

NC ROTARY TABLES



S series / Single Spindle NC Rotary Table

4th Axis Type	S-120F2/ 170F2/ 200F4/ 250F4/ 250F8/ 320F8 (Air)
Big Bore Type	S-430F22 /515F22/ 650F22 (Hyd.)
Controller Type / Left Type	S-120/ 120L/ 170/ 170L/ 200/ 200L 250i/ 250Li/ 320i/ 320Li (Air)

HRS series / Hydraulic Single Spindle NC Rotary Table

4th Axis Type	HRS-204F4/ 254F4/ 254F8/ 324F8 (Hyd.)
Controller Type	HRS-204/ 254i/ 324i (Hyd.)

TR series / Tilting NC Rotary Table

5th Axis Type	TR-120FF/ 200FF/ 250FF/ 320FF (Hyd.)
Controller Type	TR-120/ TR-200i/ TR-250i (Hyd.)

MTR series / Multi Spindle Tilting NC Rotary Table

Controller Type	MTR2-174 (Hyd.)
5th Axis Type	MTR2-204F/ 254F (Hyd.)

MS series / Multi Spindle NC Rotary Table

4th Axis Type	MS2-170F4/ MS2-170LF4 (Air)
Controller/ Left Type	MS2-170i/ 170Li (Air)

DM series / Direct Drive Motor NC Rotary Table

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Accessories

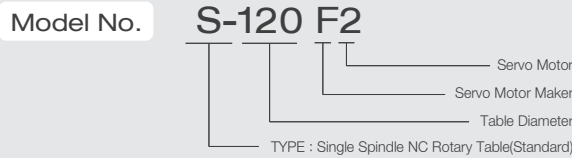
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S-120F2

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- High Clamping power

S-SERIES



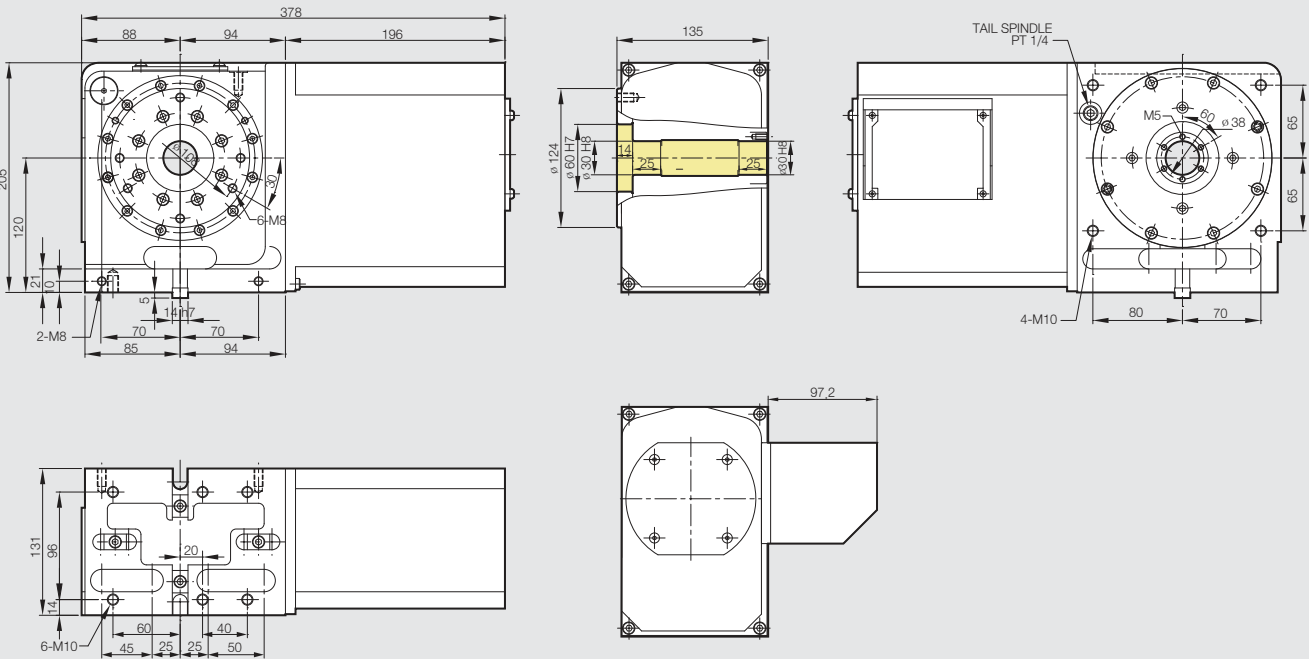
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
(Table: Option) Ø124	120	Ø60H7	Ø30H8	Pneumatic	0.22	150
Max. Spindle Speed [mm·s ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
50	1/60	4	20	35	αiF2 / 5000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
120	60	8	350	150	180	

S-120F2

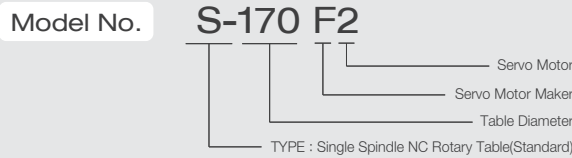


S-170F2

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES



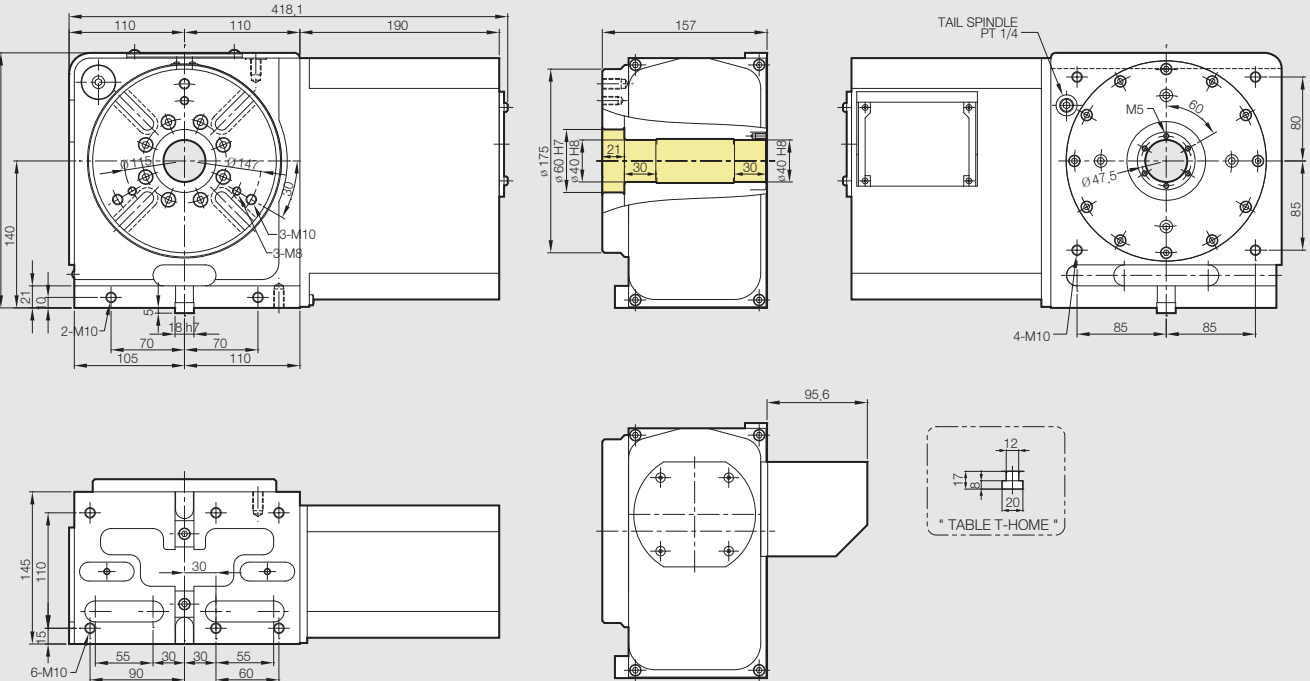
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

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M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø175	140	Ø60H7	Ø40H8	Pneumatic	0.51	380
Max. Spindle Speed [mm·s ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
41.6	1/72	4	20	52	αiF2 / 5000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
160	80	10	600	380	220	

S-170F2



S-200F4

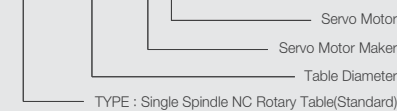
4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES



Model No. S-200 F4



* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø210	170	Ø75H7	Ø45H8	Pneumatic	0.8	480
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	20	79	αiF4 / 4000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
200	100	17	1100	480	270	

S-250F4

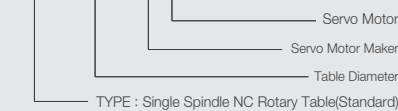
4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES



Model No. S-250 F4



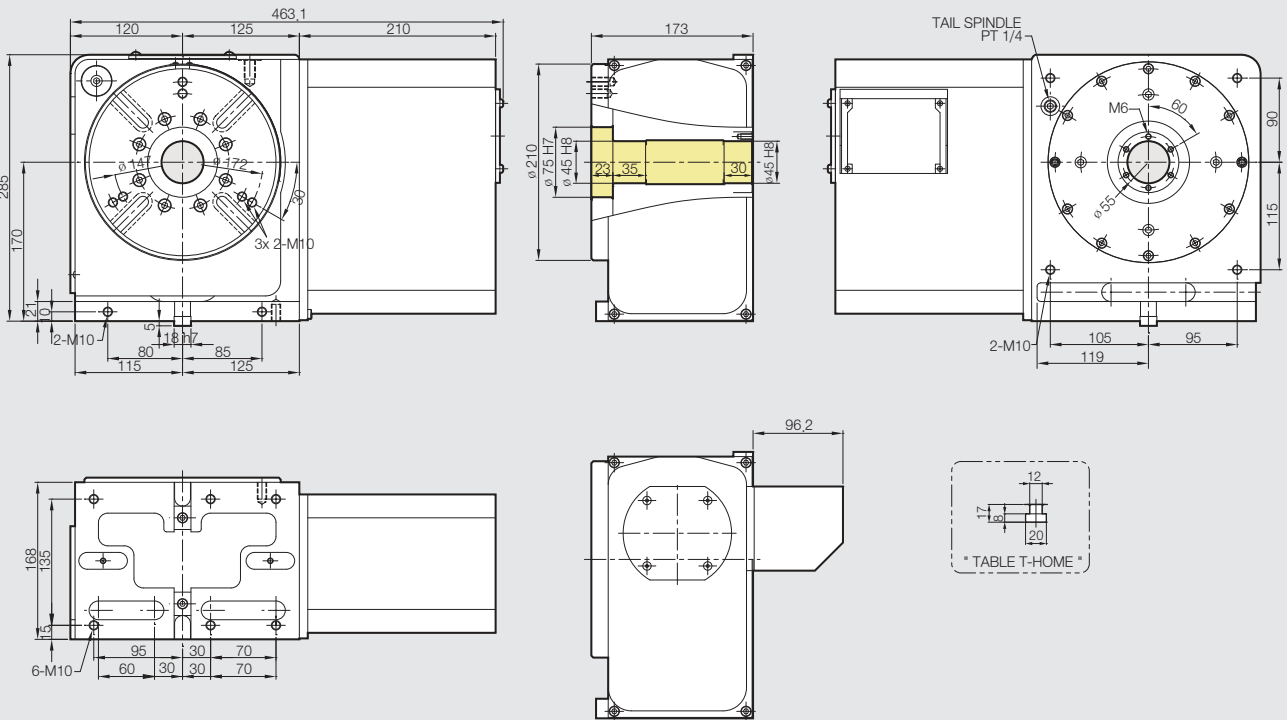
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

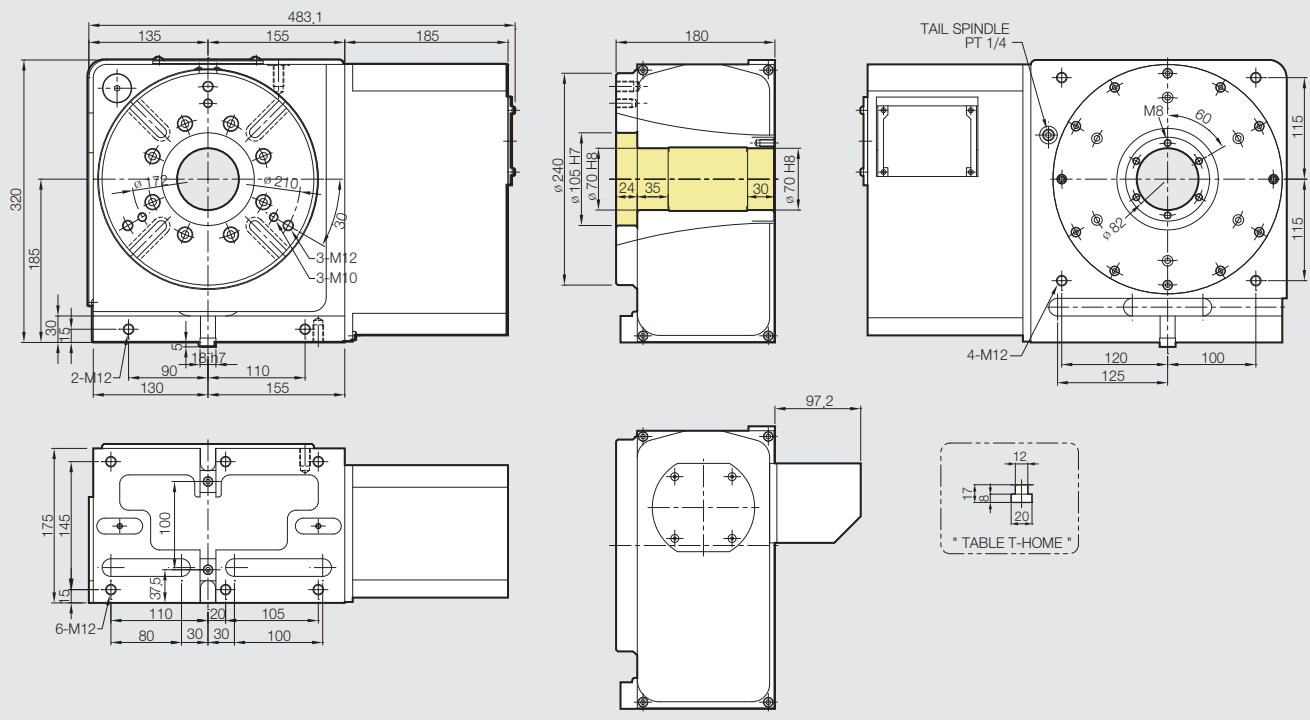
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø240	185	Ø105H7	Ø70H8	Pneumatic	1.95	750
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	20	100	αiF4 / 4000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
250	125	21	1600	750	480	

