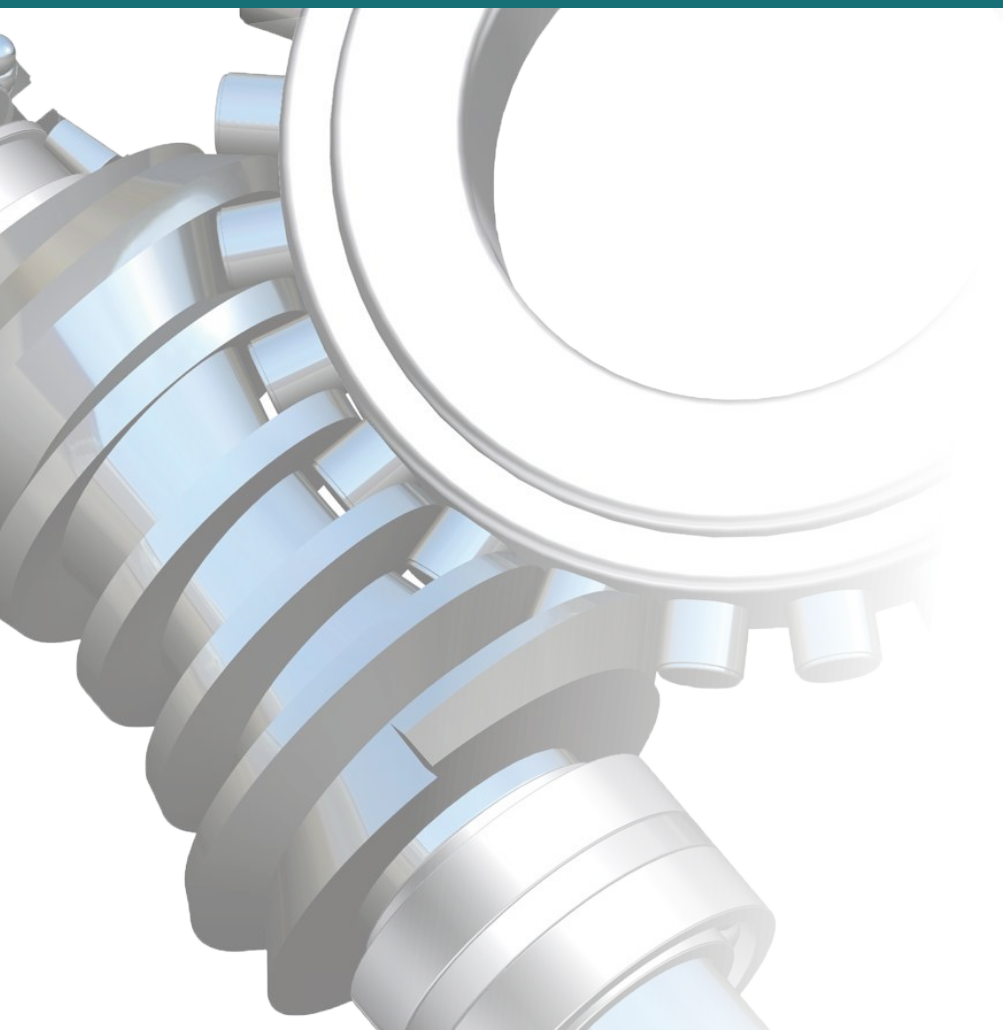
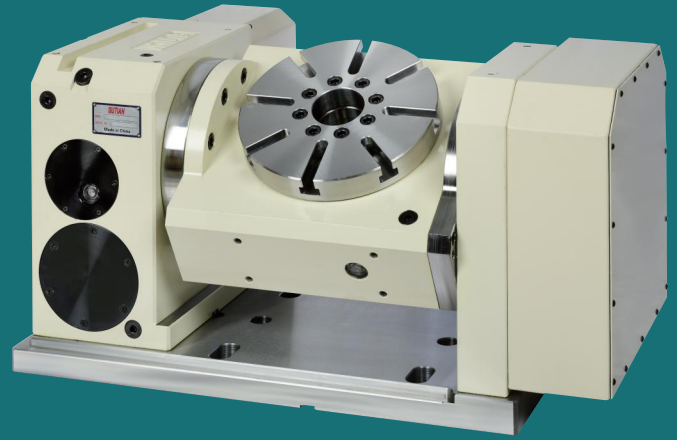
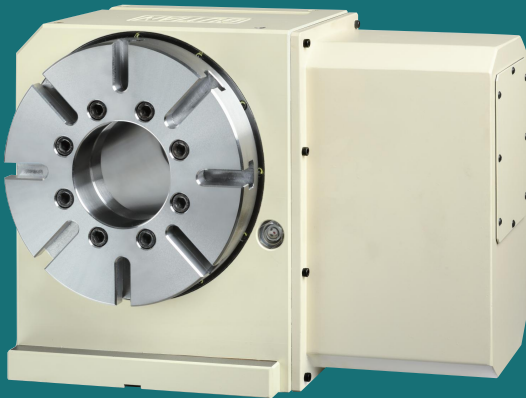


# **GUTIAN**

## **Cam Roller Indexing Mechanism**



Cam NC Rotary Table  
Cam Lathe Tool Turret  
Cam ATC Magazine

## **Declaration**

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## Company Profile

Jiangsu Gutian Automation Co., Ltd., is a national high-tech, and national specialty new little giant enterprise that specializes in production and sales of NC machine tools and automation equipment core function components. Our main products include cam NC rotary table, cam lathe tool turret, cam ATC magazine, ATC mechanism, and cam indexer.

Cam NC rotary table is the core component of machining center. Cam lathe turret is the core component of lathe. ATC mechanism is the core component of vertical machining center, and automatic changer for ATC magazine. Cam indexer is the core component of automation equipment.

The factory covers an area of around 60,000 square meters and has streamlined mature production, assembly, and inspection. The world's advanced cam processing equipment and cam manufacturing technology are adopted to maximize products' safety and reliability for customers. As a prime example of a perpetually innovative company, we persist in setting new records by prioritizing R&D, even though we own hundreds of national patents.

Besides all kinds of standard products, customers can also request special designs developed in cooperation with us. To improve our products, we have sales and service centers that cover both China and overseas markets.

# Directory

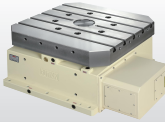
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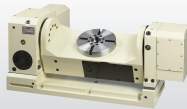
### **NC Four-Axis Cam Rotary Table**

NC170,NC17L,NC200,NC250,NC320,NC400,NC500,NC630



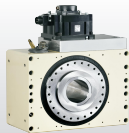
### **DC Horizontal Cam Rotary Table**

DC500,DC500S,DC630,DC630S,DC800,DC800S,DC1250S,DC1250X



### **AC Five-Axis Cam Rotary Table**

AC170,AC200,AC210,AC210S,AC250,AC250S,AC350,AC450,AC450S,AC650,AC650S,AC750S



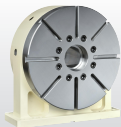
### **BC Spindle Cam Swing Head**

BC40,BC50



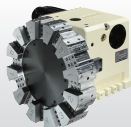
### **APC Horizontal Cam Exchange Table**

APC500,APC630



### **PZ Disc Brake Tailstock**

PZ170,PZ250,PZ320,PZ400,PZ500



### **CT Horizontal Cam Tool Turret**

CT80,CT80S,CT100,CT100S,CT125,CT125S



### **YK Cam Disc Tool Changer**

YK30A,YK30B,YK30D,YK40A,YK40B,YK40C,YK40D,YK50A,YK50B,YK50C,YK50D,YK50E



### **ATC Mechanism**

30A,30B,30D,30G,40A,40B,40C,40D,50A,50B,50C,50D,50E

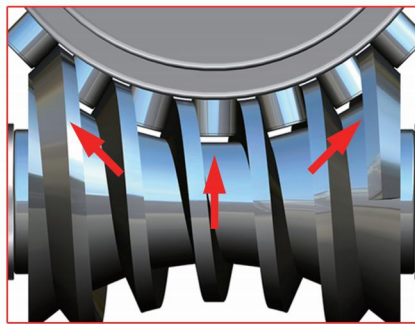
## Cam NC Rotary Table



- Internal cam roller transmission mechanism
- Cam and needle bearings pre-load with backlash-free rolling drive
- No sliding friction, keep backlash-free
- Positive/reverse motion with high repetition accuracy
- High rigidity and efficiency
- No poor accuracy due to temperature rise
- No periodic calibration or adjustments required

### Cam NC Rotary Table Operating Principle & Characteristics

#### Pre-load Principle



Compared to the traditional worm gear rotary table, Gutian cam NC rotary table is characterized by high accuracy and speed, backlash-free, and heavy-duty. The input shaft globoid cam's constant speed driving surface has a rolling contact drive with the needle bearing pre-load on the output shaft turret, achieving backlash-free, higher speed motion. The rolling drive mechanism's nearly friction-free movement ensures a long-lasting backlash-free drive and high-accuracy positioning with no regular calibration and adjustment required. Gutian cam NC rotary table features a large bearing output shaft set on the shaft round outer wall and double bearings on both cam input shaft ends, leading to increased stability and load capacity. It can more effectively handle high speeds and heavy cutting forces during machining, resulting in increased accuracy, efficiency, and cost savings.

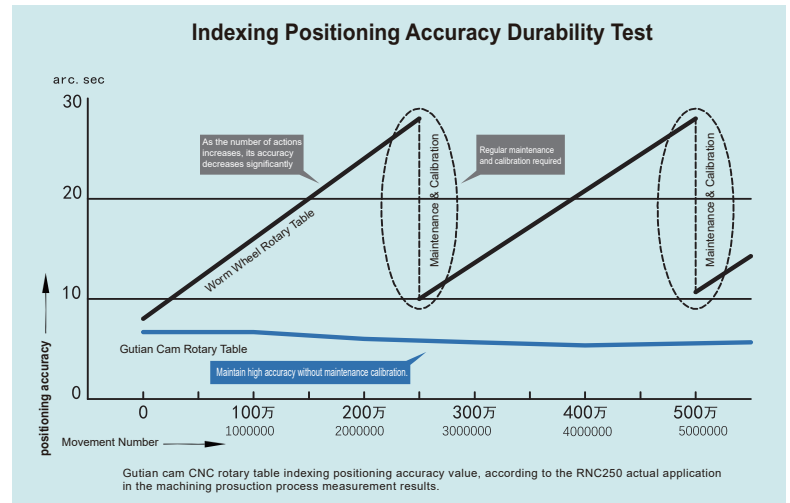
## Cost-Effective With No Adjustments or Maintenance Required

### Worm Gear Rotary Table

Its accuracy declines over time or with frequent use. To achieve or maintain the initial level of accuracy, regular maintenance and adjustments are necessary, resulting in mechanical maintenance costs of 1 to 2 times per year.

### Gutian Cam Rotary Table

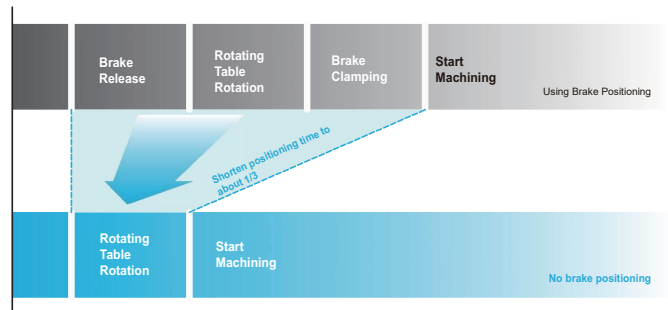
Require no mechanical adjustments or maintenance to maintain its initial accuracy, even after 5 million times of use. No additional mechanical maintenance costs.



## Different Processing Modes for Better Efficiency

### Gutian Cam Rotary Table

Built-in hydraulic brake device can handle higher strength machining heavy cutting force. In the process of general positioning machining (excluding heavy cutting), the high rigidity of the cam roller transmission mechanism ensures precise positioning without brake assistance. This results in a 2/3 reduction of rotational positioning time and improved machining efficiency.



## Absolute Repositioning Accuracy

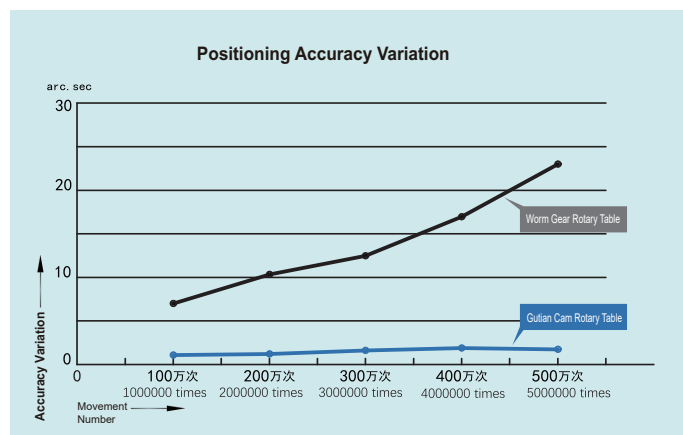
### Rotary Table 5-Million Cycles Testing

*Worm Gear V.S. Gutian Cam*

Testing Condition:

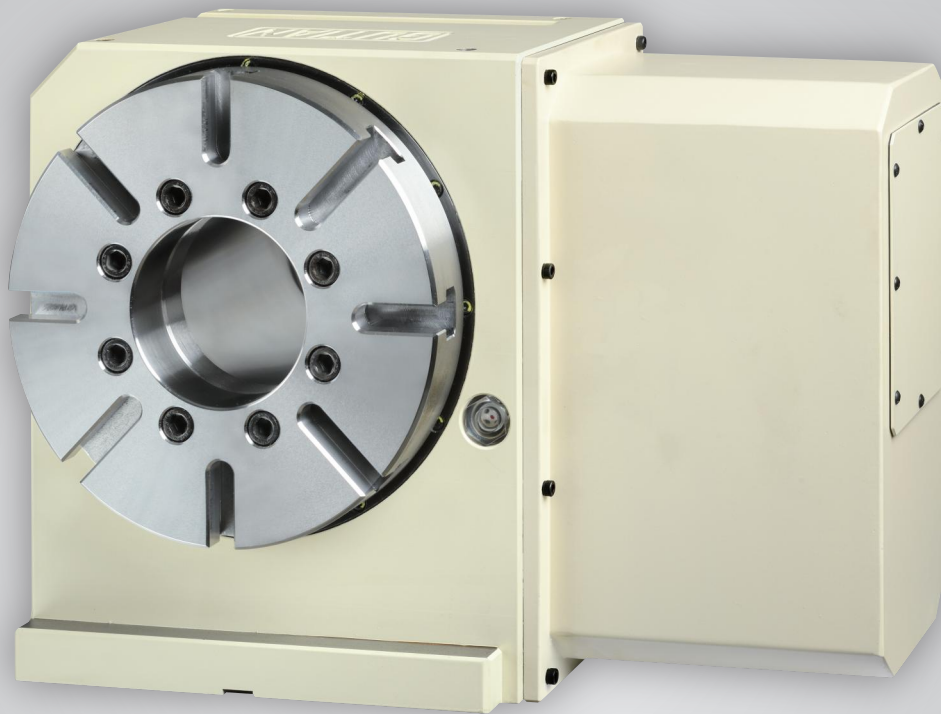
- RNC250, Rotary table diameter of 250mm.
- Load 2 kg, 100 mm from the center of rotation.
- Single indexing angle 30

Single indexing time 0.3 seconds



# Memo

# NC-series



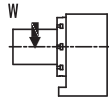
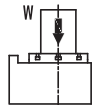
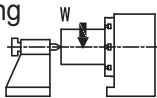
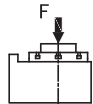
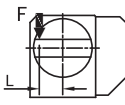
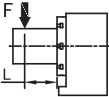
## **GUTIAN**

### **NC Four-Axis Cam Rotary Table**

**NC170,NC17L,NC200,NC250,NC320,NC400,  
NC500,NC630**



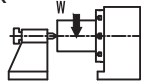

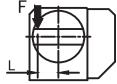
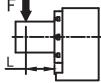
Gutian Cam NC Rotary Table internally adopts cam roller transmission mechanism. There is backlash-free rolling drive between cam and needle bearings pre-load, no sliding friction or backlash. Its positive reverse motion has high repeatability accuracy, without the need for periodic calibration and adjustments. This product is featured with high rigidity, heavy load, high efficiency, and its accuracy is not affected by rising temperature.

**NC170 Parameter Table**

Items		Unit	Data
Table Diameter		mm	170
Center Height		mm	160
Center Bore Diameter	Front-End	mm	55
	Rear-End	mm	40
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC $\beta$ S8 MITSUBISHI HG104
T-slot Width		mm	12H7
Positioning Key Width		mm	14h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	80
Total Speed Reduction Ratio			1:40
Indexing Accuracy		arc. sec	20
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	3.0±0.5
Max. Cutting Torque (Brake locking state)		N·m	330
Net Weight		kg	52
Allowable Work Weight	Vertical Mounting 	kg	100
	Horizontal Mounting 	kg	200
	Vertical Mounting with Tail-Stock 	kg	200
Allowable Load	F 	N	15500
	F × L 	N·m	330
	F × L 	N·m	1100

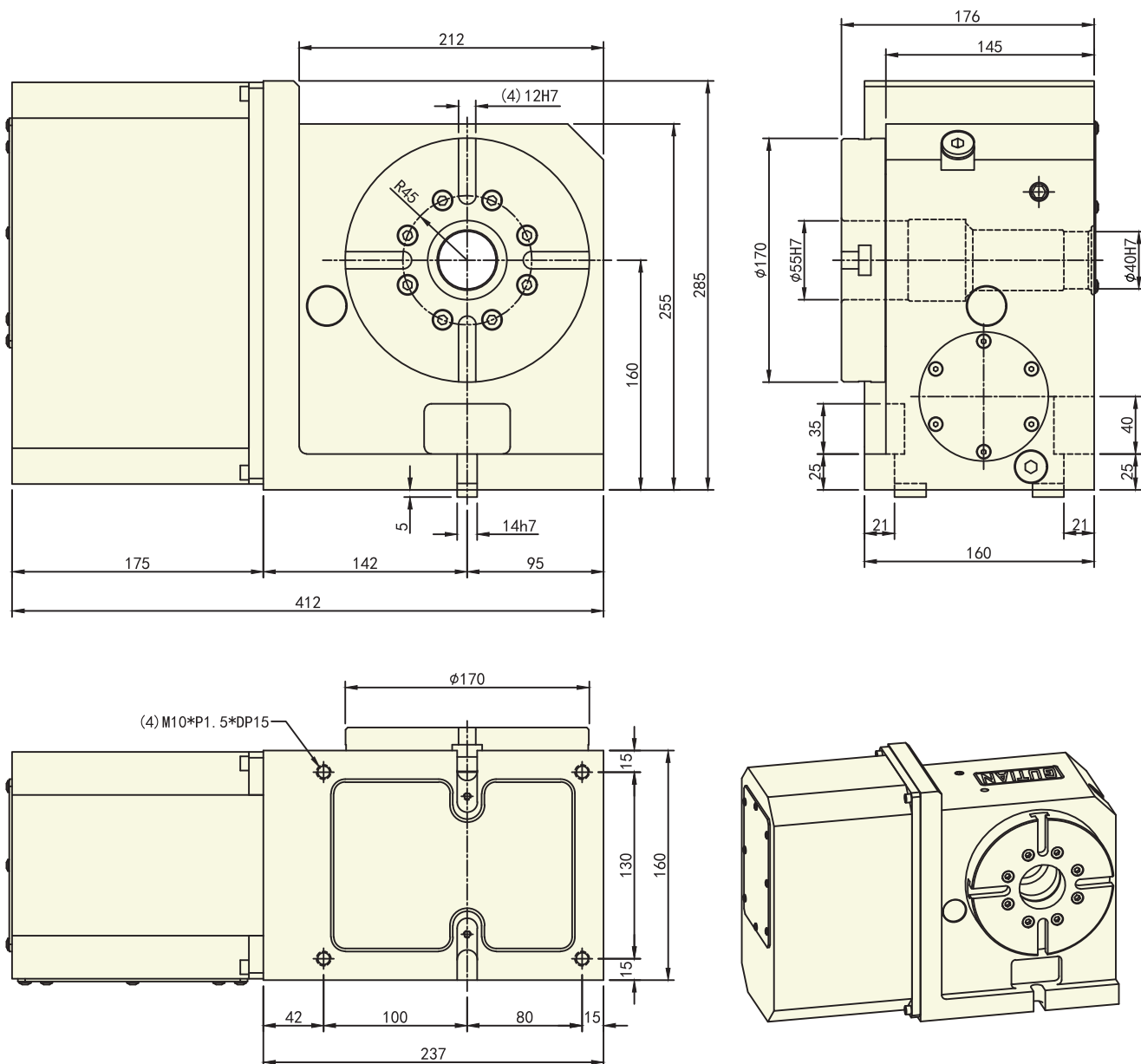


**NC17L Parameter Table**

Items		Unit	Data
Table Diameter		mm	170
Center Height		mm	160
Center Bore Diameter	Front-End	mm	55
	Rear-End	mm	40
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC $\beta$ S8 MITSUBISHI HG104
T-SLOT Width		mm	12H7
Positioning Key Width		mm	14h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	80
Total Speed Reduction Ratio			1:40
Indexing Accuracy		arc. sec	20
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	3.0 $\pm$ 0.5
Max. Cutting Torque (Brake locking state)		N·m	330
Net Weight		kg	52
Allowable Work Weight	Vertical Mounting 	kg	100
	Horizontal Mounting 	kg	200
	Vertical Mounting with Tail-Stock 	kg	200
Allowable Load	F 	N	15500
	F $\times$ L 	N·m	330
	F $\times$ L 	N·m	1100



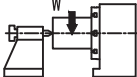


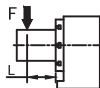


# NC17L

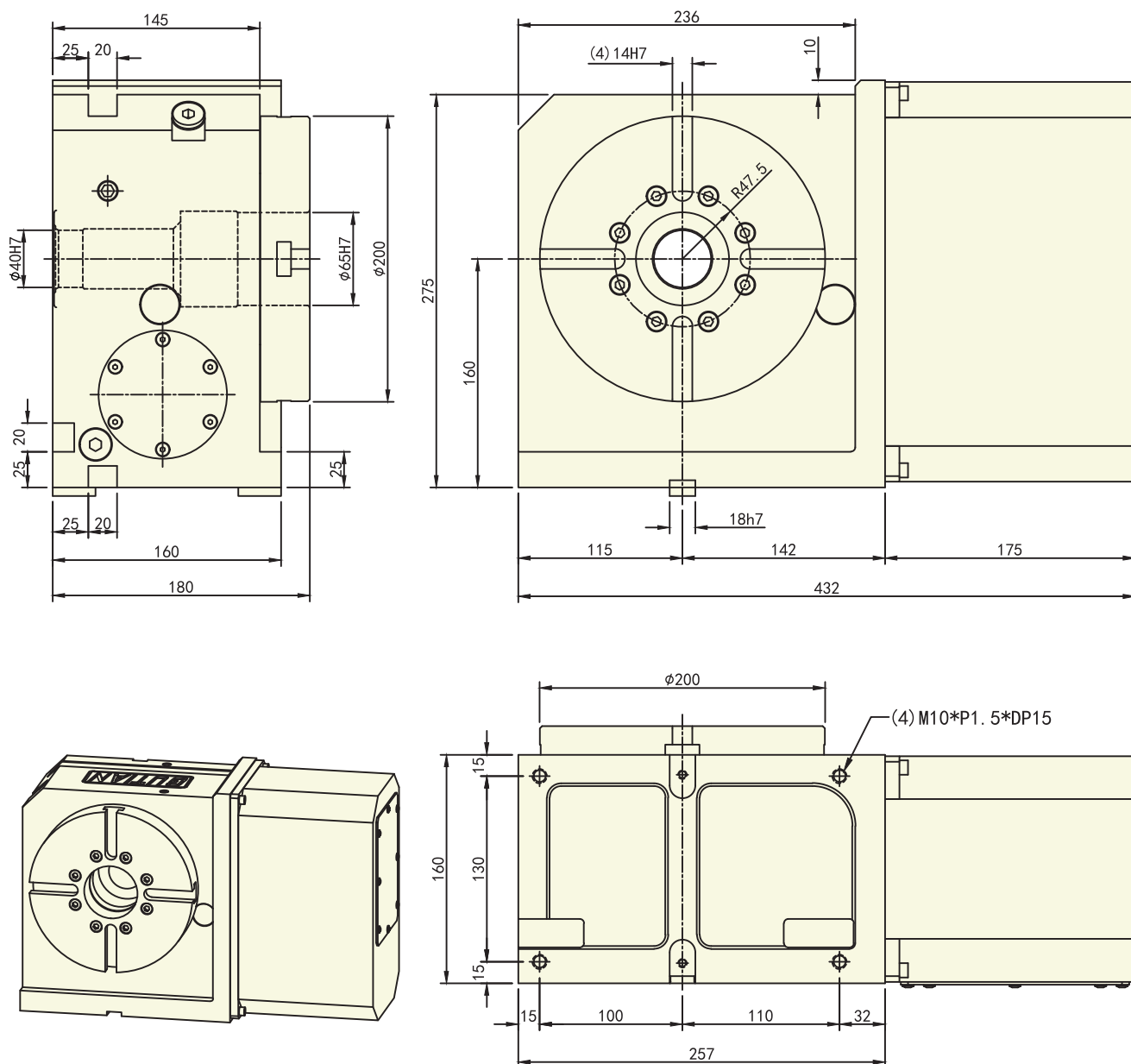


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS8, MITSUBISHI-HG104

**NC200 Parameter Table**



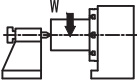

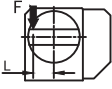

Items		Unit	Data
Table Diameter		mm	200
Center Height		mm	160
Center Bore Diameter	Front-End	mm	65
	Rear-End	mm	40
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC $\beta$ S8 MITSUBISHI HG104
T-SLOT Width		mm	14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	80
Total Speed Reduction Ratio			1:40
Indexing Accuracy		arc. sec	20
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	3.0 $\pm$ 0.5
Max. Cutting Torque (Brake locking state)		N·m	450
Net Weight		kg	60
Allowable Work Weight	Vertical Mounting 	kg	120
	Horizontal Mounting 	kg	260
	Vertical Mounting with Tail-Stock 	kg	220
Allowable Load	F 	N	18500
	F $\times$ L 	N·m	450
	F $\times$ L 	N·m	1390

# NC200

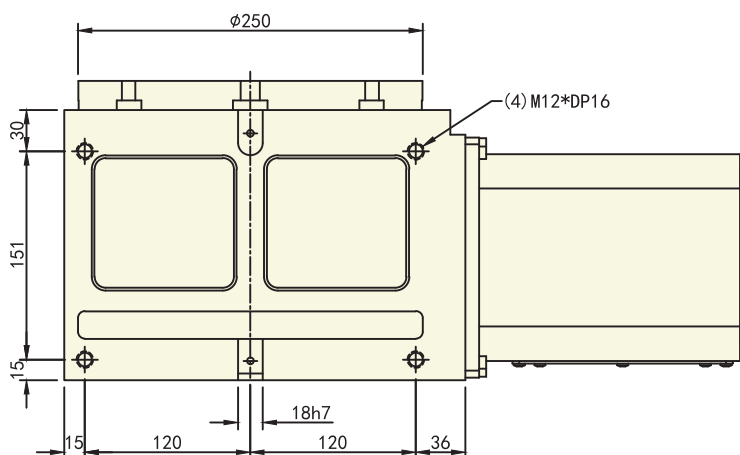
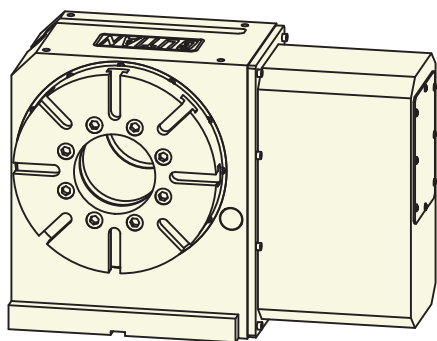
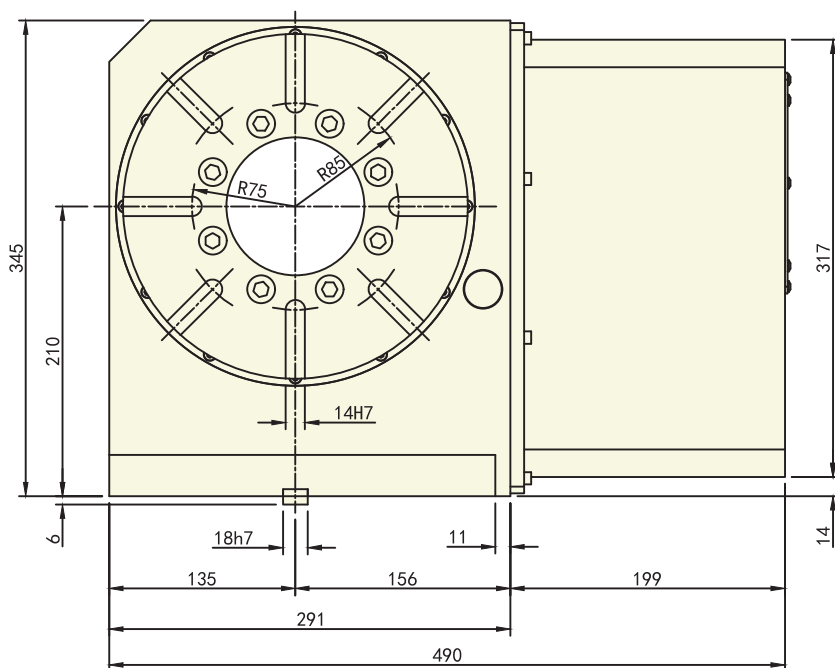
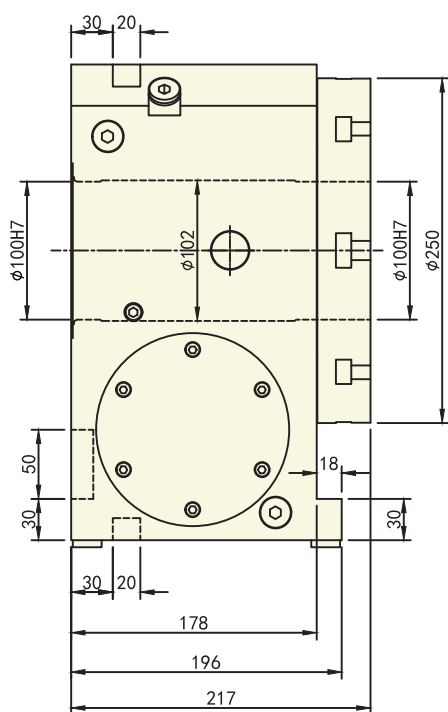


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS8, MITSUBISHI-HG104

**NC250 Parameter Table**



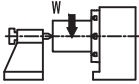

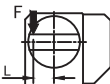

Items		Unit	Data
Table Diameter		mm	250
Center Height		mm	210
Center Bore Diameter	Front-End	mm	100
	Rear-End	mm	100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC $\beta$ S8 MITSUBISHI HG154
T-SLOT Width		mm	14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	60
Total Speed Reduction Ratio			1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	3.0 $\pm$ 0.5
Max. Cutting Torque (Brake locking state)		N·m	1300
Net Weight		kg	115
Allowable Work Weight	Vertical Mounting 	kg	180
	Horizontal Mounting 	kg	360
	Vertical Mounting with Tail-Stock 	kg	360
Allowable Load	F 	N	20500
	F $\times$ L 	N·m	1300
	F $\times$ L 	N·m	1800

# NC250

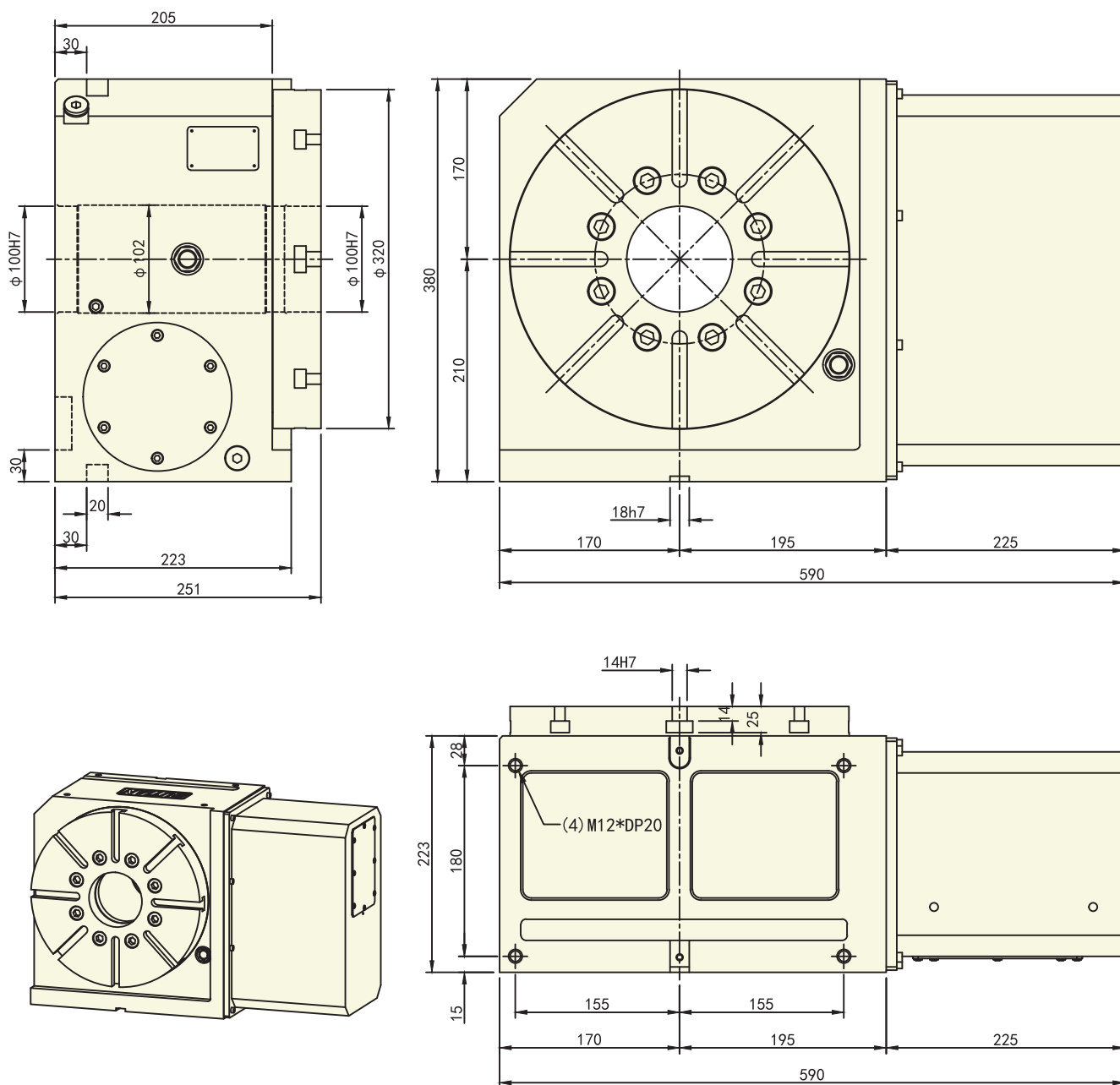


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS8, MITSUBISHI-HG154

**NC320 Parameter Table**



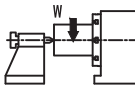


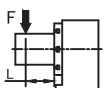
Items		Unit	Data
Table Diameter		mm	Φ320
Center Height		mm	210
Center Bore Diameter	Front-End	mm	Φ100
	Rear-End	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS22 MITSUBISHI HG204
T-SLOT Width		mm	14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	60
Total Speed Reduction Ratio			1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	3.5±0.5
Max. Cutting Torque (Brake locking state)		N·m	1500
Net Weight		kg	135
Allowable Work Weight	Vertical Mounting 	kg	260
	Horizontal Mounting 	kg	500
	Vertical Mounting with Tail-Stock 	kg	500
Allowable Load	F 	N	26000
	F×L 	N·m	1500
	F×L 	N·m	2300

