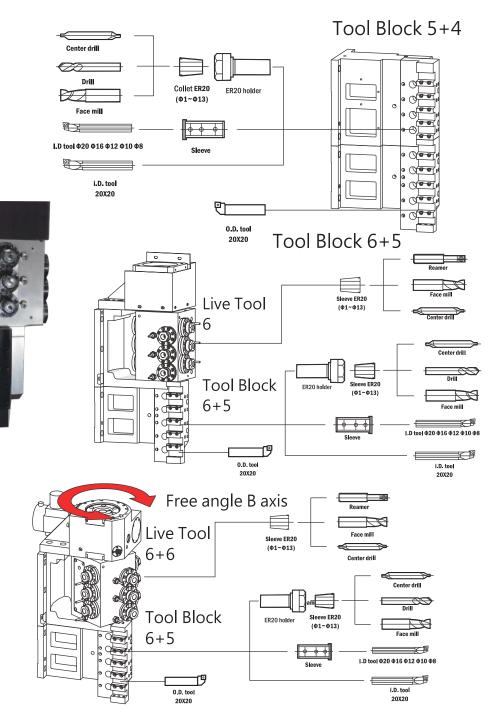
Standard machine packed with 6 live tools and C-Axis control, many complex contours can be machined, providing a variety of options to our customers.

# B axis

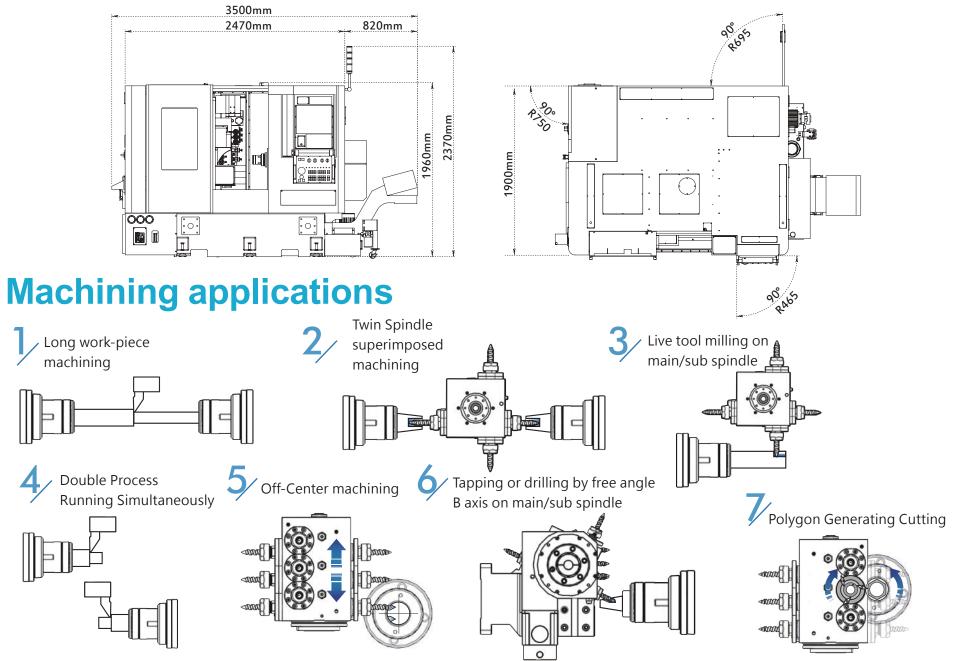
# Live tools with **B** Axis

Index Time	0.3sec(one)/ 0.6(full)
Number of motorized tools	12 tools
B axis	360 °
Speed	4000rpm(Max.)
Size	ER-20
Max.Drilling Dia	12.0mm
Max.Tapping capacity	M10xP1.5

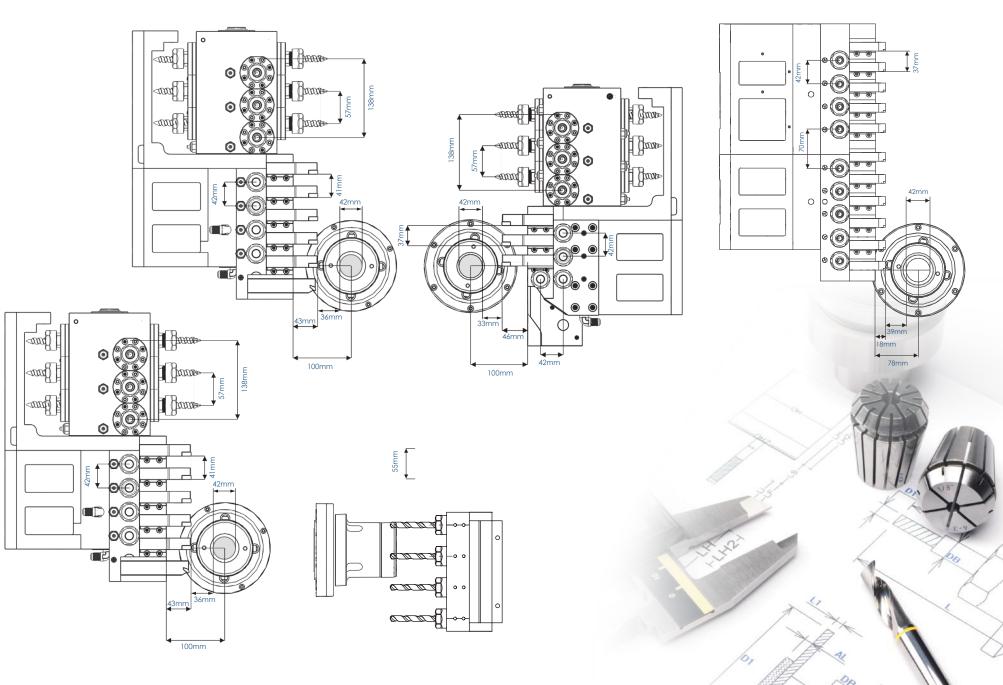
The milling head comprises of 12 motorized tools for 360  $^{\circ}$  continuous leads to even greater flexible tools arrangement and significantly efficient productivity for small and medium lot sizes.



# **External view**



# **Gantry Tooling interference**



the art of turning



2019.03