S-200F4



S-250F4

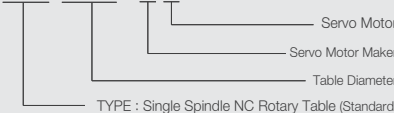


4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston



S-SERIES

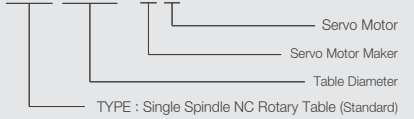
Model No.		S-250 F8				
						
Table Dia.	Center Height	Resister Dia. On face plate	Spindle Threhole Dia.	Clamp Method	Allowable Work Inertia	Clamp Torque
[mm]	[mm]	[mm]	[mm]		[kgm ²]	[N·m]
Ø240	185	Ø105H7	Ø70H8	Pneumatic	3.12	750
Max. Spindle Speed	Gear Ratio	Repeatability Accuracy	Indexing Accuracy	Net Weight	Servo Motor	
(mm ⁻¹)		[sec]	[sec]	[kg]	[FANUC]	
33.3	1/90	4	20	106	αiF8 / 3000	
Allowable Load					Allowable Cutting Torque	
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
						
250	125	21	1600	750	600	

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston



S-SERIES

Model No.		S-320 F8				
						
Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø310	225	Ø130H7	Ø105H8	Pneumatic	4.49	1440
Max. Spindle Speed (mm ³)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
25	1/120	4	20	170	αiF8 / 3000	
Allowable Load					Allowable Cutting Torque	
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
						
350	180	25	2400	1440	800	

Technical drawings of the T-Home table base, showing dimensions and assembly details:

- Top View (Left):** Shows the circular base with a central hole of diameter $\phi 25$ and a larger hole of diameter $\phi 285$. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 593.1, a central section of 170, and a side section of 125. The base height is 395, with a 22.5 offset.
- Side View (Top):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Side View (Bottom):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Front View (Left):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Front View (Right):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Top View (Right):** Shows the circular base with a central hole of diameter $\phi 122$ and a larger hole of diameter $\phi 105$. The base is secured with 4-M12 bolts. Dimensions include a total width of 145, a central section of 140, and a side section of 150. The base height is 145, with a 18 h7 offset.
- Side View (Right):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Front View (Right):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Bottom View (Left):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Bottom View (Right):** Shows the base profile with a total width of 210. The base is secured with 2x 2-M12 bolts. Dimensions include a total width of 210, a central section of 25, and a side section of 40. The base height is 310, with a 130 H7 offset.
- Assembly Detail (Bottom Right):** Shows the assembly of the base with a central hole of diameter $\phi 122$ and a larger hole of diameter $\phi 105$. The base is secured with 4-M12 bolts. Dimensions include a total width of 145, a central section of 140, and a side section of 150. The base height is 145, with a 18 h7 offset.

S-430F22

4th axis NC Rotary Table (Big Bore Type)

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Large Through Hole
- High Clamping power (Hydraulic)

S-SERIES



Model No. S-430F22

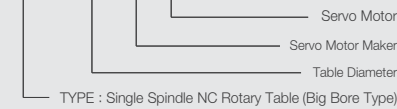
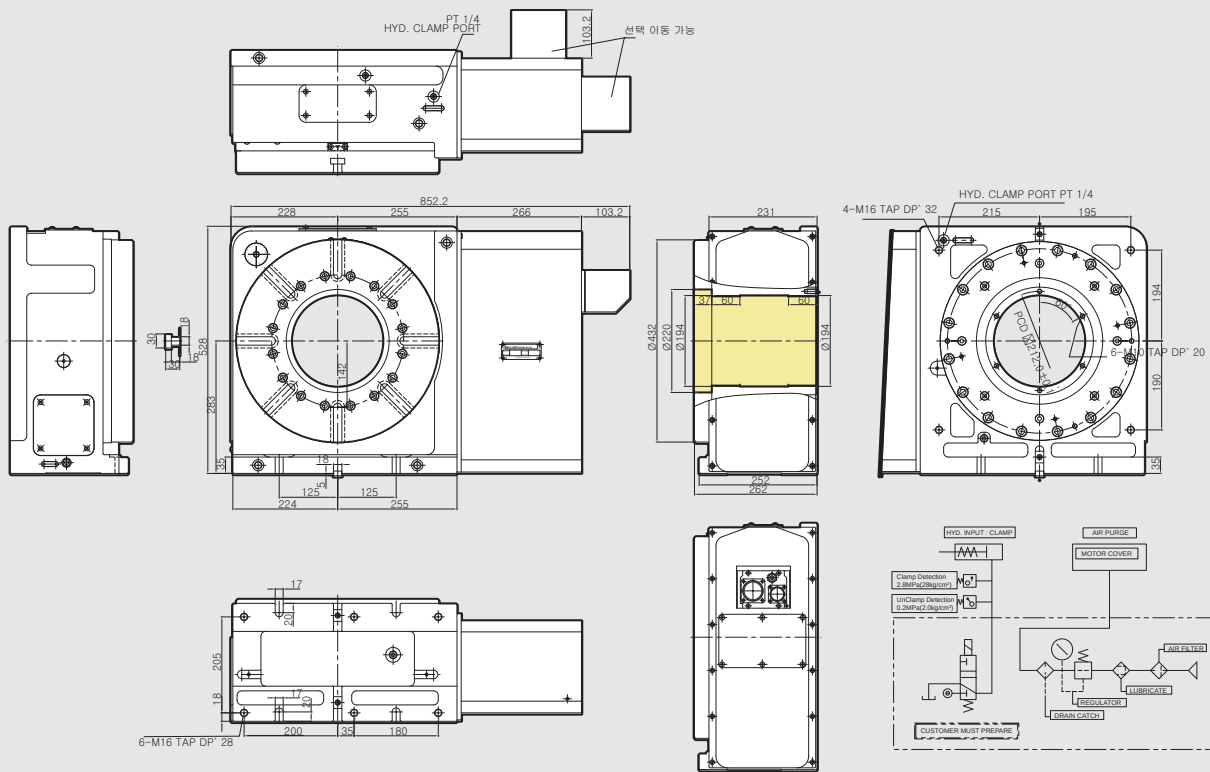


Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø432	283	Ø220H7	Ø194H8	Hydraulic Max.35bar	10.67	2500
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
25	1/120	4	20	350	αiF22 / 3000	
Allowable Load					Allowable Cutting Torque	
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
500	250	32	5000	2500	1700	

S-430F22



S-515F22

4th axis NC Rotary Table (Big Bore Type)

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Solid Body
- Large Through Hole
- High Clamping power (Hydraulic)

S-SERIES



Model No. S-515F22

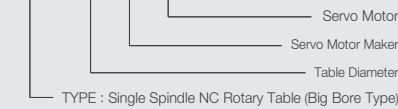
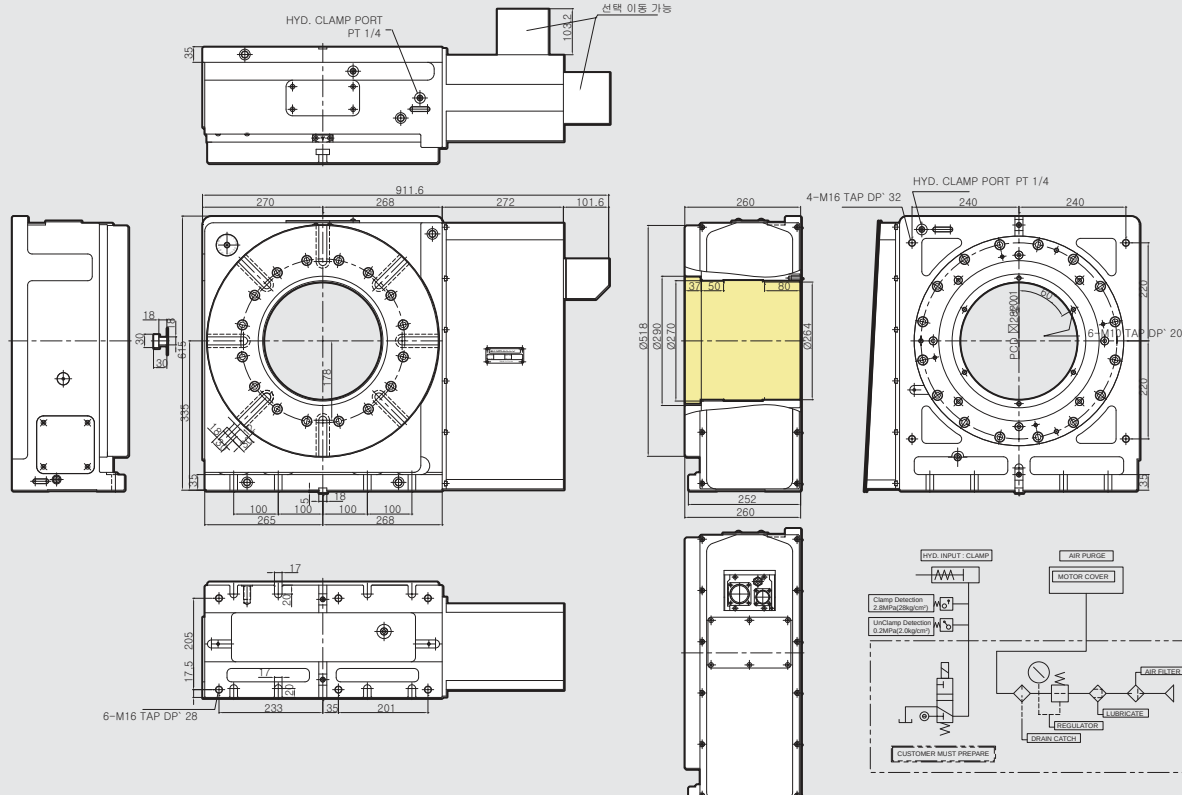


Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø518	335	Ø290H7	Ø264H8	Hydraulic Max.35bar	19.97	3200
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
25	1/120	4	20	430	αiF22 / 3000	
Allowable Load					Allowable Cutting Torque	
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
600	300	50	8000	3200	2600	

S-515F22



S-650F22

4th axis for NC Rotary Table (Big Bore Type)

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Solid Body
- Large Through Hole
- High Clamping power (Hydraulic)

S-SERIES

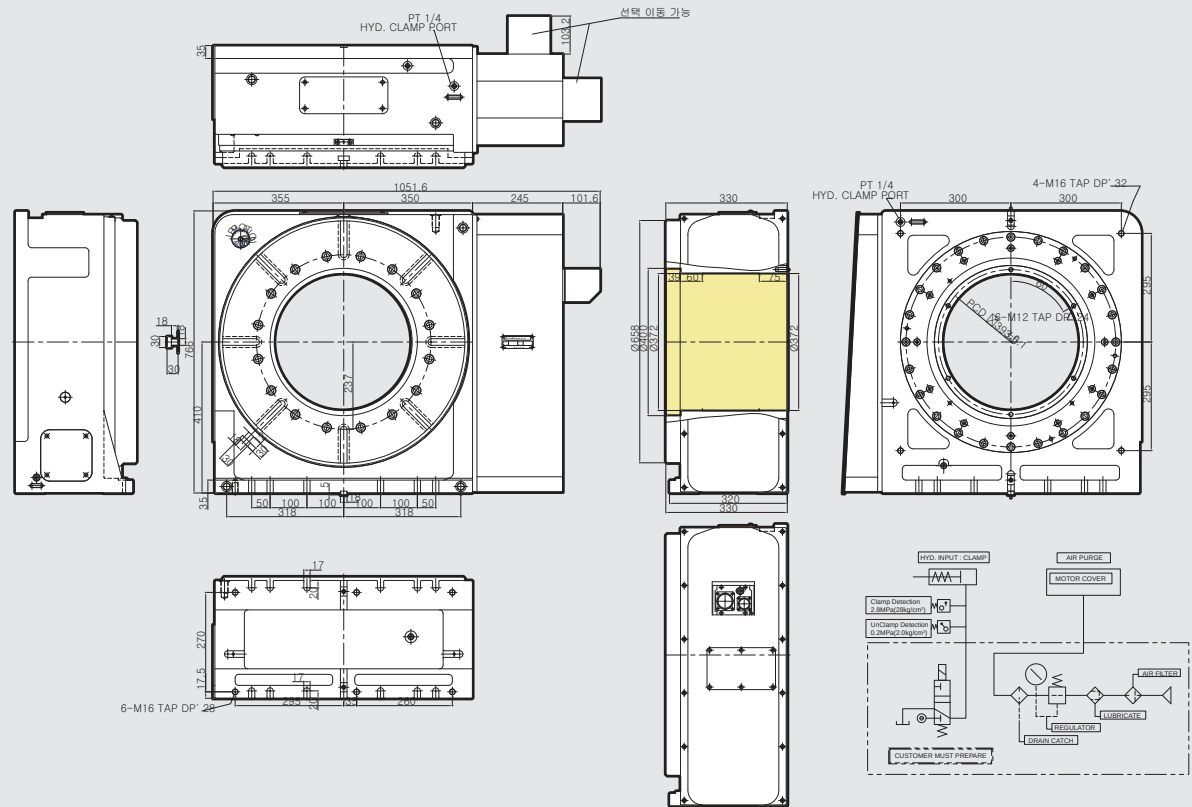


Model No. S-650F22

Servo Motor
Servo Motor Maker
Table Diameter
TYPE : Single Spindle NC Rotary Table (Big Bore Type)