# NC320



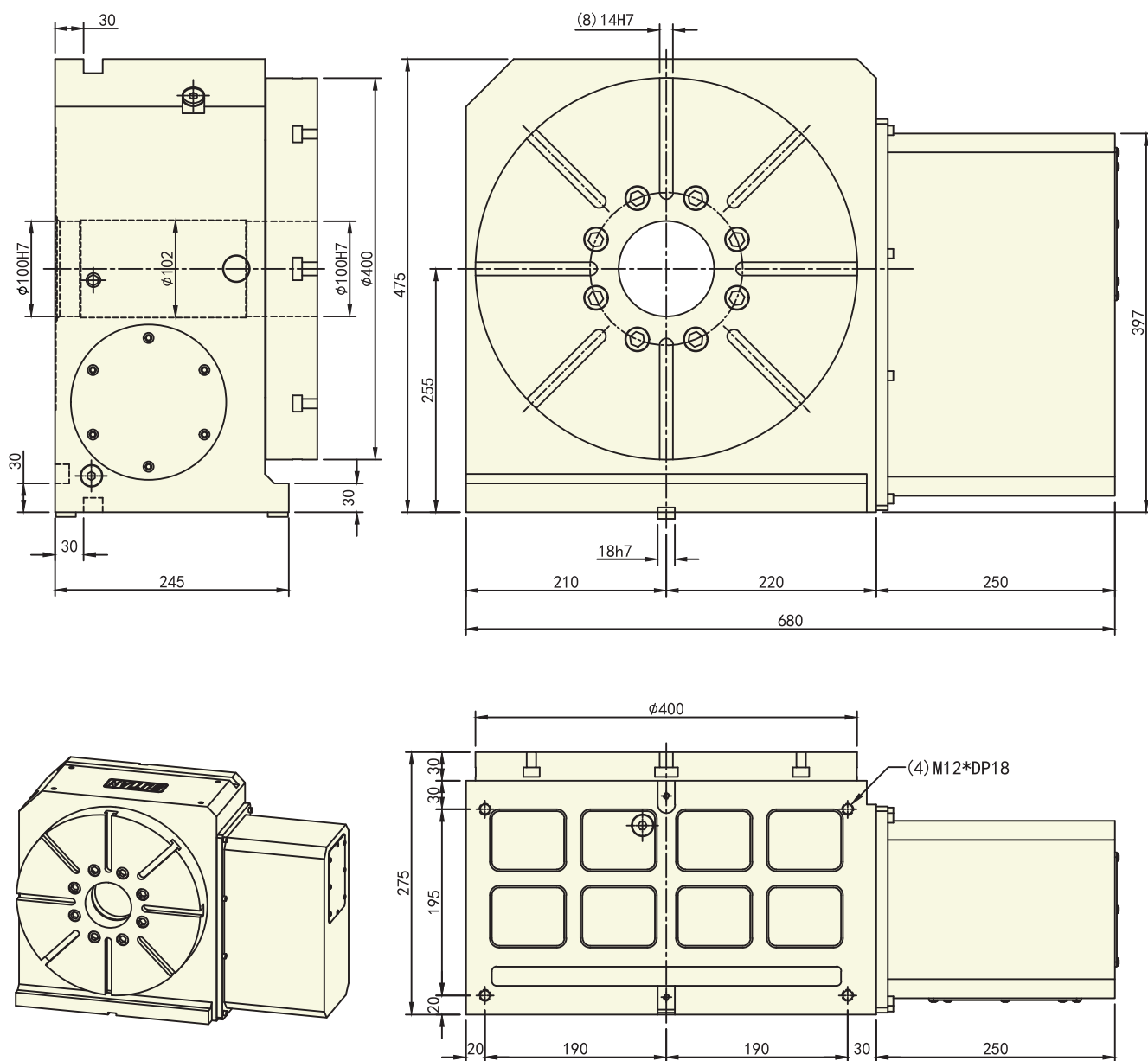
Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS22, MITSUBISHI-HG204

**NC400 Parameter Table**

Items		Unit	Data
Table Diameter		mm	Φ400
Center Height		mm	255
Center Bore Diameter	Front-End	mm	Φ100
	Rear-End	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS22 MITSUBISHI HG204
T-SLOT Width		mm	(8)14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	40
Total Speed Reduction Ratio			1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Max. Cutting Torque (Brake locking state)		N·m	1850
Net Weight		kg	260
Allowable Work Weight	Vertical Mounting 	kg	320
	Horizontal Mounting 	kg	650
	Vertical Mounting with Tail-Stock 	kg	610
Allowable Load	F 	N	41500
	F×L 	N·m	1850
	F×L 	N·m	4600



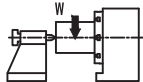

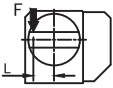
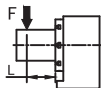


# NC400

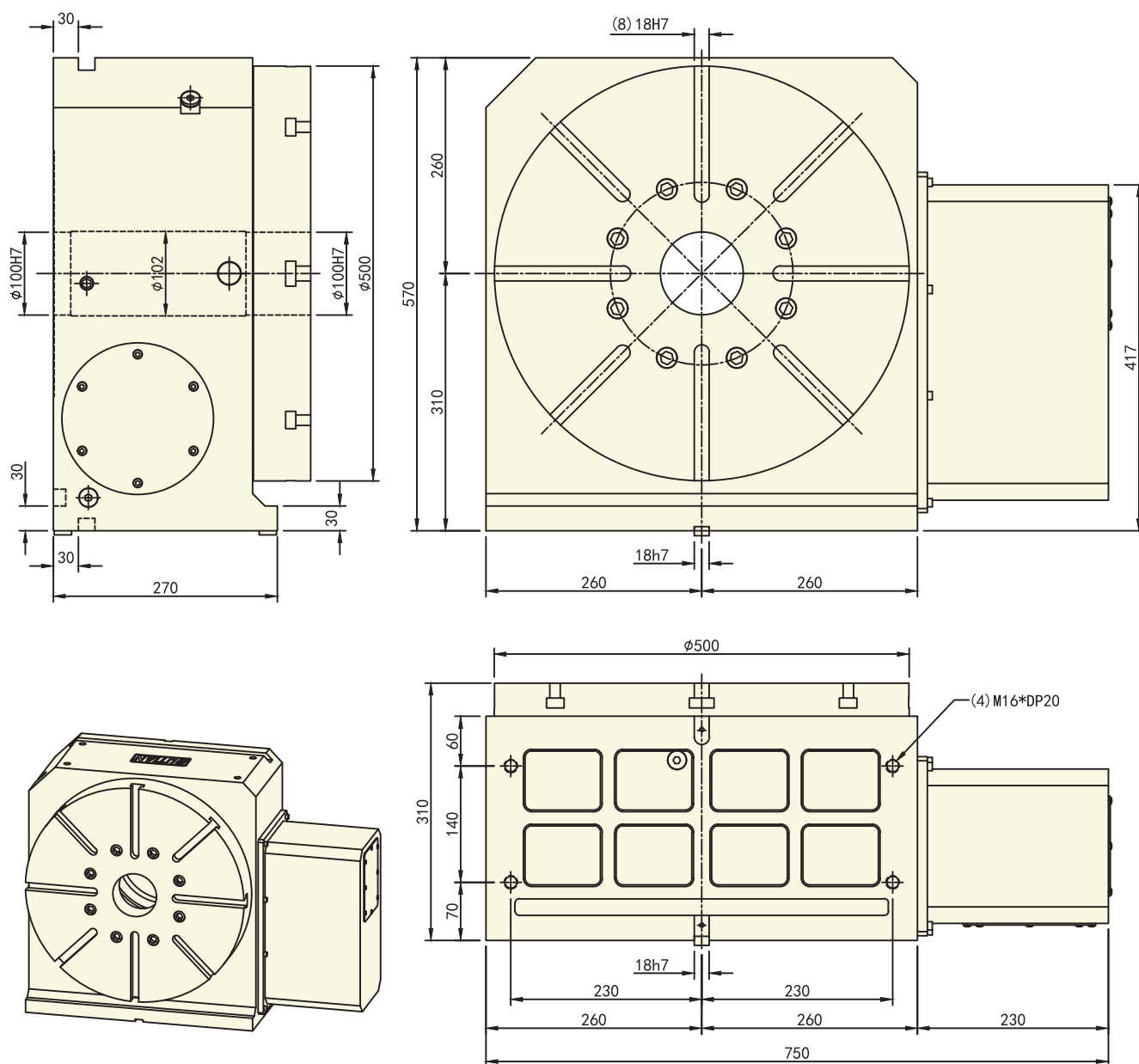


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS22, MITSUBISHI-HG204

**NC500 Parameter Table**


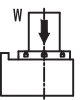
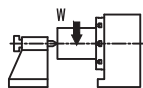

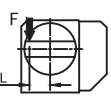
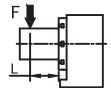
Items		Unit	Data
Table Diameter		mm	Φ500
Center Height		mm	310
Center Bore Diameter	Front-End	mm	Φ100
	Rear-End	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS22 MITSUBISHI HG204
T-SLOT Width		mm	(8)18H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	40
Total Speed Reduction Ratio			1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Max. Cutting Torque (Brake locking state)		N·m	2600
Net Weight		kg	350
Allowable Work Weight	Vertical Mounting 	kg	400
	Horizontal Mounting 	kg	800
	Vertical Mounting with Tail-Stock 	kg	800
Allowable Load	F 	N	55000
	F×L 	N·m	2600
	F×L 	N·m	7100

# NC500

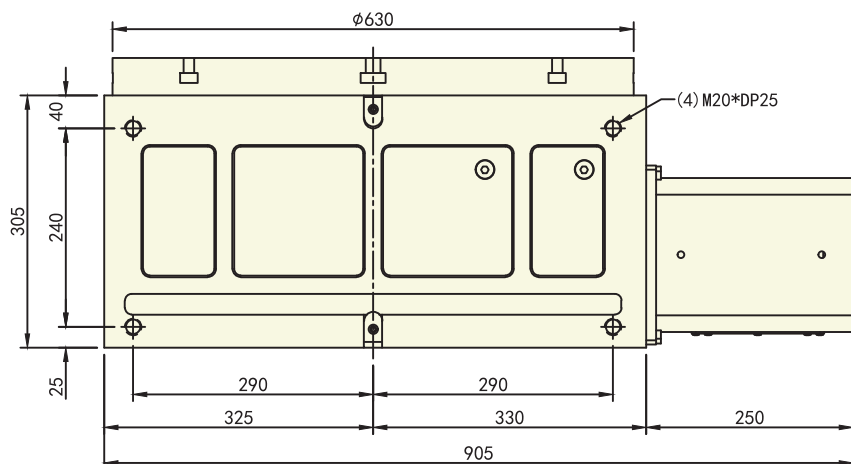
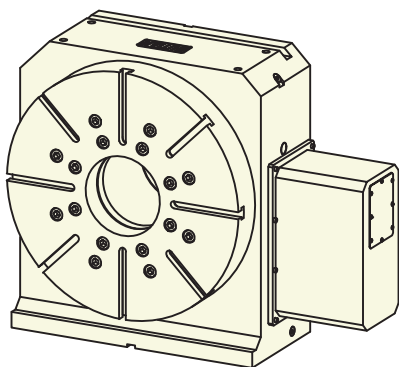
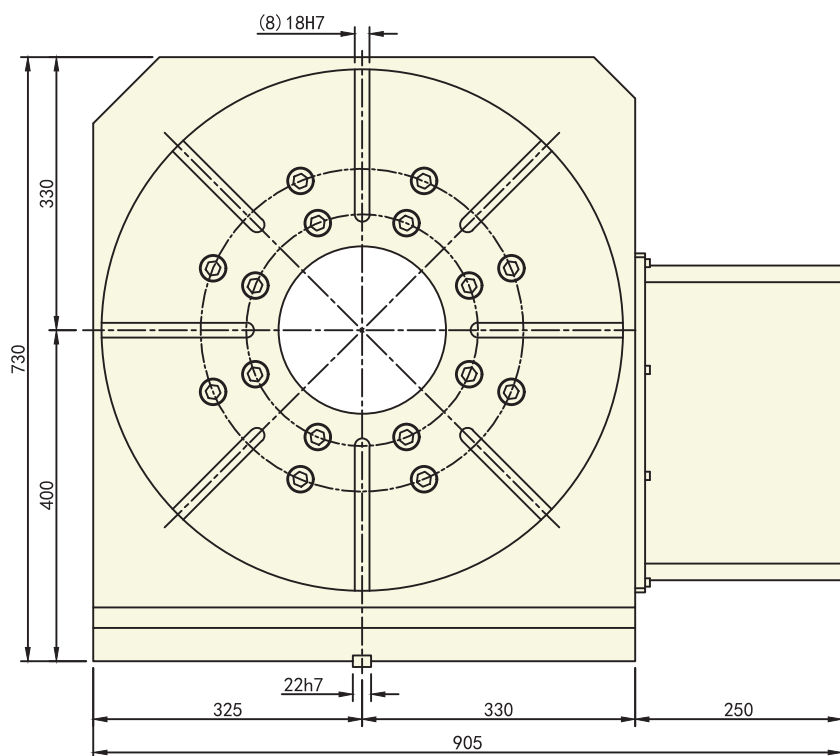
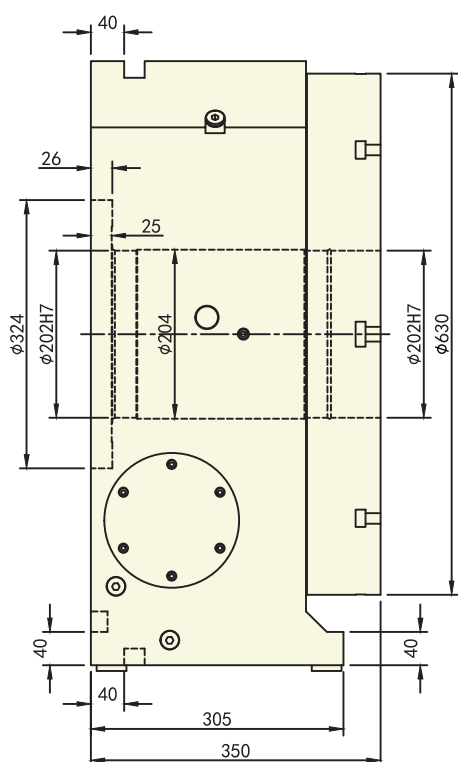


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS22, MITSUBISHI-HG204

**NC630 Parameter Table**

Items		Unit	Data
Table Diameter		mm	Φ630
Center Height		mm	400
Center Bore Diameter	Front-End	mm	Φ202
	Rear-End	mm	Φ202
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS30 MITSUBISHI HG303
T-SLOT Width		mm	(8)18H7
Positioning Key Width		mm	22h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	25
Total Speed Reduction Ratio			1:70
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Max. Cutting Torque (Brake locking state)		N·m	6100
Net Weight		kg	750
Allowable Work Weight	Vertical Mounting 	kg	600
	Horizontal Mounting 	kg	1200
	Vertical Mounting with Tail-Stock 	kg	1200
Allowable Load	F 	N	85000
	F × L 	N·m	6100
	F × L 	N·m	9600

# NC630



Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS30, MITSUBI SHI-HG354\HG303

# Memo

## DC-series



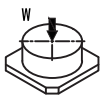
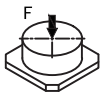
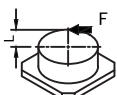
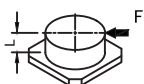
# GUTIAN

### DC Horizontal Cam Rotary Table

**DC500,DC500S,DC630,DC630S,DC800,DC800S,  
DC1250S,DC1250X**

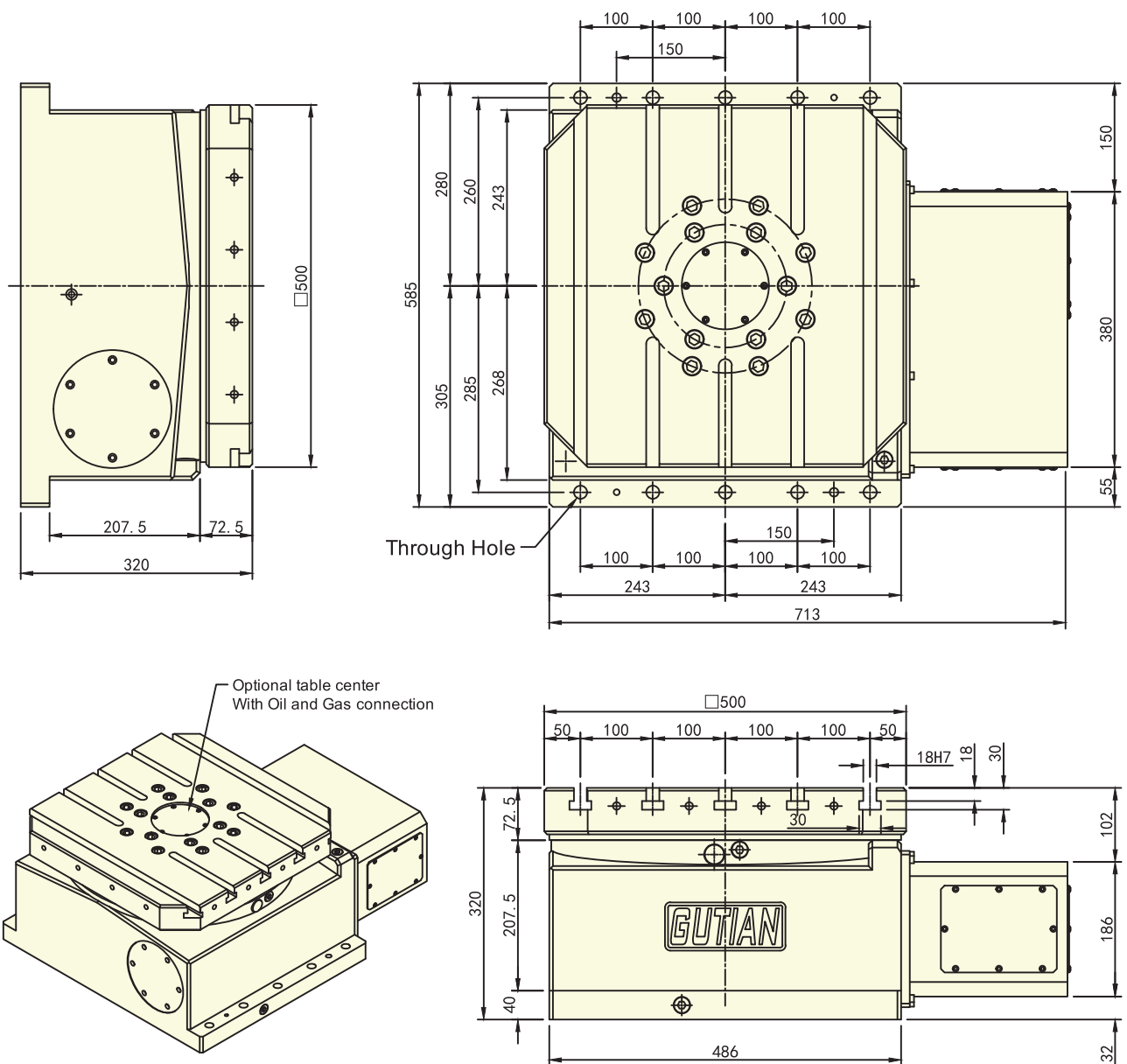
Gutian horizontal cam rotary table has higher rigidity and stronger bearing capacity by adjusting the internal structure and optimizing horizontal machine tool four-axis. It adopts internal cam roller transmission mechanism. There is backlash-free rolling drive between cam and needle bearings pre-load, no sliding friction or backlash-free. Its positive reverse motion has high repeatability accuracy without the need for periodic calibration and adjustments, and has the characteristic of high accuracy and high efficiency.

**DC500 Parameter Table**

Items		Unit	Data
Rotary Table Dimension		mm	500*500
Rotary Table Height		mm	320
Central Through Hole Diameter		mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS22 MITSUBISHI HG204
T-SLOT Width		mm	18H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	40
Total Speed Reduction Ratio		arc. sec	1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		MPa	4
Clamping Method (Hydraulic)		N·m	4.5±0.5
Clamping Torque		N·m	2650
Continuous Cutting Torque		N·m	1580
Max. Cutting Torque (Brake locking state)		N·m	2650
Net Weight		kg	380
Allowable Weight	Work 	kg	800
Allowable Load	F 	N	58000
	F × L 	N·m	2650
	F × L 	N·m	7900

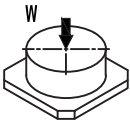
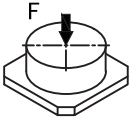
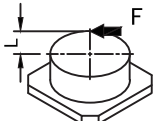
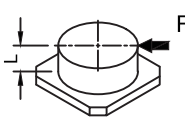


# DC500

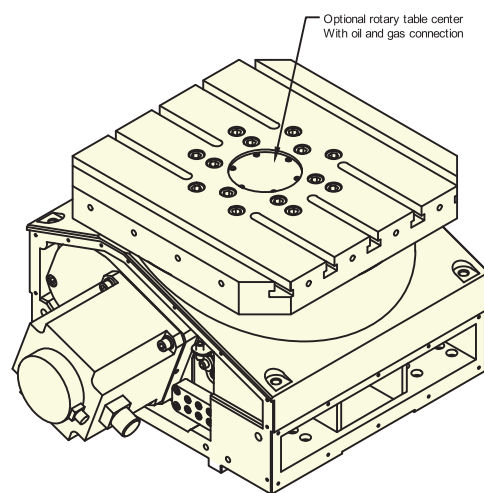
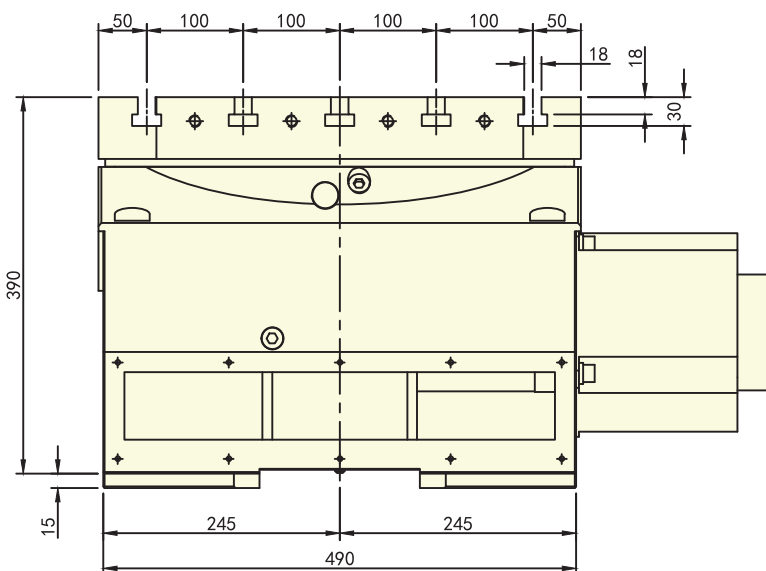
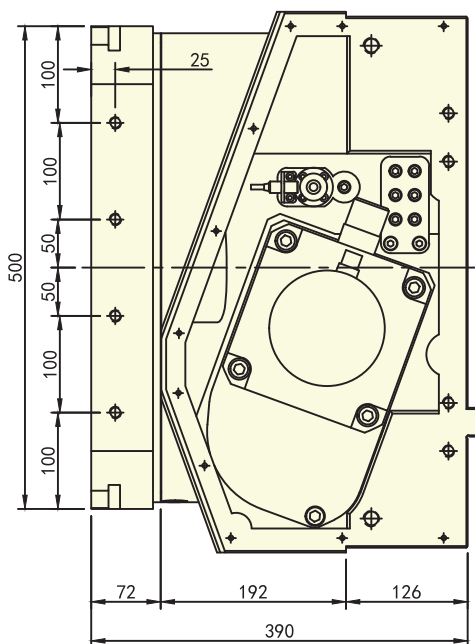
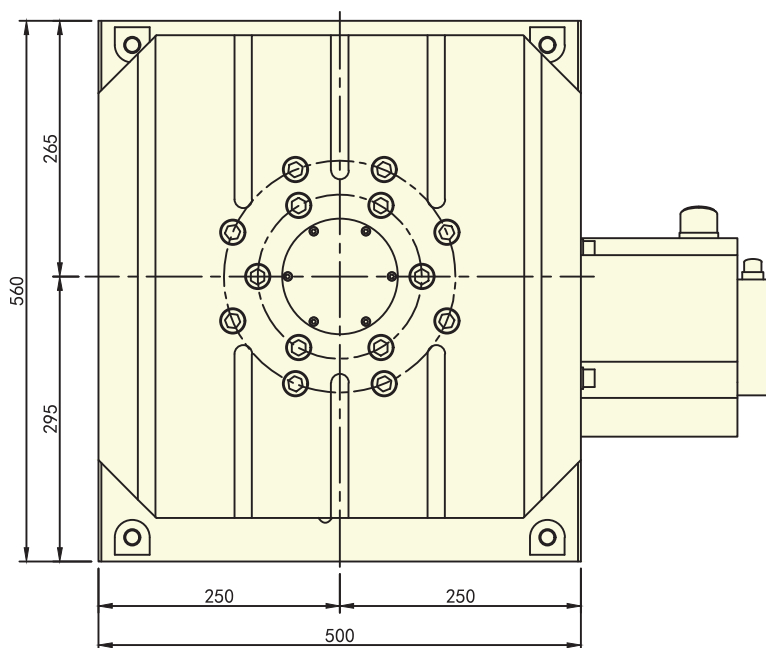


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS22, MITSUBISHI-HG204

**DC500S Parameter Table**

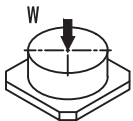
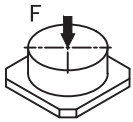
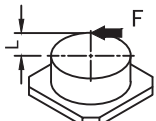
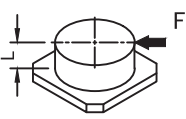
Items		Unit	Data
Rotary Table Dimension		mm	500*500
Rotary Table Height		mm	390
Central Through Hole Diameter		mm	Φ120
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS22 MITSUBISHI HG204
T-SLOT Width		mm	18H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	40
Total Speed Reduction Ratio		arc. sec	1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		MPa	4
Clamping Method (Hydraulic)		N·m	4.5±0.5
Clamping Torque		N·m	2650
Continuous Cutting Torque		N·m	1580
Max. Cutting Torque (Brake locking state)		N·m	2650
Net Weight		kg	370
Allowable Work Weight		kg	800
Allowable Load	F 	N	58000
	F × L 	N·m	2650
	F × L 	N·m	7900

# DC500S

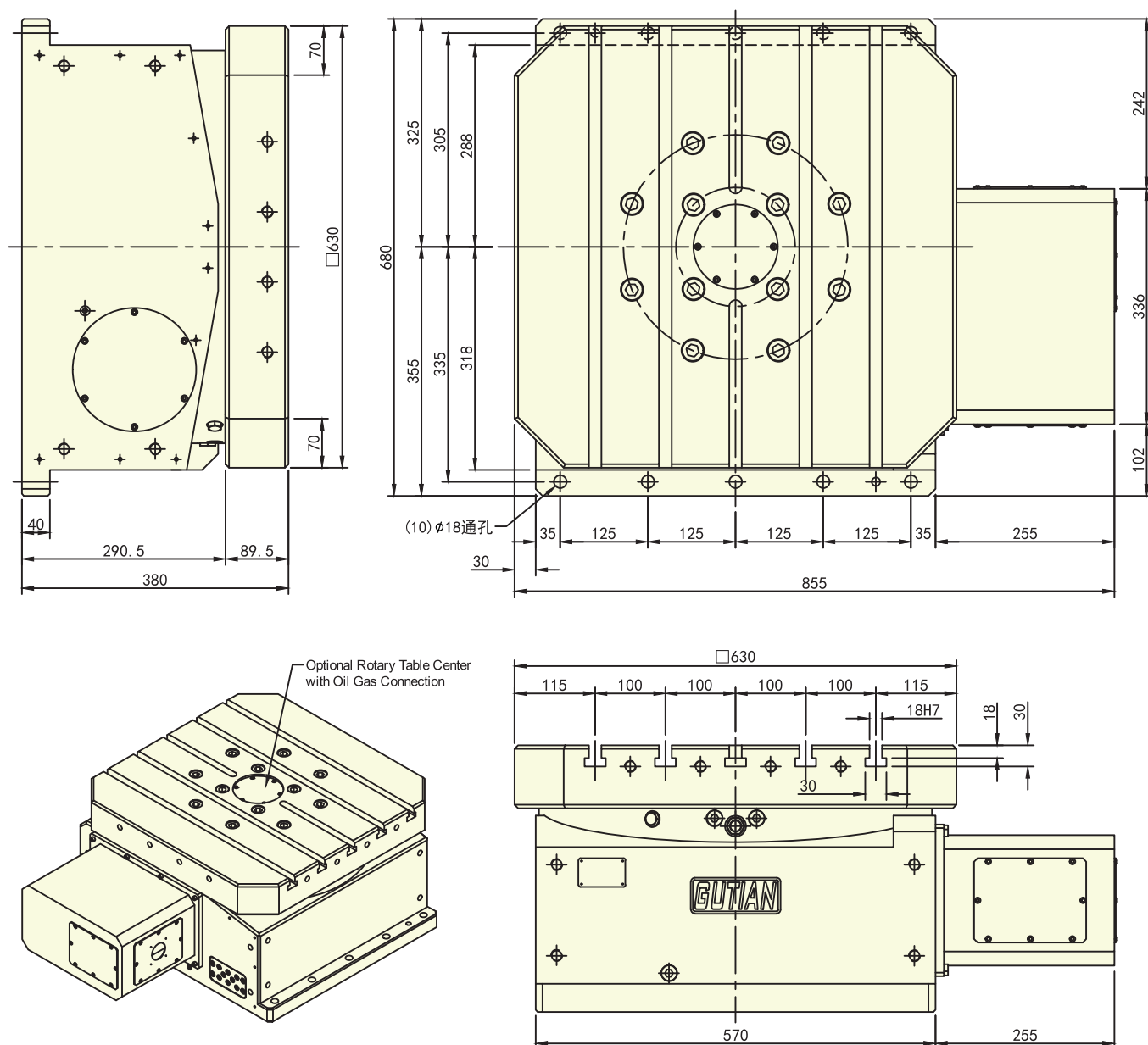


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS22, MITSUBISHI-HG204

DC630 Parameter Table

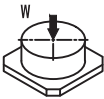
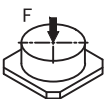
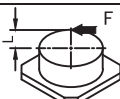
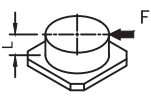
Items		Unit	Data
Rotary Table Dimension		mm	630*630
Rotary Table Height		mm	380
Central Through Hole Diameter		mm	Φ120
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS30 MITSUBISHI HG303
T-SLOT Width		mm	18H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	40
Total Speed Reduction Ratio			1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Clamping Torque		N·m	4600
Continuous Cutting Torque		N·m	2800
Max. Cutting Torque (Brake locking state)		N·m	4600
Net Weight		kg	680
Allowable Weight	Work 	kg	1200
Allowable Load	F 	N	65000
	F×L 	N·m	4600
	F×L 	N·m	9500

# DC630

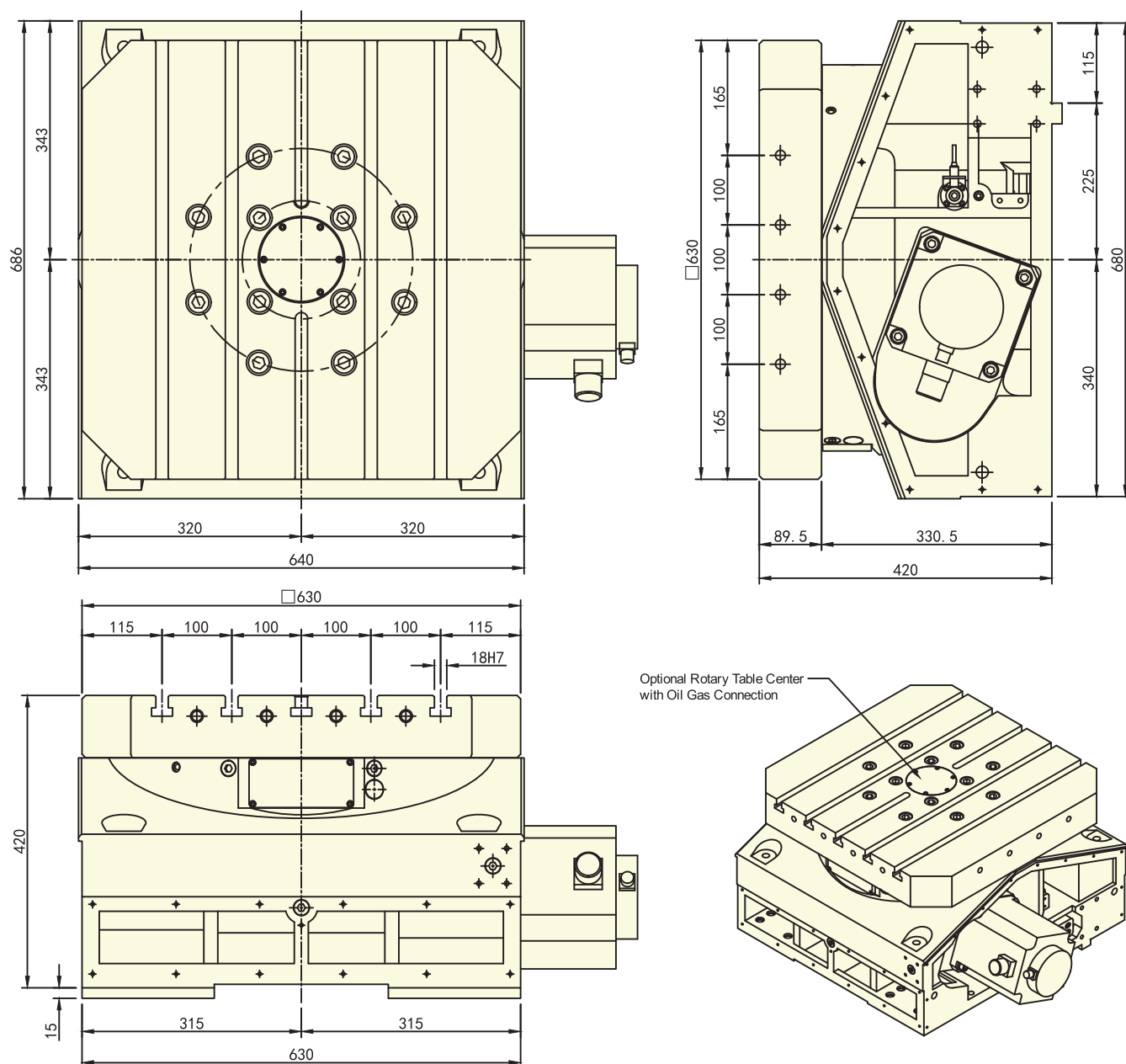


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS30, MITSUBISHI-HG303

DC630S Parameter Table

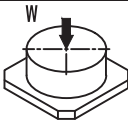
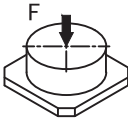
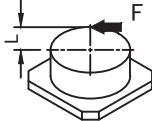

Items		Unit	Data
Rotary Table Dimension		mm	630*630
Rotary Table Height		mm	420
Central Through Hole Diameter		mm	Φ120
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS30 MITSUBISHI HG303
T-SLOT Width		mm	18H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	40
Total Speed Reduction Ratio			1:50
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Clamping Torque		N·m	4600
Continuous Cutting Torque		N·m	2800
Max. Cutting Torque (Brake locking state)		N·m	4600
Net Weight		kg	750
Allowable Weight	Work 	kg	1200
Allowable Load	F 	N	65000
	F×L 	N·m	4600
	F×L 	N·m	9500

# DC630S



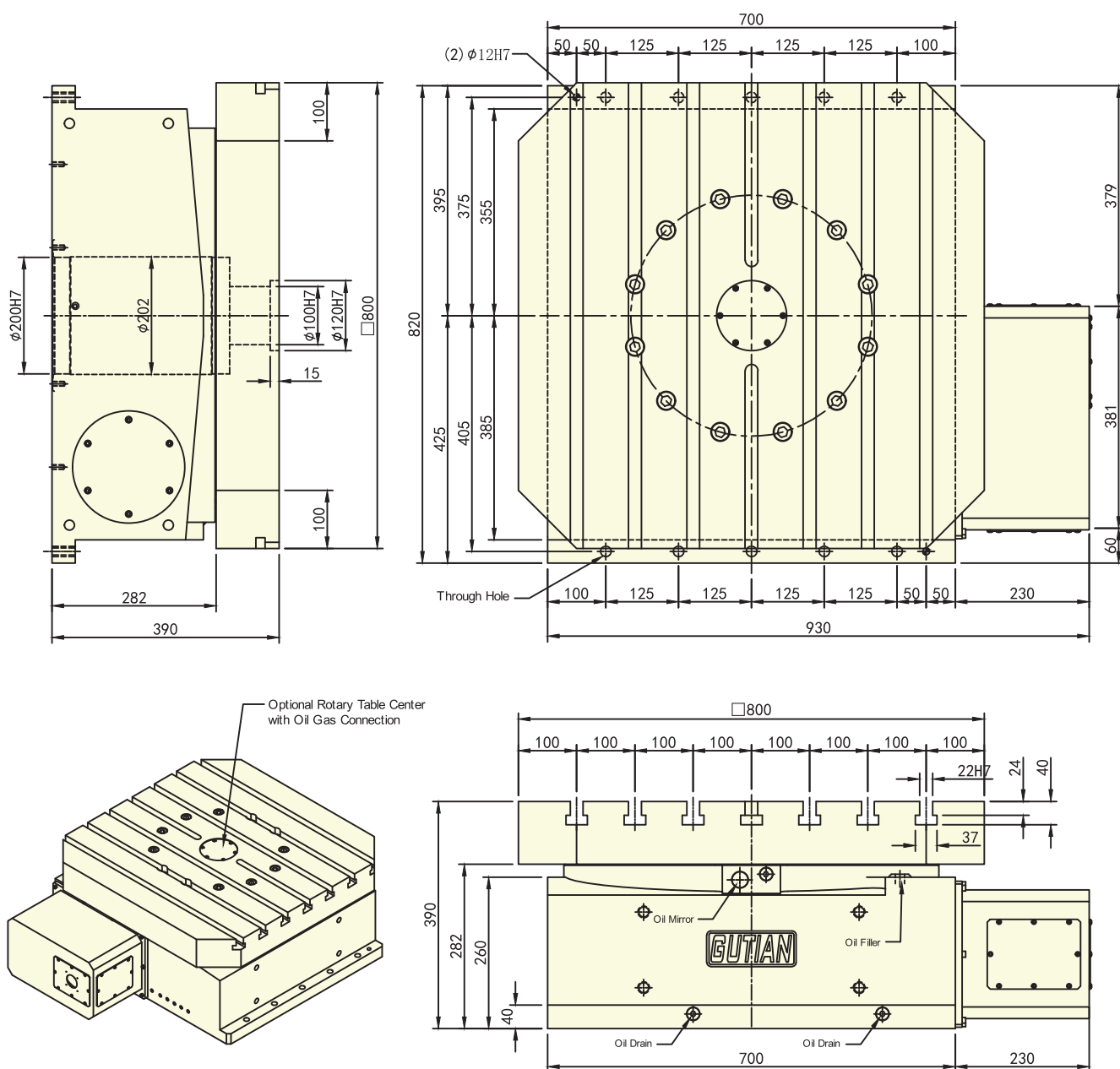
Servo Motor Standard Specification (Straight Shaft): FANUC-βiS30, MITSUBISHI-HG303