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø656	410	Ø400H7	Ø372H8	Hydraulic Max.35bar	33.07	4000
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
25	1/120	4	20	750	αiF22 / 3000	
Allowable Load						Allowable Cutting Torque
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
 1000	 400	 70	 10000	 4000	 5000	

S-650F22



S-120,120L

Controller type for NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Solid Body
- High Clamping power

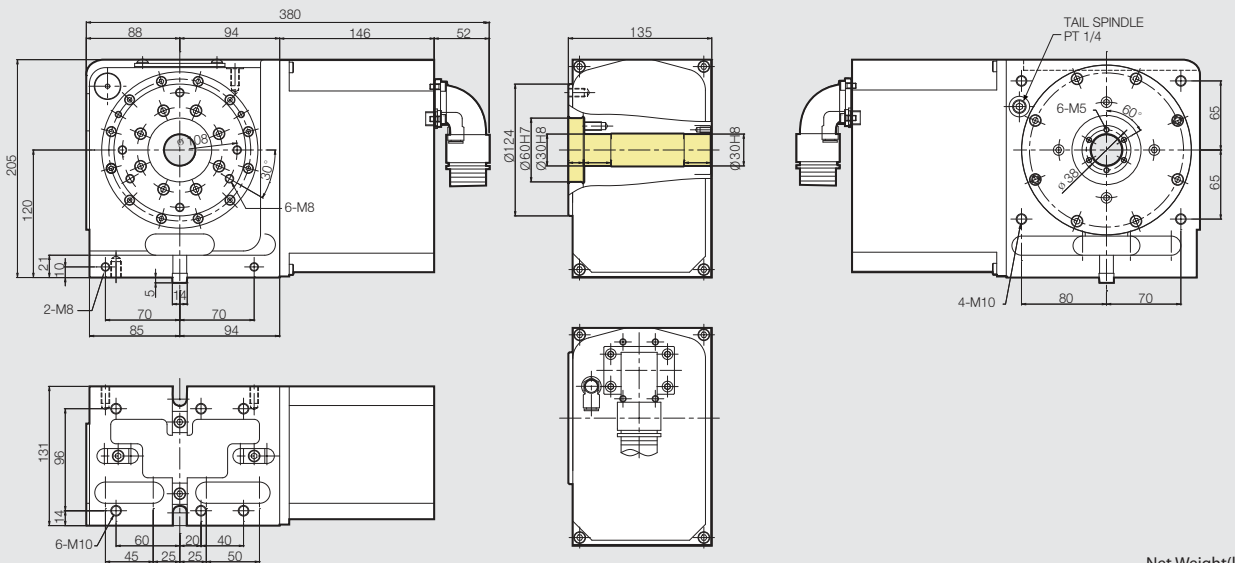
S-SERIES



Model No. S-120L

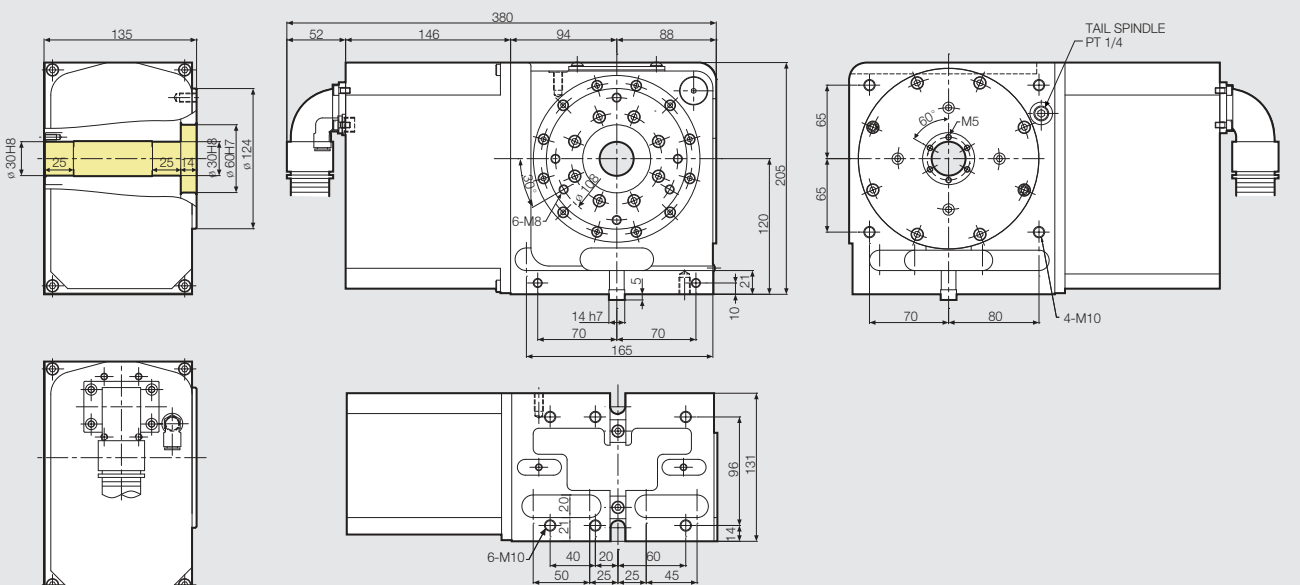
Motor Side
Table Diameter
TYPE : Single Spindle NC Rotary Table(Standard)