DC800 Parameter Table

Items		Unit	Data
Rotary Table Dimension		mm	800*800
Rotary Table Height		mm	390
Central Through Hole Diameter		mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS30 MITSUBISHI HG303
T-SLOT Width		mm	22H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	20
Total Speed Reduction Ratio			1:91
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Clamping Torque		N·m	7600
Continuous Cutting Torque		N·m	3950
Max. Cutting Torque (Brake locking state)		N·m	7600
Net Weight		kg	1020
Allowable Weight	Work 	kg	2000
Allowable Load	F 	N	105000
	F×L 	N·m	7600
	F×L 	N·m	12800

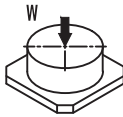
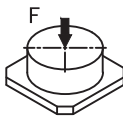
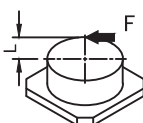
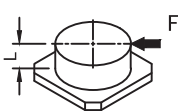


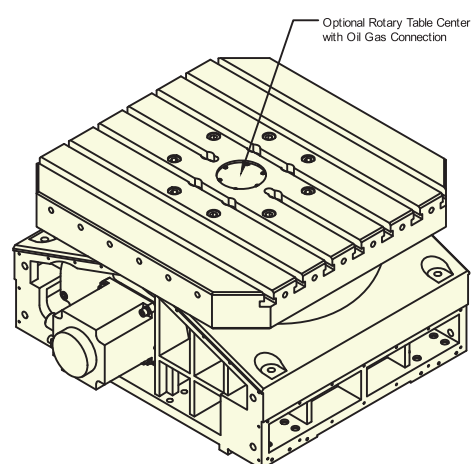
# DC800



Servo Motor Standard Specification (Straight Shaft): FANUC-βiS30, MITSUBISHI-HG303

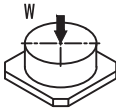
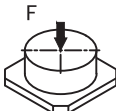
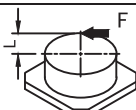
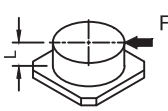
DC800S Parameter Table

Items		Unit	Data
Rotary Table Dimension		mm	800*800
Rotary Table Height		mm	485
Central Through Hole Diameter		mm	Φ120
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS30 MITSUBISHI HG303
T-SLOT Width		mm	22H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	20
Total Speed Reduction Ratio			1:70
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4.5±0.5
Clamping Torque		N·m	7600
Continuous Cutting Torque		N·m	3950
Max. Cutting Torque (Brake locking state)		N·m	7600
Net Weight		kg	1260
Allowable Work Weight		kg	2000
Allowable Load	F 	N	105000
	F × L 	N·m	7600
	F × L 	N·m	12800

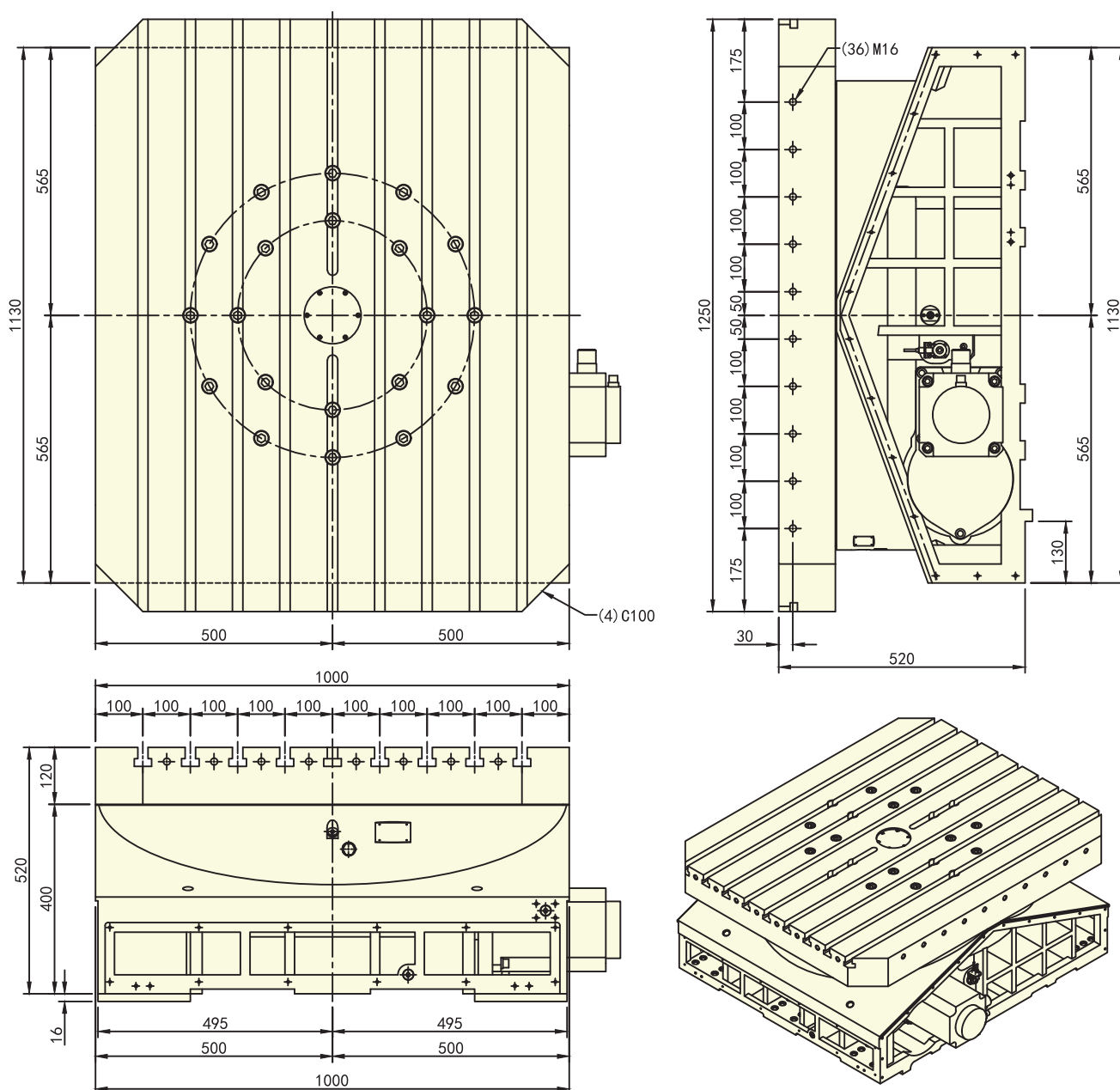


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**DC1250S Parameter Table**

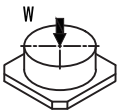
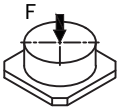
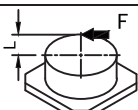
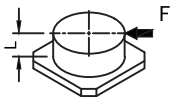
Items		Unit	Data
Rotary Table Dimension		mm	1000*1250
Rotary Table Height (From Guide Rail Slider Mounting Datum to Table Datum)		mm	520
Central Through Hole Diameter		mm	Φ120
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS40 MITSUBISHI HG453
T-SLOT Width		mm	22H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	15
Total Speed Reduction Ratio			1:117
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4±0.5
Clamping Torque		N·m	21000
Continuous Cutting Torque		N·m	6900
Max. Cutting Torque (Brake locking state)		N·m	21000
Net Weight		kg	2100
Allowable Work Weight		kg	5000
Allowable Load	F 	N	192000
	F × L 	N·m	21000
	F × L 	N·m	23500

# DC1 250S

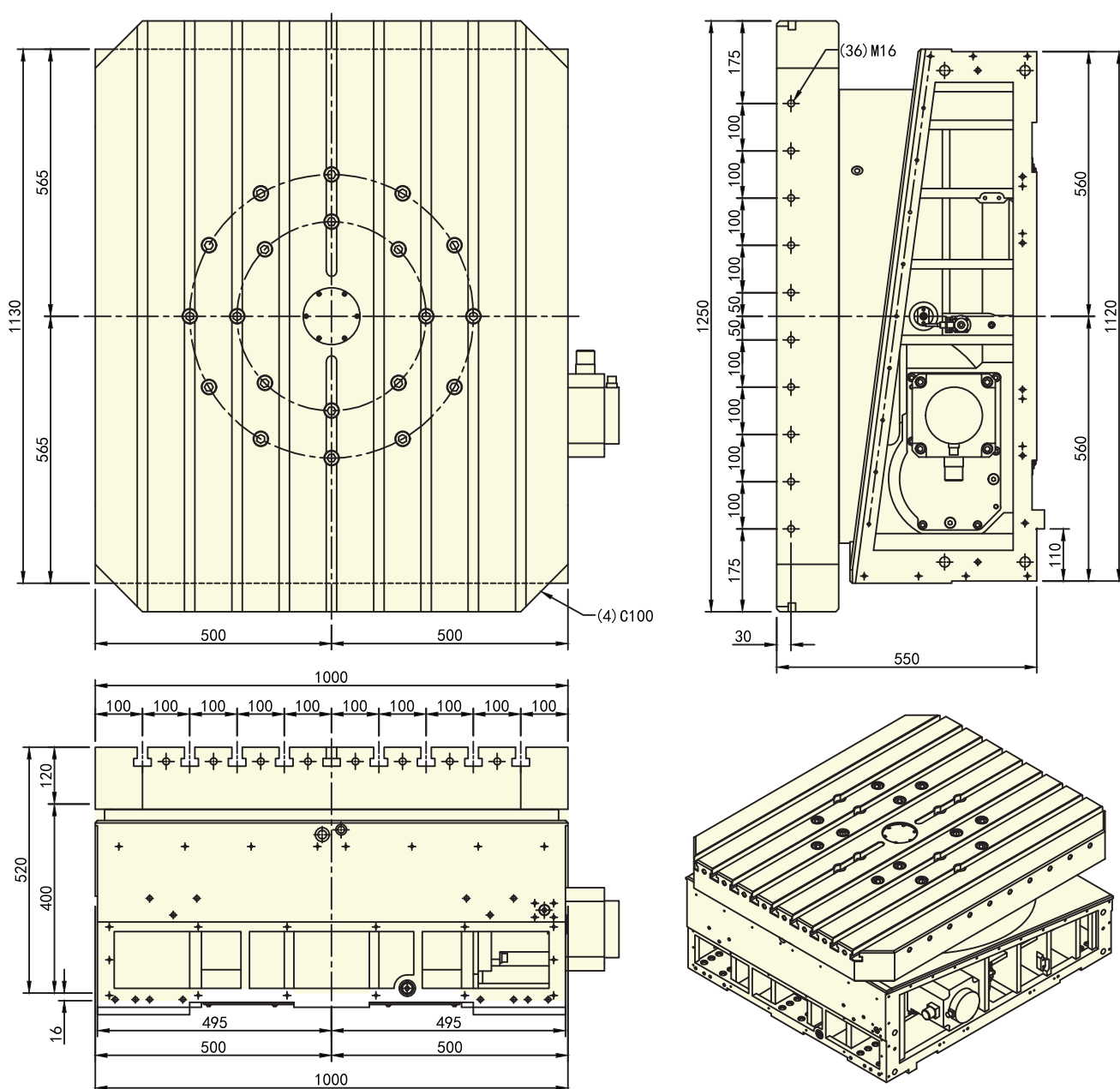


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS40, MITSUBISHI-HG453

DC1250X Parameter Table

Items		Unit	Data
Rotary Table Dimension		mm	1000*1250
Rotary Table Height (From Guide Rail Slider Mounting Datum to Table Datum)		mm	550
Central Through Hole Diameter		mm	Φ120
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)			FANUC βiS40 MITSUBISHI HG453
T-SLOT Width		mm	22H7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	15
Total Speed Reduction Ratio			1:117
Indexing Accuracy		arc. sec	15
Repeatability Accuracy		arc. sec	4
Clamping Method (Hydraulic)		MPa	4±0.5
Clamping Torque		N·m	21000
Continuous Cutting Torque		N·m	6900
Max. Cutting Torque (Brake locking state)		N·m	21000
Net Weight		kg	2100
Allowable Weight	Work 	kg	5000
Allowable Load	F 	N	192000
	F×L 	N·m	21000
	F×L 	N·m	23500

# DC1250X

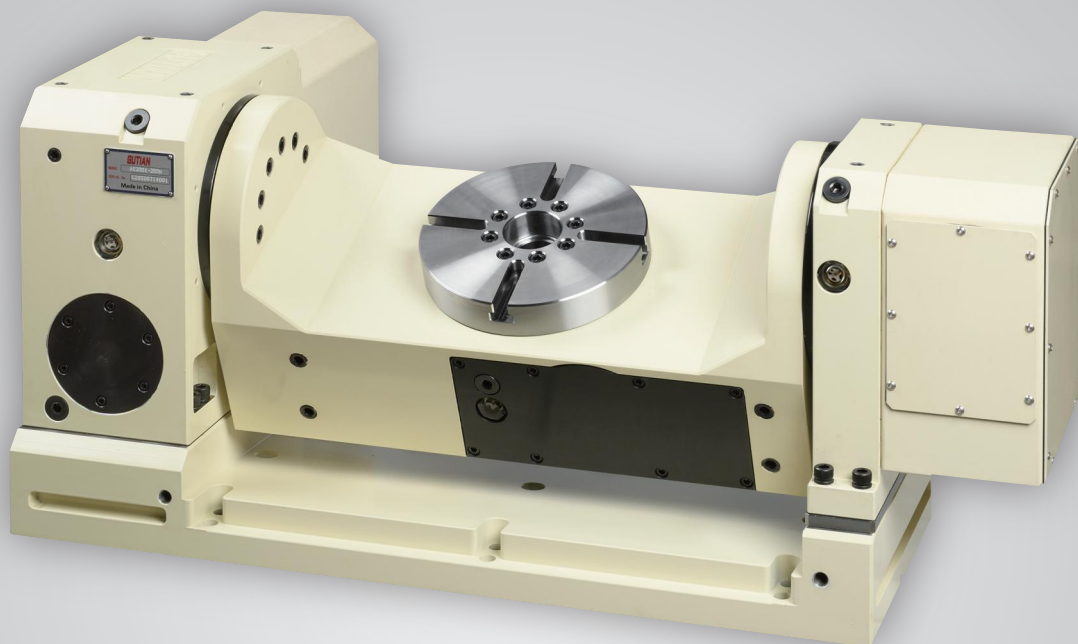


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS40, MITSUBISHI-HG453

# Memo



# AC-series



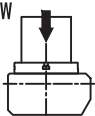
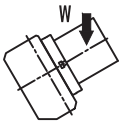
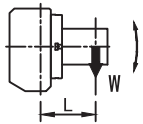
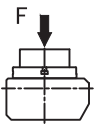

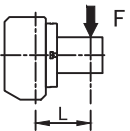
## **GUTIAN**

### **AC Five-axis Cam Rotary Table**

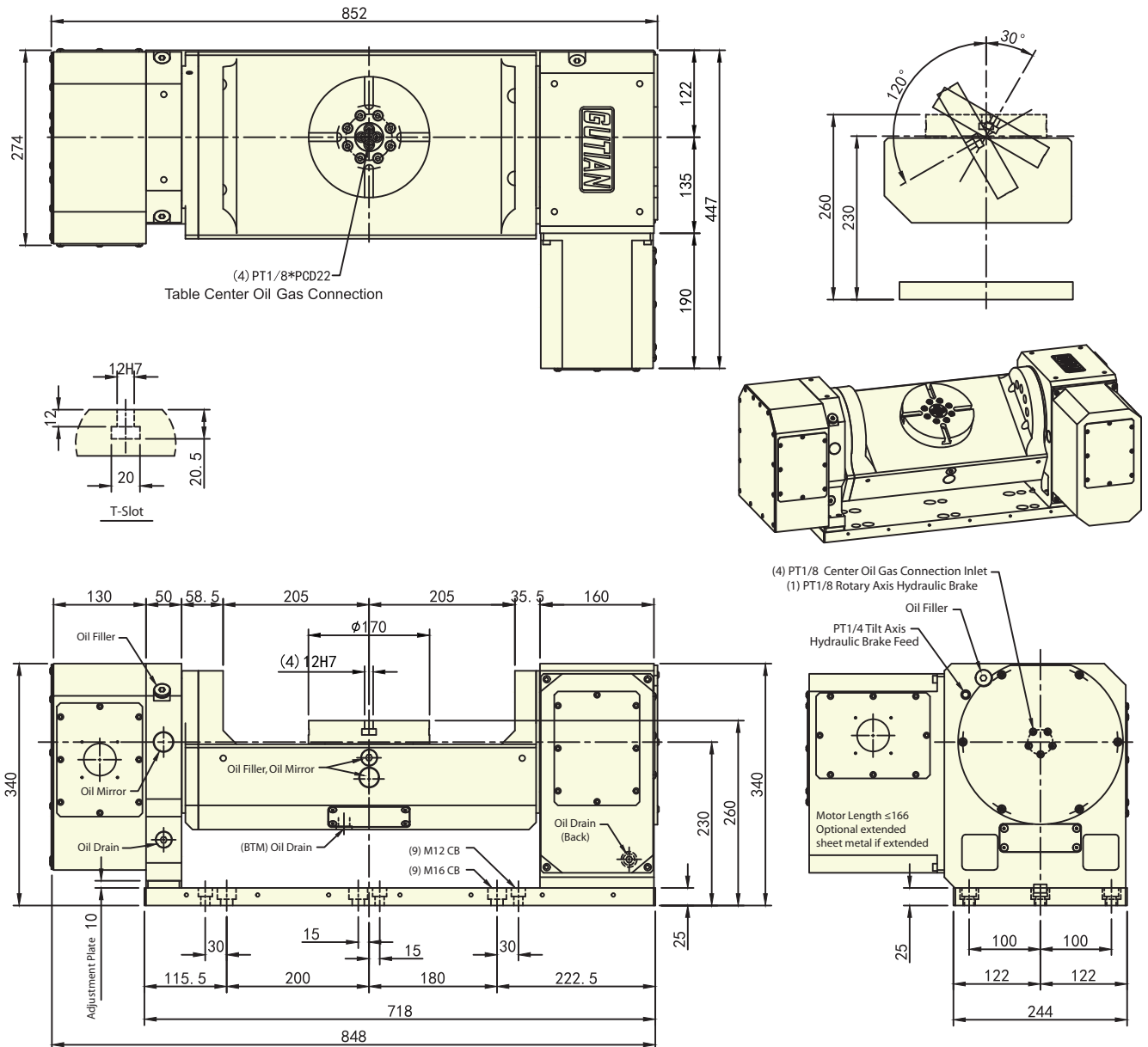
**AC170,AC200,AC210,AC210S,AC250,AC250S,  
AC350,AC450,AC450S,AC650,AC650S,AC750S**

Gutian horizontal cam fix-axis rotary table has internal cam roller transmission mechanism. There is backlash-free rolling drive between cam and needle bearings pre-load, no sliding friction or backlash. Its positive reverse motion has high repeatability accuracy without the need for periodic calibration and adjustment. Its accuracy is not affected by rising temperature. Improving the quality of multi-axis machining parts can greatly reduce defective rate of machined parts.

**AC170 Parameter Table**

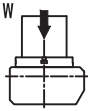
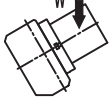
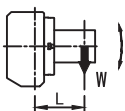
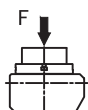

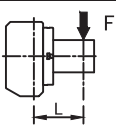
Items		Unit	Data
Table Diameter		mm	Φ170
Rotary Table Height (Horizontal State)		mm	260
Servo Motor (Straight Shaft Motor) (Other Specification/Brand to be Consulted)		Rotary Axis	MITSUBISHI HG105
			FANUC βiS4
		Tilt Axis	MITSUBISHI HG104
			FANUC βiS8
T-SLOT Width		mm	12H7
Positioning Key Width		mm	18h7\14h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	75
Total Speed Reduction Ratio		Rotary Axis	1:40
		Tilt Axis	1:50
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	20 \ 40
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	6 \ 8
Clamping Method (Hydraulic)		MPa	3.5 ± 0.5
Clamping Torque		N·m	390
Net Weight		kg	155
Allowable Work Weight	Horizontal State 	kg	80
	Inclined State 	kg	50
Allowable Work Moment	$W \times L$ 	N·m	40
Allowable Load	F 	N	12000
	$F \times L$ 	N·m	390
	$F \times L$ 	N·m	580

# AC170

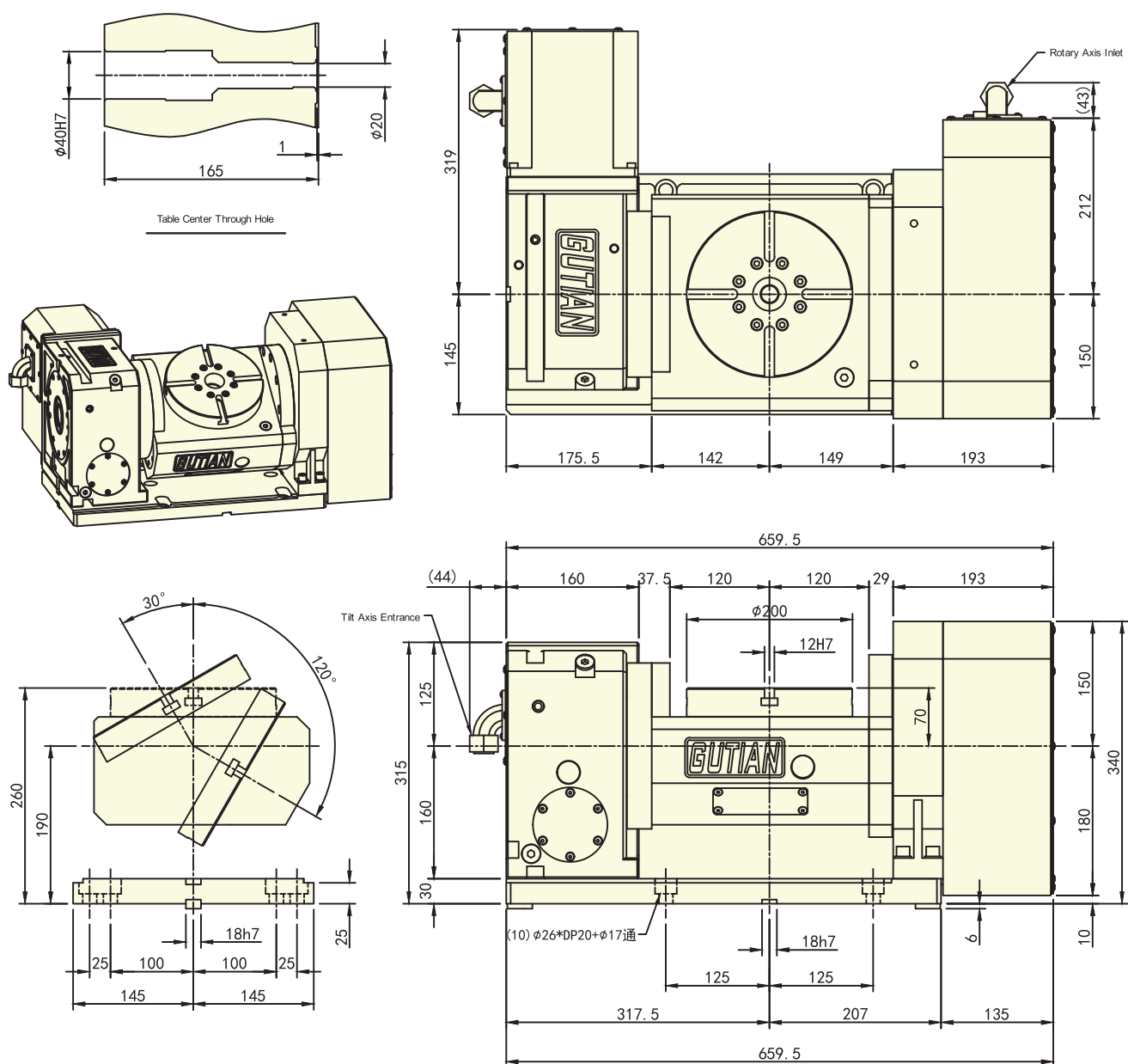


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS4,  $\beta$ iS8B  
MITSUBISHI-HG105, HG104

AC200 Parameter Table

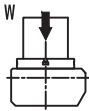
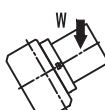
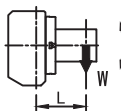
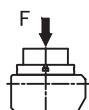
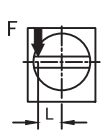
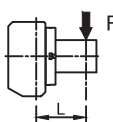
Items		Unit	Data
Table Diameter		mm	Φ200
Rotary Table Height (Horizontal State)		mm	260
Center Bore Distance	Front-End	mm	Φ40
	Rear-End	mm	Φ20
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		(2)PCS	FANUC βiS8 MITSUBISHI HG104
T-SLOT Width		mm	12H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	60
Total Speed Reduction Ratio		Rotary Axis	1:40
		Tilt Axis	1:40
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	20 \ 40
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	6 \ 8
Clamping Method (Hydraulic)		MPa	3.0 ± 0.5
Clamping Torque		N·m	410
Net Weight		kg	205
Allowable Work Weight	Horizontal State 	kg	100
	Inclined State 	kg	70
Allowable Work Moment	$W \times L$ 	N·m	60
Allowable Load	$F$ 	N	14000
	$F \times L$ 	N·m	410
	$F \times L$ 	N·m	620

# AC200

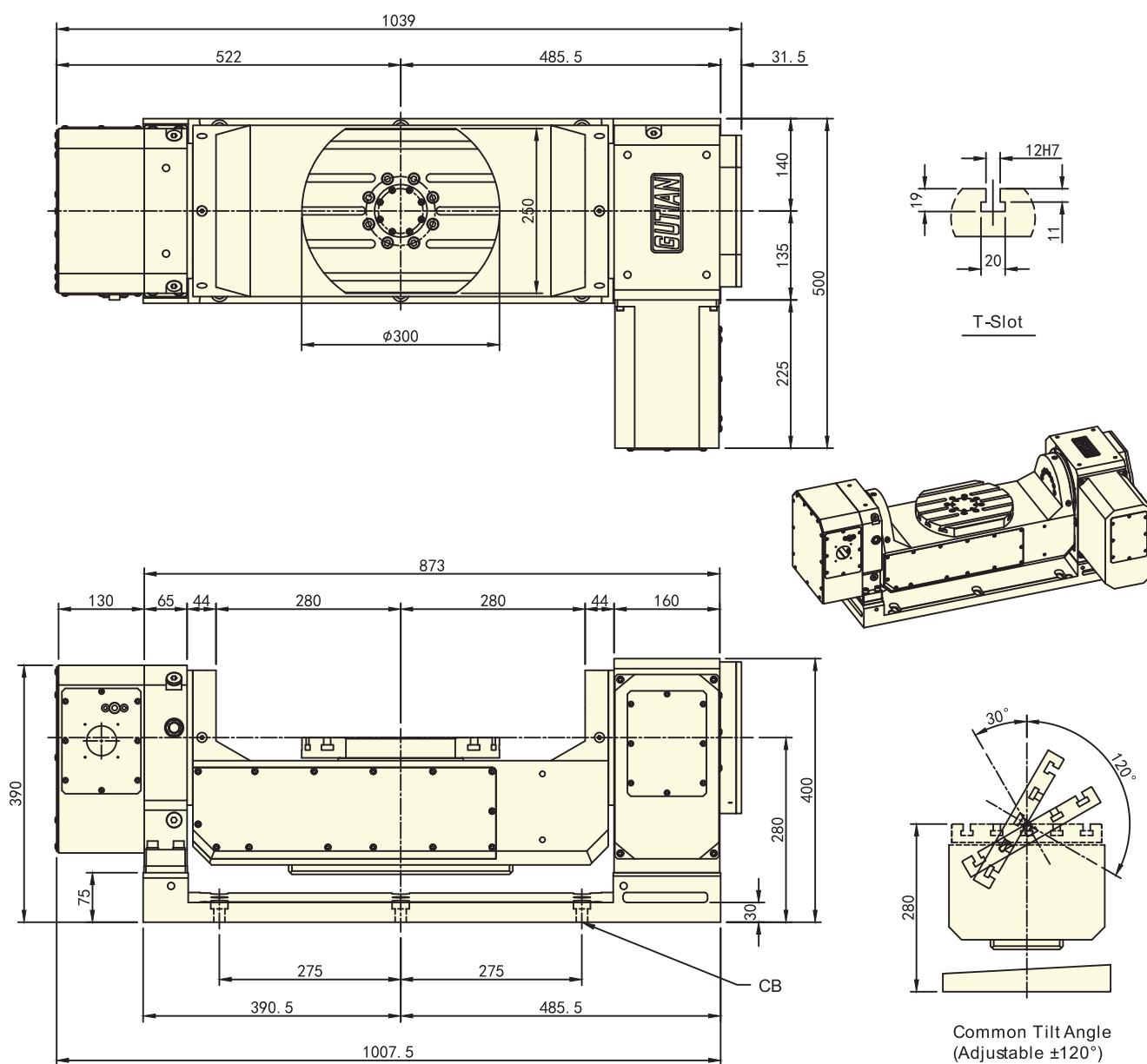


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS8, MITSUBISHI-HG104

**AC210 Parameter Table**



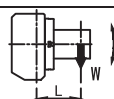


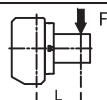
Items		Unit	Data
Table Diameter		mm	Φ300*250
Rotary Table Height (Horizontal State)		mm	280
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)	Rotary Axis		FANUC βiS4 MITSUBISHI HG105
	Tilt Axis		FANUC βiS8B MITSUBISHI HG154B
T-SLOT Width		mm	12H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	50
Total Speed Reduction Ratio	Rotary Axis		1:40
	Tilt Axis		1:50
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	8
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	15
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	20
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	60
Clamping Method (Hydraulic)		MPa	3.5 ± 0.5
Clamping Torque		N·m	410
Net Weight		kg	(310)
Allowable Work Weight	Horizontal State 	kg	100
	Inclined State 	kg	70
Allowable Work Moment	$W \times L$ 	N·m	60
Allowable Load	F 	N	14000
	$F \times L$ 	N·m	410
	$F \times L$ 	N·m	650

# AC210



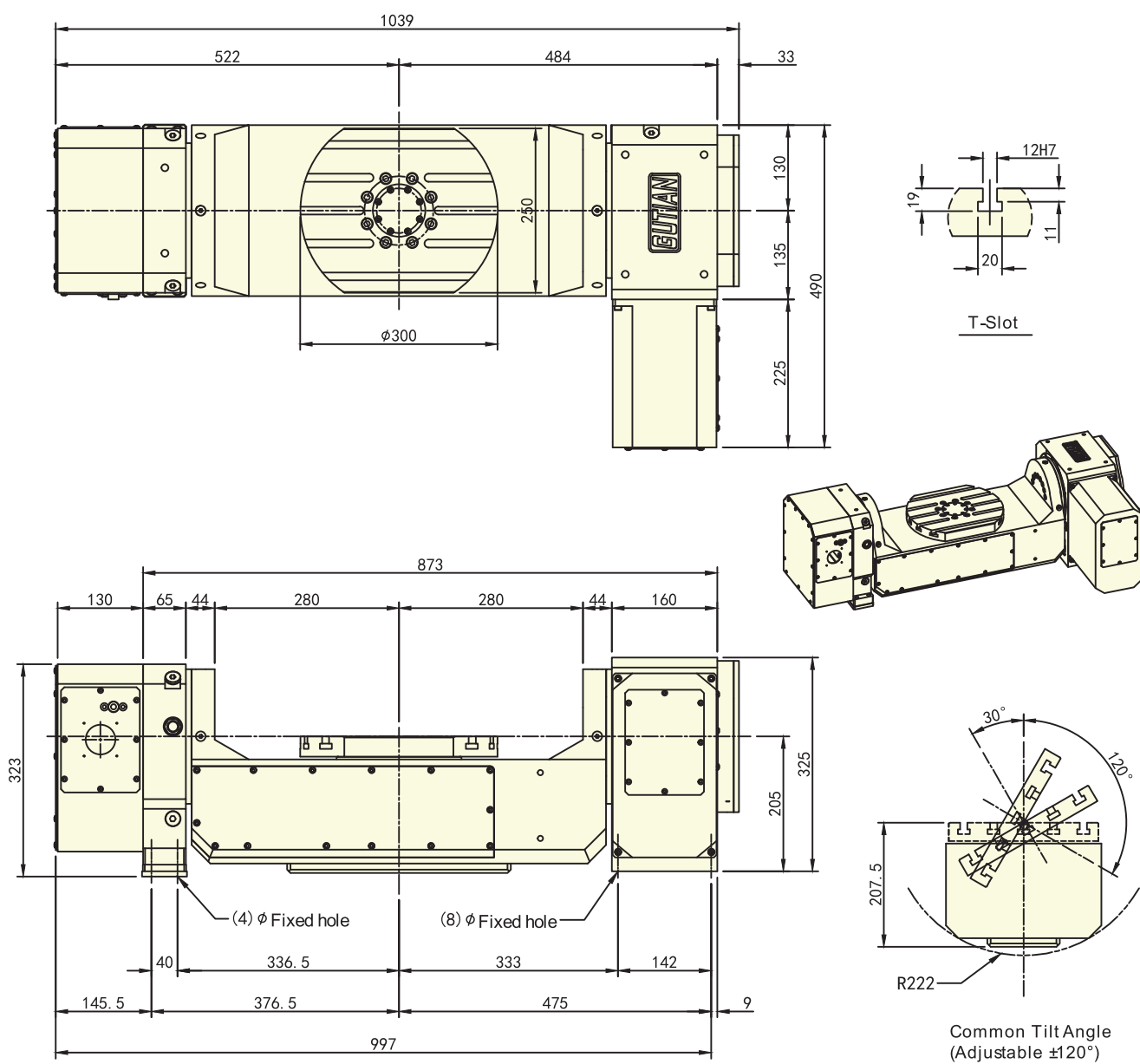
Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS4,  $\beta$ iS8B MITSUBISHI-HG105, HG154B

**AC210S Parameter Table**

Items		Unit	Data	
Rotary Table Dimension		mm	Φ300*250	
Rotary Table Height (Horizontal State)		mm	205	
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		Rotary Axis	FANUC βiS4 MITSUBISHI HG105	
		Tilt Axis	FANUC βiS8B MITSUBISHI HG154B	
T-SLOT Width		mm	12H7	
Positioning Key Width		mm	18h7	
Mini. Angle Setting		deg	0.001	
Max. Rotational Speed		rpm	50	
Total Speed Reduction Ratio		Rotary Axis	1:40	
		Tilt Axis	1:50	
Repeatability Accuracy (Rotary Axis)		arc. sec	8	
Repeatability Accuracy (Tilt Axis)		arc. sec	15	
Indexing Accuracy (Rotary Axis)		arc. sec	20	
Indexing Accuracy (Tilt Axis)		arc. sec	60	
Clamping Method (Hydraulic)		MPa	3.5±0.5	
Clamping Torque		N·m	410	
Net Weight		kg	(230)	
Allowable Work Weight	Horizontal State		kg	100
	Inclined State		kg	70
Allowable Work Moment	W×L		N·m	60
Allowable Load	F		N	14000
	F×L		N·m	410
	F×L		N·m	650