S-120



Net Weight(kg) :33

S-120L



Net Weight(kg) :33

S-170, 170L

Controller type for NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

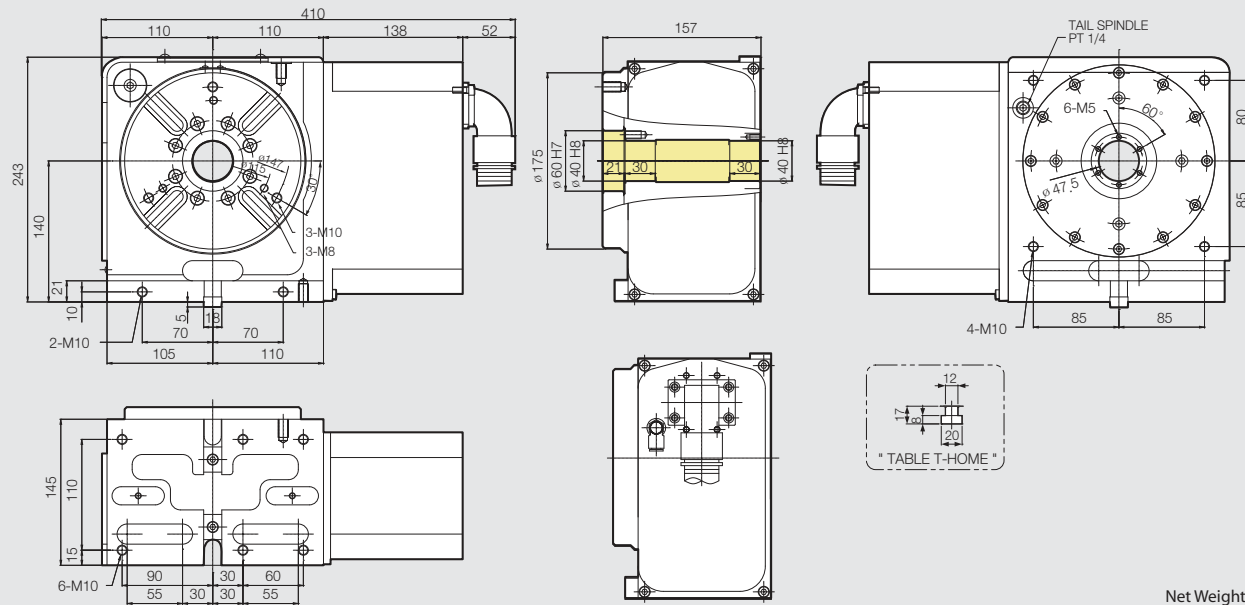


S-SERIES

Model No. S-170L

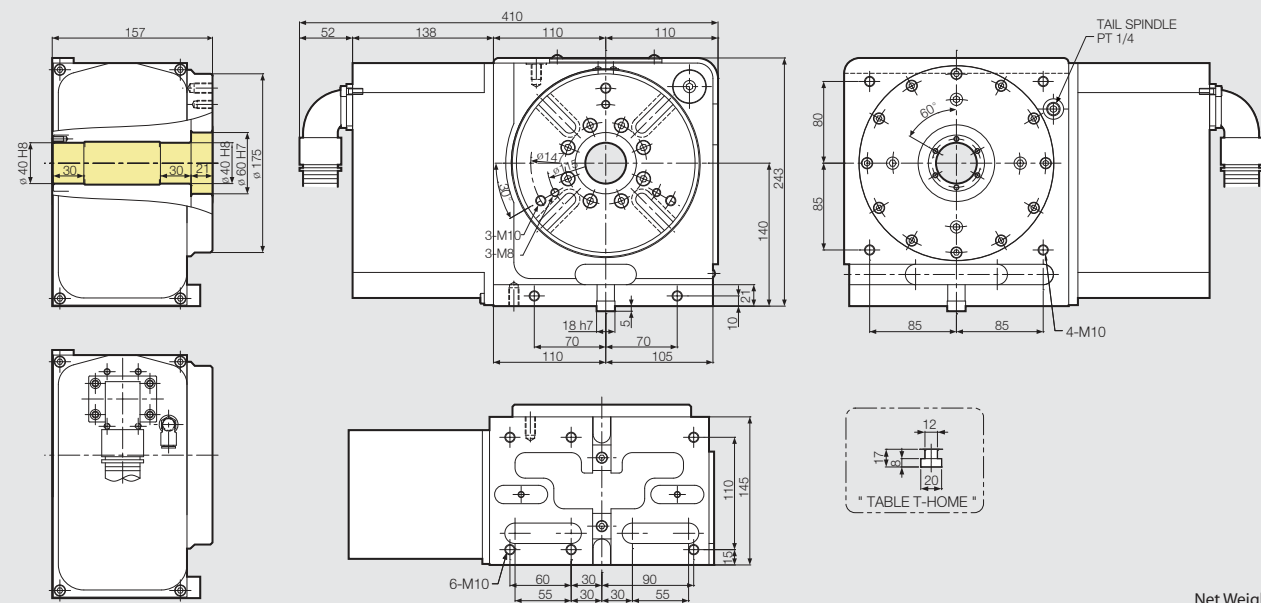


S-170



Net Weight(kg) : 50

S-170L



Net Weight(kg) : 50

S-200, 200L

Controller type for NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

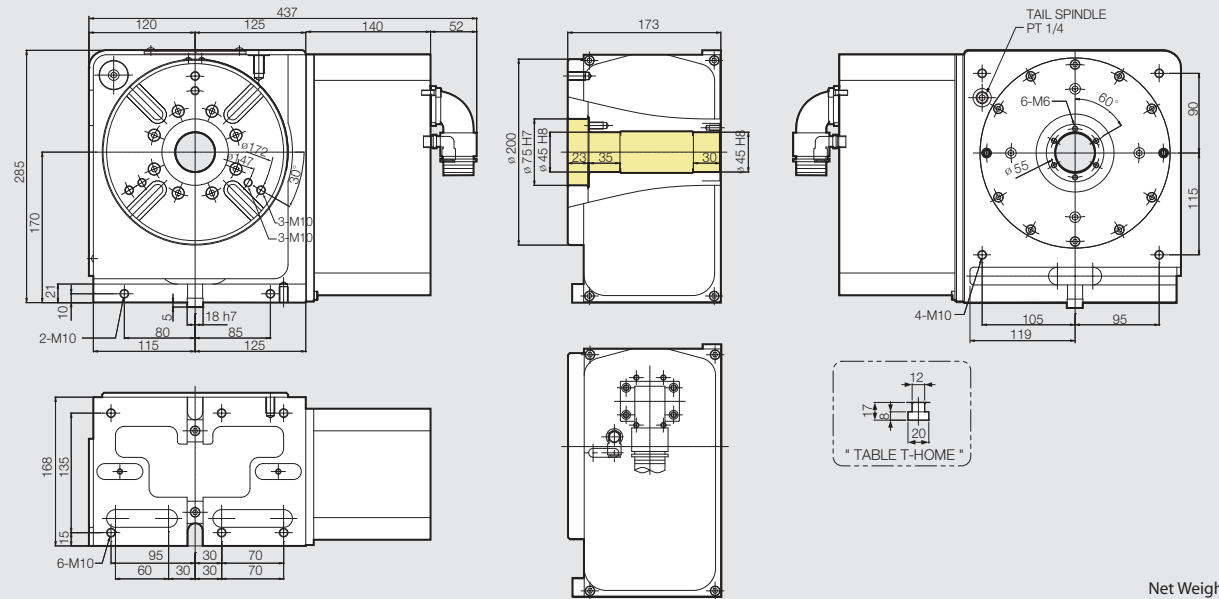


S-SERIES

Model No. S-200L

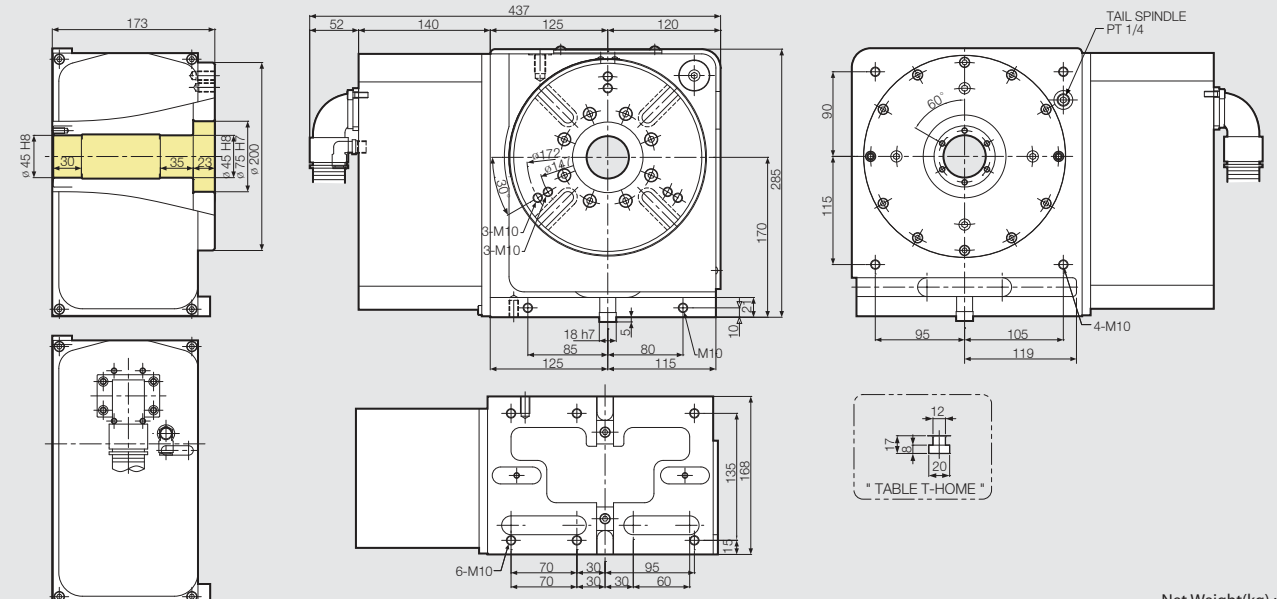


S-200



Net Weight(kg) : 71

S-200L



Net Weight(kg) : 71

S-250i, 250Li

Controller type for NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

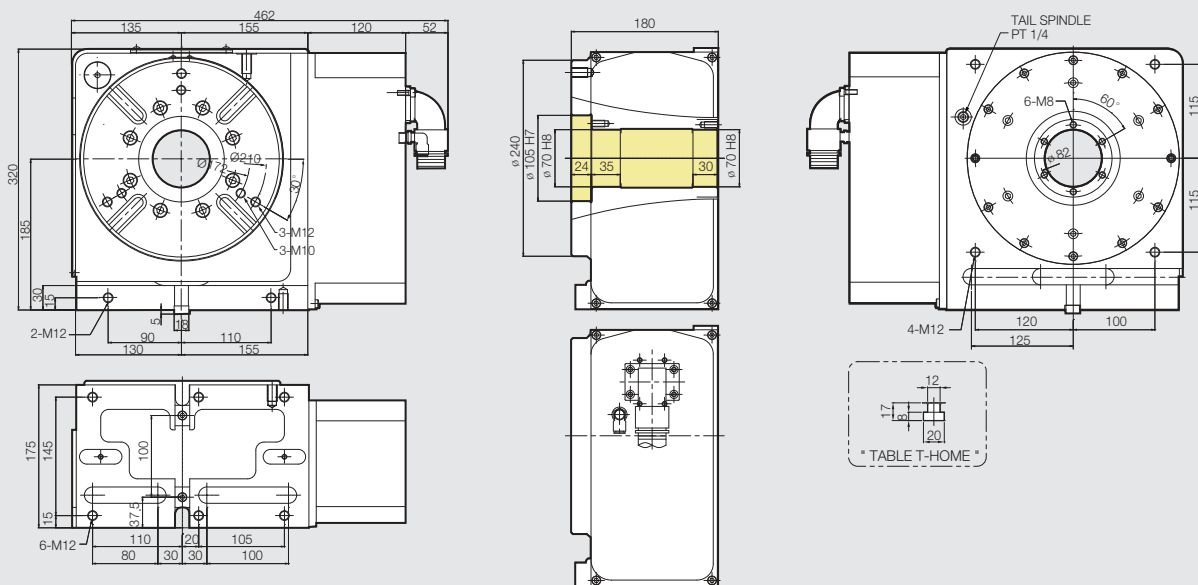
S-SERIES



Model No. **S-250Li**

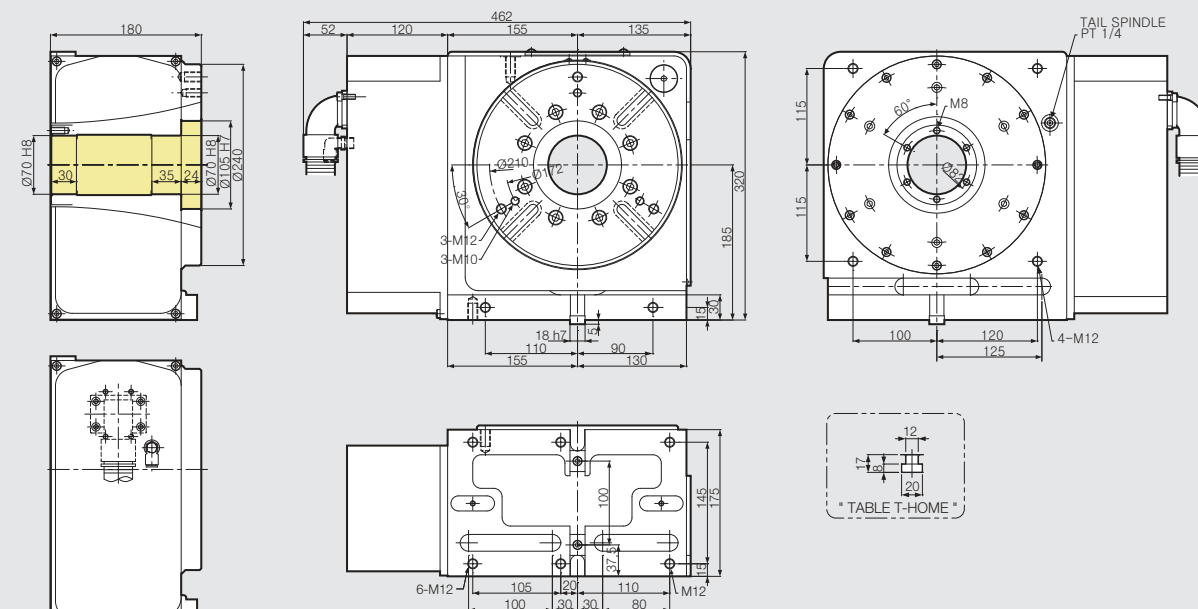
Motor Spec (None : 1HP, i : 2HP)
 Motor Side (None : Right, L : Left)
 Table Diameter
 TYPE : Single Spindle NC Rotary Table(Standard)

S-250i



Net Weight(kg) : 91

S-250Li



Net Weight(kg) : 91

S-320i, 320Li

Controller type for NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

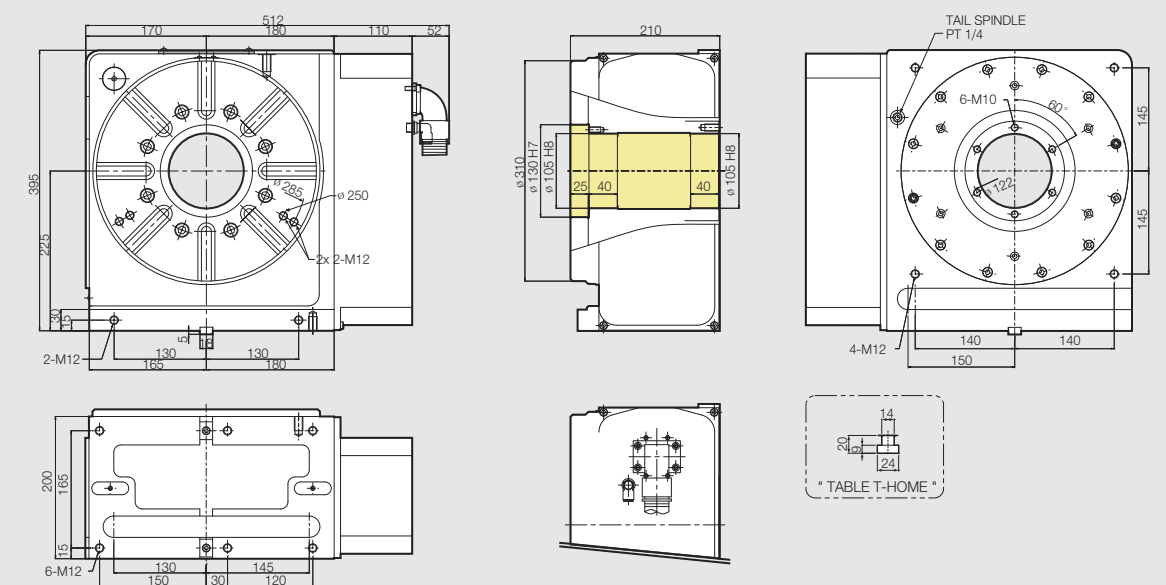
S-SERIES



Model No. **S-320Li**

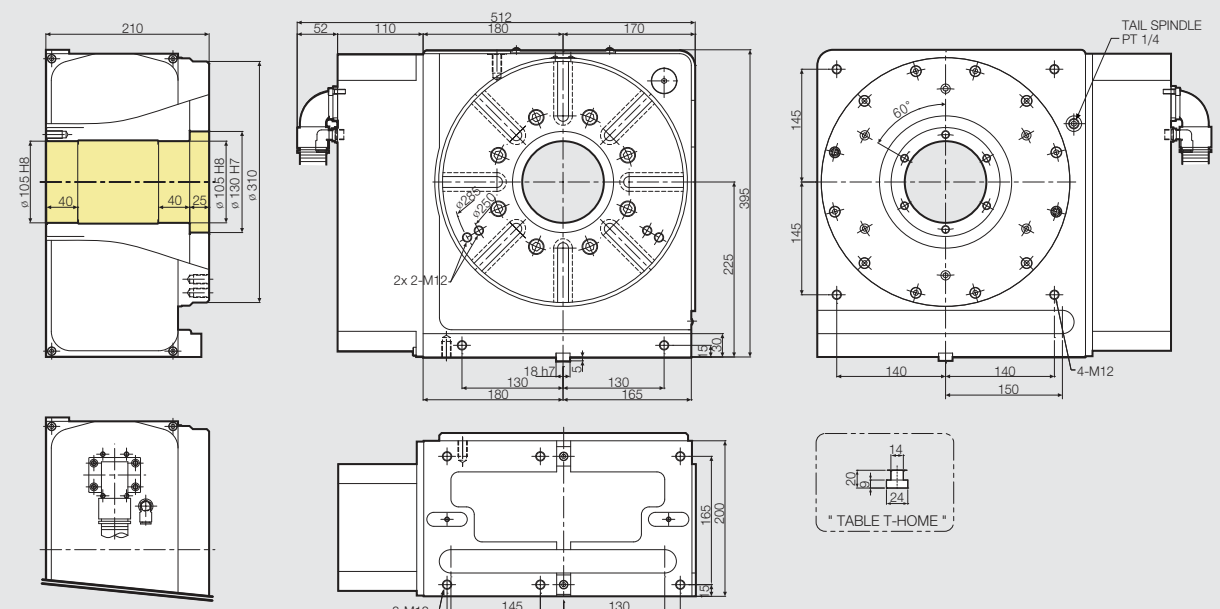
Motor Spec (None : 1HP, i : 2HP)
 Motor Side (None : Right, L : Left)
 Table Diameter
 TYPE : Single Spindle NC Rotary Table(Standard)

S-320i



Net Weight(kg) : 154

S-320Li



Net Weight(kg) : 154

HRS-204F4

4th axis Hydraulic NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

HRS-SERIES



Model No. **HRS-204 F4**

— Servo Motor
— Servo Motor Maker
— Table Diameter
— TYPE : Hydraulic Single Spindle NC Rotary Table

* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø210	170	Ø75H7	Ø45H8	Hydraulic	0.8	720
Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	20	79	αiF4 / 4000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
200	100	17	1100	480	270	

HRS-254F4

4th axis Hydraulic NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

HRS-SERIES



Model No. **HRS-254 F4**

— Servo Motor
— Servo Motor Maker
— Table Diameter
— TYPE : Hydraulic Single Spindle NC Rotary Table

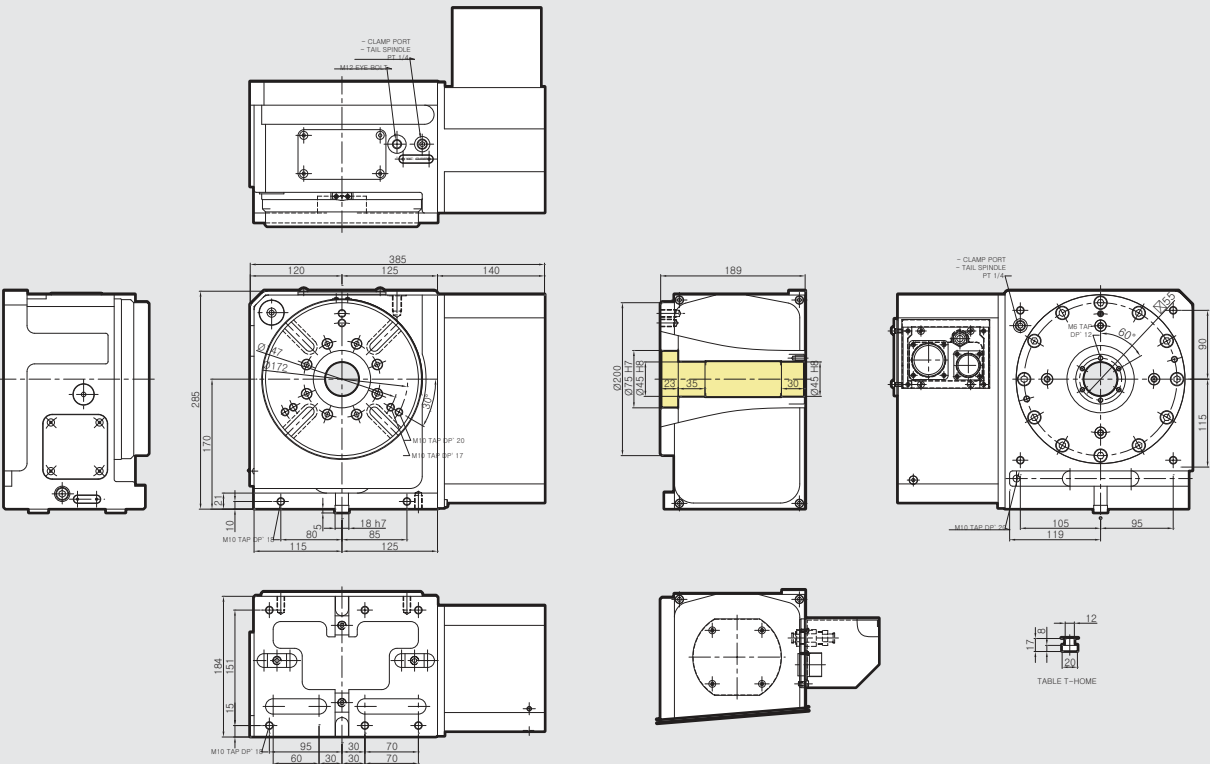
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