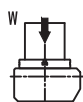
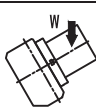
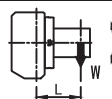
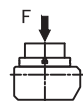
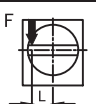
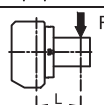


# AC210S

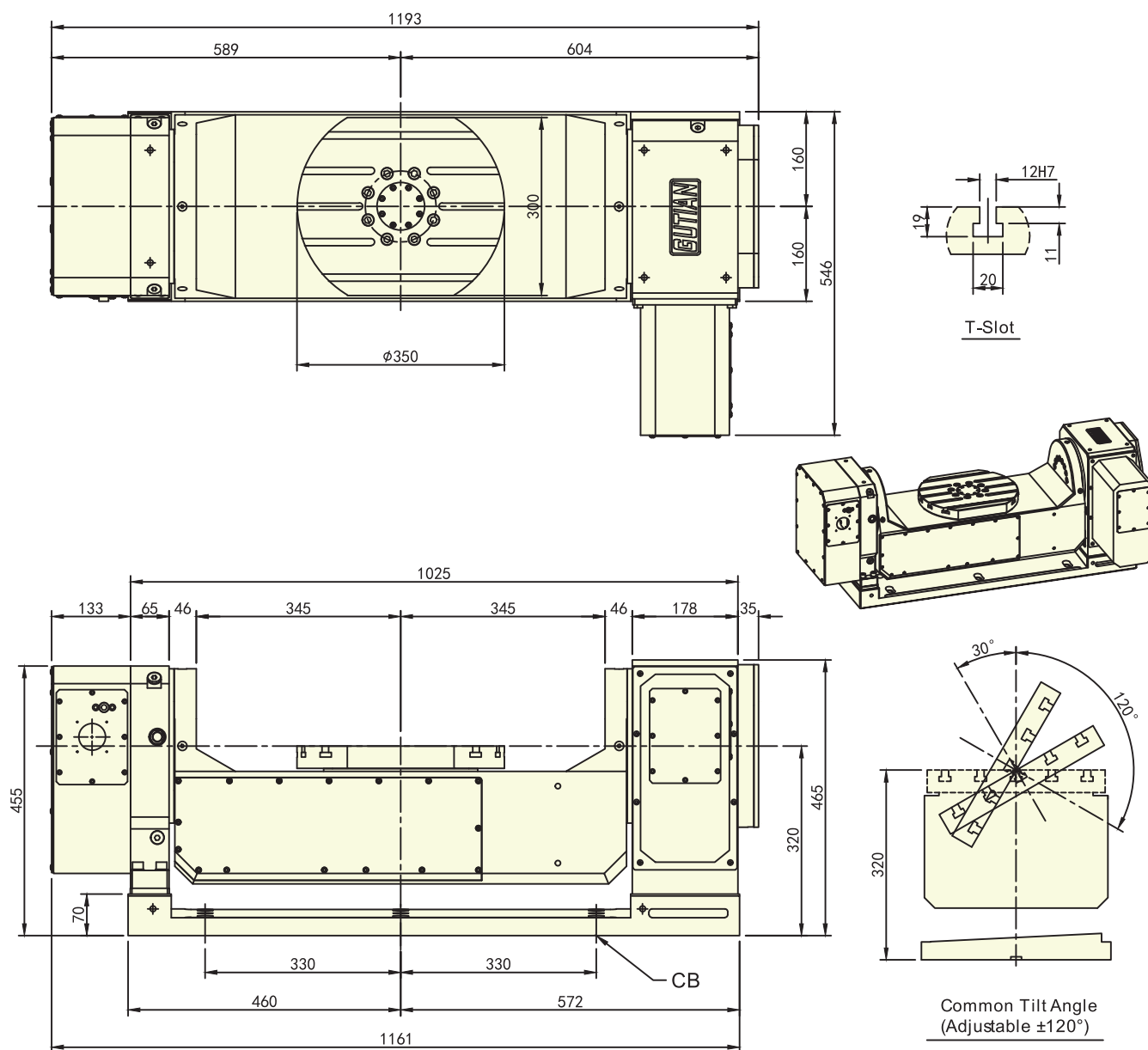


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS4, βiS8B MITSUBISHI-HG105, HG154B

**AC250 Parameter Table**

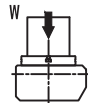

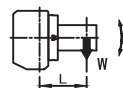
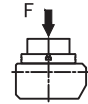
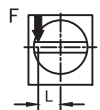
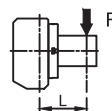
Items		Unit	Data	
Rotary Table Dimension		mm	Φ350*300	
Rotary Table Height (Horizontal State)		mm	320	
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		Rotary Axis	FANUC βiS8 MITSUBISHI HG104	
		Tilt Axis	FANUC βiS8B MITSUBISHI HG154B	
T-SLOT Width		mm	12H7	
Positioning Key Width		mm	18h7	
Mini. Angle Setting		deg	0.001	
Max. Rotational Speed		rpm	50	
Total Speed Reduction Ratio		Rotary Axis	1:40	
		Tilt Axis	1:50	
Repeatability Accuracy (Rotary Axis)		arc. sec	8	
Repeatability Accuracy (Tilt Axis)		arc. sec	15	
Indexing Accuracy (Rotary Axis)		arc. sec	20	
Indexing Accuracy (Tilt Axis)		arc. sec	60	
Clamping Method (Hydraulic)		MPa	3.5±0.5	
Clamping Torque		N·m	600	
Net Weight		kg	(430)	
Allowable Weight	Work	Horizontal State 	kg	120
		Inclined State 	kg	90
Allowable Moment	Work	$W \times L$ 	N·m	100
Allowable Load		$F$ 	N	18000
		$F \times L$ 	N·m	600
		$F \times L$ 	N·m	1000

# AC250

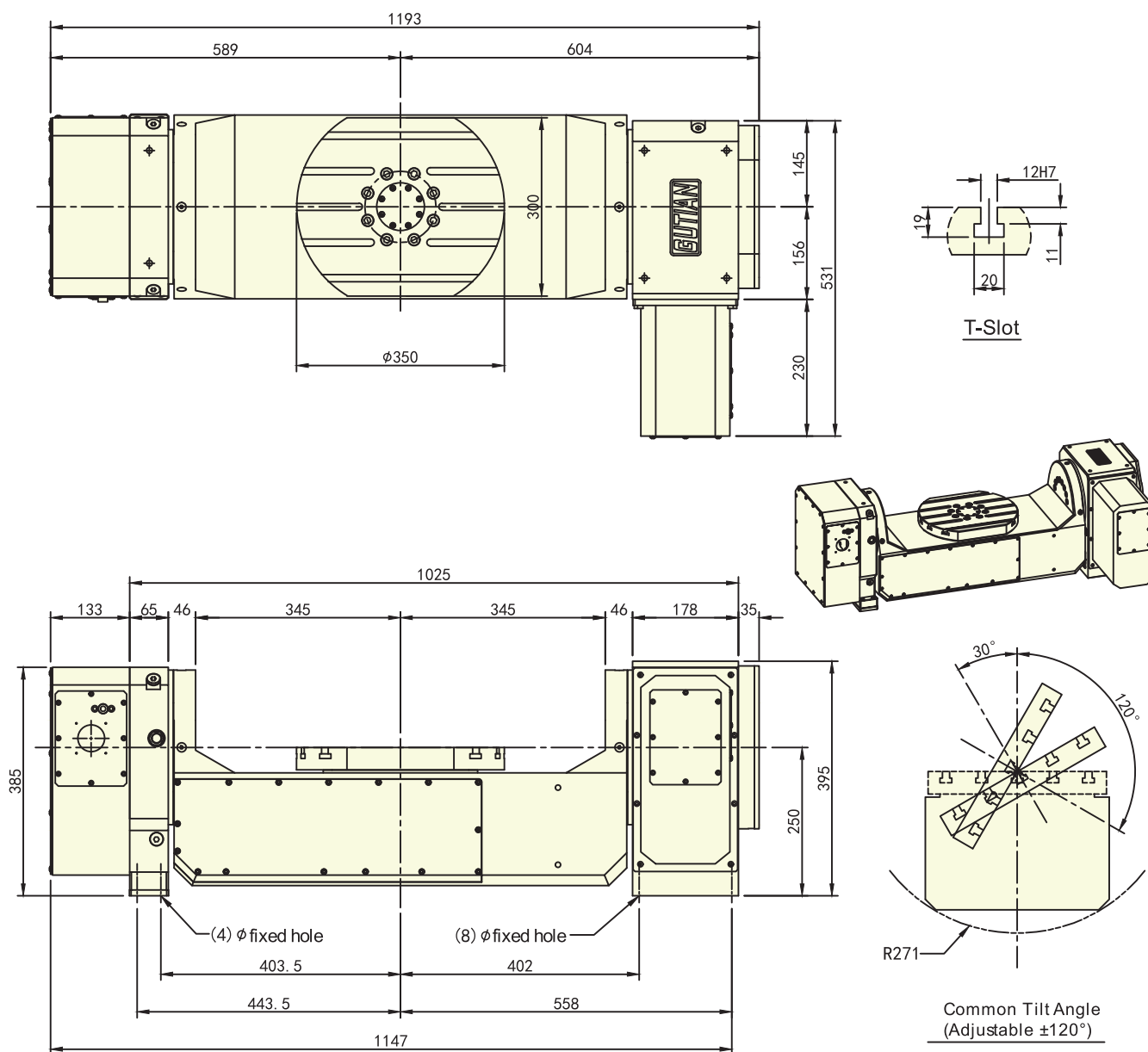


Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS4,  $\beta$ iS8B MITSUBISHI-HG105, HG154B

**AC250S Parameter Table**

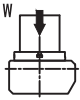

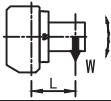


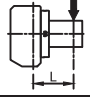
Items		Unit	Data	
Rotary Table Dimension		mm	Φ350*300	
Rotary Table Height (Horizontal State)		mm	250	
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		Rotary Axis	FANUC βiS8 MITSUBISHI HG104	
		Tilt Axis	FANUC βiS8B MITSUBISHI HG154B	
T-SLOT Width		mm	12H7	
Positioning Key Width		mm	18h7	
Mini. Angle Setting		deg	0.001	
Max. Rotational Speed		rpm	50	
Total Speed Reduction Ratio		Rotary Axis	1:40	
		Tilt Axis	1:50	
Repeatability Accuracy (Rotary Axis)		arc. sec	8	
Repeatability Accuracy (Tilt Axis)		arc. sec	15	
Indexing Accuracy (Rotary Axis)		arc. sec	20	
Indexing Accuracy (Tilt Axis)		arc. sec	60	
Clamping Method (Hydraulic)		MPa	3.5±0.5	
Clamping Torque		N·m	600	
Net Weight		kg	(310)	
Allowable Work Weight	Horizontal State		kg	120
	Inclined State		kg	90
Allowable Work Moment	$W \times L$		N·m	100
Allowable Load	F		N	18000
	$F \times L$		N·m	600
	$F \times L$		N·m	1000

# AC250S

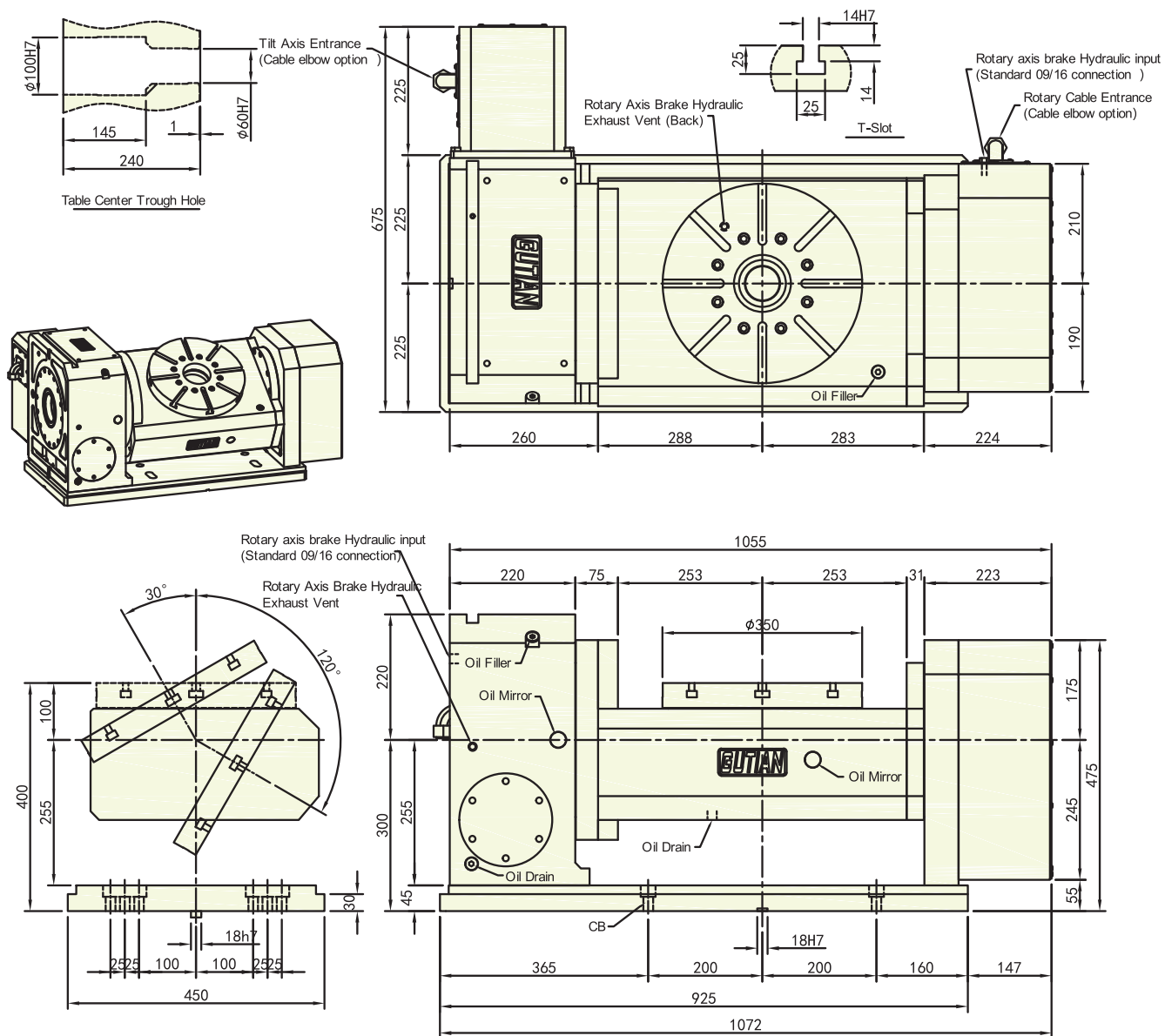


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS8, βiS8B MITSUBISHI-HG104, HG154B

**AC350 Parameter Table**

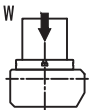
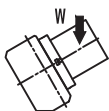
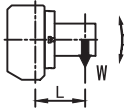
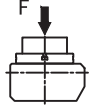
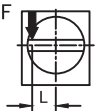
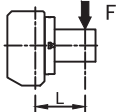
Items		Unit	Data
Rotary Table Dimension		mm	Φ350
Rotary Table Height (Horizontal State)		mm	400
Center Bore Distance	Front-End	mm	Φ100
	Rear-End	mm	Φ60
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		Rotary Axis	FANUC αiF8 βiS12 MITSUBISHI HG154
		Tilt Axis	FANUC βiS22 MITSUBISHI HG204
T-SLOT Width		mm	14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	60
Total Speed Reduction Ratio		Rotary Axis	1:50
		Tilt Axis	1:50
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	20\40
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	6\8
Clamping Method (Hydraulic)		MPa	3.5±0.5
Clamping Torque		N·m	1600
Net Weight		kg	490
Allowable Work Weight	Horizontal State 	kg	230
	Inclined State 	kg	160
Allowable Work Moment	W×L 	N·m	150
Allowable Load	F 	N	22000
	F×L 	N·m	1600
	F×L 	N·m	1800

# AC350



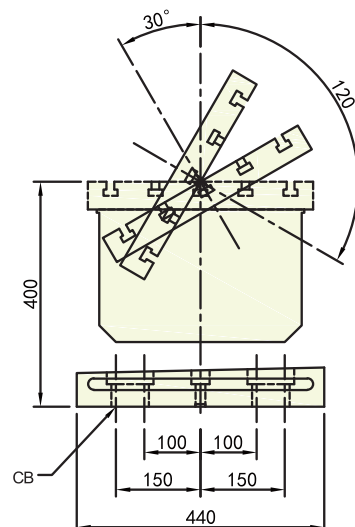
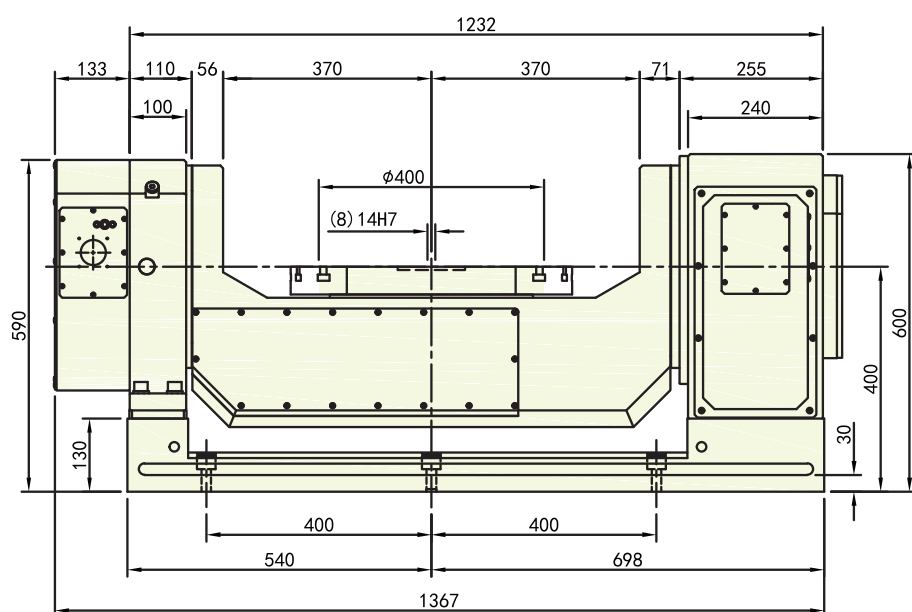
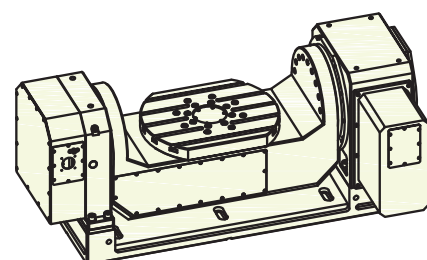
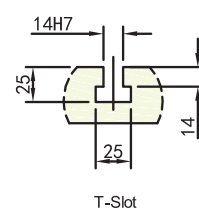
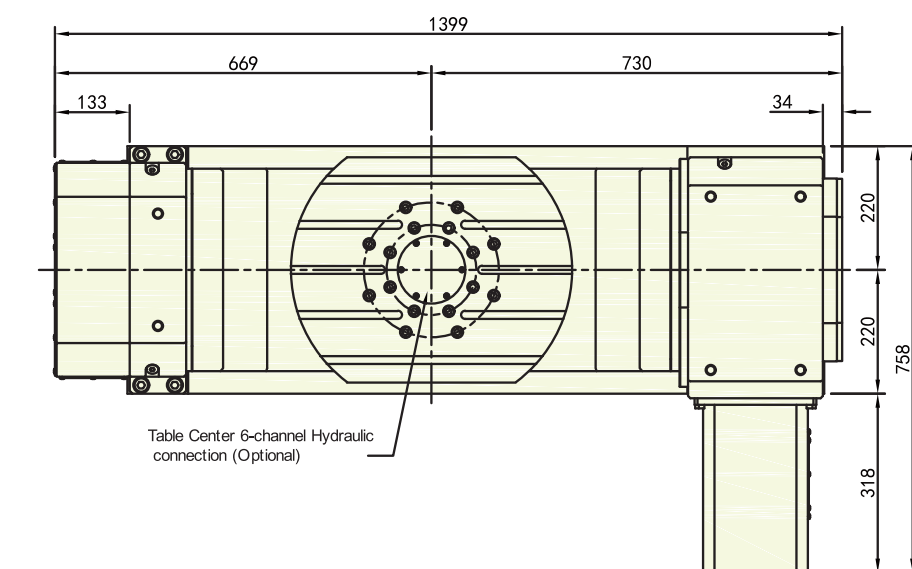
Servo Motor Standard Specification (Straight Shaft): FANUC- $\alpha$ F8,  $\beta$ S12,  $\beta$ S22 MITSUBISHI-HG154, HG204

AC450 Parameter Table

Items		Unit	Data
Rotary Table Diameter		mm	Φ500*400
Rotary Table Height (Horizontal State)		mm	400
Center Bore Diameter	Front-End	mm	Φ120*10+Φ100
	Rear-End	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be consulted)		Rotary Axis	FANUC αiF8, βiS12 MITSUBISHI HG154
		Tilt Axis	FANUC βiS22B MITSUBISHI HG204B
T-Slot Width		mm	14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	60
Total Speed Reduction Ratio		Rotary Axis	1:50
		Tilt Axis	1:50
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	20 \ 60
Repeatability (Rotary Axis\Tilt Axis)		arc. sec	6 \ 8
Clamping Method (Hydraulic)		MPa	3.5±0.5
Clamping Torque		N·m	1800
Net Weight		kg	(980)
Allowable Work Weight	Horizontal State 	kg	255
	Tilt State 	kg	200
Allowable Work Moment	$W \times L$ 	N·m	200
Allowable Work Weight	F 	N	20000
	$F \times L$ 	N·m	1800
	$F \times L$ 	N·m	2000



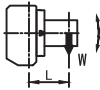





# AC450

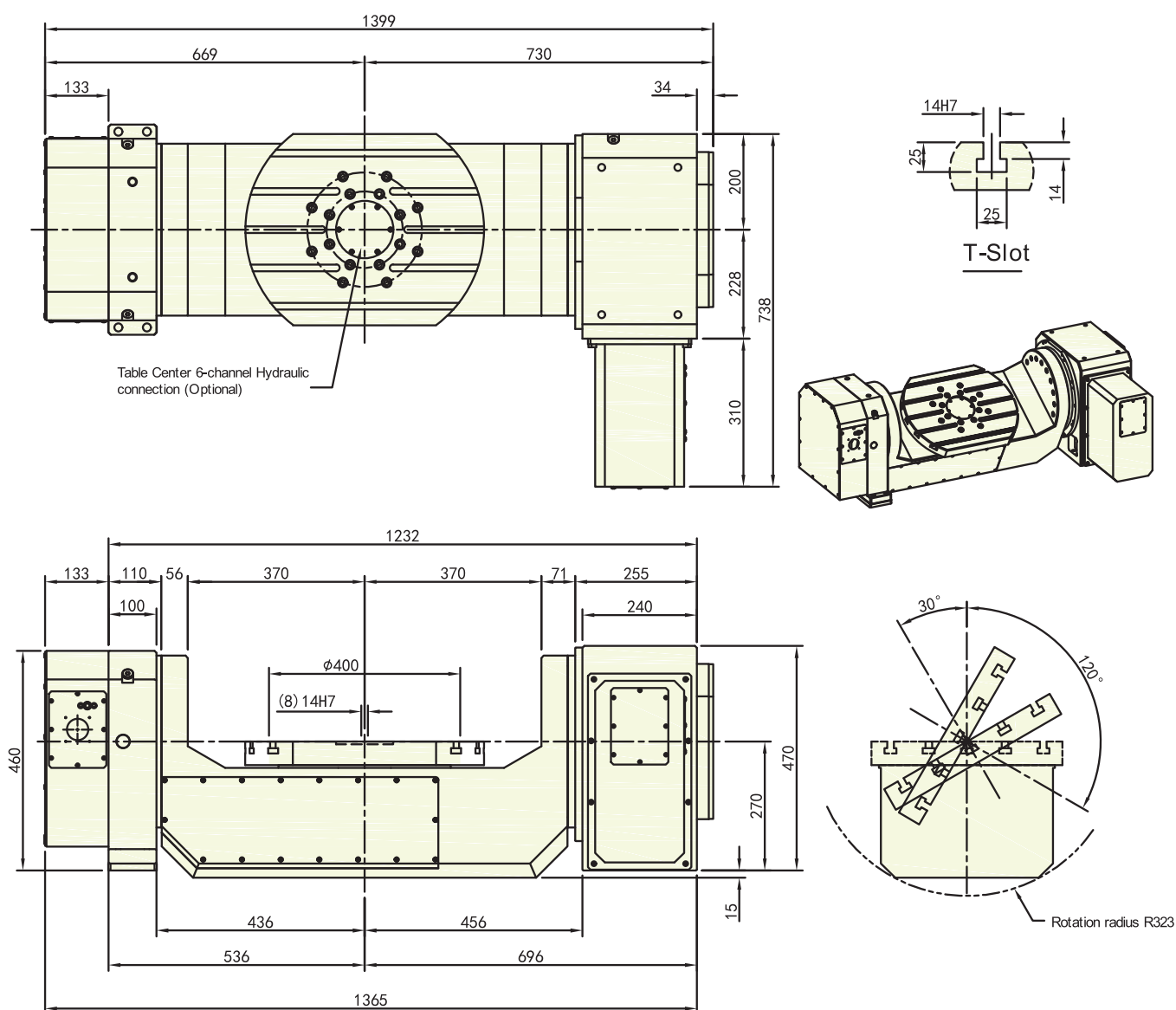


Servo Motor Standard Specification (Straight Shaft): FANUC- $\alpha$ iF8,  $\beta$ iS12,  $\beta$ iS22B MITSUBISHI-HG154, HG204B

AC450S Parameter Table

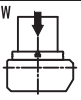
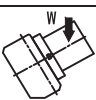
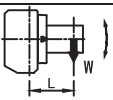

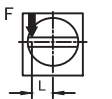
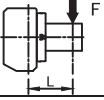
Items		Unit	Data
Rotary Table Dimension		mm	Φ500*400
Rotary Table Height (Horizontal State)		mm	270
Center Bore Diameter	Front-End	mm	Φ120*10+Φ100
	Rear-End	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		Rotary Axis	FANUC αiF8 βiS12 MITSUBISHI HG154
		Tilt Axis	FANUC βiS22B MITSUBISHI HG204B
T-Slot Width		mm	14H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	60
Total Speed Reduction Ratio		Rotary Axis	1:50
		Tilt Axis	1:50
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	20 \ 60
Repeatability (Rotary Axis\Tilt Axis)		arc. sec	6 \ 8
Clamping Method (Hydraulic)		MPa	3.5±0.5
Clamping Torque		N·m	1800
Net Weight		kg	(760)
Allowable Work Weight	Horizontal State 	kg	255
	Tilt State 	kg	200
Allowable Work Moment	$W \times L$ 	N·m	200
Allowable Work Weight	F 	N	20000
	$F \times L$ 	N·m	1800
	$F \times L$ 	N·m	2000

# AC450S

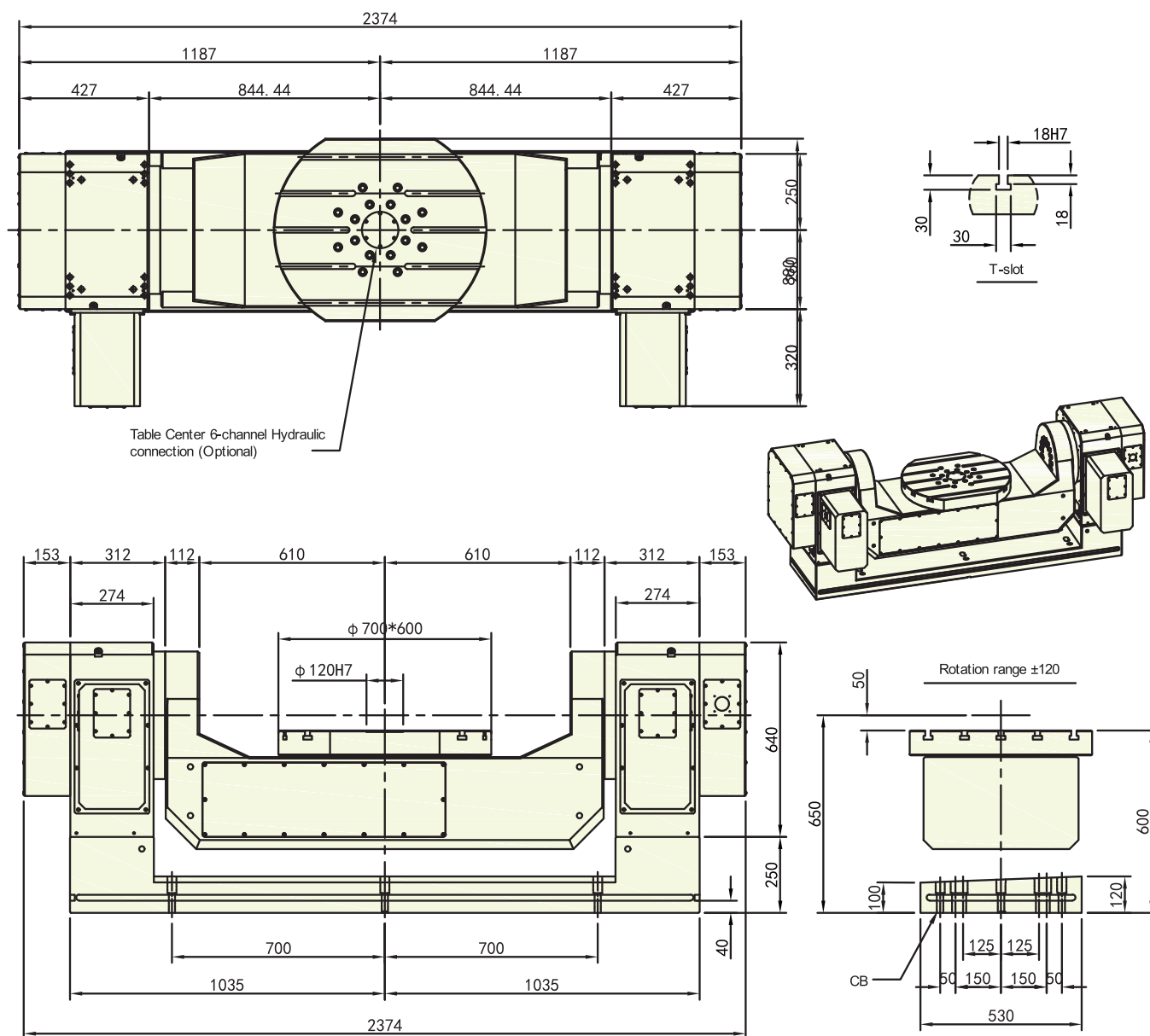


Servo Motor Standard Specification (Straight Shaft): FANUC-αiF8, βiS12, βiS22B MITSUBISHI-HG154, HG204B

**AC650 Parameter Table**

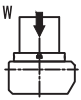

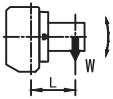
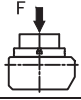
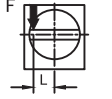
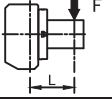
Items		Unit	Data
Table Diameter		mm	Φ700*600
Rotary Table Height (Horizontal State)		mm	600
Center Bore Distance	Front Locating Hole	mm	Φ120
	Through Hole	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		Rotary Axis	FANUC αiF30 βiS40 MITSUBISHI HG453
		Tilt Axis(2PCS)	FANUC αiF30 βiS40B MITSUBISHI HG453B
T-SLOT Width		mm	18H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	30
Total Speed Reduction Ratio		Rotary Axis	1:60
		Tilt Axis	1:75
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	25\60
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	10\20
Clamping Method (Hydraulic)		MPa	3.5±0.5
Clamping Torque		N·m	3600
Net Weight		kg	(1750)
Allowable Work Weight	Horizontal State 	kg	800
	Inclined State 	kg	600
Allowable Work Moment	W×L 	N·m	600
Allowable Load	F 	N	30000
	F×L 	N·m	3600
	F×L 	N·m	6500

# AC650

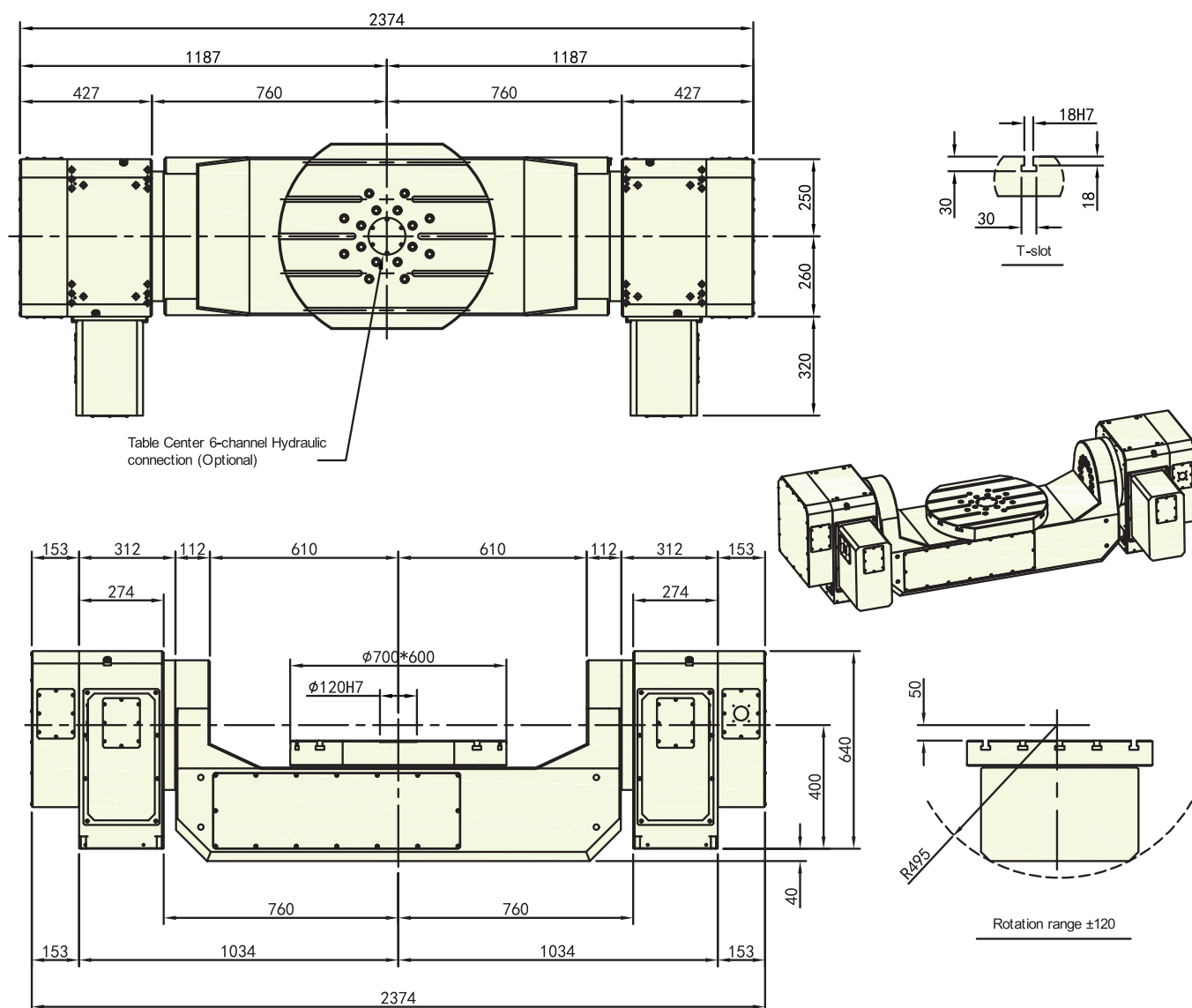


Servo Motor Standard Specification (Straight Shaft): FANUC-αiF30、βiS40  
MITSUBISHI-HG453

## AC650s Parameter Table

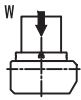

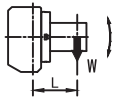
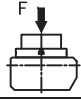
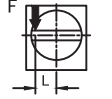
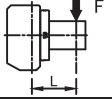
Items		Unit	Data
Rotary Table Size		mm	Φ700*600
Rotary Table Height (Horizontal State)		mm	350
Center Bore Diameter	Front Locating Hole	mm	Φ120
	Through Hole	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be consulted)		Rotary Axis	FANUC αiF30 βiS40 MITSUBISHI HG453
		Tilt Axis (2 PCS)	FANUC αiF30B βiS40B MITSUBISHI HG453B
T-SLOT Width		mm	18H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	30
Total Speed Reduction Ratio		Rotary Axis	1:60
		Tilt Axis	1:75
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	25\60
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	10\20
Clamping Method (Hydraulic)		MPa	3.5±0.5
Clamping Torque		N·m	3600
Net Weight		kg	(1750)
Allowable Work Weight	Horizontal State 	kg	800
	Inclined State 	kg	600
Allowable Work Moment	W×L 	N·m	600
Allowable Work Weight	F 	N	30000
	F×L 	N·m	3600
	F×L 	N·m	6500

# AC650S



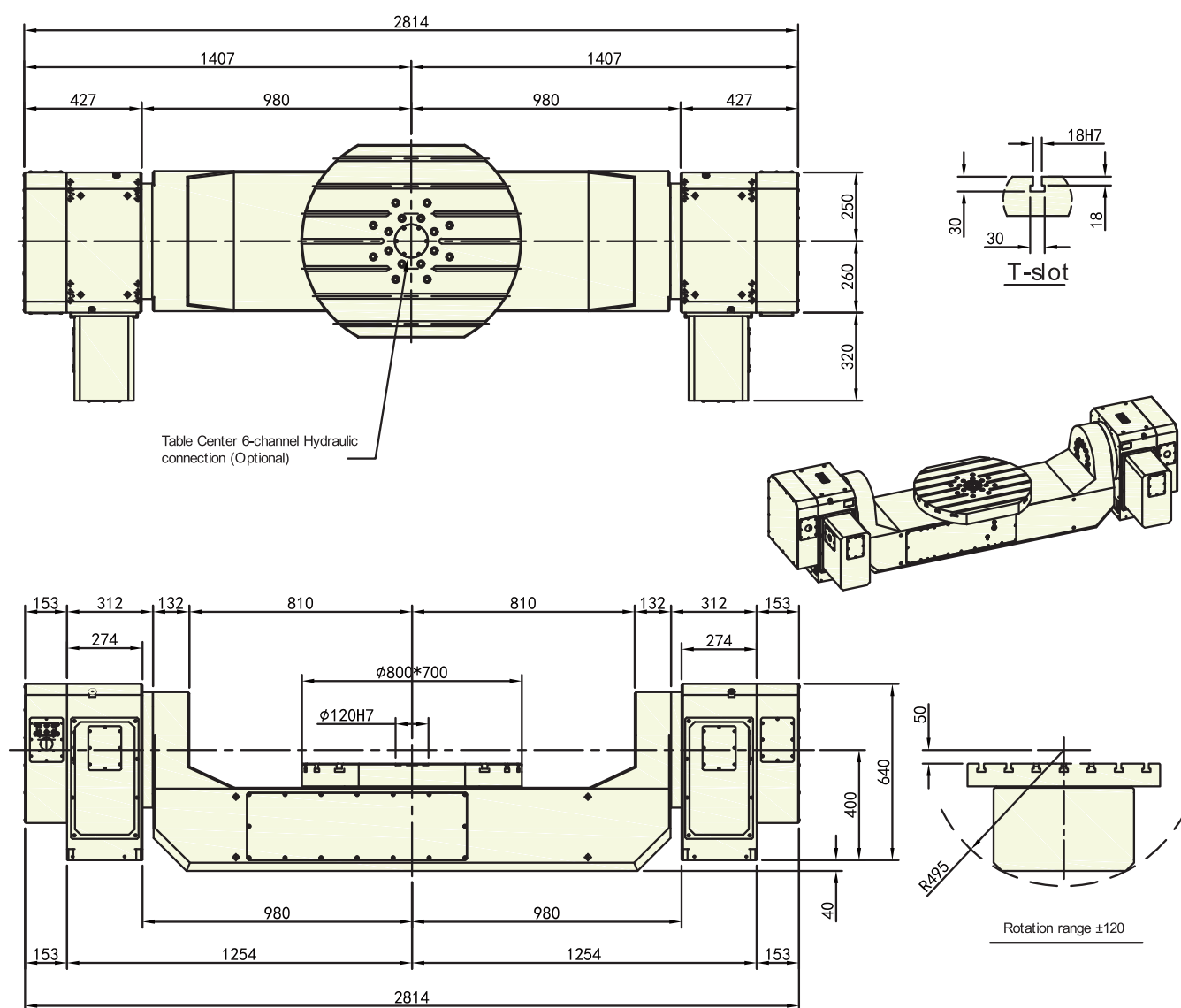
Servo Motor Standard Specification (Straight Shaft): FANUC- $\alpha$ F30、 $\beta$ S40  
MITSUBISHI-HG453

## AC750S Parameter Table

Items		Unit	Data
Rotary Table Size		mm	Φ800*700
Rotary Table Height (Horizontal State)		mm	350
Center Bore Diameter	Front Locating Hole	mm	Φ120
	Through Hole	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be consulted)		Rotary Axis	FANUC αiF30 βiS40 MITSUBISHI HG453
		Tilt Axis (2 PCS)	FANUC αiF30B βiS40B MITSUBISHI HG453B
T-SLOT Width		mm	18H7
Positioning Key Width		mm	18h7
Mini. Angle Setting		deg	0.001
Max. Rotational Speed		rpm	30
Total Speed Reduction Ratio		Rotary Axis	1:60
		Tilt Axis	1:75
Indexing Accuracy (Rotary Axis\Tilt Axis)		arc. sec	25\60
Repeatability Accuracy (Rotary Axis\Tilt Axis)		arc. sec	10\20
Clamping Method (Hydraulic)		MPa	3.5±0.5
Clamping Torque		N·m	3600
Net Weight		kg	(1750)
Allowable Work Weight	Horizontal State 	kg	800
	Inclined State 	kg	600
Allowable Work Moment	W×L 	N·m	600
Allowable Work Weight	F 	N	30000
	F×L 	N·m	3600
	F×L 	N·m	6500



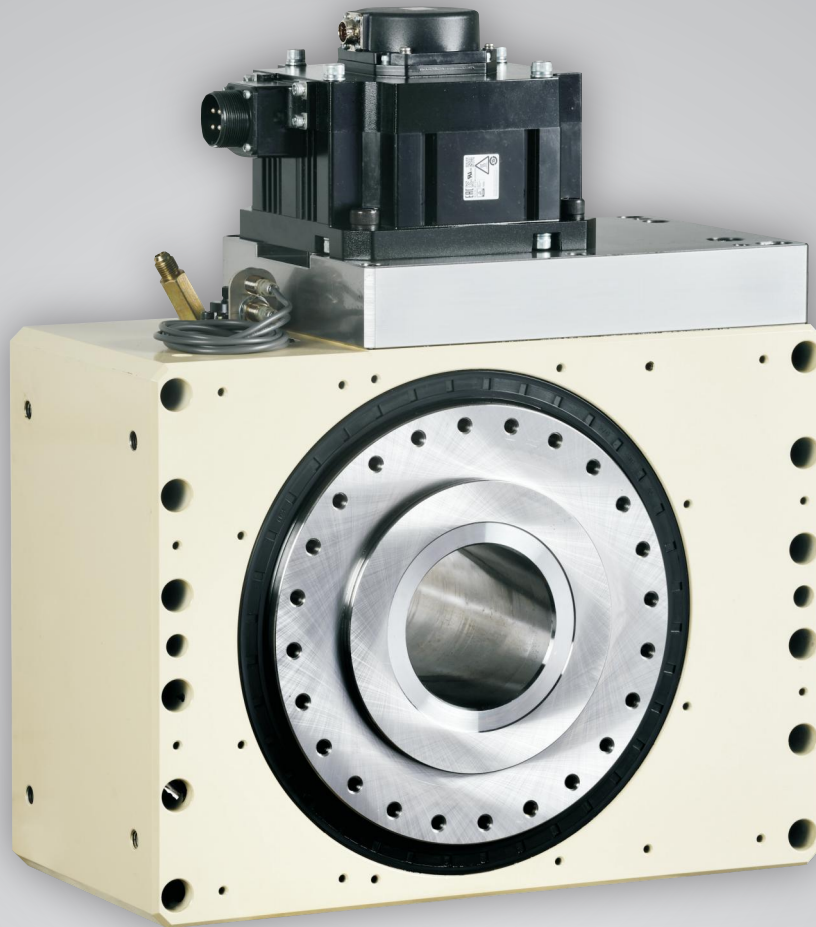
# AC750S



Servo Motor Standard Specification (Straight Shaft): FANUC- $\alpha$ F30、 $\beta$ iS40  
MITSUBISHI-HG453

# Memo

# BC-series



## **GUTIAN**

### **BC Spindle Cam Swing Head**

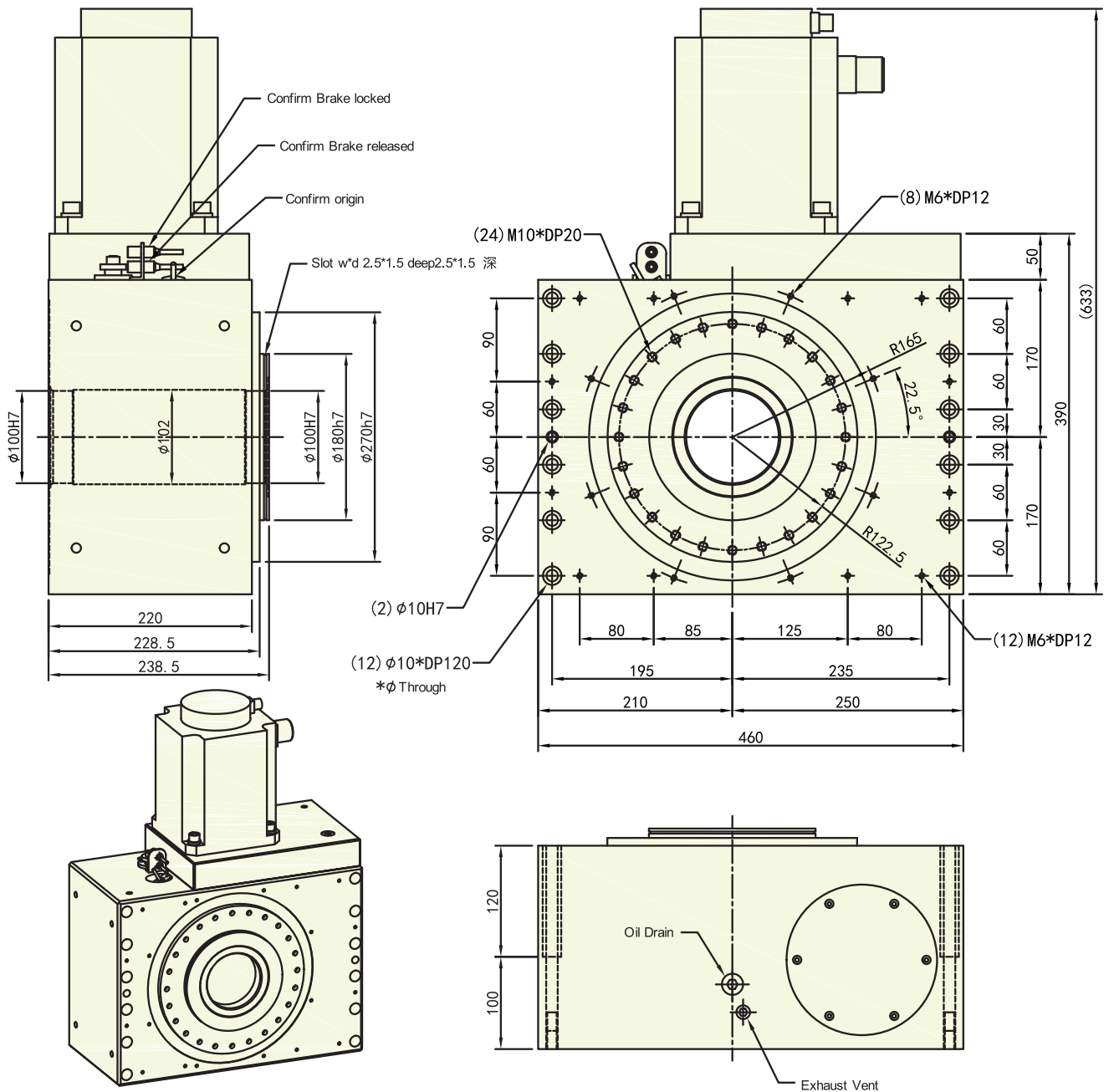
#### **BC40,BC50**

Gutian spindle cam swing head internally adopts cam roller transmission mechanism. There is backlash-free rolling drive between cam and needle bearings pre-load, with no sliding friction or backlash. Its positive/reverse motion has a high repeatability accuracy without the need for periodic calibration and adjustment. This product is featured with high rigidity, heavy load, high efficiency, and its accuracy is not affected by rising temperature.

BC40 Parameter Table

Items	Unit	Data
Flange Diameter	mm	Φ270
Locating Flange Diameter	mm	Φ180
Fixed Thread Hole		(24)M10*P1.5
Center Through Hole Diameter	mm	Φ100
Motor Standard Specification (Straight Shaft Motor) (Custom Specification/Brand to be Consulted)		FANUC βiS22-B MITSUBISHI HG204B
Mini. Angle Setting	deg	0.001
Max. Rotational Speed	rpm	40
Total Speed Reduction Ratio		1:50
Indexing Accuracy	arc. sec	15
Repeatability	arc. sec	4
Clamping Method (Hydraulic)	MPa	3.5±0.5
Clamping Torque	N·m	2800
Allowable Cutting Force	N·m	1700
Max. Cutting Force (Clamped)	N·m	2800
Allowable Work Weight	kg	200
Net Weight	kg	210

# BC40



Servo Motor Standard Specification (Straight Shaft): FANUC- $\beta$ iS22-B, MITSUBISHI-HG204B

# Memo

# APC-series

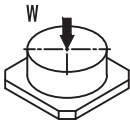
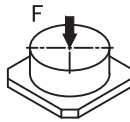
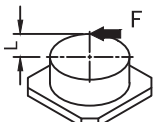
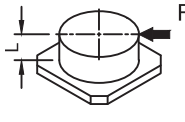


## **GUTIAN**

### **APC Horizontal Cam Exchange Table** **APC500, APC630**

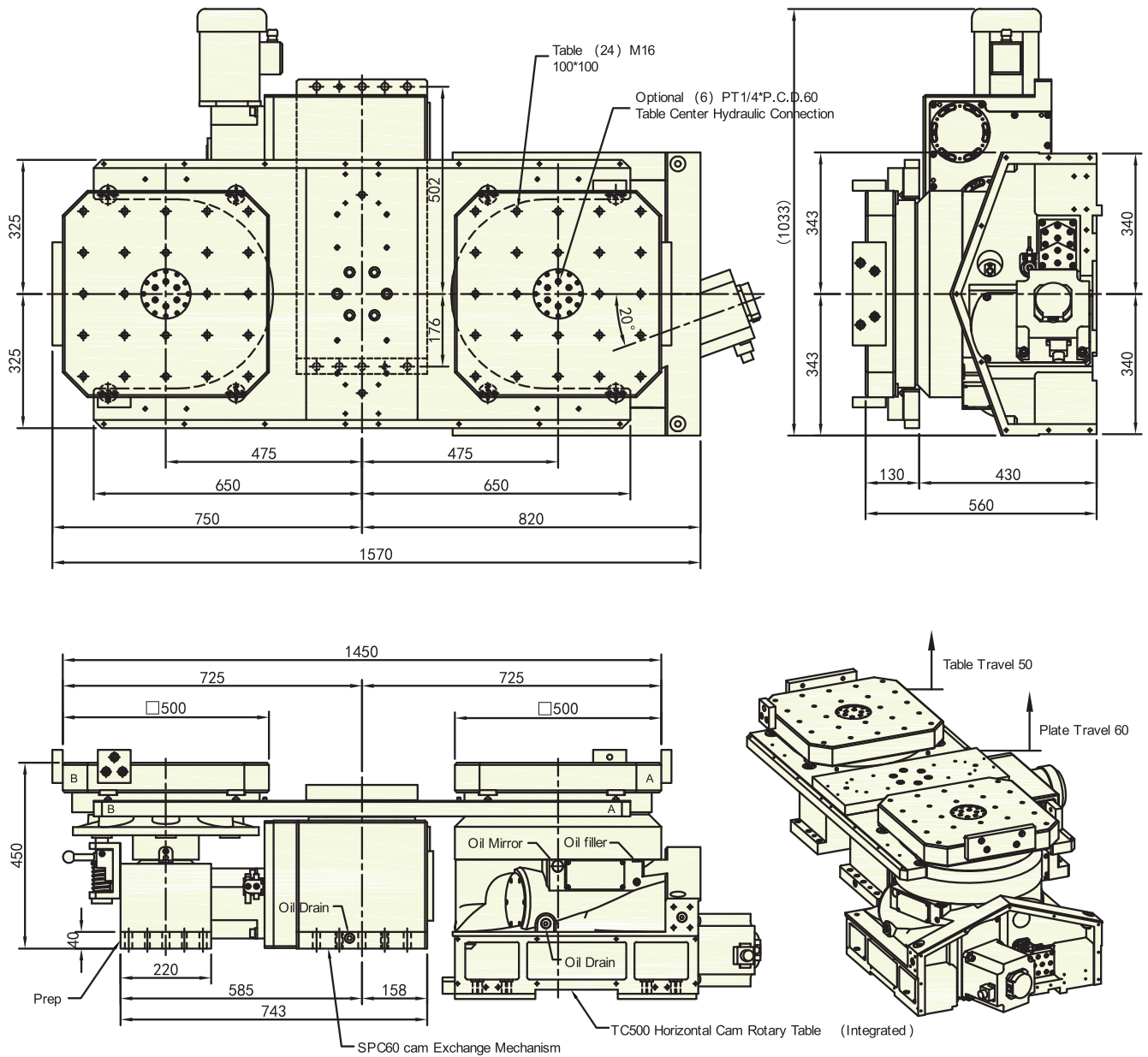
Its cam rotary table internally adopts cam roller transmission mechanism. There's rolling backlash-free drive between multi-rollers and cam surface pre-load, with no need for periodic calibration and adjustment. This product is featured with high rigidity, heavy load, and high efficiency. Cam lift exchange mechanism internally adopts cam lift and rotation structure, which has strong rotation lifting ability, faster speed and positioning higher accuracy.

APC500 Parameter Table

Items		Unit	Data
Rotary Table Dimension		mm	(2) 500*500
Rotary Table Height (Guide Rail Slider Mounting Datum to Table Datum)		mm	560
Center Datum Bore Diameter		mm	Φ120
TC500 Horizontal Cam Rotary Table	Motor Standard Specification (Straight Shaft) (Custom Specification/Brand to be consulted)		FANUC βiS22 MITSUBISHI HG204
	Mini. Angle Setting	deg	0.001
	Max. Rotational Speed	rpm	40
	Total Speed Reduction Ratio		1:50
	Indexing Accuracy	arc. sec	15
	Repeatability	arc. sec	4
	Clamping Method (Hydraulic)	MPa	4.5±0.5
	Clamping Torque	N · m	2600
	Continuous Cutting Torque	N · m	1550
	Max. Cutting Torque (Brake Lock)	N · m	2600
	Rotary Table Taper Seat Clamped (Hydraulic)	MPa	2.0±0.2
		kg	600
	Allowable Work Weight		
		N	39500
	Allowable Axial Force		
		N·m	2600
	Allowable Cutting Force		
		N·m	7800
	Allowable Radial Force		
SPC60 Cam Exchange Mechanism	Transmission Mode	-	Cam Lift Rotation Exchange Mechanism
	Exchange Method	-	180° Reciprocating Motion
	Exchange Time	sec	6
	Lifting Stroke	mm	60
	Max. Weight Diff on Both Sides	kg	400
	Allowable Work Weight	kg	500*2=1000
Net Weight		kg	1650

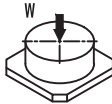
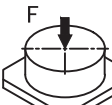
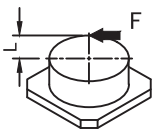
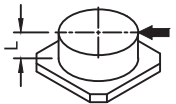


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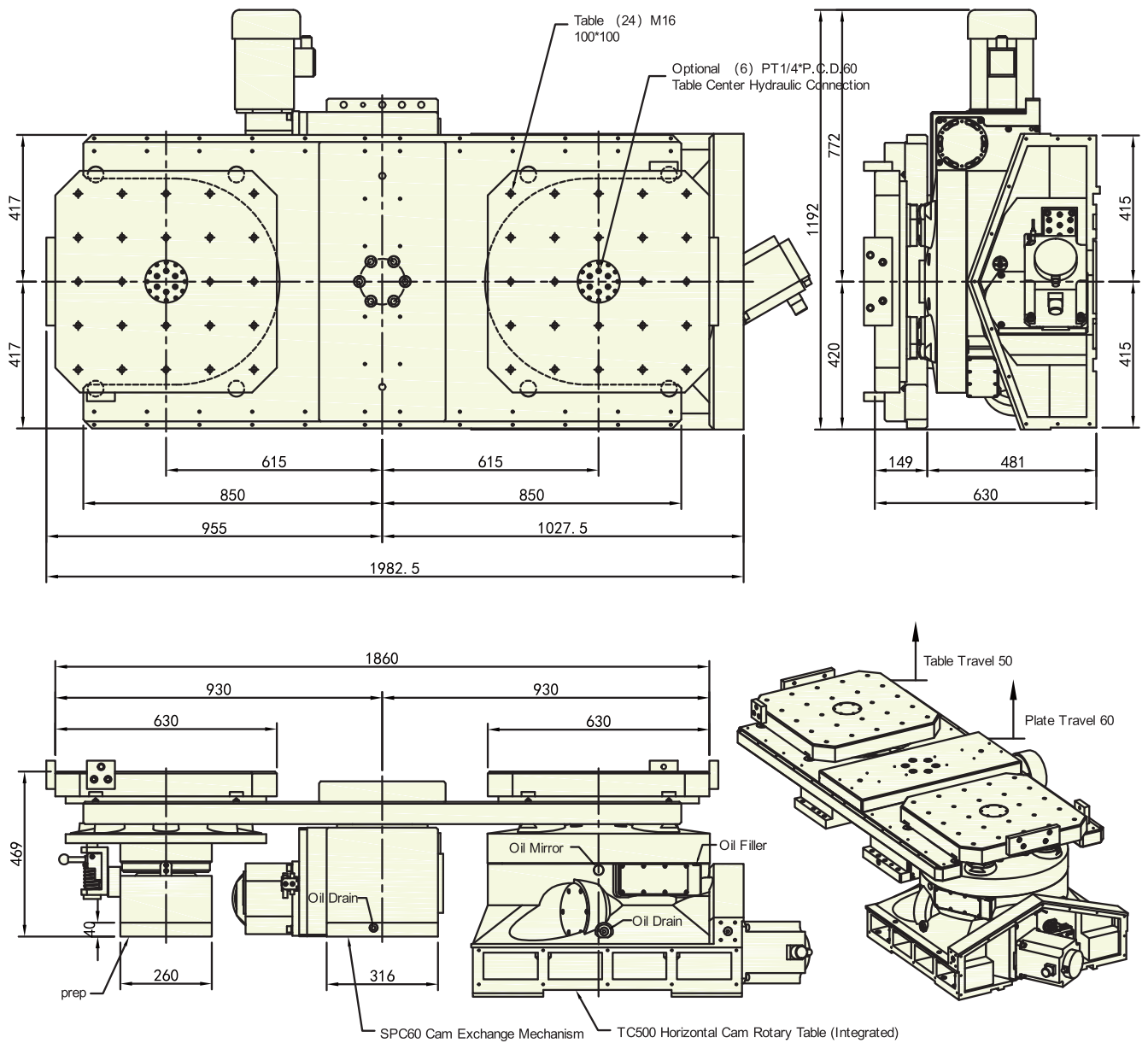


Servo Motor Standard Specification (Straight Shaft): FANUC-βiS22, MITSUBISHI-HG204

APC630 Parameter Table

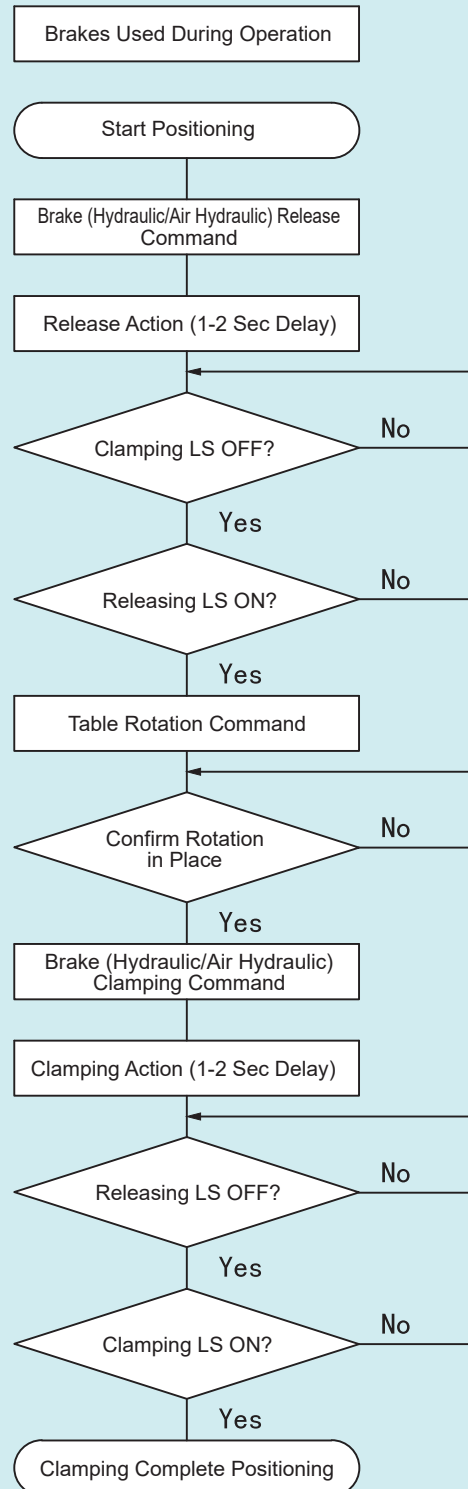
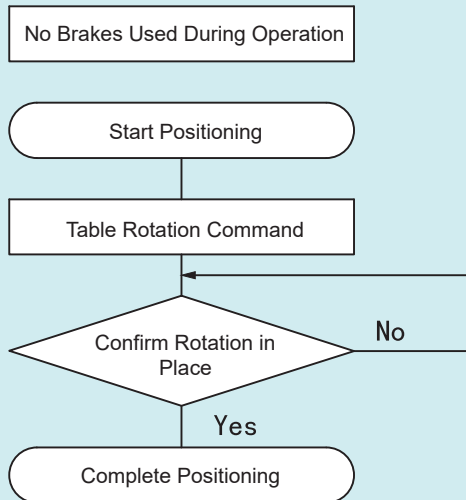
Items		Unit	Data
Rotary Table Dimension		mm	(2) 630*630
Rotary Table Height (Guide Rail Slider Mounting Datum to Table Datum)		mm	630
Center Datum Bore Diameter		mm	Φ120
TC500 Horizontal Cam Rotary Table	Motor Standard Specification (Straight Shaft) (Custom Specification/Brand to be consulted)		FANUC βiS22 MITSUBISHI HG204
	Mini. Angle Setting	deg	0.001
	Max. Rotational Speed	rpm	25
	Total Speed Reduction Ratio		1:70
	Indexing Accuracy	arc. sec	15
	Repeatability	arc. sec	4
	Clamping Method (Hydraulic)	MPa	4.5±0.5
	Clamping Torque	N · m	4600
	Continuous Cutting Torque	N · m	2800
	Max. Cutting Torque (Brake Lock)	N · m	4600
	Rotary Table Taper Seat Clamped (Hydraulic)	MPa	2.0±0.2
	 Allowable Work Weight	kg	1200
	 Allowable Axial Force	N	65000
	 Allowable Cutting Force	N · m	4600
	 Allowable Radial Force	N · m	9500
SPC60 Cam Exchange Mechanism	Transmission Mode	-	Cam Lift Rotation Exchange Mechanism
	Exchange Method	-	180° Reciprocating Motion
	Exchange Time	sec	10
	Lifting Stroke	mm	60
	Max. Weight Diff on Both Sides	kg	1000
	Allowable work weight	kg	1200*2=2400
Net Weight		kg	2550

# APC630



Servo Motor Standard Specification (Straight Shaft): FANUC-βiS22, MITSUBISHI-HG204

## Control Flowchart



## Precautions

### Cam NC Rotary Table Selection

Confirm mounting mode (vertical or horizontal) of rotary table. Confirm the shape of tooling clamps and connection mode. After loading the workpiece, confirm the maximum rotating radius and total load. Calculate the max. Cutting torque during machining, and confirm the value is slightly below that the max. cutting torque corresponding specification in the parameter table.

### Lubrication

The mechanism shall be well lubricated to extend service life and maintain optimum performance. Thus, it is crucial to use high-quality lubricating oil. It's highly recommended to replace lubricating oil for every 3000-hour operation, or at least once a year in case of low working frequency. Lubricating oil found to be discolored or cloudy during operation must be replaced immediately. Oil replacement shall be done in the down state. Unscrew and remove oil filler hole screw and oil drain hole screw, and drain left oil from the mechanism. Wrap drain hole with sealing tape and add oil from filler hole. It is appropriate for oil level to reach 1/2 and 2/3 shown in oil level mirror. Check regularly during use and refill oil when it is found to be insufficient. It is normal for lubricating oil to have tiny bubbles, which is not a quality problem of mechanism.

Always use prescribed lubricating oil (Mobi SH629 (VG150)) to ensure an effective lubrication and mechanical performance, while other oil may result in shortened service life or fragile parts.

### Operating environment

Do not use strong alkaline, corrosive coolants, or other corrosive gases, water, steam and chemicals that could damage sealing member. Damage caused by media entering the interior of mechanism can also cause protective finish on the exterior peeling off.

### Rotational Speed

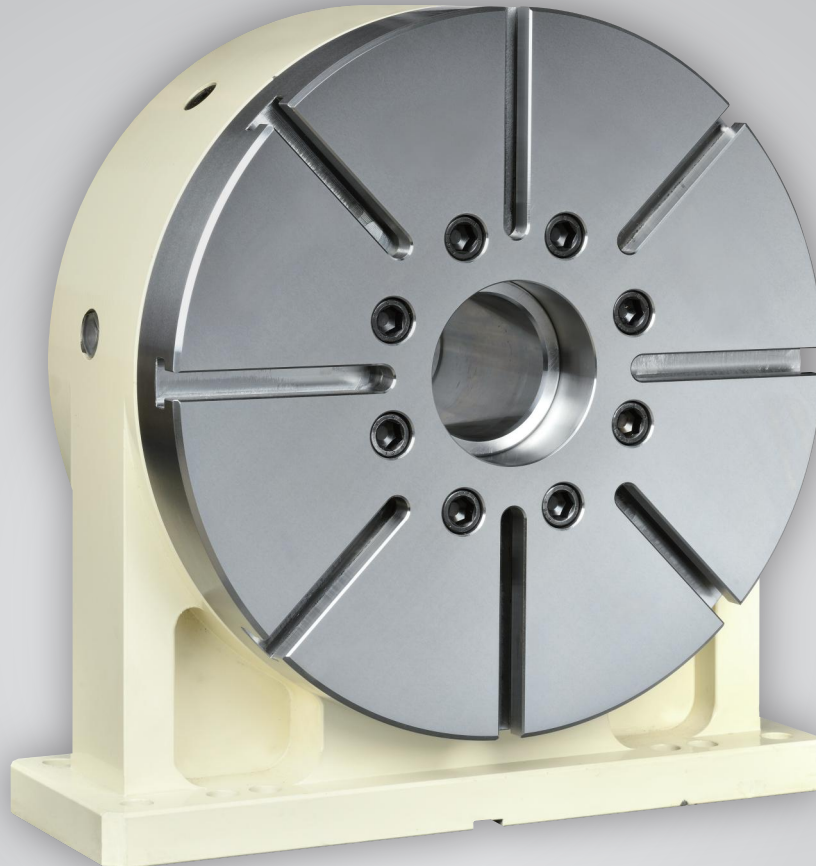
As rotary table runs at the max. rotational speed described in parameter table, equipment temperature to be rising, which may lead to decline in accuracy. To protect machine and sustain its long-term stability, the maximum rotational speed shall be appropriately reduced when load reaches more than 1/2 of the maximum load in parameter table.

### Other Precautions

Mechanical machining must be stopped immediately to avoid more damage if any abnormality occurs during operation. Cut off the power before troubleshooting and maintenance in mechanical operation area. It's necessary for rotary table in extended downtime to preheat before boot operation.

# Memo

## PZ-series



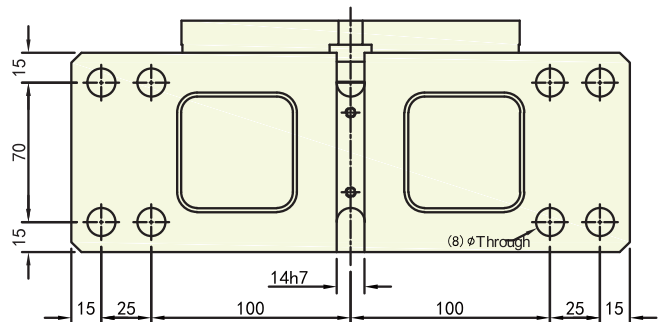
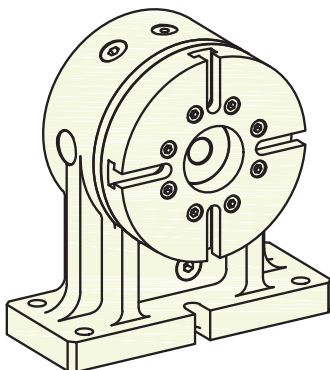
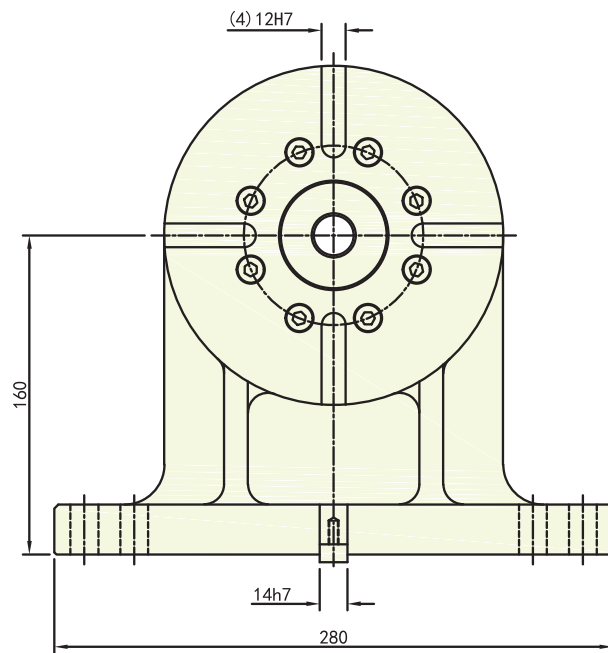
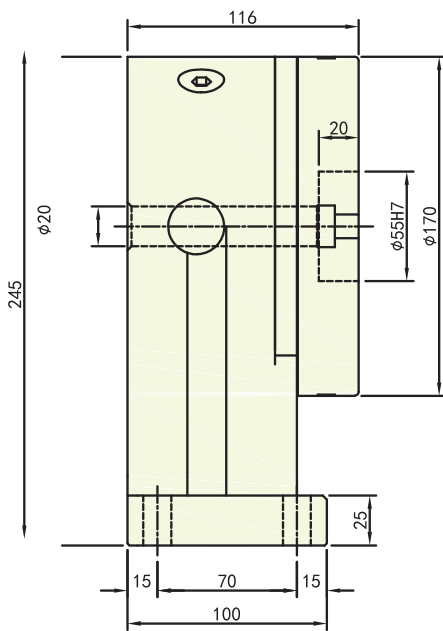
**GUTIAN**

### **PZ Disc Brake Tail-Stock**

**PZ170,PZ250,PZ320,PZ400,PZ500**

Mounted in NC vertical cam rotary table and equipped with jigs or medium plates, Gutian PZ disc brake tail-stock can realize the machining method of multi-clamping and multi-modulus for each time. And the tail-stock is internally equipped with disc brake lock system that can achieve hydraulic or air hydraulic clamping and effectively save time and cost.