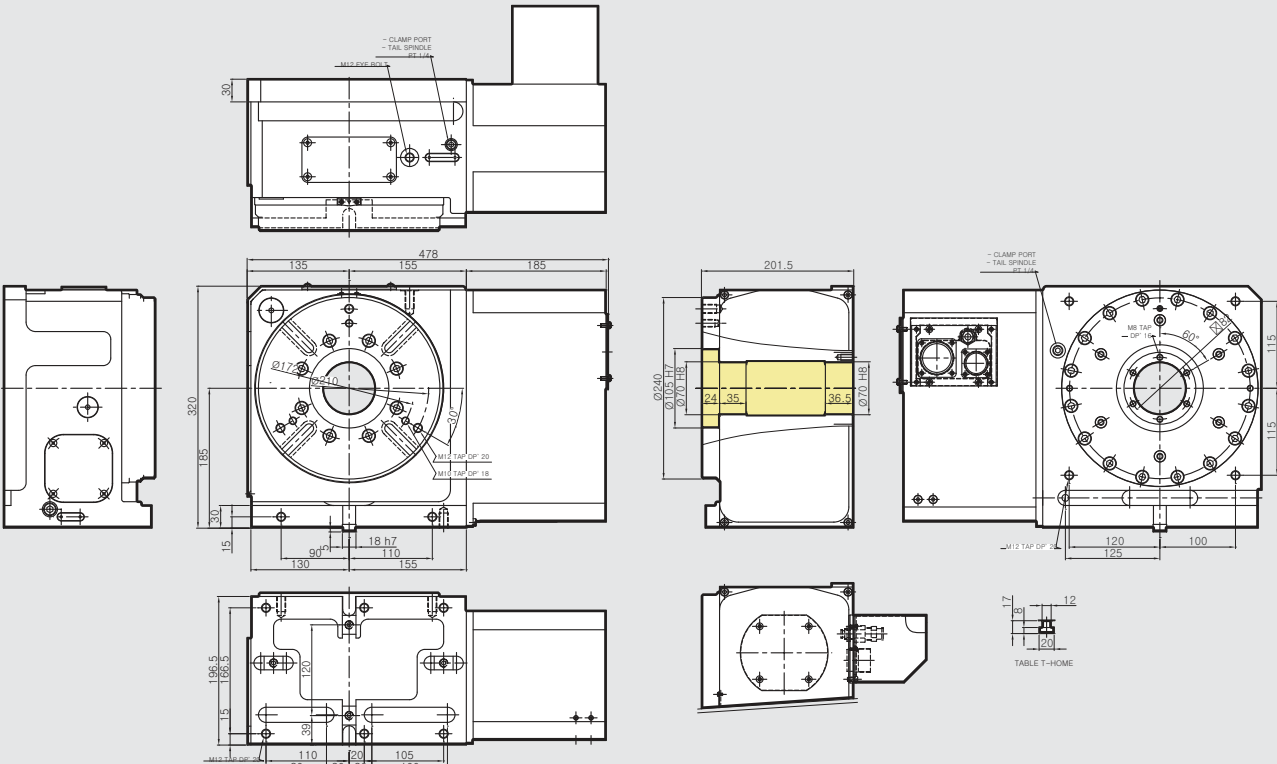
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø240	185	Ø105H7	Ø70H8	Hydraulic	3.12	1500
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	20	116	αiF4 / 4000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
250	125	21	1600	750	480	

HRS-204F4



HRS-254F4



HRS-254F8

4th axis Hydraulic NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

HRS-SERIES



Model No. **HRS-254 F8**

Servo Motor
Servo Motor Maker
Table Diameter
TYPE : Hydraulic Single Spindle NC Rotary Table

* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø240	185	Ø105H7	Ø70H8	Hydraulic	3.12	1500
Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	20	116	αiF8 / 3000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
250	125	21	1600	750	600	

HRS-324F8

4th axis Hydraulic NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

HRS-SERIES



Model No. **HRS-324 F8**

Servo Motor
Servo Motor Maker
Table Diameter
TYPE : Hydraulic Single Spindle NC Rotary Table

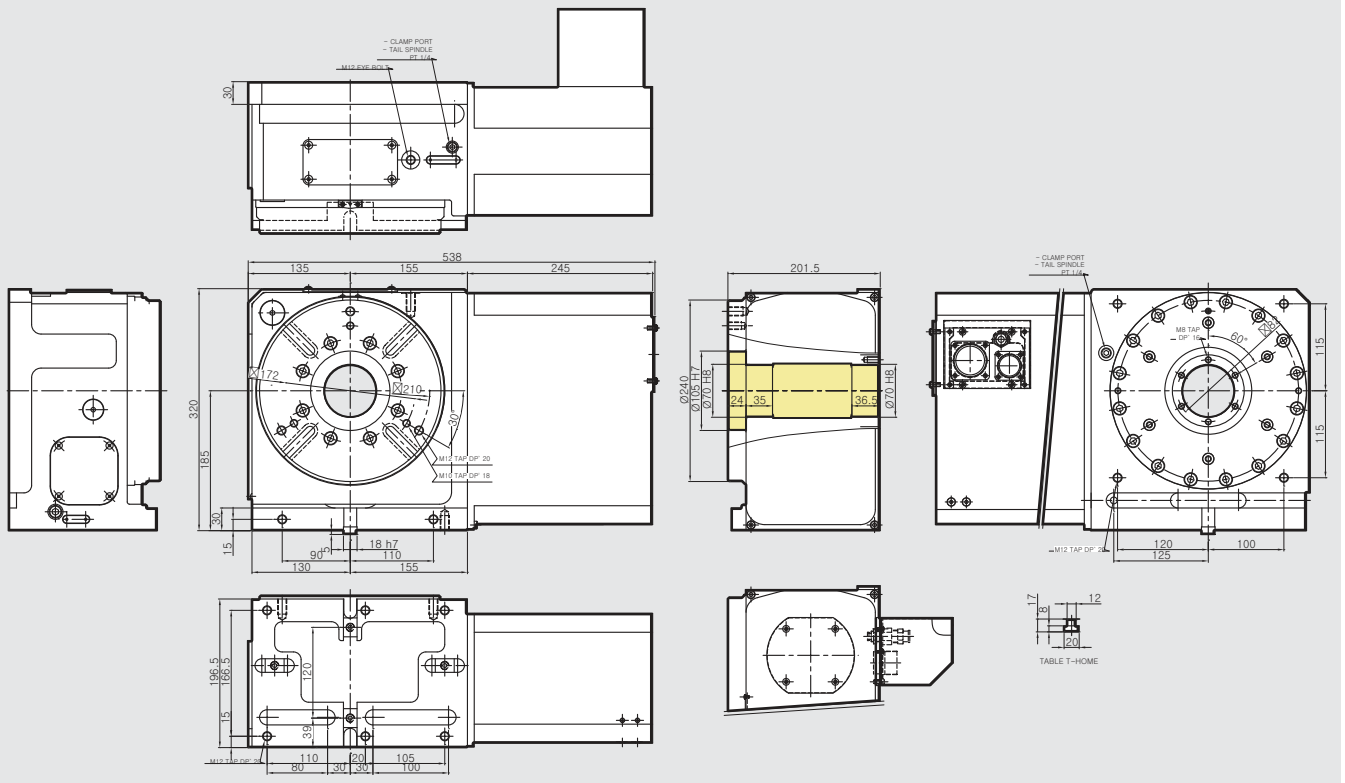
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

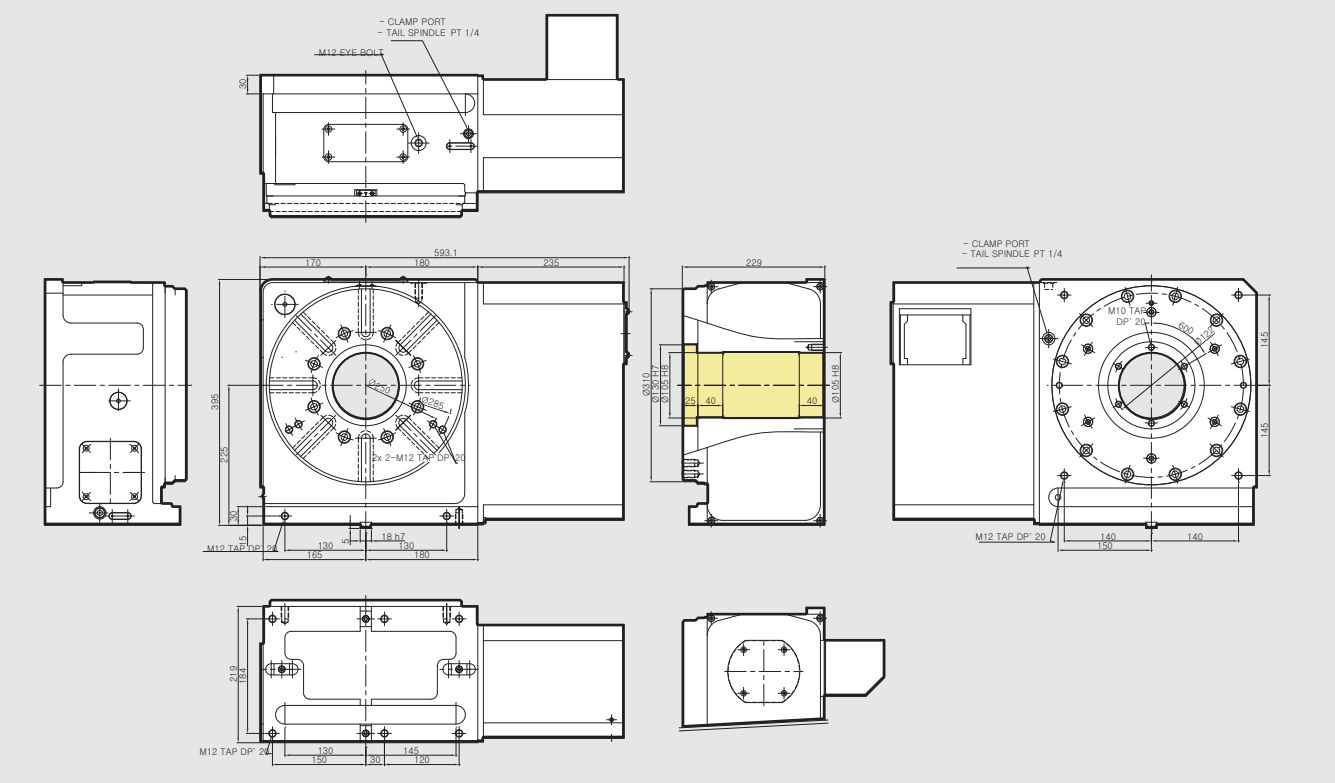
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø310	225	Ø130H7	Ø105H8	Hydraulic	4.49	2300
Max. Spindle Speed (mm ⁻¹)	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
25	1/120	4	20	180	αiF8 / 3000	
Allowable Load						Allowable Cutting Torque
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
350	180	25	2400	1440	800	

HRS-254F8



HRS-324F8



Controller Type Hydraulic NC Rotary Table

- # HRS-SERIES



TYPE : Hydraulic Single Spindle NC Rotary Table

Technical drawing of the M10 TAP DP 17, showing three views: front, top, and side. The front view shows a circular head with 17 mounting holes (147° spacing) and a central hole (Ø17). The top view shows the base with 17 mounting holes (147° spacing) and a central hole (Ø17). The side view shows the profile of the unit with a height of 170 mm and a base width of 125 mm. Dimensions are given in mm.

The technical drawing shows two views of the M12 TAP DP 20 valve:

- Top View:** Shows the circular end face with a central bore of diameter $\varnothing 17$. The outer diameter is 462 mm. Key dimensions include:
 - Overall width: 462 mm
 - Flange thickness: 18 h7
 - Internal features: $M12 \text{ TAP DP } 20$, $M10 \text{ TAP DP } 18$
 - Mounting holes: 8 holes with diameter $\varnothing 24$
 - Dimensions: 135, 155, 120, 52, 320, 185, 90, 130, 110, 155.
- Side View:** Shows the profile of the valve body. Key dimensions include:
 - Total height: 196.5 mm
 - Body height: 160.5 mm
 - Flange thickness: 15 mm
 - Internal channel depth: 120 mm
 - Bottom flange thickness: 35 mm
 - Dimensions: 110, 80, 30, 30, 20, 105, 100.