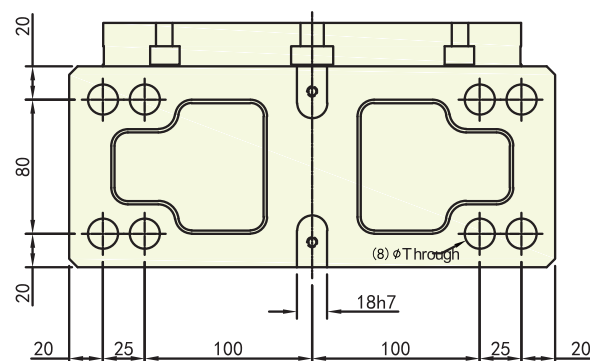
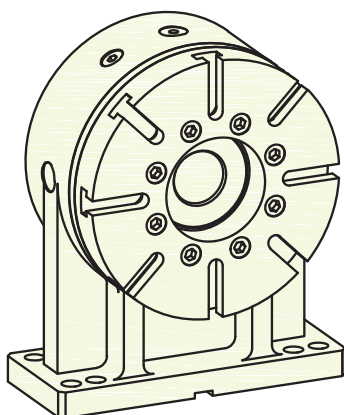
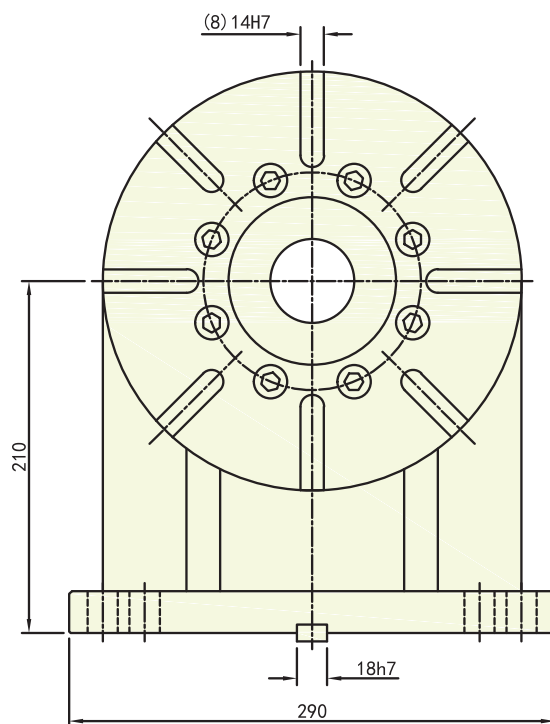
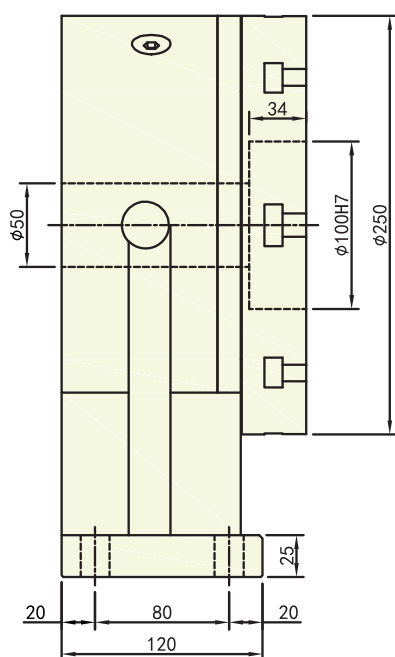
# PZ170



Clamping Method: Air Hydraulic, Hydraulic

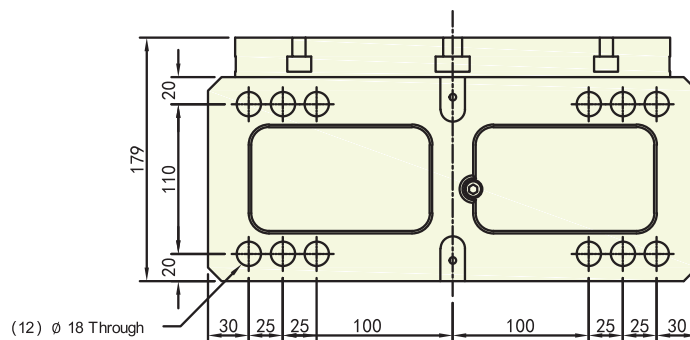
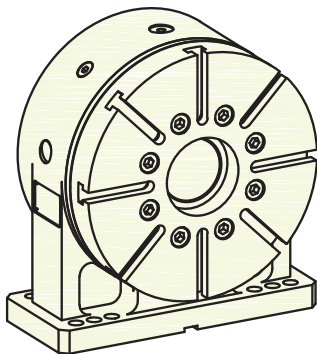
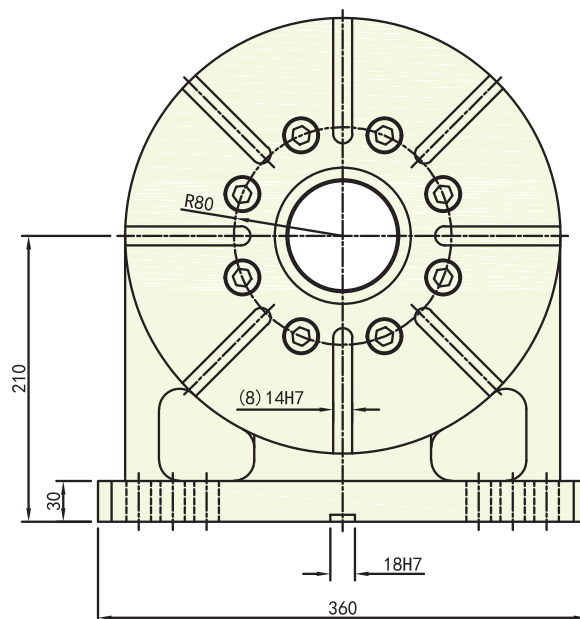
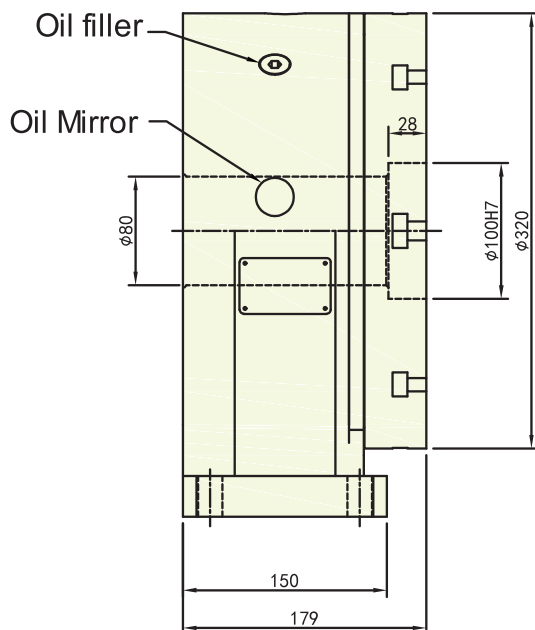


# PZ250



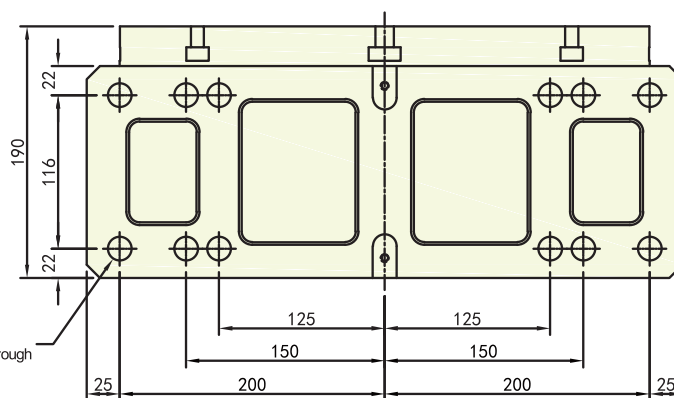
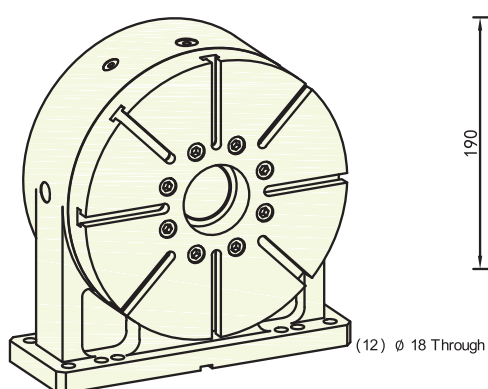
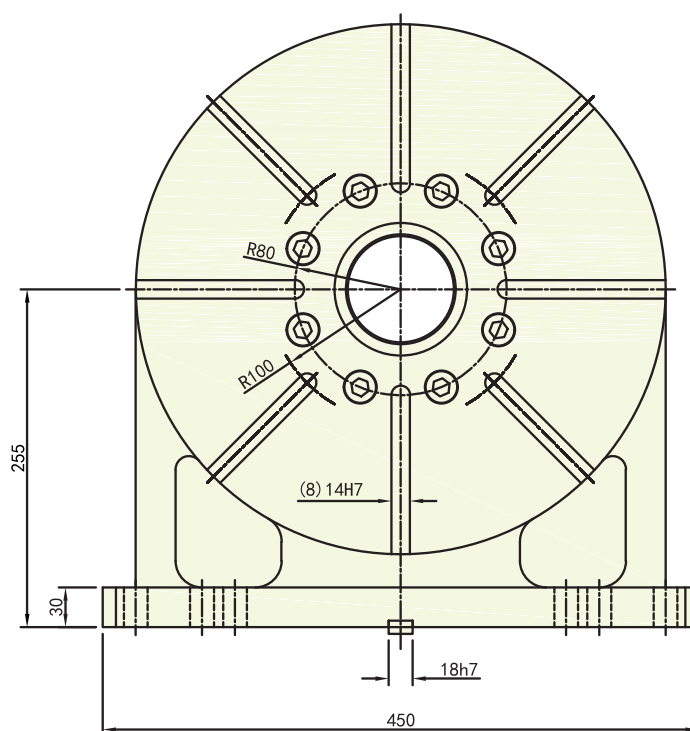
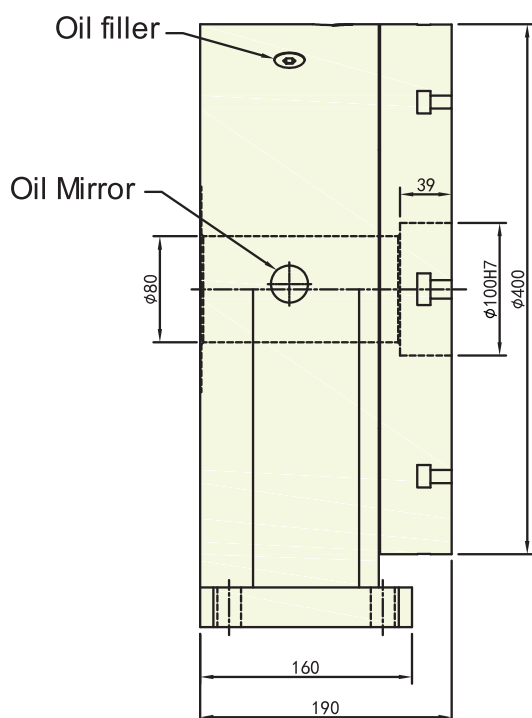
Clamping Method: Air Hydraulic, Hydraulic

# PZ320



Clamping Method: Air Hydraulic, Hydraulic

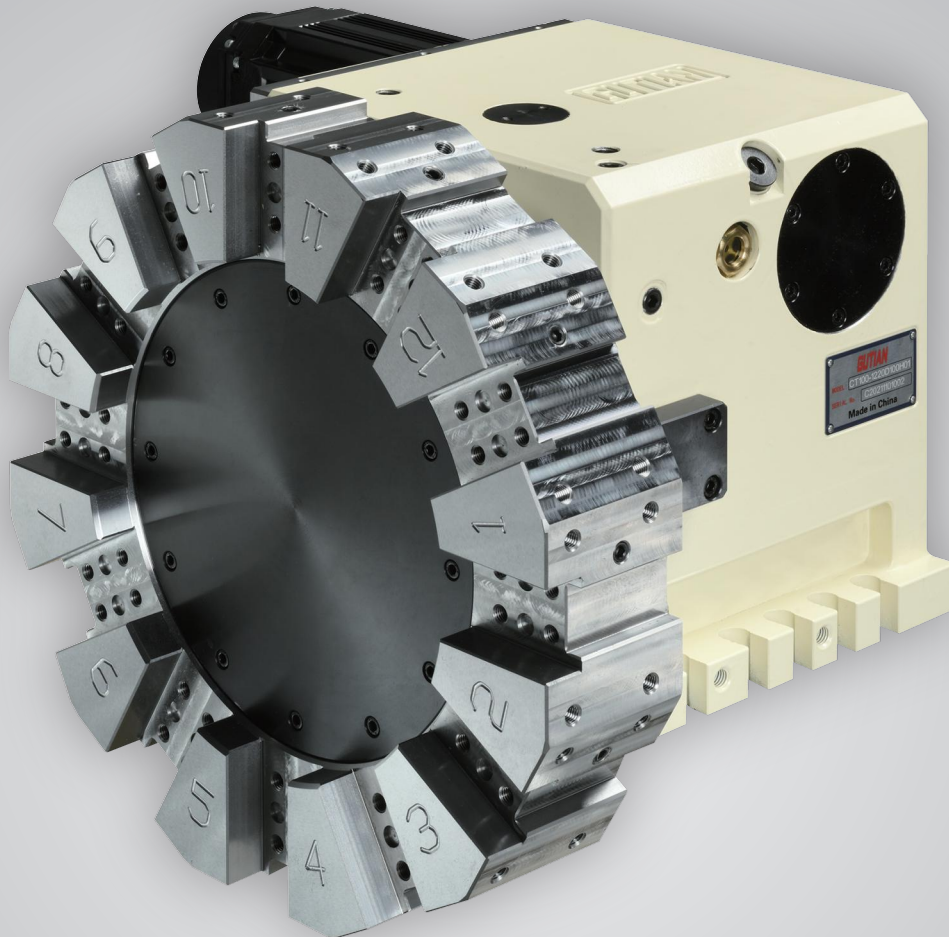
# PZ400



Clamping Method: Air Hydraulic, Hydraulic

# Memo

# CT-series



# GUTIAN

# CT Horizontal Cam Tool Turret

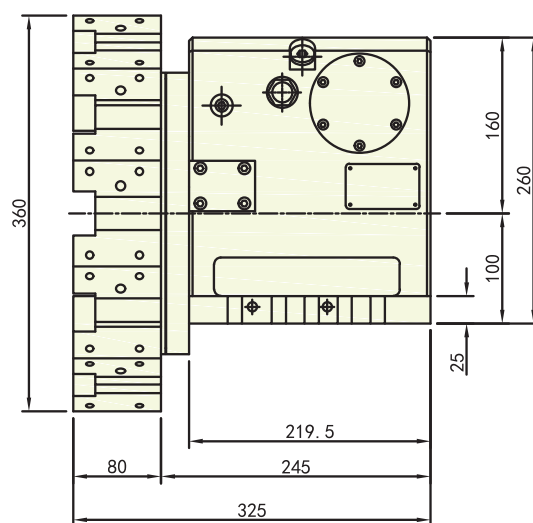
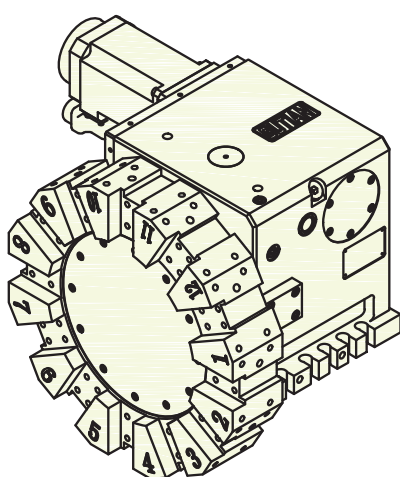
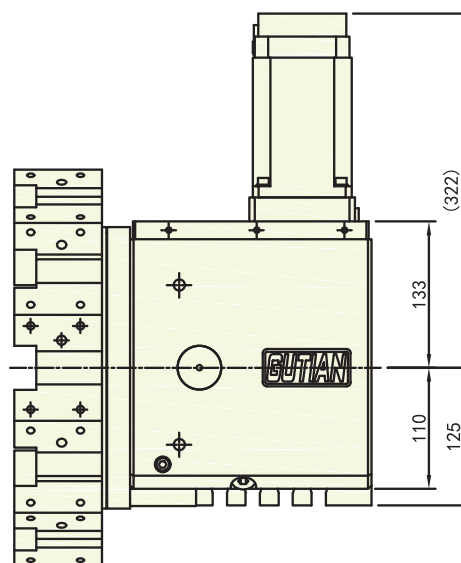
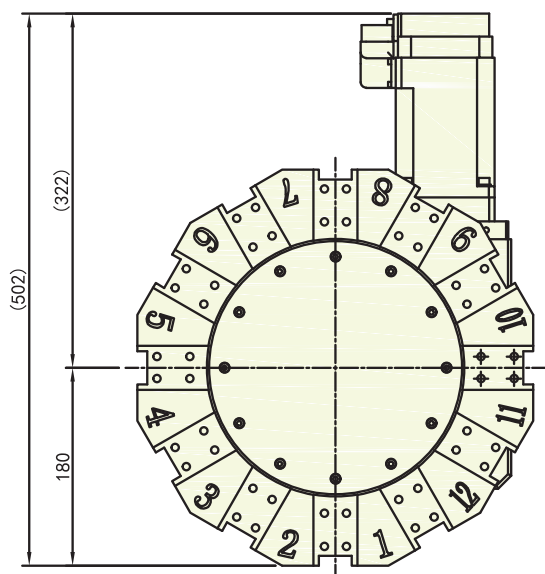
**CT80,CT80S,CT100,CT100S,CT125,CT125S**

Gutian horizontal cam tool turret internally adopts cam roller transmission mechanism. There's backlash-free rolling drive between rollers and cam surface with low friction coefficient that contributes to maintaining high rigidity, high efficiency and high speed. Forward, reverse tool change can be realized with short time. The brake adopts clutch teeth and has the strong braking force and high positioning accuracy, which is applicable to heavy-cutting machining operations.

CT100 Parameter Table

Items	Unit	Data
Cutter Head Disc Diameter	mm	360
Number of Tools	PCS	12
Center Height (to Mounting Datum)	mm	100
ID Tool holder	mm	Φ32
OD Tool holder	mm	20
End Surface Tool holder	mm	20
Transmission Ratio		1: 20
Last Tool Change Time (Without Clamping)	S	0.08
Last Tool Change Time (With Clamping)	S	0.5
Clamping Hydraulic Pressure	MPa	3.5
Hydraulic Flow	L/min	30
Indexing Accuracy	arc. sec	4
Repeatability	arc. sec	2
Net Weight	Kg	130

# CT100



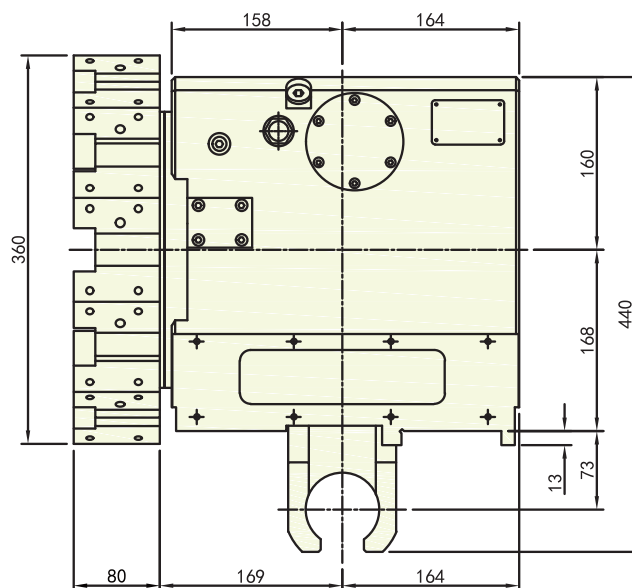
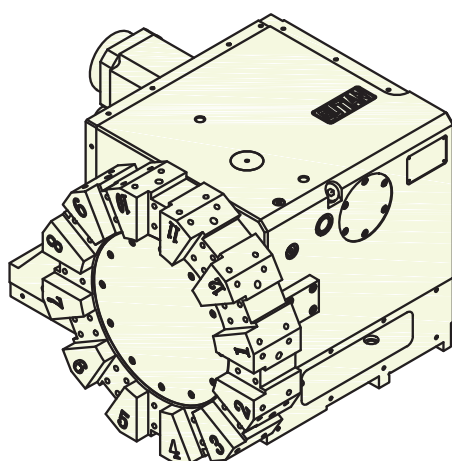
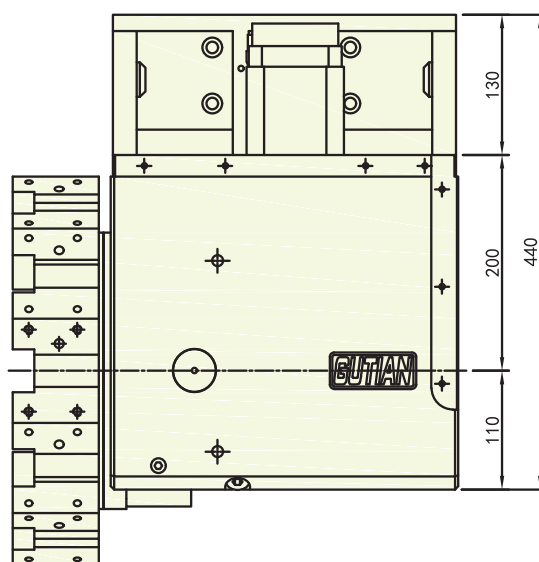
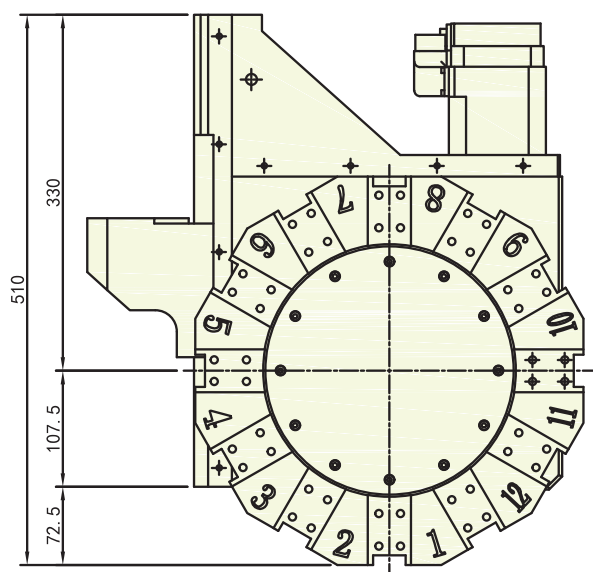
Applicable Motor Specification: 80 Family (Fixed Hole PCD100), 70 Family (Fixed Hole PCD90), Axis Diameter of 14, 16, 19.

CT100S Parameter Table

Items	Unit	Data
Cutter Head Disc Diameter	mm	360
Number of Tools	PCS	12
Center Height (to Slider Mounting Datum)	mm	168
ID Tool holder	mm	Φ32
OD Tool holder	mm	20
End Surface Tool holder	mm	20
Transmission Ratio		1: 20
Last Tool Change Time (Without Clamping)	S	0.08
Last Tool Change Time (With Clamping)	S	0.5
Clamping Hydraulic Pressure	MPa	3.5
Hydraulic Flow	L/min	30
Indexing Accuracy	arc. sec	4
Repeatability	arc. sec	2
Net Weight	Kg	180



# CT100S



Applicable Motor Specification: 80 Family (Fixed Hole PCD100), 70 Family (Fixed Hole PCD90), Axis Diameter of 14, 16, 19.



# YK-series



## GUTIAN

### YK Cam Disc ATC Magazine

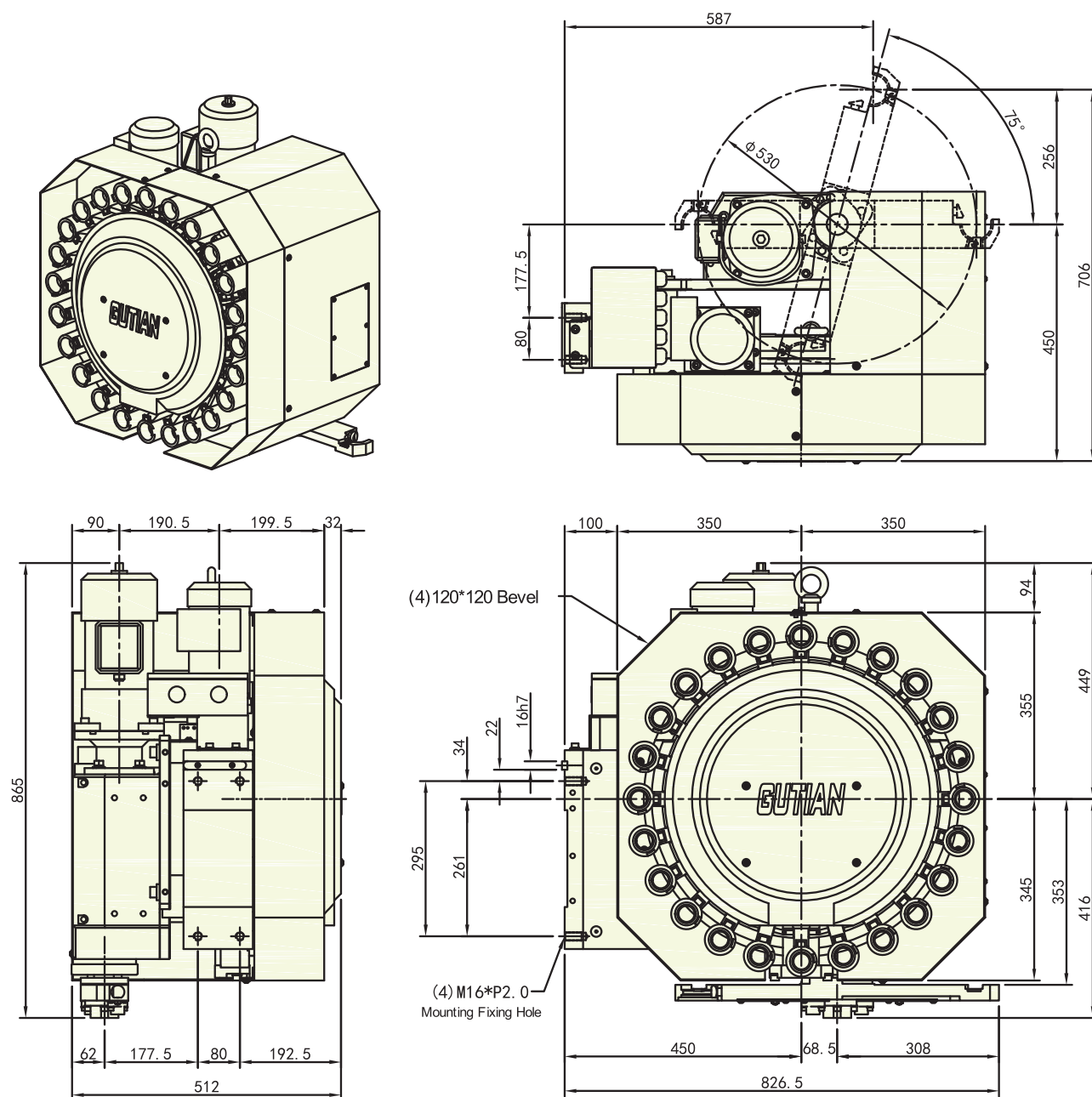
YK30A,YK30B,YK30D,YK40A,YK40B,YK40C,  
YK40D,YK50A,YK50B,YK50C,YK50D,YK50E

Gutian cam disc ATC magazine internally equipped with ATC mechanism drive, cam and disc cam carburized and grinded, features wear-resistant, high finish, and long-term stability. It provides various control modes for tool magazine, including conventional induction brake control, induction frequency control, and APB encoder control. Encoding signals can be output with different angles. Based on different types of tools, it can realize regular tool change, rapid tool change, and releasing/clamping tool in advance.

YK40 Parameter Table

Items	Unit	Data
ATC Type	-	Disc Tool Magazine
Number of Tools (Optional)	PCS	20T, 24T, 30T
Tool holder Specification (Optional)	-	BT40, HSK63
Tool Arm Center Distance Specification (Optional)	mm	530, 580, 650, 700
Tool Change Degree (Optional)	deg	30, 60, 65, 70, 75, 80, 90
Tool Change Direction (Optional)	-	L, R
Max. Tool Diameter	mm	Φ75、Φ80
Non-adjacent Max. Tool Diameter	mm	Φ140、Φ150
Max. Tool Size	mm	300
Tool Sleeve Max. Load	kg	8
Tool Sleeve Average Load	kg	5
Tool Storage Total Load	kg	120
ATC Motor Specification	-	3/4HP (With Brake), 1HP (Without Brake)
Cutter Head Motor Specification	-	1/4HP (With Brake)
Solenoid Voltage	-	DC24V
ATC Signal Switch	-	3*PNP/DC24V
Cutter Head Signal Switch	-	1*PNP/DC24V
Air Cylinder Signal Switch	-	2*PNP/DC24V
Original Signal Switch	-	1*PNP/DC24V
Tool Change Time 50HZ (Optional, Without tool release time)	s	1.3, 1.5, 1.9
Tool Selection Time (Adjacent Tool Position)	s	0.8
Tool Magazine Weight	kg	(255)

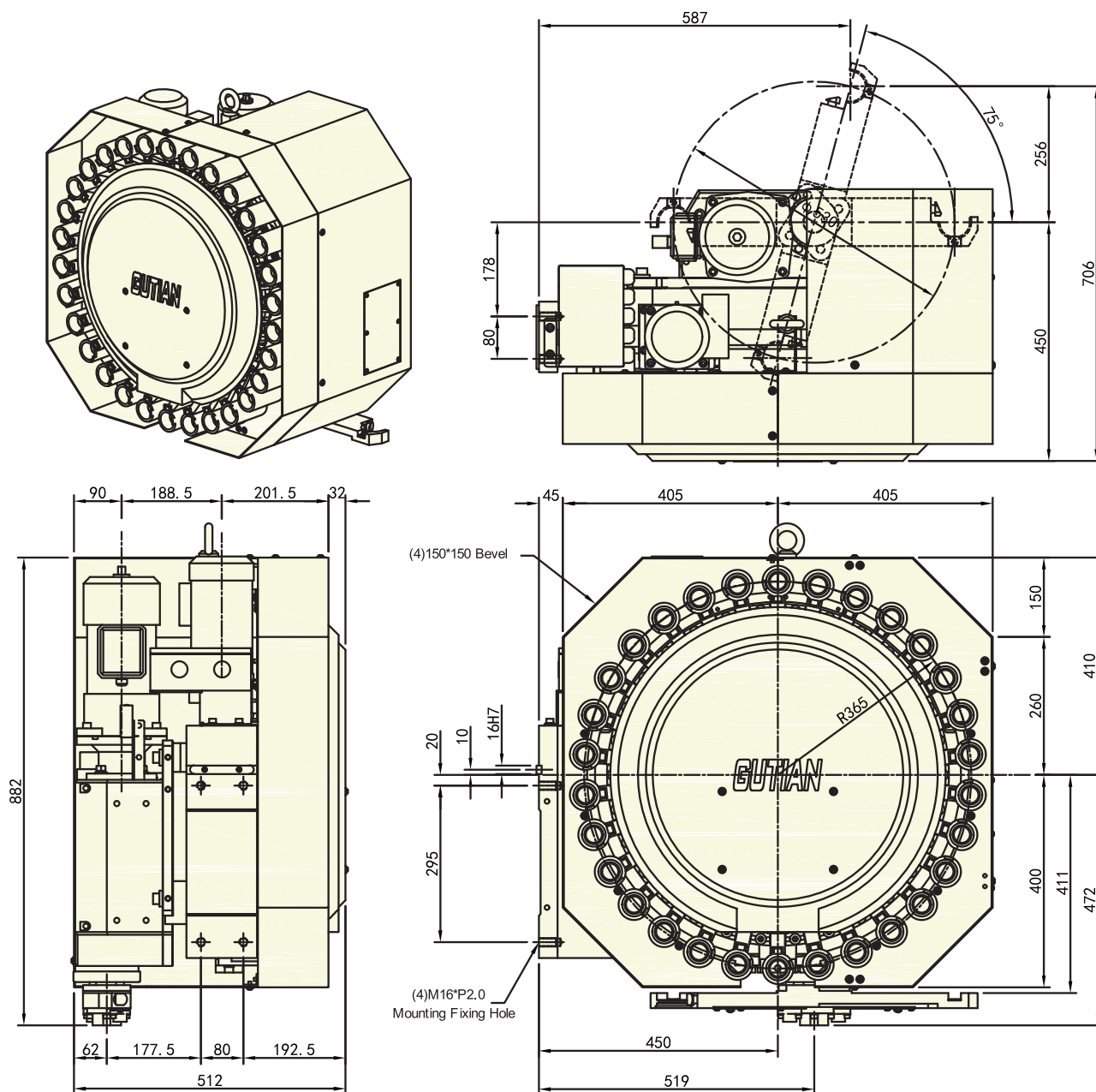
# YK40A24T



Specification: YK40A-75L-530-24T



# YK40A30T

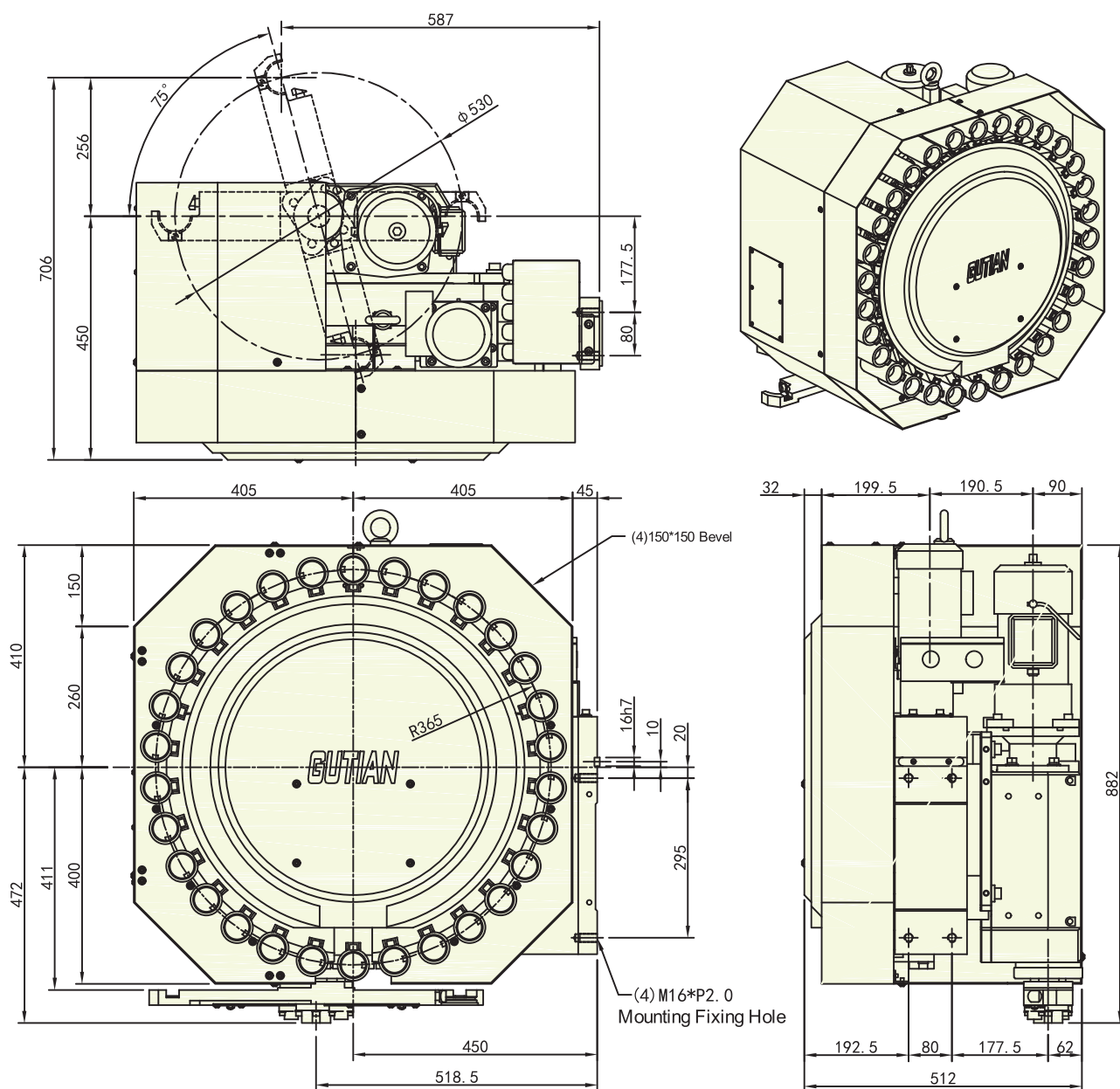


Specification: YK40A-75L-530-30T



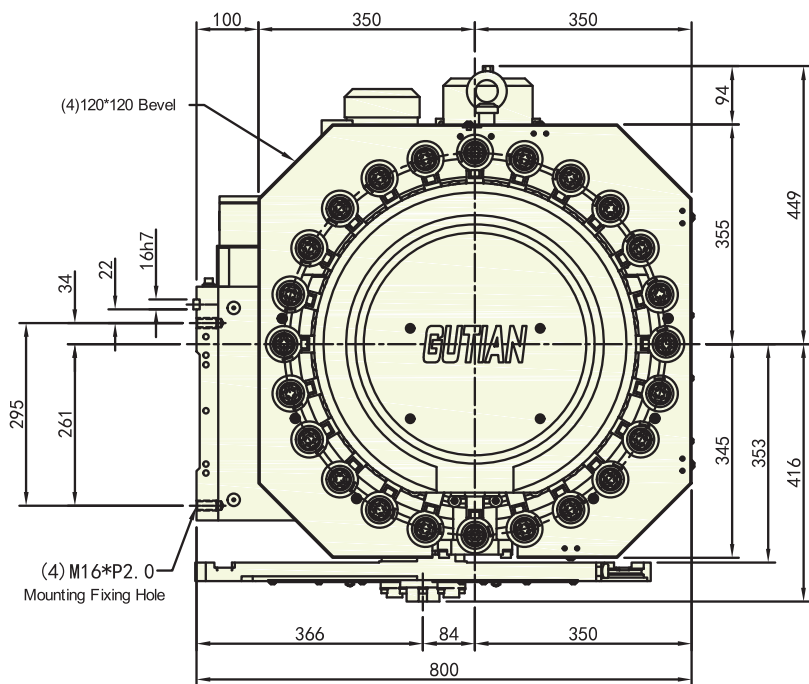
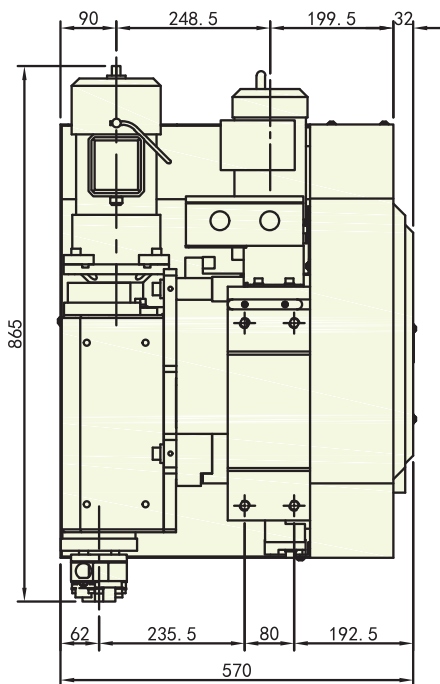
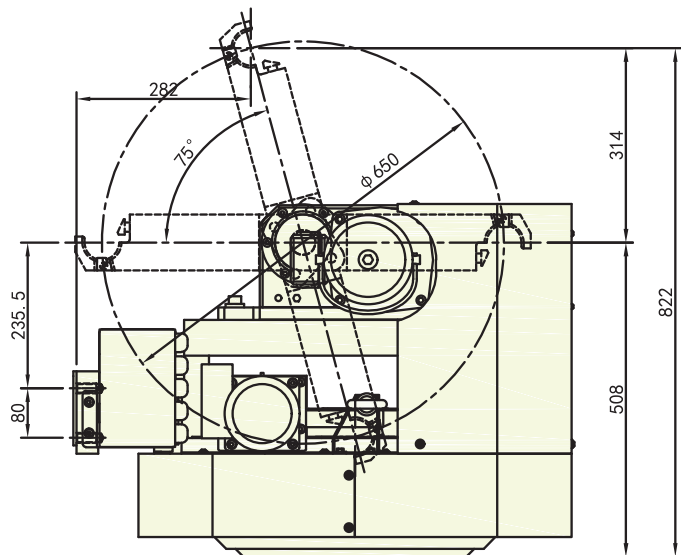
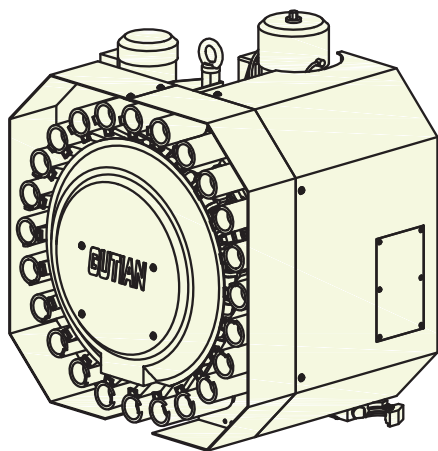