Controller Type Hydraulic NC Rotary Table

- # HRS-SERIES



Motor Spec (None : 1HP, i : 2HP)
Table Diameter
TYPE : Hydraulic Single Spindle NC Rotary Table

- CLAMP PORT
- TAIL SPINDLE PT 1/4"
M12 EYE BOLT

170 512 180 110

395 225 330

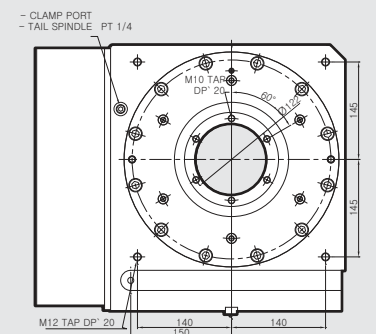
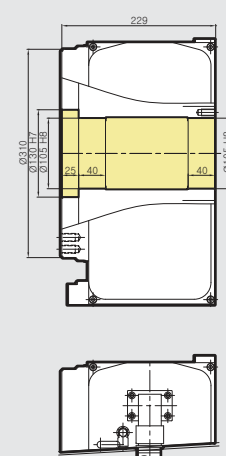
M12 TAP DP 20 130 165 18mm 180

$\phi 20$

2x 2-M12 TAP DP 20

219 184 130 150 30 145

M12 TAP DP 20



TR-120FF

4th, 5th Axis for Tilting NC Rotary Table

- Compact Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Compact Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)



TR-SERIES

Model No.

TR-120FF

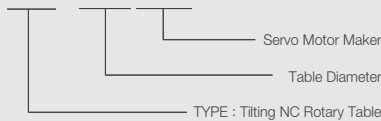


Table Dia. [mm]	Center Height [mm]	Resister Dia.on Face Plate [mm]	Spindle Through Hole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
(Table: Option) Ø130	150	Ø60H7	Ø32H8	Hydraulic Max. 20bar	0.06	115
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	33.3	1/90	4	30	240	αiF2 / 5000
Tilting Axis	16.6	1/180	4	60	380	αiF2 / 5000
Allowable Load				Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]	
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
35	20	4	200	120	190	10

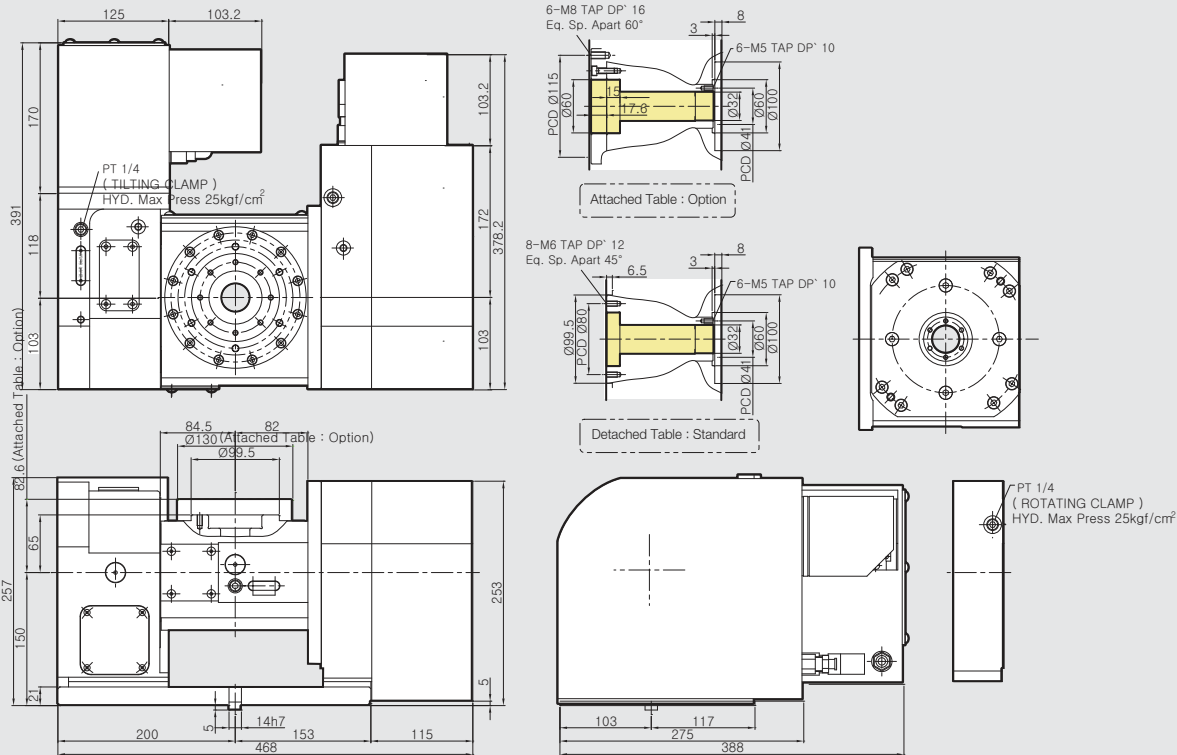
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Tilting Range : -20° ~ 110°

TR-120FF



TR-200FF

4th, 5th Axis for Tilting NC Rotary Table

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)



TR-SERIES

Model No.

TR-200FF

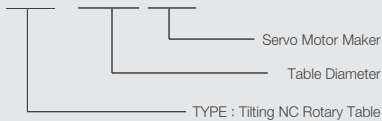


Table Dia. [mm]	Center Height [mm]	Resister Dia.on Face Plate [mm]	Spindle Through Hole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
(Table: Option) Ø200	180	Ø70H7	Ø45H8	Hydraulic Max. 35bar	0.25	250
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	33.3	1/90	4	30	450	αiF4 / 4000
Tilting Axis	16.6	1/180	4	60	800	αiF4 / 4000
Allowable Load				Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]	
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
60	40	5	800	450	250	12

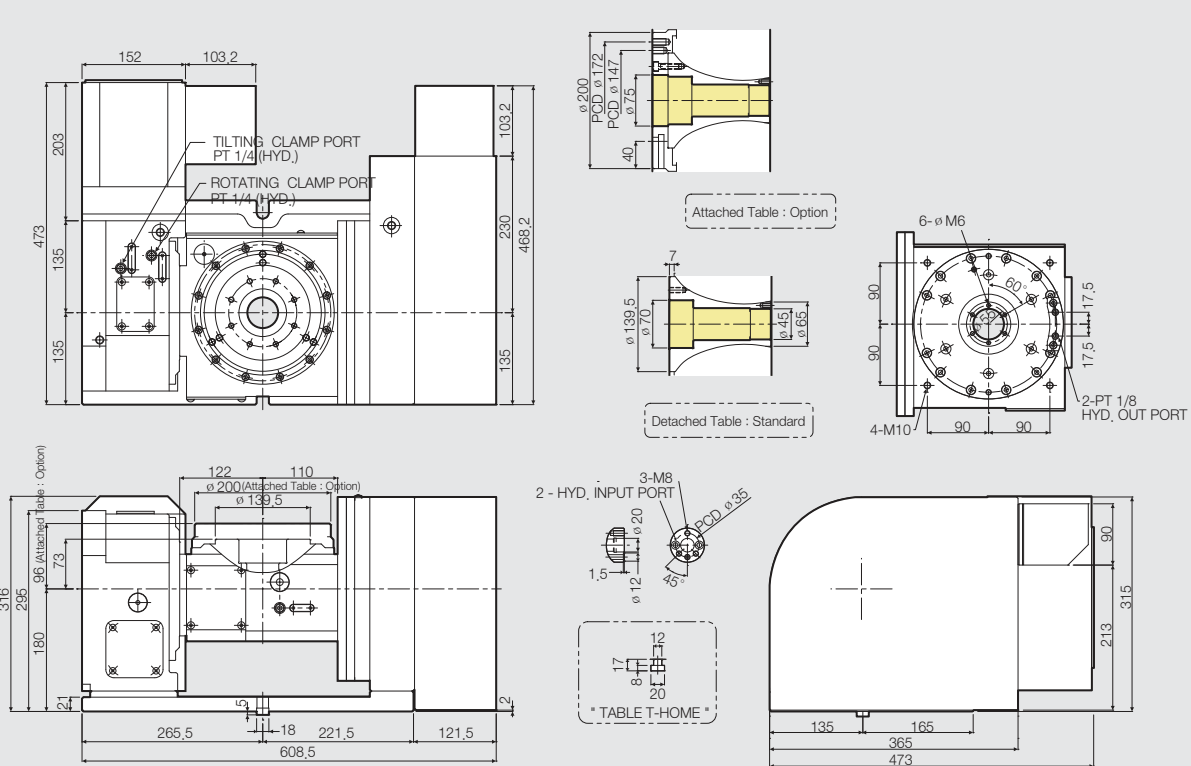
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Tilting Range : -20° ~ 110°

TR-200FF



TR-250FF

4th, 5th Axis for Tilting NC Rotary Table

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

TR-SERIES



Model No. TR-250FF



* Servo Motor Brand

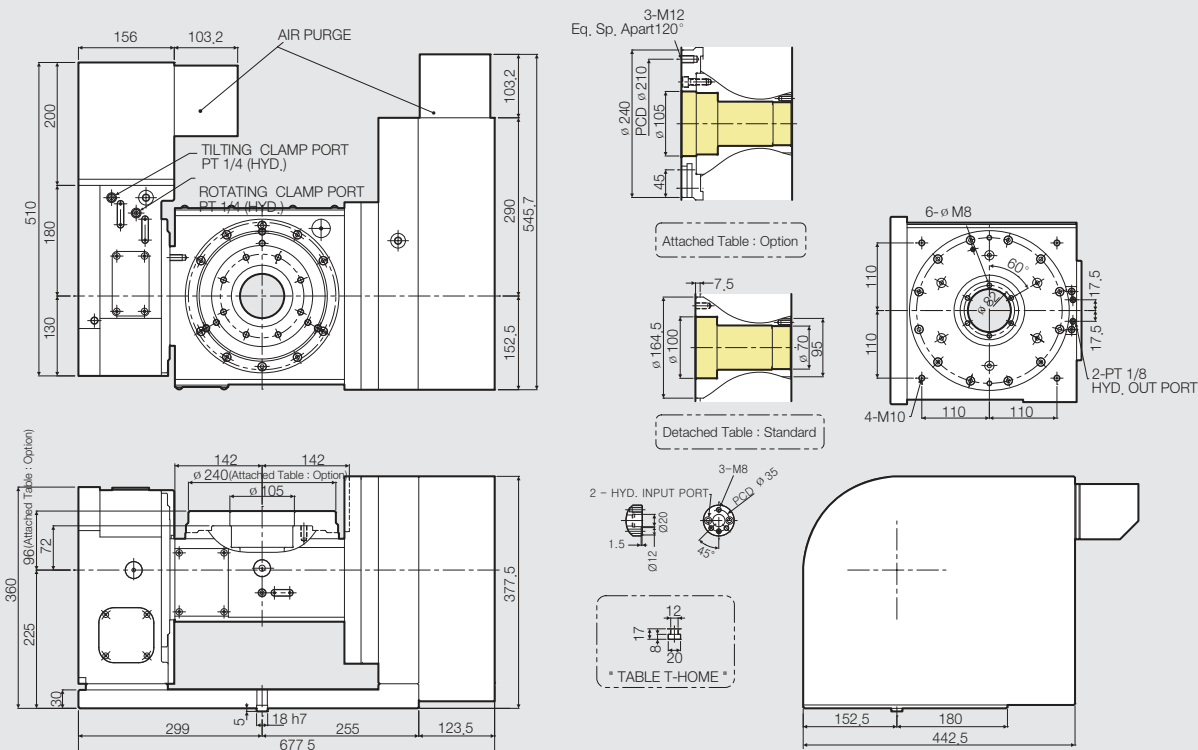
AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia.on Face Plate [mm]	Spindle Through Hole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
(Table: Option) Ø240	225	Ø100H7	Ø70H8	Hydraulic Max. 35bar	0.78	295
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio [mm]	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	33.3	1/90	4	30	900	αiF4 / 4000
Tilting Axis	16.6	1/180	4	60	1200	αiF4 / 4000
Allowable Load				Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]	
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
100	60	12	1200	900	600	26

Tilting Range : -20° ~ 110°

TR-250FF



TR-320FF

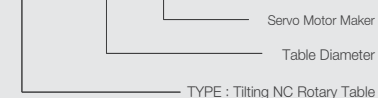
4th, 5th Axis for Tilting NC Rotary Table

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

TR-SERIES



Model No. TR-320FF



* Servo Motor Brand

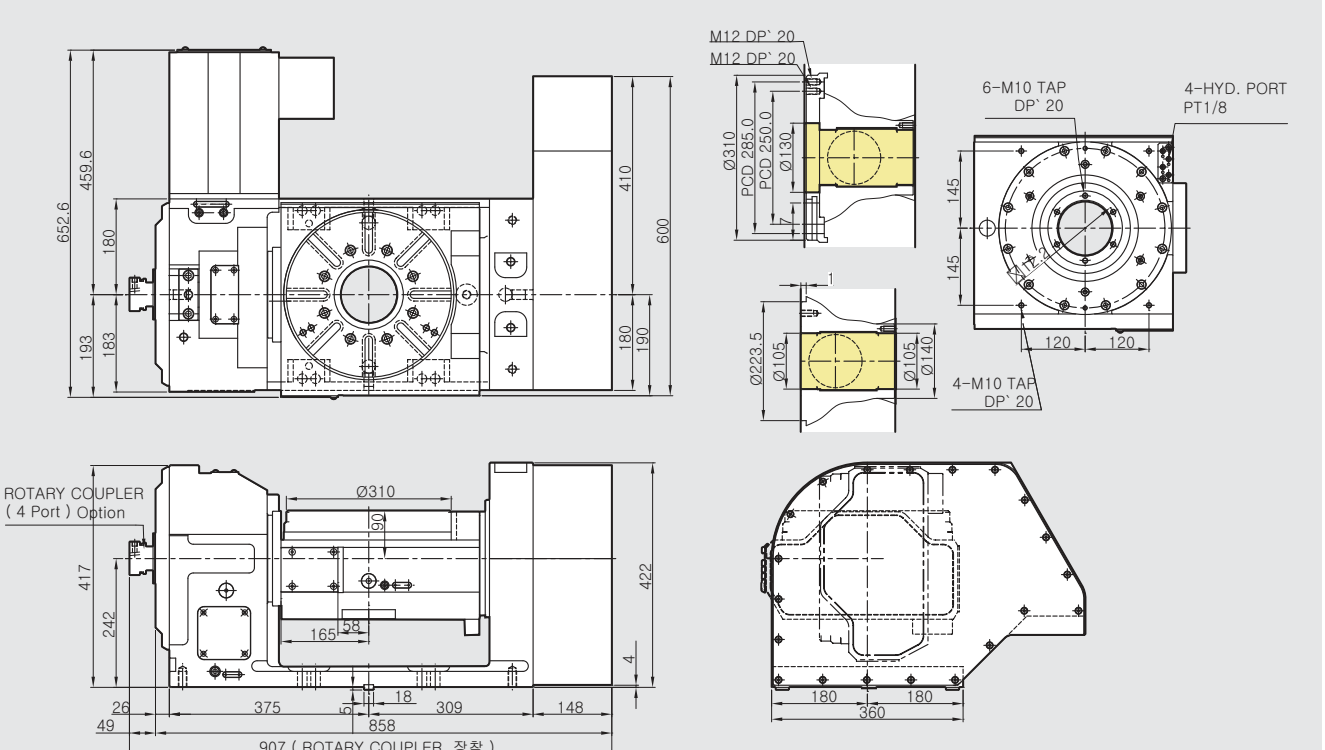
AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia.on Face Plate [mm]	Spindle Through Hole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
(Table: Option) Ø320	242	Ø130H7	Ø105H8	Hydraulic Max. 35bar	-	410
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio [mm]	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	25	1/120	4	30	-	αiF8 / 3000
Tilting Axis	25	1/120	8	60	-	αiF12 / 3000
Allowable Load				Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]	
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
150	100	13.5	-	-	-	-

Tilting Range : -20° ~ 110°

TR-320FF



TR-120, 200i

Controller type for Tilting NC Rotary Table

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Compact Design
- Extremely Rigid Body

TR-SERIES

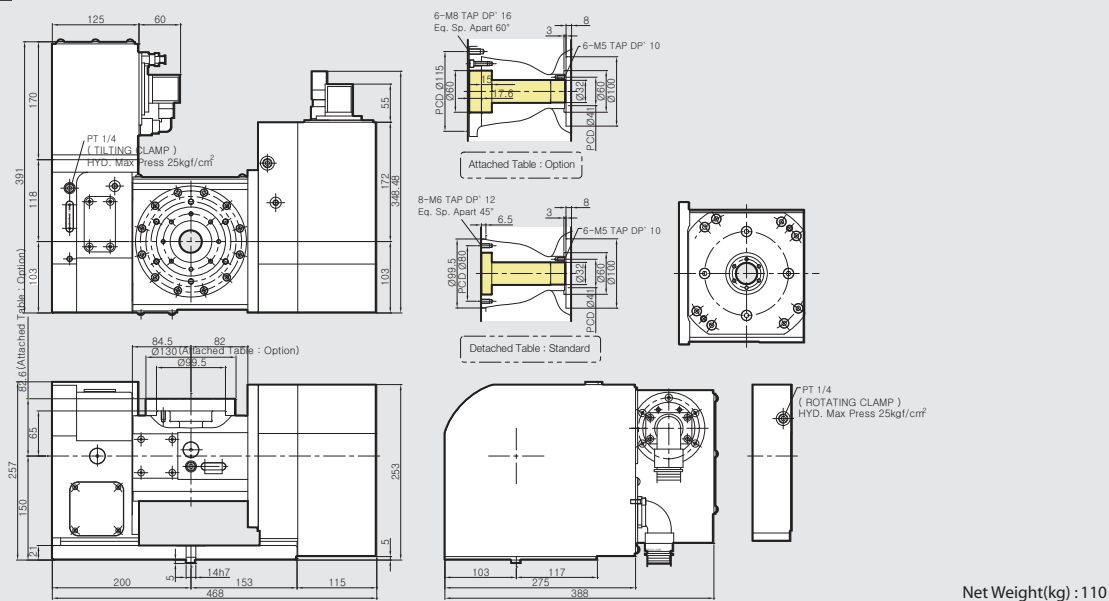


Model No. **TR-120**

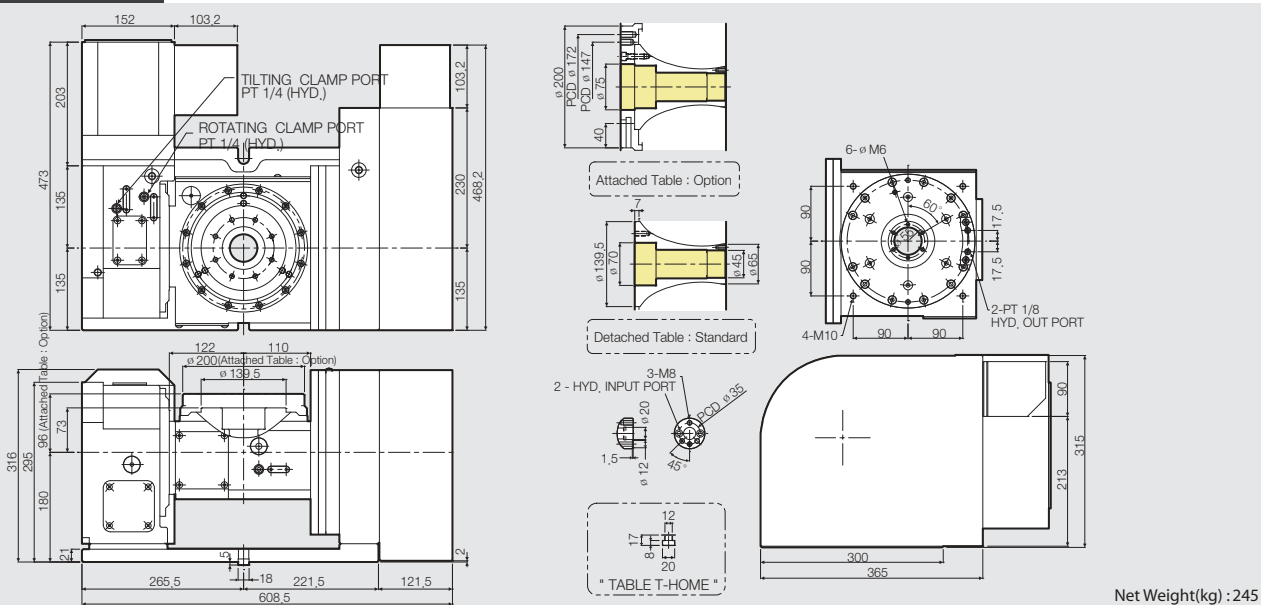
Table Diameter

TYPE : Tilting NC Rotary Table

TR-120



TR-200i



TR-250i

Controller type for Tilting NC Rotary Table

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Compact Design
- Extremely Rigid Body

TR-SERIES



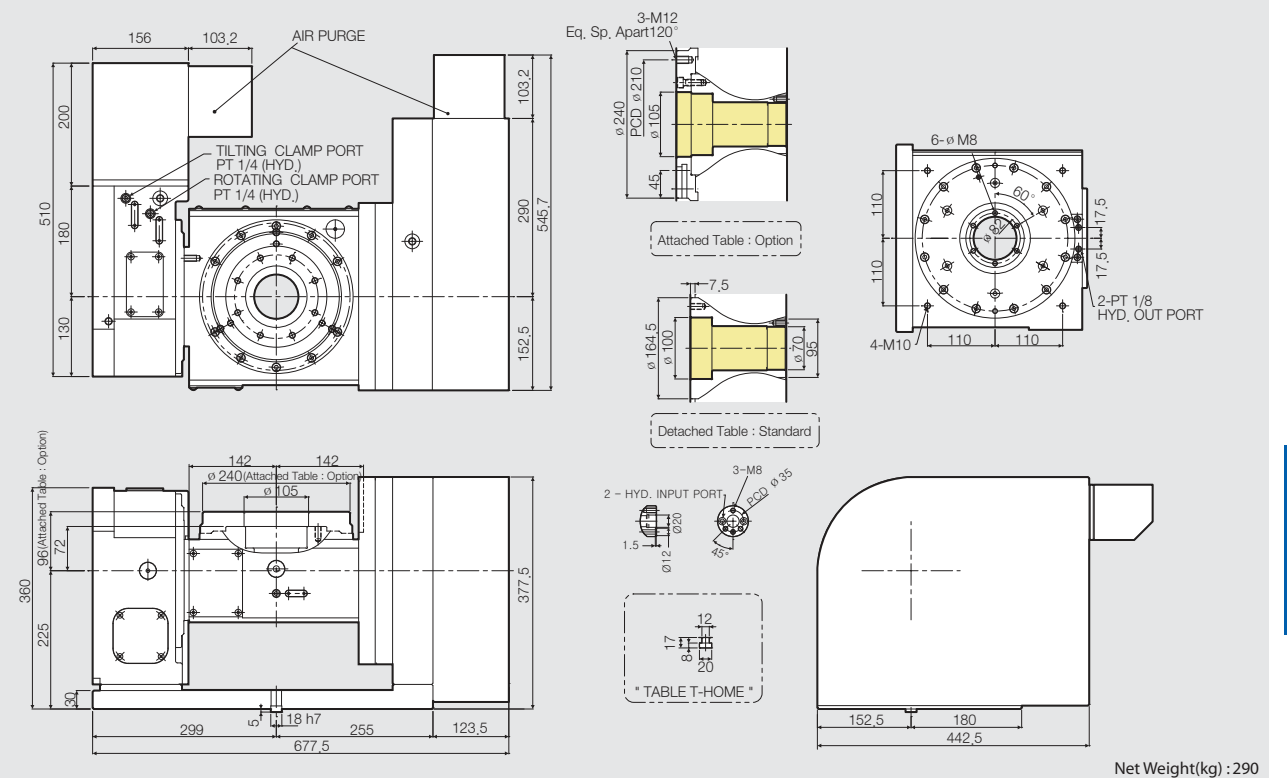
Model No. **TR-250 i**

Motor Spec (None : 1HP, i : 2HP)

Table Diameter

TYPE : Tilting NC Rotary Table

TR-250i



MTR2-174

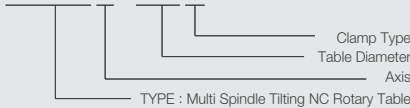
Controller type for Multi Spindle Tilting NC Rotary Table

- Multi Spindle Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

MTR-SERIES



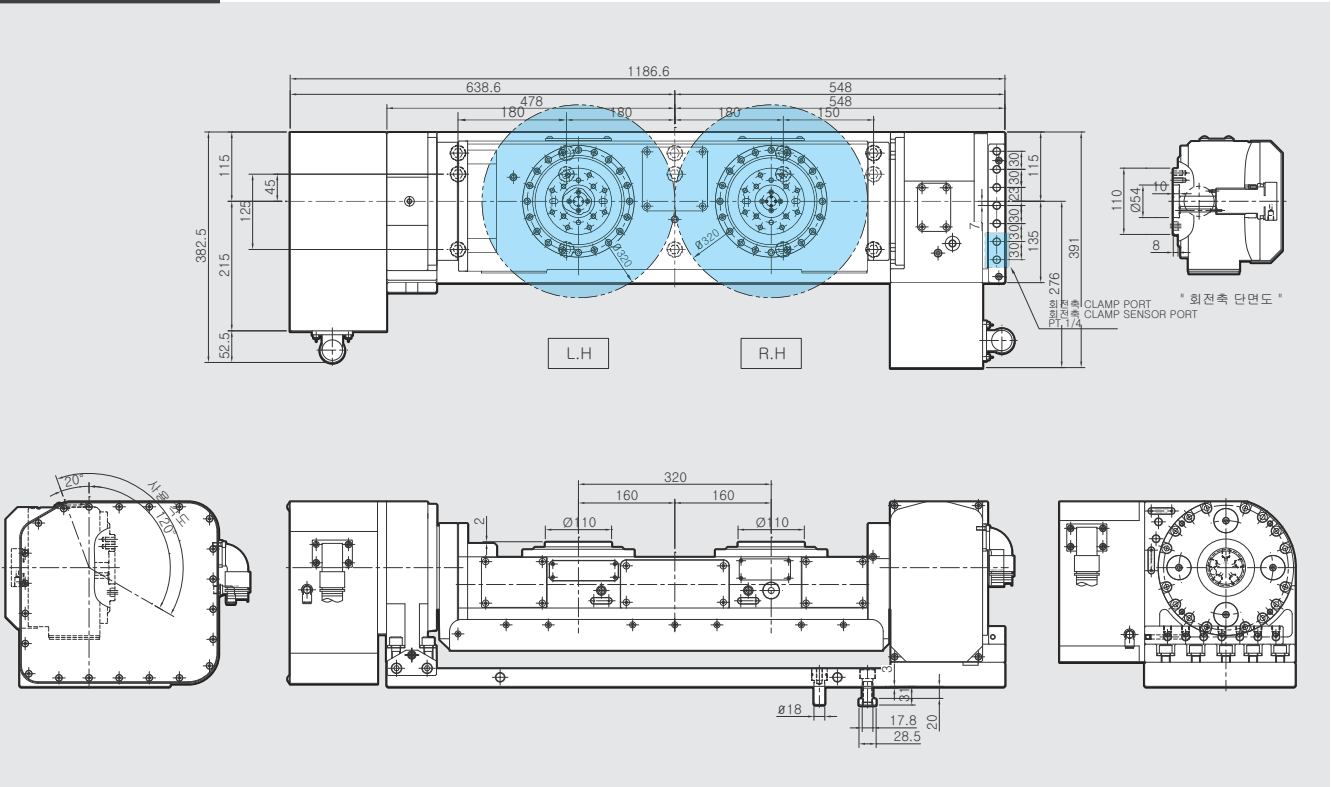
Model No. **MTR2-174**



Spindle Dia. [mm]	Center Height [mm]	Resister Dia.on Face Plate [mm]	Distance of Center [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
Ø110	240	Ø54 (110)	Ø320	Hydraulic Max. 35bar	-	295
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	25	1/120	4	40	600	SGMPS-15A2A6S
Tilting Axis	25	1/120	4	60	900	SGMPS-15A2A6S
Allowable Load					Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
40, 40	40, 40	-	-	-		