# YK40B30T



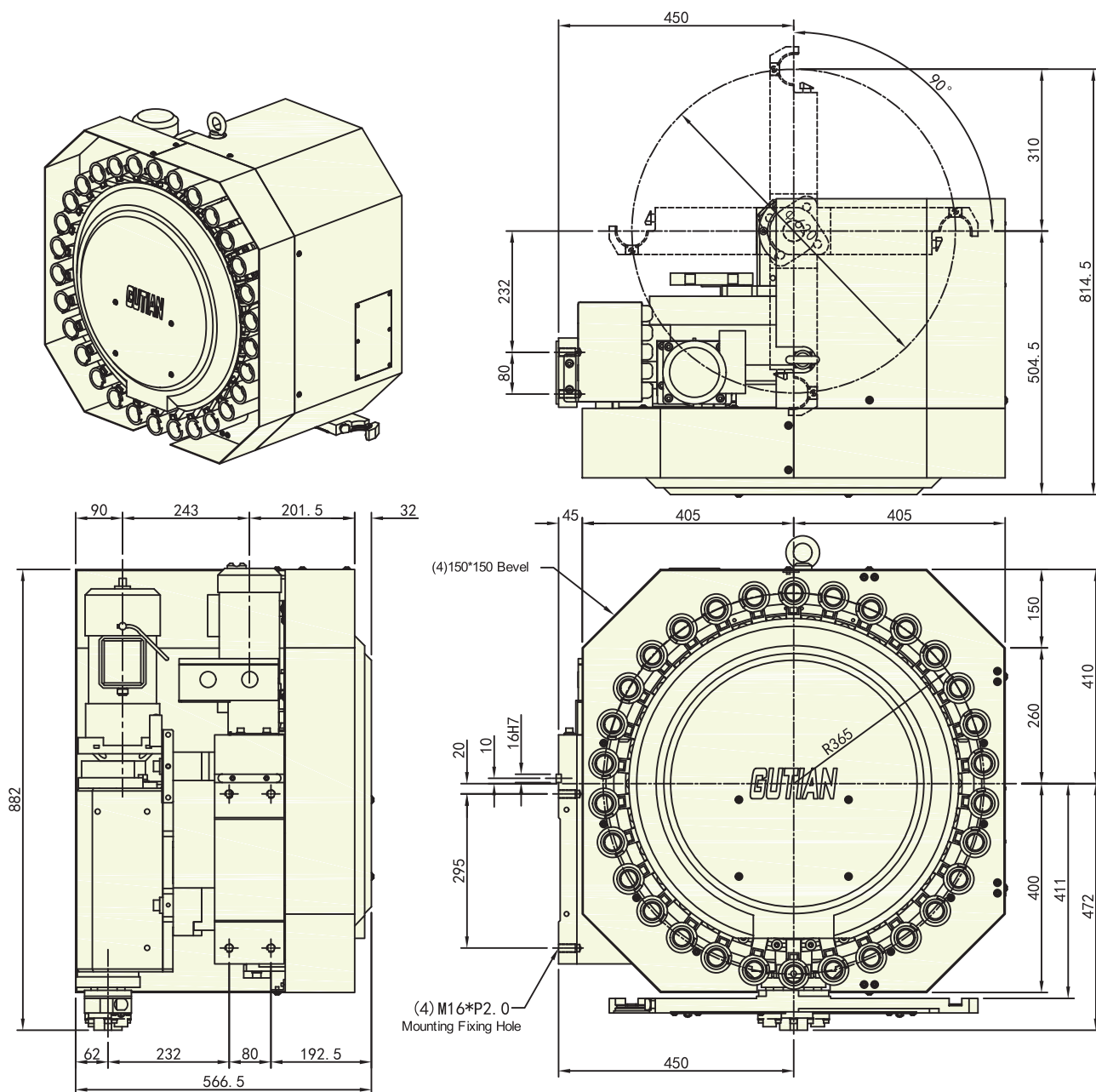
Specification: YK40B-75R-530-30T

# YK40D24T



Specification: YK40D-75R-650-24T

# YK40D30T

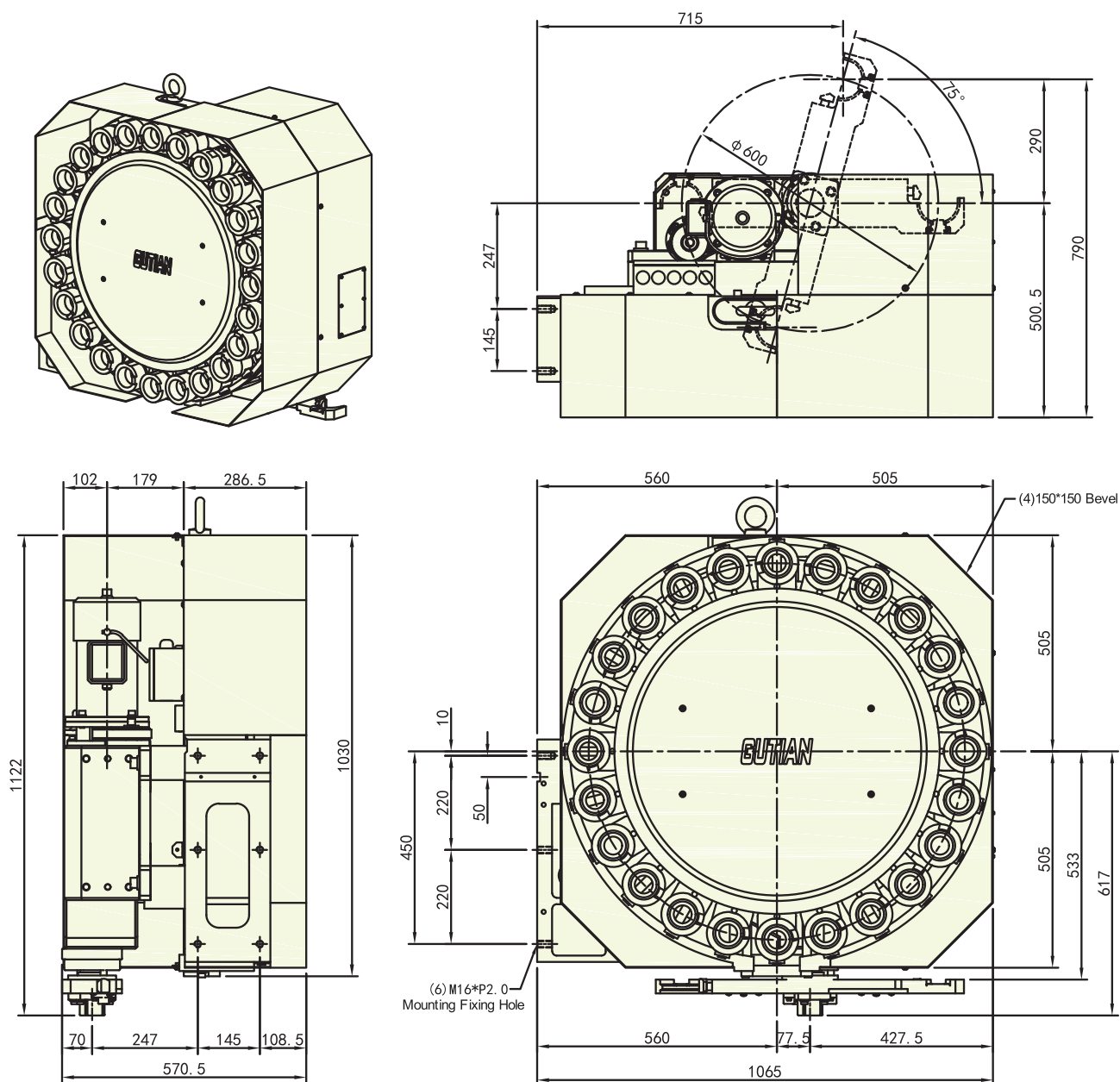


Specification: YK40D-90R-620-30T

YK50 Parameter Table

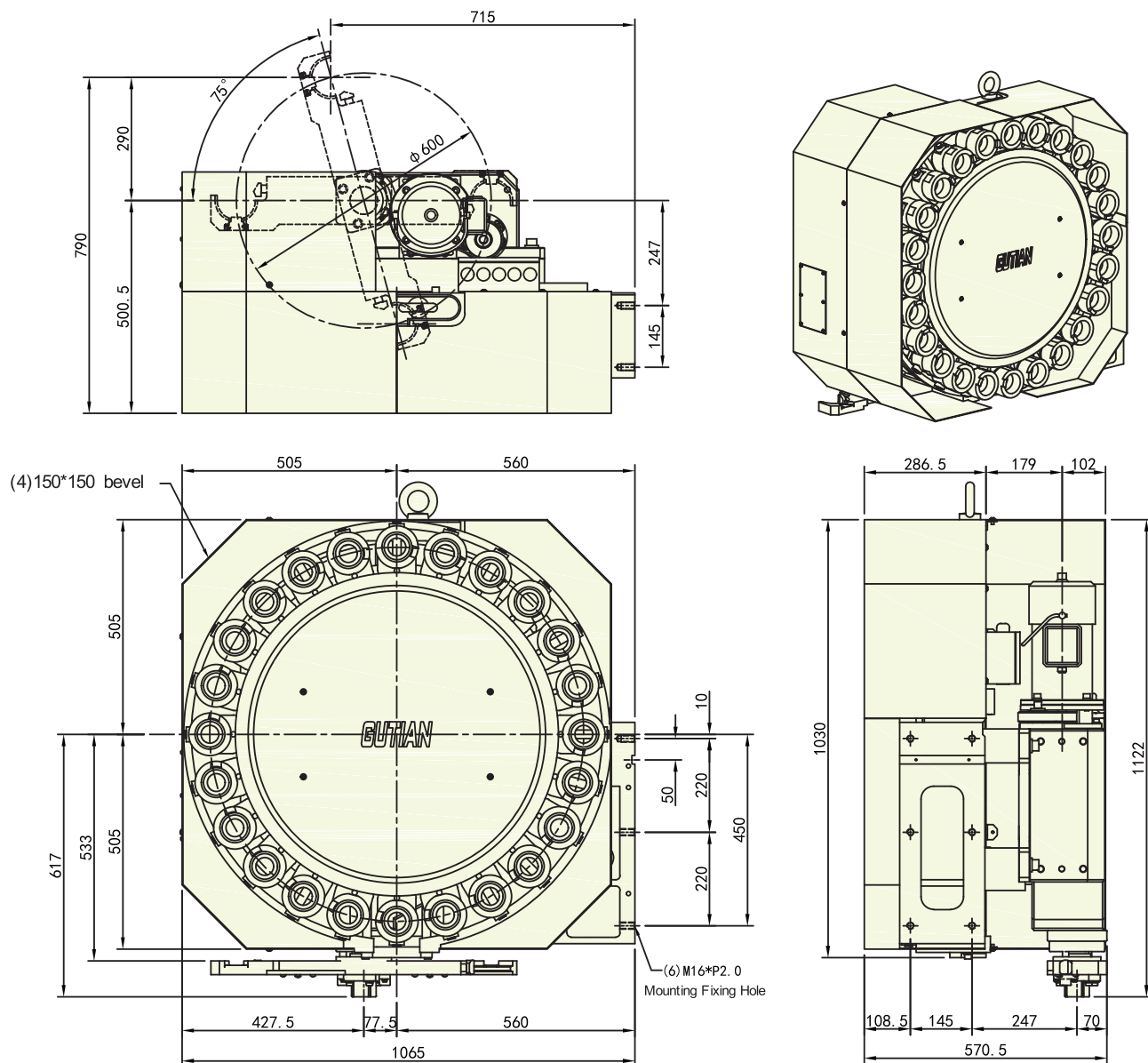
Items	Unit	Data
ATC Type	-	Disc Tool Magazine
Number of Tools (Optional)	PCS	24T, 30T
Tool holder Specification (Optional)	-	BT50, HSK100
Tool Arm Center Distance Specification (Optional)	mm	600, 750, 900
Tool Change Degree (Optional)	deg	30, 60, 65, 70, 75, 80, 90
Tool Change Direction (Optional)	-	L, R
Max. Tool Diameter	mm	Φ110
Non-adjacent Max. Tool Diameter	mm	Φ200
Max. Tool Size	mm	350
Tool Sleeve Max. Load	kg	18
Tool Sleeve Average Load	kg	12.5
Tool Storage Total Load	kg	300
ATC Motor Specification	-	1.5HP (With Brake)
Cutter Head Motor Specification	-	1/4HP (With Brake)
Solenoid Voltage	-	DC24V
ATC Signal Switch	-	3*PNP/DC24V
Cutter Head Signal Switch	-	1*PNP/DC24V
Air Cylinder Signal Switch	-	2*PNP/DC24V
Original Signal Switch	-	1*PNP/DC24V
Tool Change Time 50HZ (Optional, Without tool release time)	s	2.9, 3.8, 4.8, 8.3
Tool Selection Time (Adjacent Tool Position)	s	1.2
Tool Magazine Weight	kg	(590)

# YK50A24T



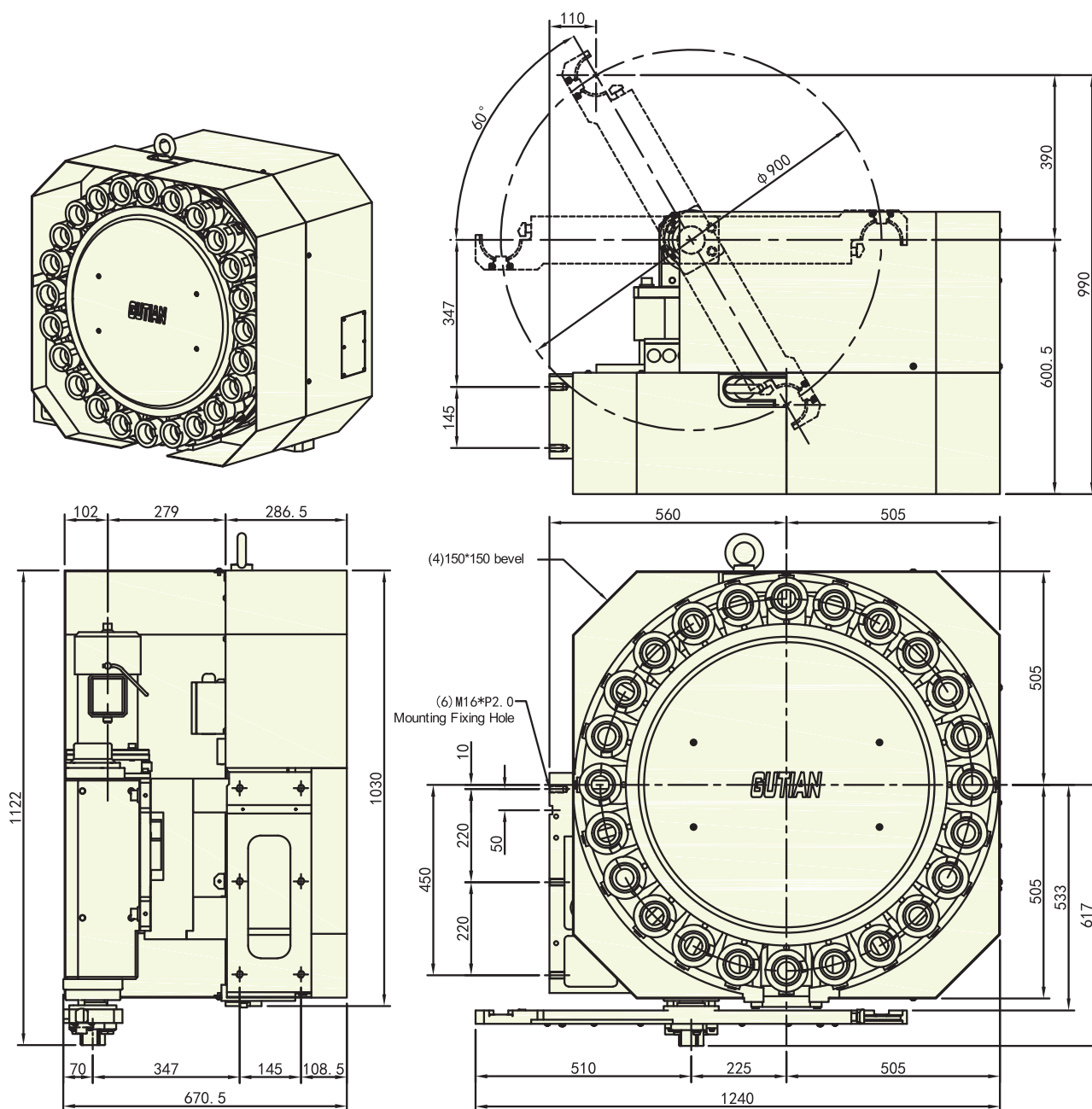
Specification: YK50A-75L-600-24T

# YK50B24T



Specification: YK50B-75R-600-24T

# YK50D24T



Specification: YK50D-60R-900-24T

# Memo



# ATC-series



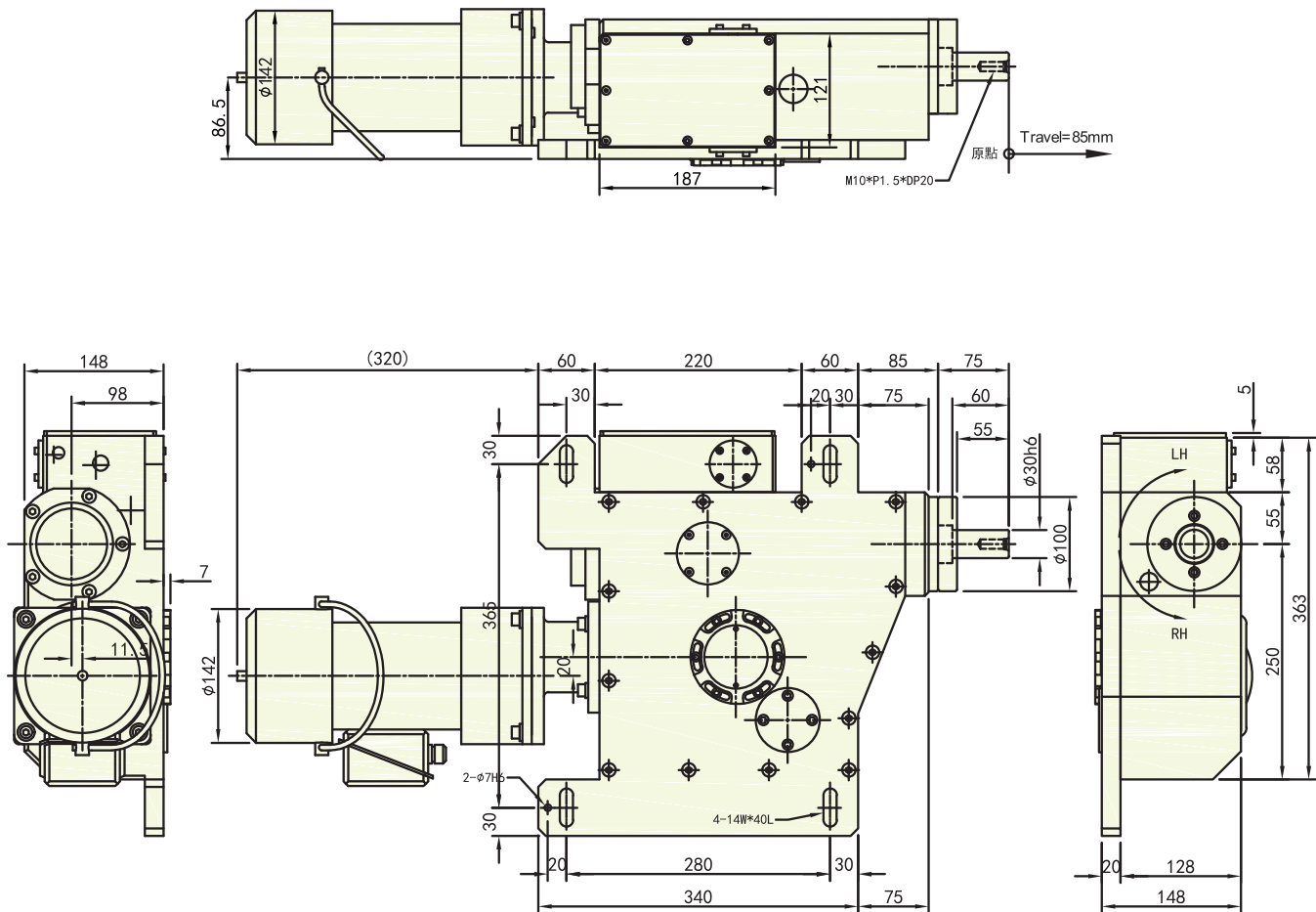
## **GUTIAN**

### **ATC Mechanism**

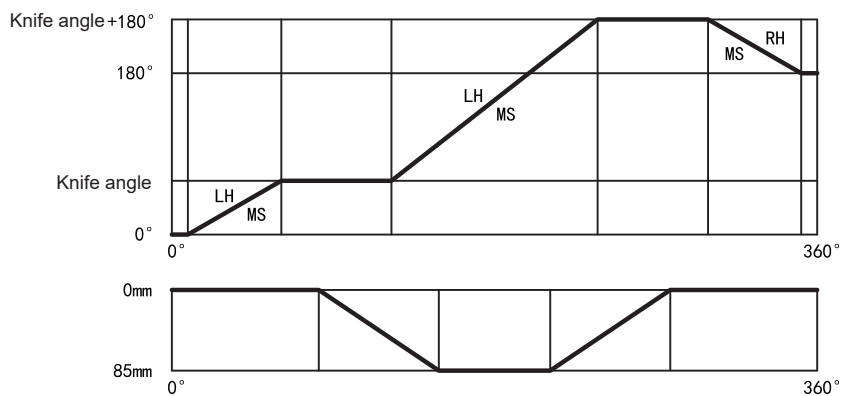
**30A,30B,30D,30G,40A,40B,40C,40D,50A,50B,50C,  
50D,50E**

ATC Mechanism internally adopts cam roller transmission mechanism. The output shaft is featured with small moment of inertia, compact structure, small size and large output force. It has high accuracy and wide indexing, and support a combination of series actions that output shaft can do positive reverse motion as cams turn the same. Free to set tool taking angle within the range and choose the best motion curve. Tool clamping is fast, stable and noiseless, and tool slotting is stable and highly precise. Maintaining the accuracy of spindle helps to extend service life.

# 30A

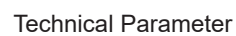
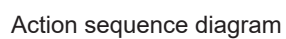


### Action sequence diagram

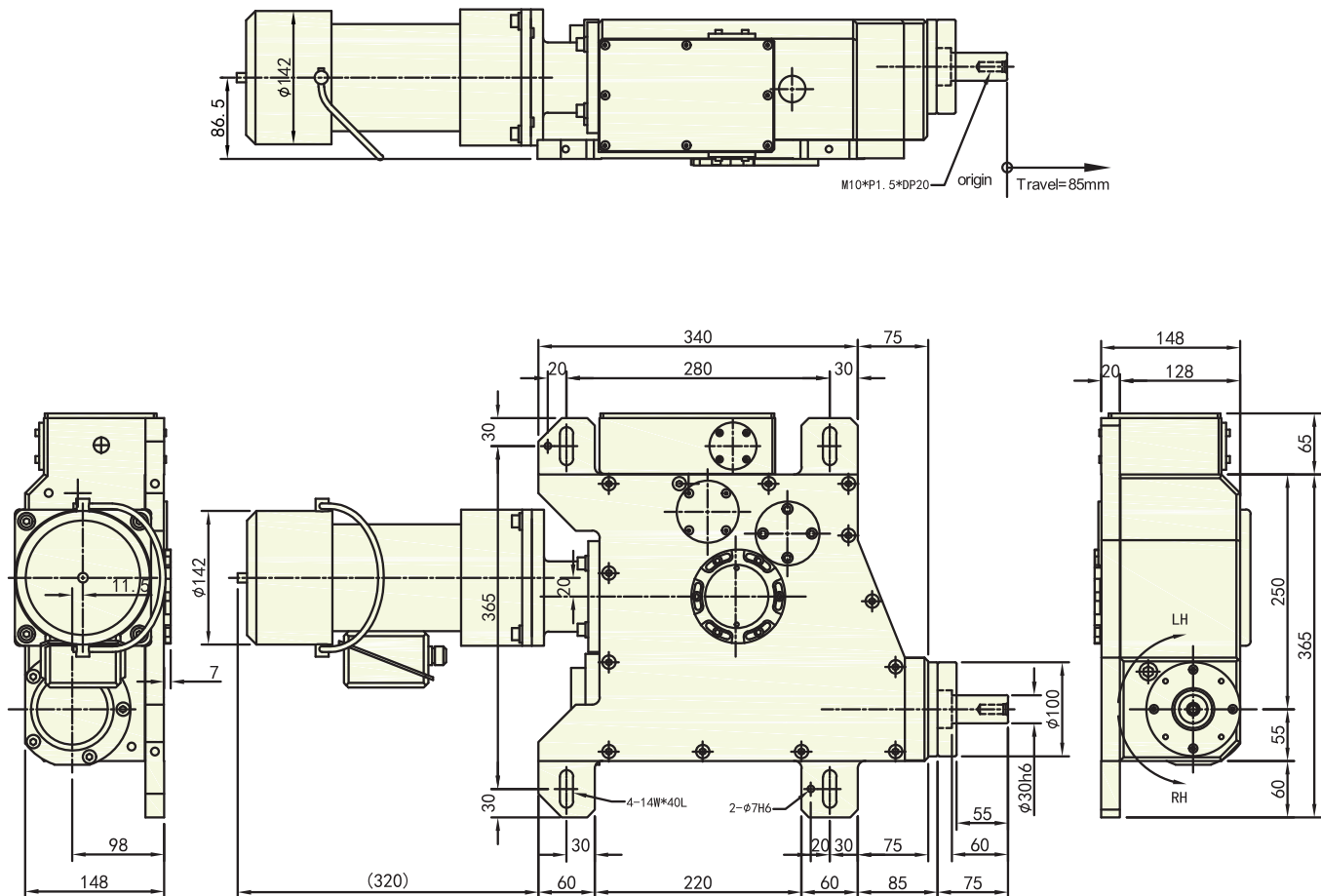


### Technical Parameter

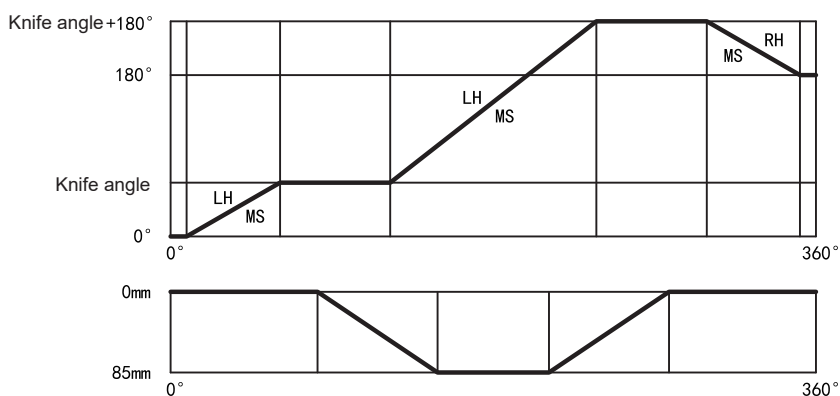
Model	30A Positive Tool Taking
Tool Broaching Length	85mm
Max. Load	4.5kg/side
Tool Change Time	50Hz=0.99sec (4kg/side) 60Hz=0.84sec (4kg/side)
Net Weight	90kg
Motor Drive Horsepower	1/2HP (370W)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

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# 30D



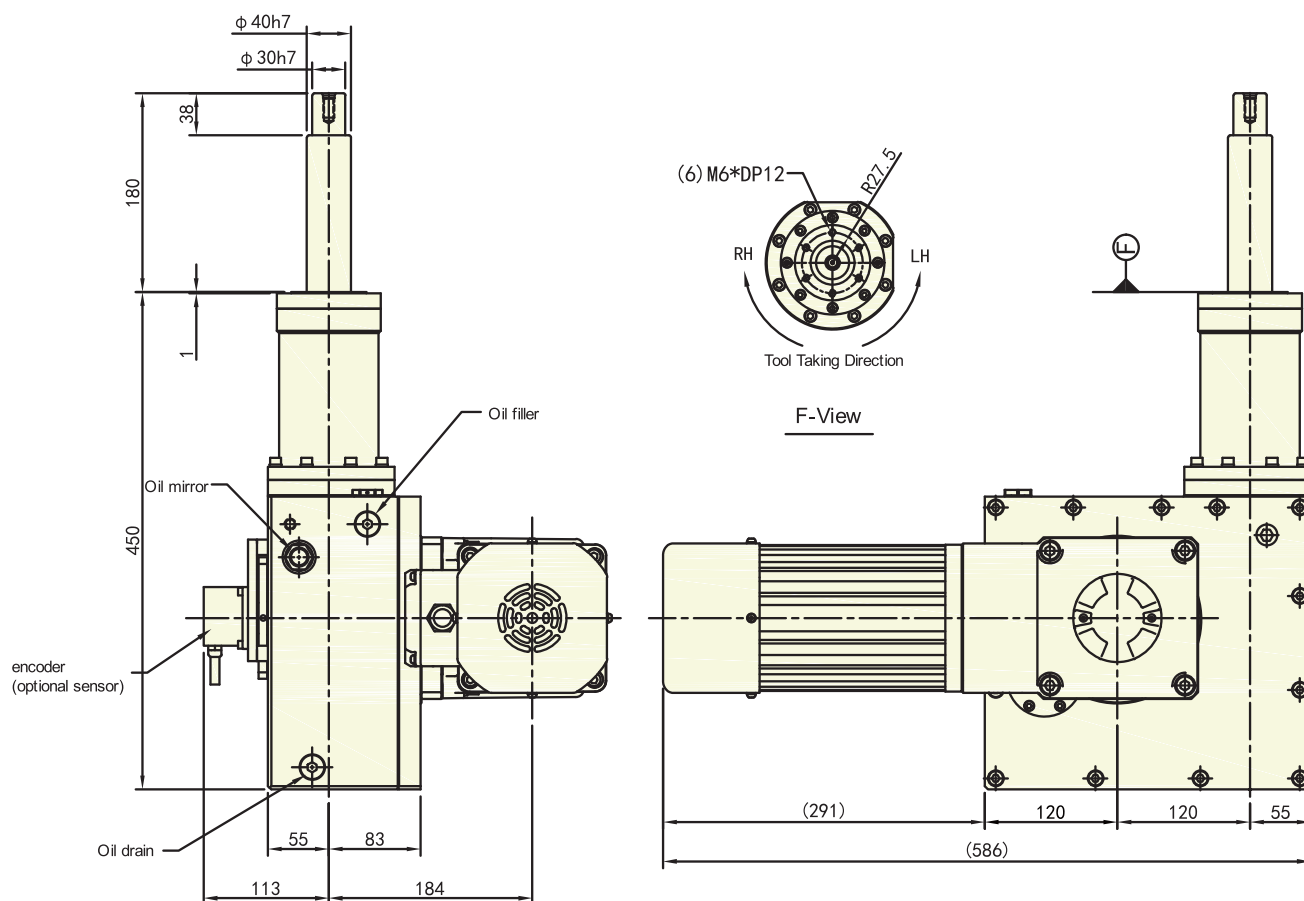
Action sequence diagram



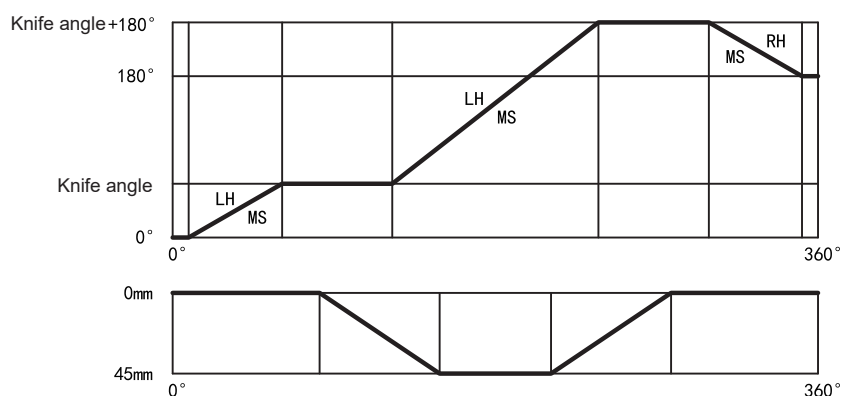
Technical Parameter

Model	30D Reverse Tool Taking
Tool Broaching Length	85mm
Max. Load	4.5kg/side
Tool Change Time	50Hz=0.99sec (4kg/side) 60Hz=0.84sec (4kg/side)
Net Weight	90kg
Motor Drive Horsepower	1/2HP (370W)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

# 30G



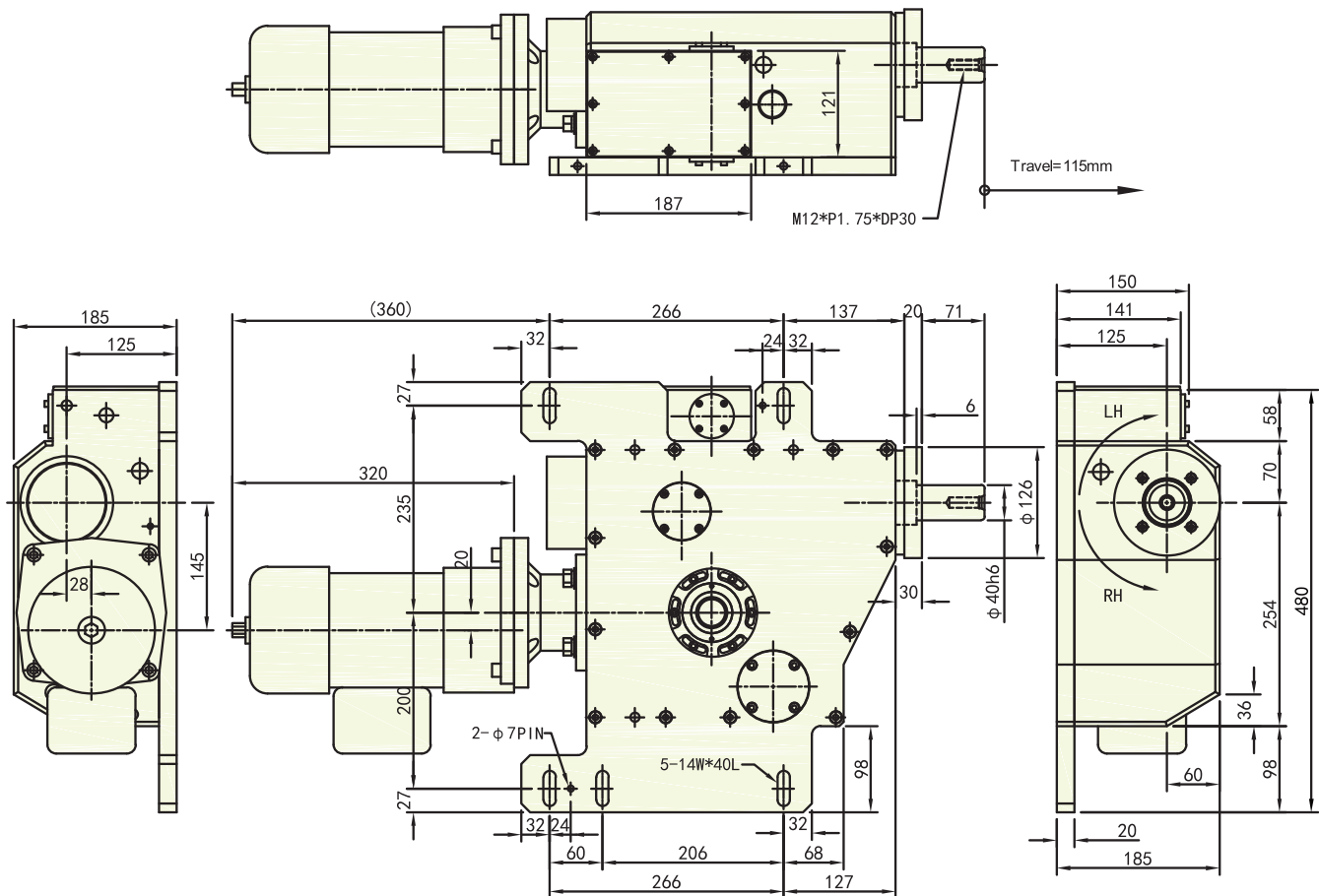
Action sequence diagram



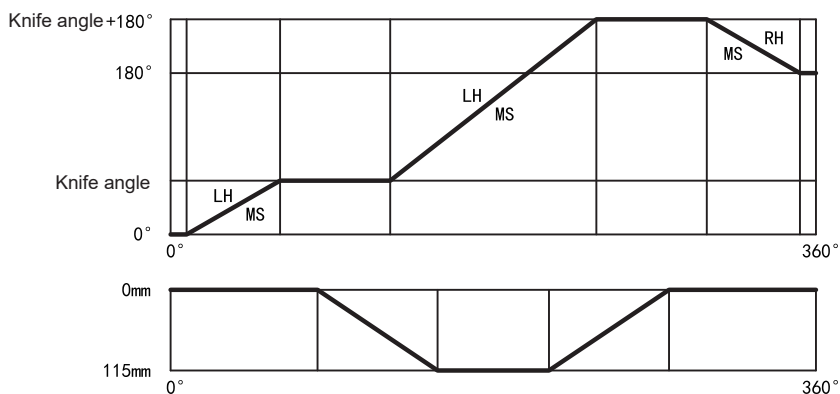
Technical Parameter

Model	30G Inverted
Tool Broaching Length	45mm (85 for Option)
Max. Load	4.5kg/side
Tool Change Time	50Hz=1.31sec (17kg/side) 60Hz=1.15sec (17kg/side)
Net Weight	85kg
Motor Drive Horsepower	1HP (0.75KW)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

# 40A



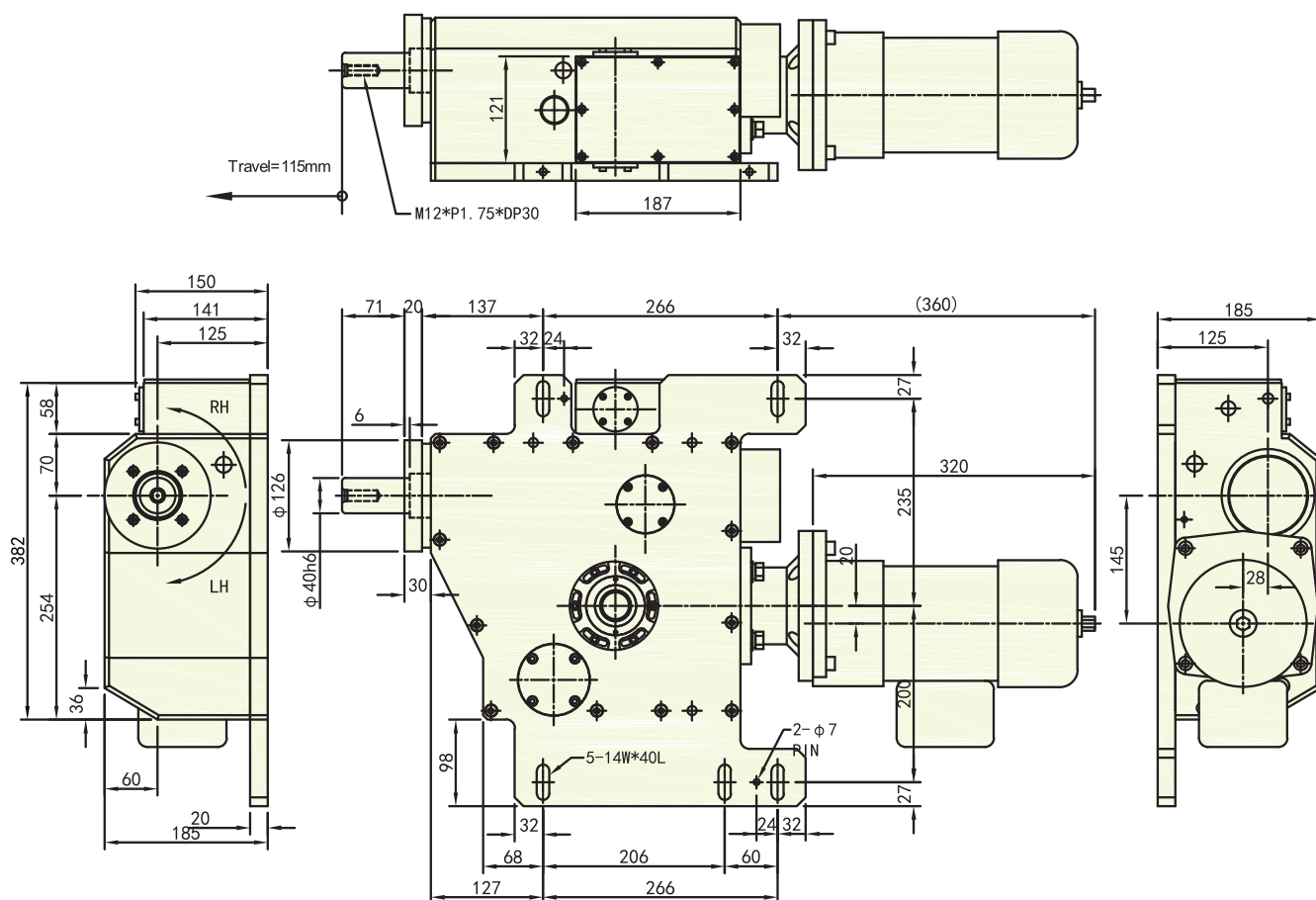
Action sequence diagram



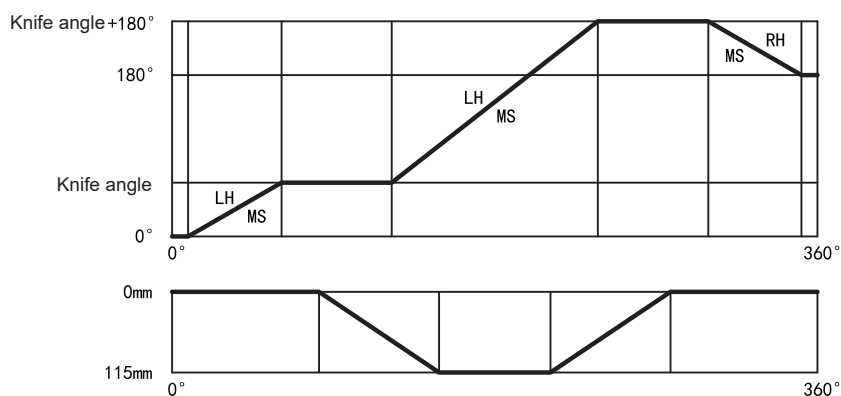
Technical Parameter

Model	40A Positive Tool Taking
Tool Broaching Length	115mm
Max. Load	8kg/side
Tool Change Time	50Hz=1.55sec (4kg/side) 60Hz=1.31sec (4kg/side)
Net Weight	115kg
Motor Drive Horsepower	3/4HP (550W)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

# 40B

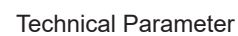
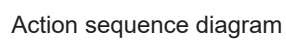


Action sequence diagram



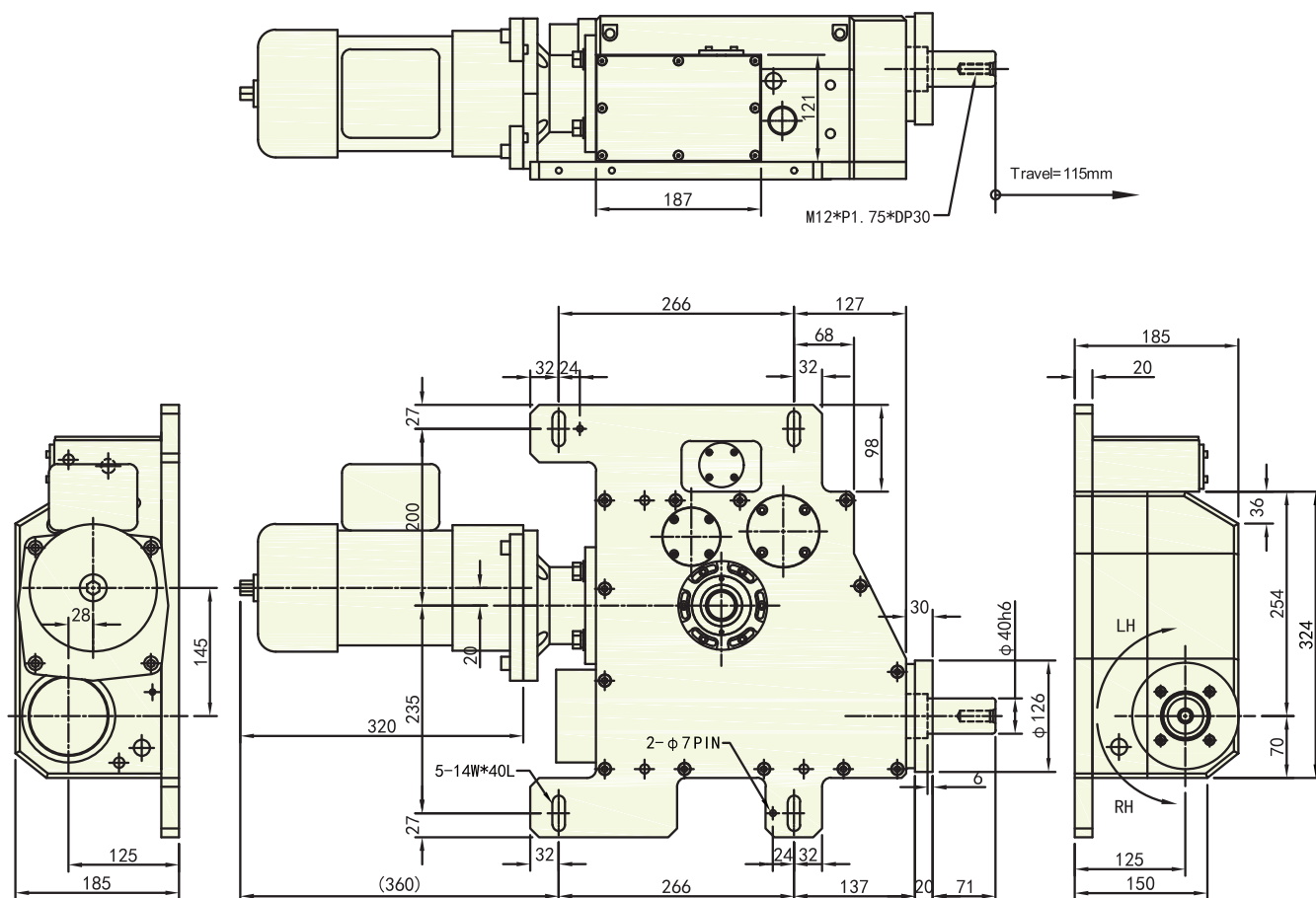
Technical Parameter

Model	40B Reverse Direction Positive Tool Taking
Tool Broaching Length	115mm
Max. Load	8kg/side
Tool Change Time	50Hz=1.55sec (4kg/side) 60Hz=1.31sec (4kg/side)
Net Weight	115kg
Motor Drive Horsepower	3/4HP (550W)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

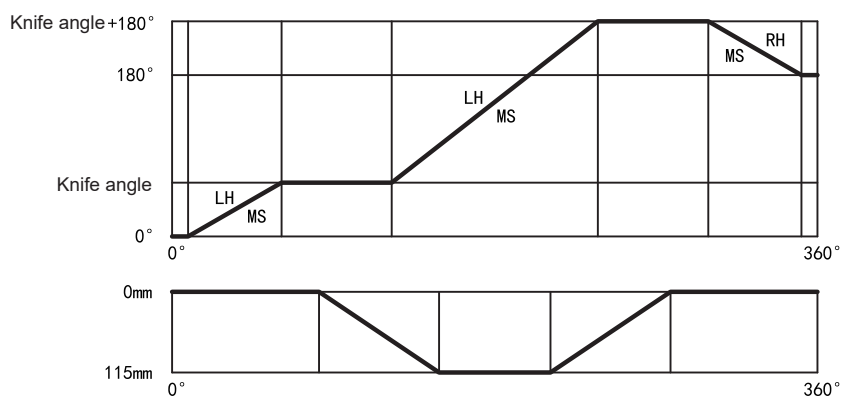
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# 40D



Action sequence diagram

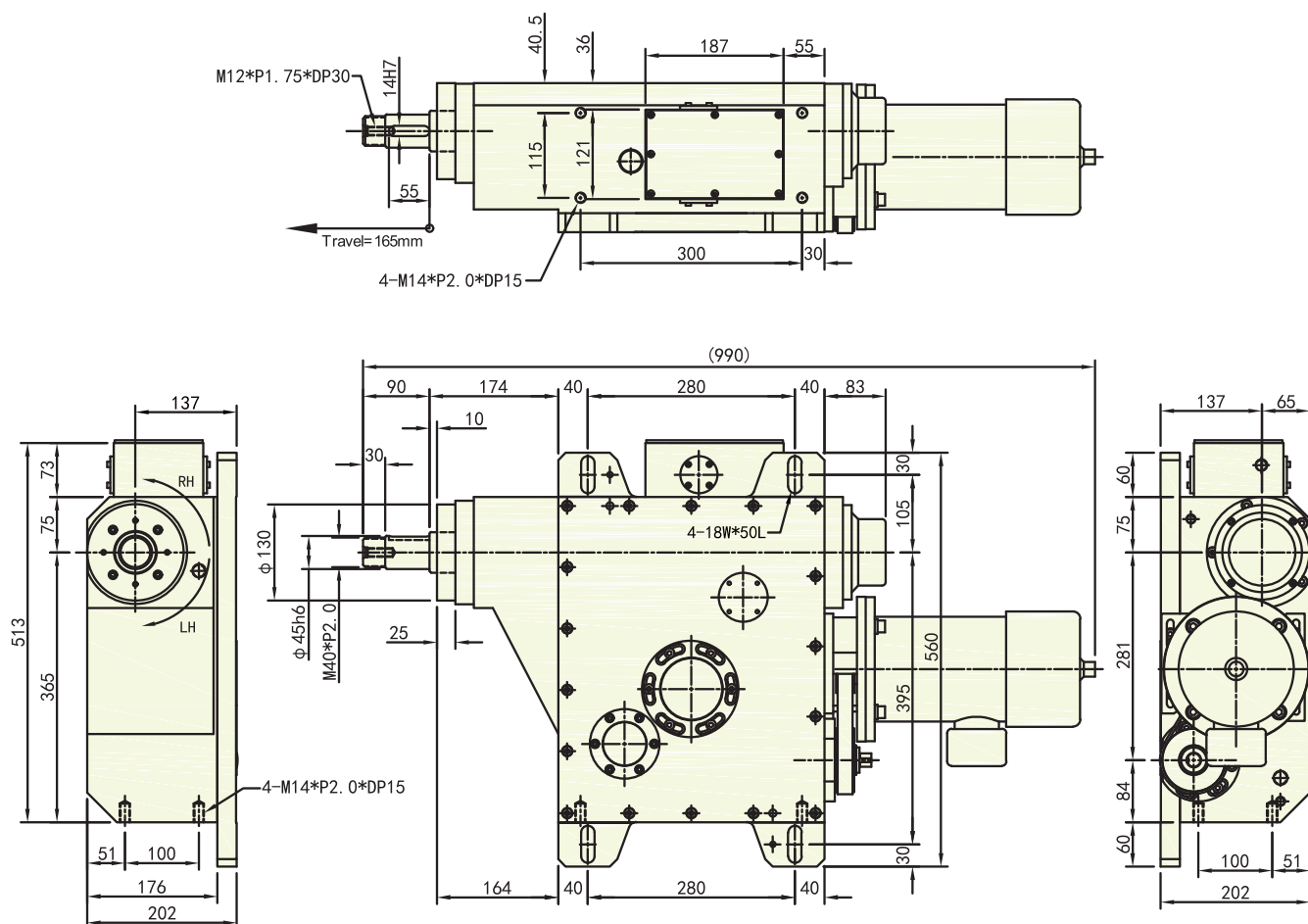


Technical Parameter

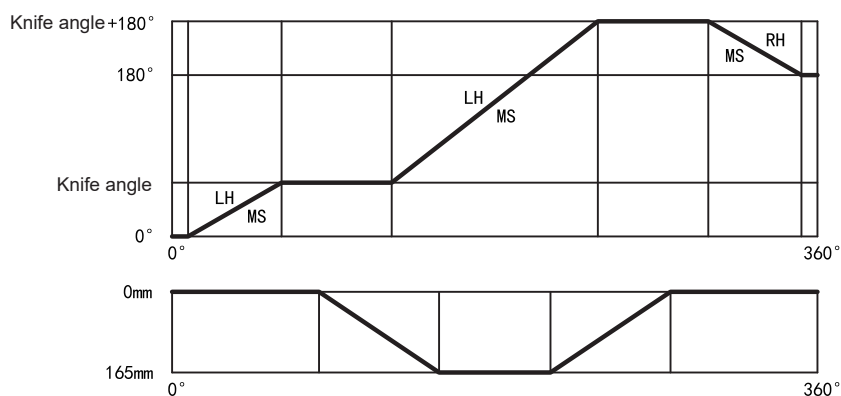
Model	40D Reverse Tool Taking
Tool Broaching Length	115mm
Max. Load	8kg/side
Tool Change Time	50Hz=1.55sec (4kg/side) 60Hz=1.31sec (4kg/side)
Net Weight	115kg
Motor Drive Horsepower	3/4HP (550W)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm



# 50B



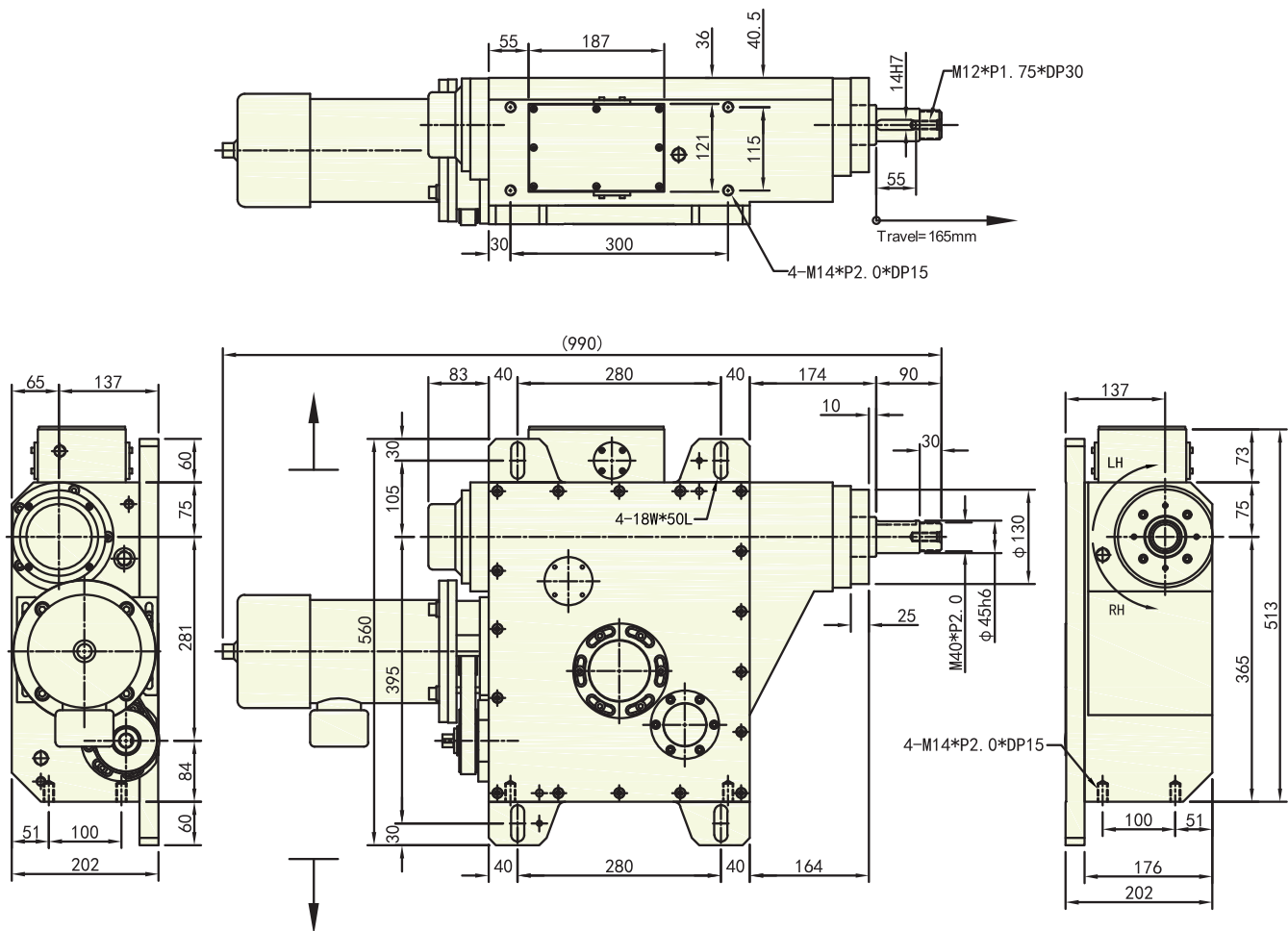
Action sequence diagram



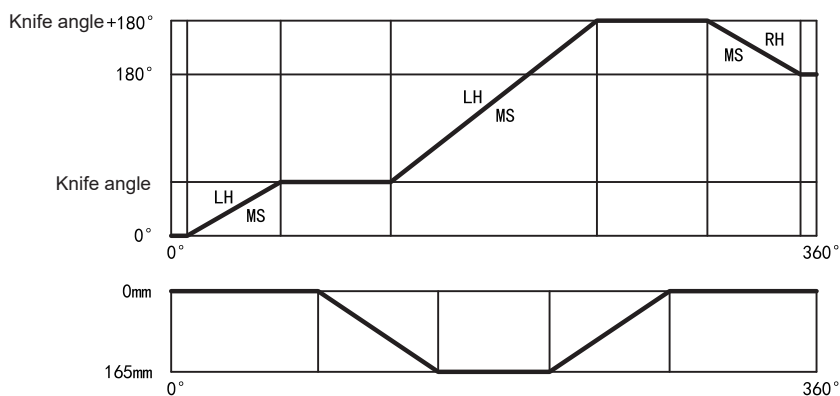
Technical Parameter

Model	50B Reverse Tool Taking
Tool Broaching Length	165mm
Max. Load	20kg/side
Tool Change Time	50Hz=2.91sec (17kg/side) 60Hz=2.45sec (17kg/side)
Net Weight	200kg
Motor Drive Horsepower	1.5HP(1.1KW)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

# 50C



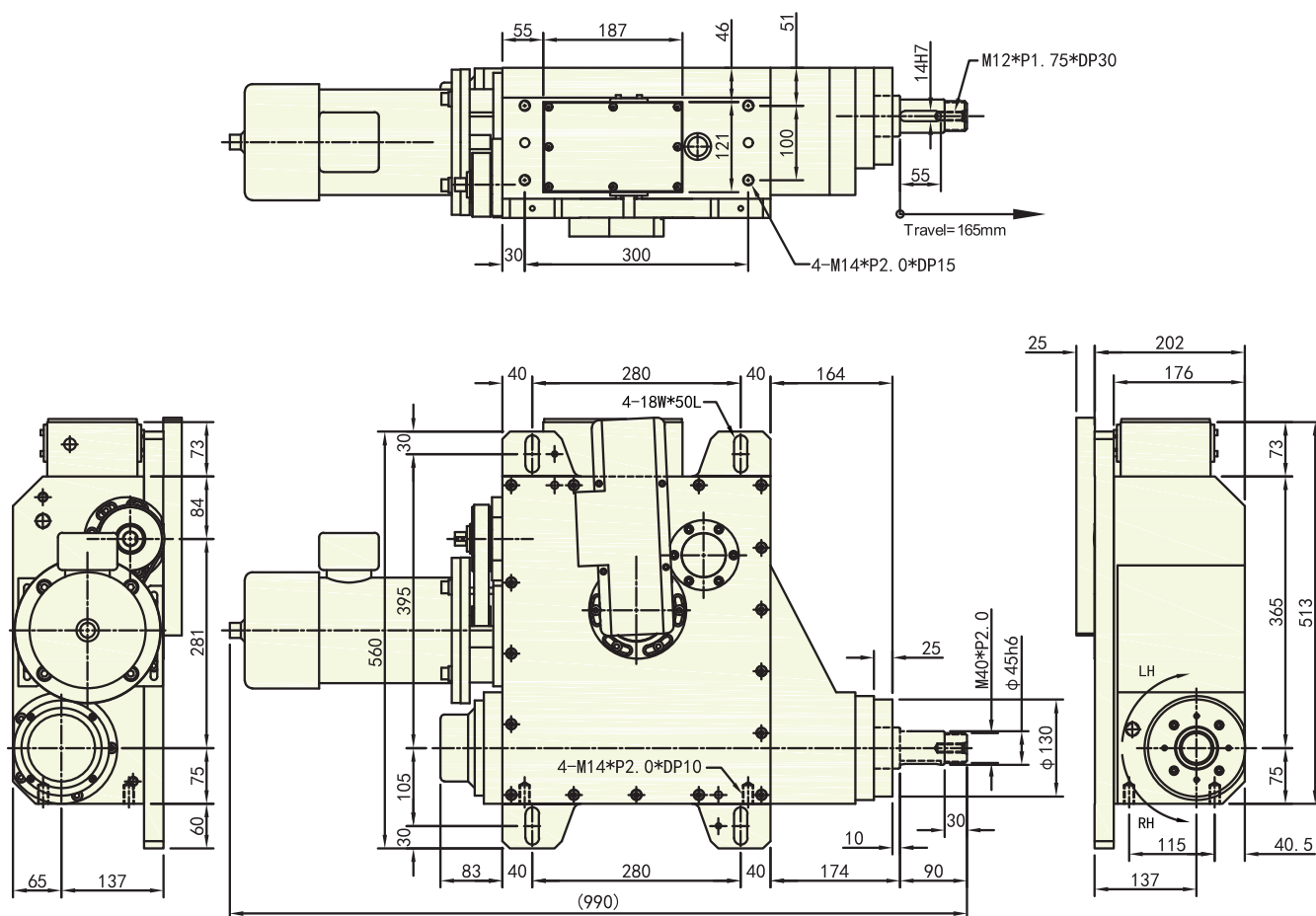
Action sequence diagram



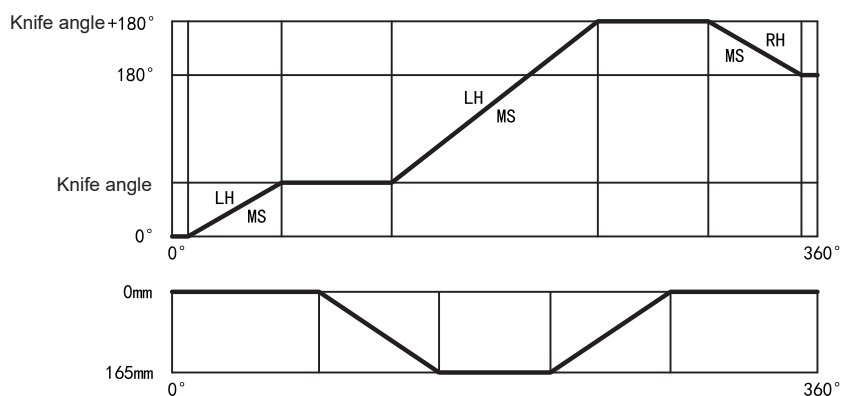
Technical Parameter

Model	50C Horizontal (Modified from Vertical)
Tool Broaching Length	165mm
Max. Load	20kg/side
Tool Change Time	50Hz=2.91sec (17kg/side) 60Hz=2.45sec (17kg/side)
Net Weight	200kg
Motor Drive Horsepower	1.5HP(1.1KW)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

# 50D



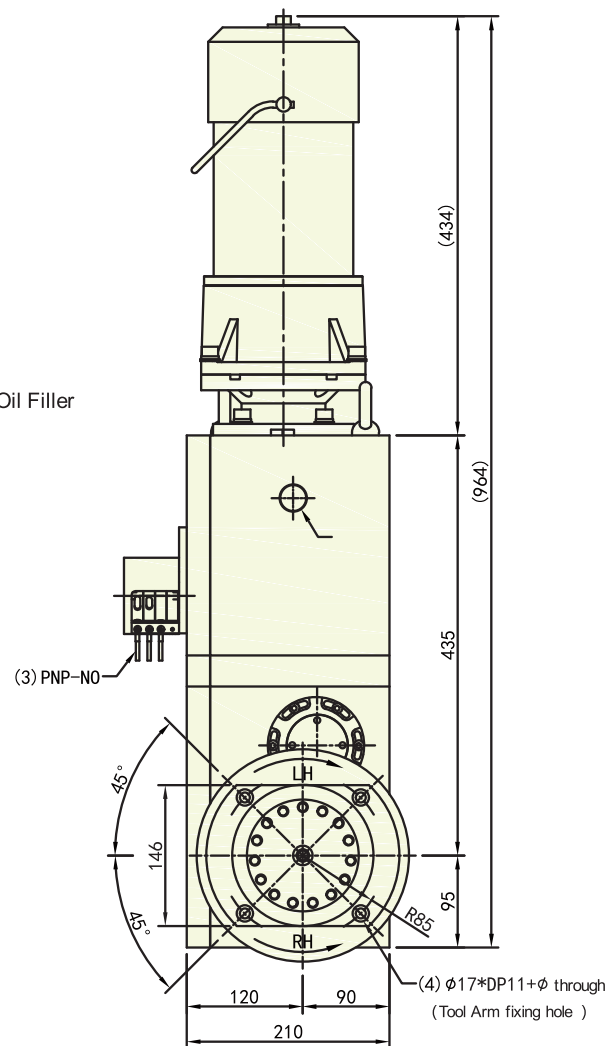
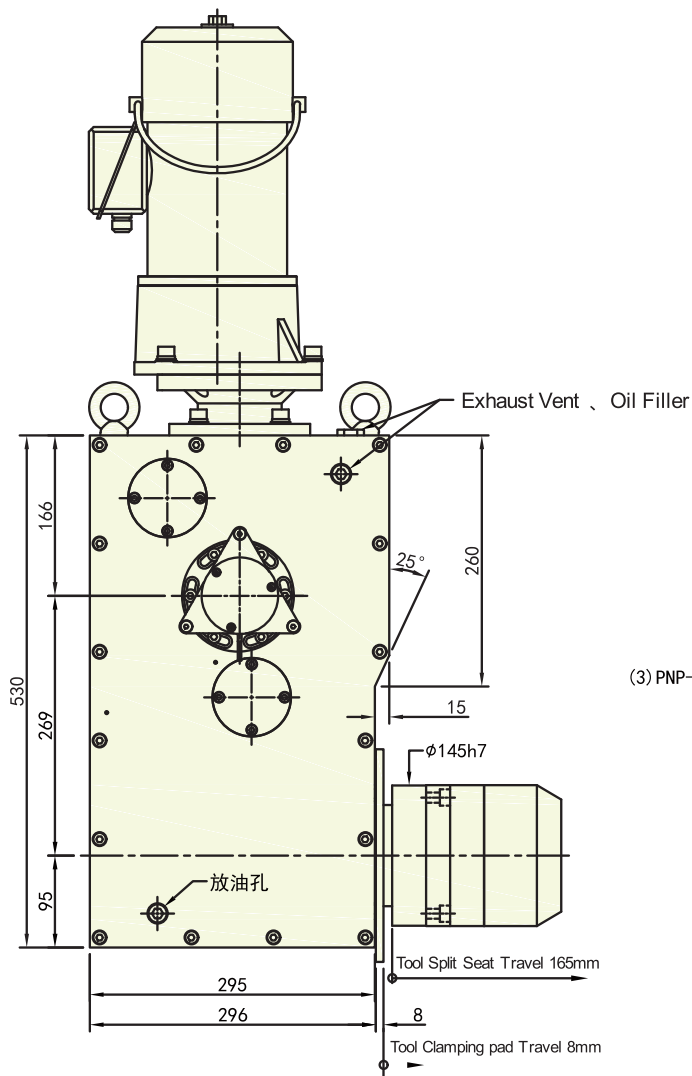
Action sequence diagram



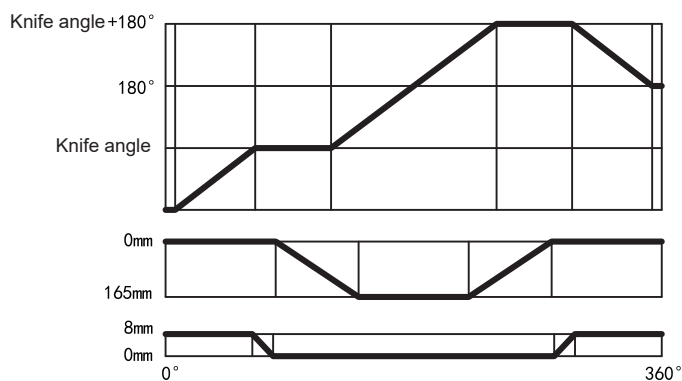
Technical Parameter

Model	50D Reverse Tool Taking
Tool Broaching Length	165mm
Max. Load	20kg/side
Tool Change Time	50Hz=2.91sec (17kg/side) 60Hz=2.45sec (17kg/side)
Net Weight	200kg
Motor Drive Horsepower	1.5HP(1.1KW)
Accuracy	Positioning Accuracy 60" Repeatability Accuracy 10" Routine Accuracy 0.1mm

# 50E



Action sequence diagram



Technical Parameter

Model	50E Horizontal Heavy-Duty
Tool Broaching Length	165mm
Max. Load	22kg/side
Tool Change Time	50Hz=2.91sec (17kg/side) 60Hz=2.45sec (17kg/side)
Net Weight	200kg
Motor Drive Horsepower	1.5HP(1.1KW)
Accuracy	Positioning Accuracy 60° Repeatability Accuracy 10° Routine Accuracy 0.1mm



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