Tilting Range: -20° ~ +120°

MTR2-174



MTR2-204F

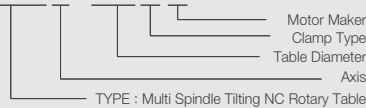
5th Axis for Multi Spindle Tilting NC Rotary Table

- Multi Spindle Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

MTR-SERIES



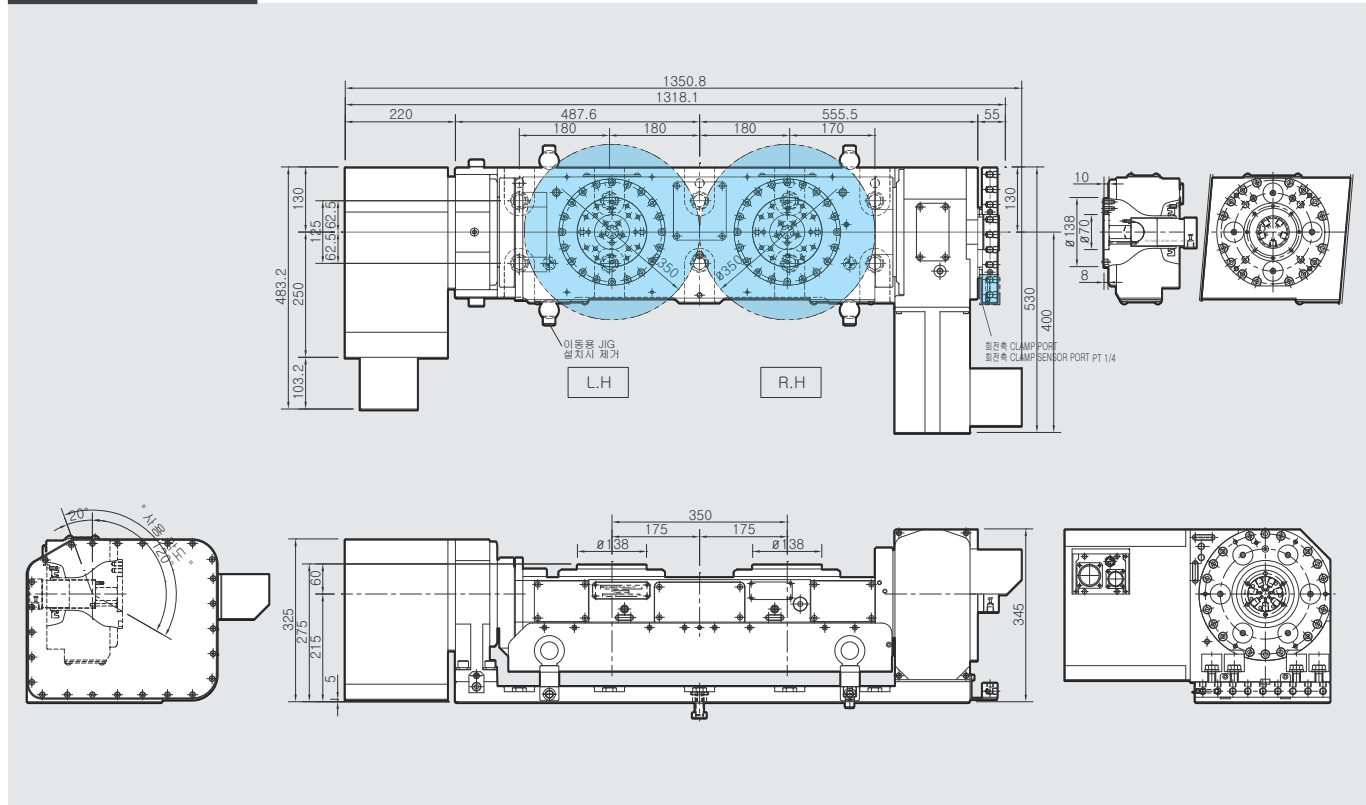
Model No. **MTR2-204F**



Spindle Dia. [mm]	Center Height [mm]	Resister Dia.on Face Plate [mm]	Distance of Center [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
Ø138	275	Ø70 (138)	Ø350	Hydraulic Max. -bar	-	360
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	25	1/120	4	40	800	αiF4 / 4000
Tilting Axis	25	1/120	4	60	1400	αiF8 / 3000
Allowable Load					Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
50, 50	50, 50	-	-	-		

Tilting Range: -20° ~ +120°

MTR2-204F



*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

MTR2-254F

5th Axis for Multi Spindle Tilting NC Rotary Table

- Multi Spindle Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

MTR-SERIES



Model No. **MTR2-254F**

Motor Maker
Clamp Type
Table Diameter
Axis
TYPE : Multi Spindle Tilting NC Rotary Table

* Servo Motor Brand

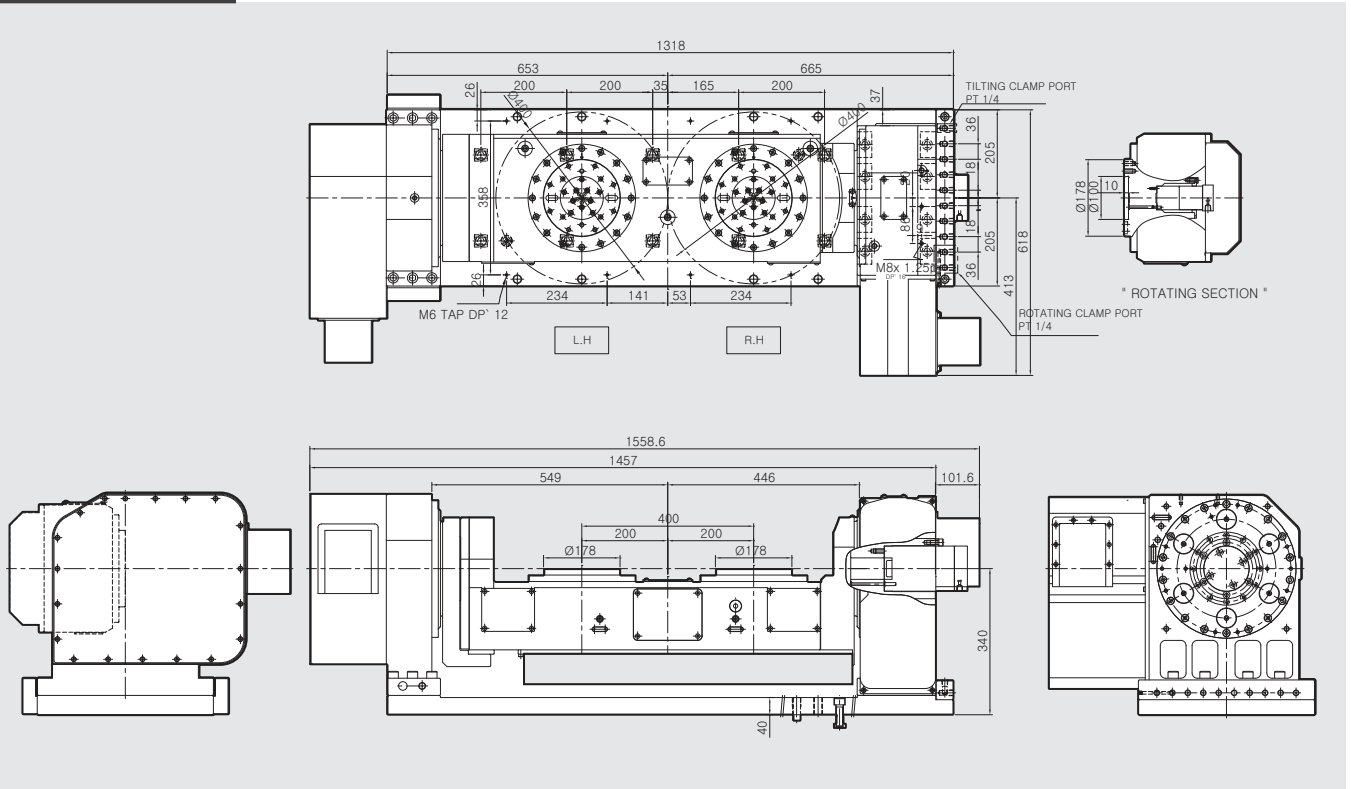
AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Spindle Dia. [mm]	Center Height [mm]	Resister Dia. on Face Plate [mm]	Distance of Center [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Net Weight [kg]
Ø178	340	Ø100 (178)	Ø400	Hydraulic Max. 35bar	0.78	890
	Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Clamp Togue [N·m]	Servo Motor [FANUC]
Rotating Axis	33.3	1/120	4	40	900	αiF4 / 4000
Tilting Axis	25	1/120	4	60	1200	αiF8 / 3000
Allowable Load					Allowable Cutting Torque [N·m]	Moment Of Tilting Weight W x L [kgf·m]
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]		
 100, 100	 60, 60	 12	 1200	 900	 800	 26

Tilting Range : -20° ~ +120°

MTR2-254



MS2-170F4

4th axis type for Multi Spindle NC Rotary Table

- Doubles production output
- Ideal for balanced work-pieces
- Realize High Clamping Force by applying Double Piston

MS-SERIES



Model No. **MS2-170F4**

Servo Motor
Servo Motor Maker
Table Diameter
Axis
TYPE : Multi Spindle NC Rotary Table

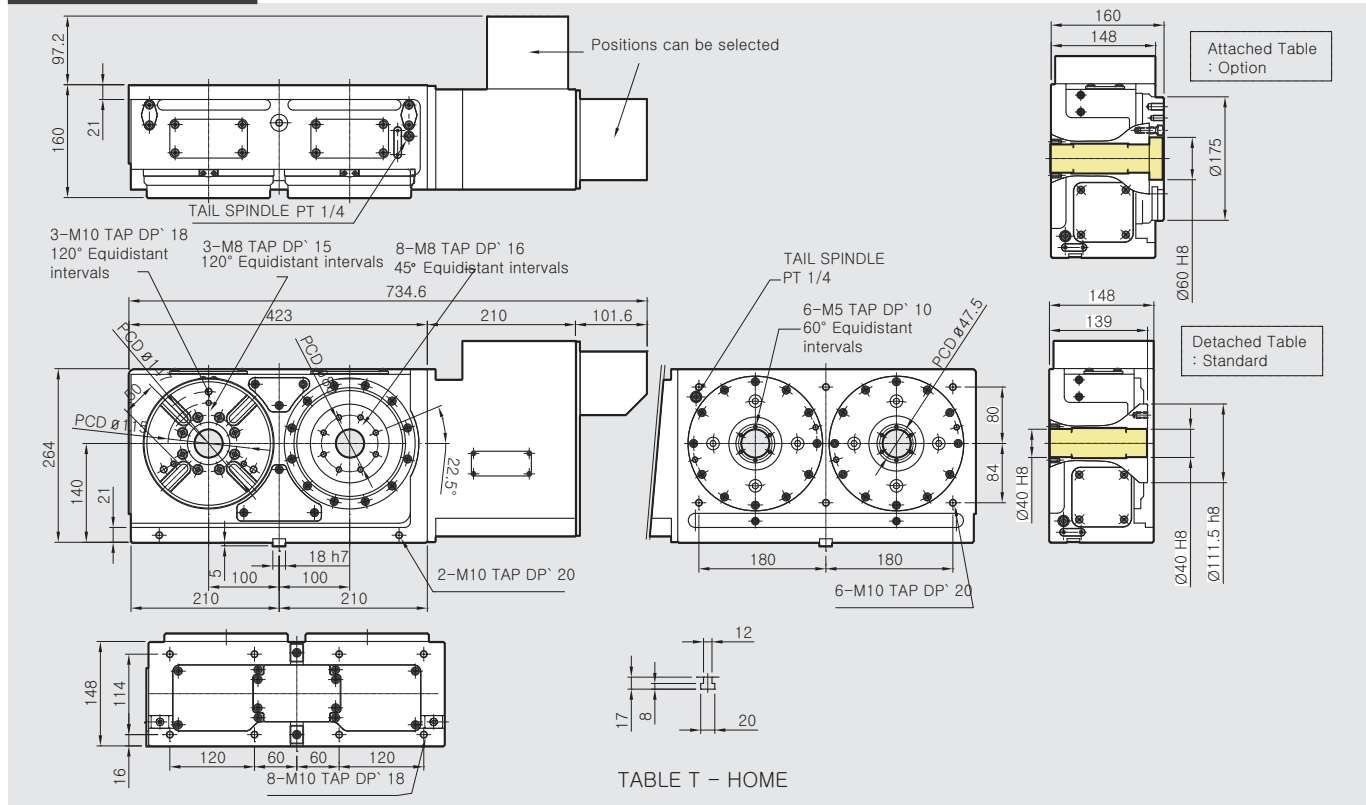
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
(Table: Option) Ø175	140	Ø60H8	Ø40H8	Pneumatic	0.51	380
Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	30	87	αiF4 / 4000	
Allowable Load					Allowable Cutting Torque [N·m]	
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]		
 160, 160	 80, 80	 10	 600	 380	 300	

MS2-170F4

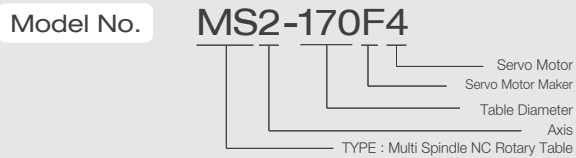


MS2-170LF4

4th axis type for Multi Spindle NC Rotary Table

- Doubles production output
- Ideal for balanced work-pieces
- Realize High Clamping Force by applying Double Piston

MS-SERIES



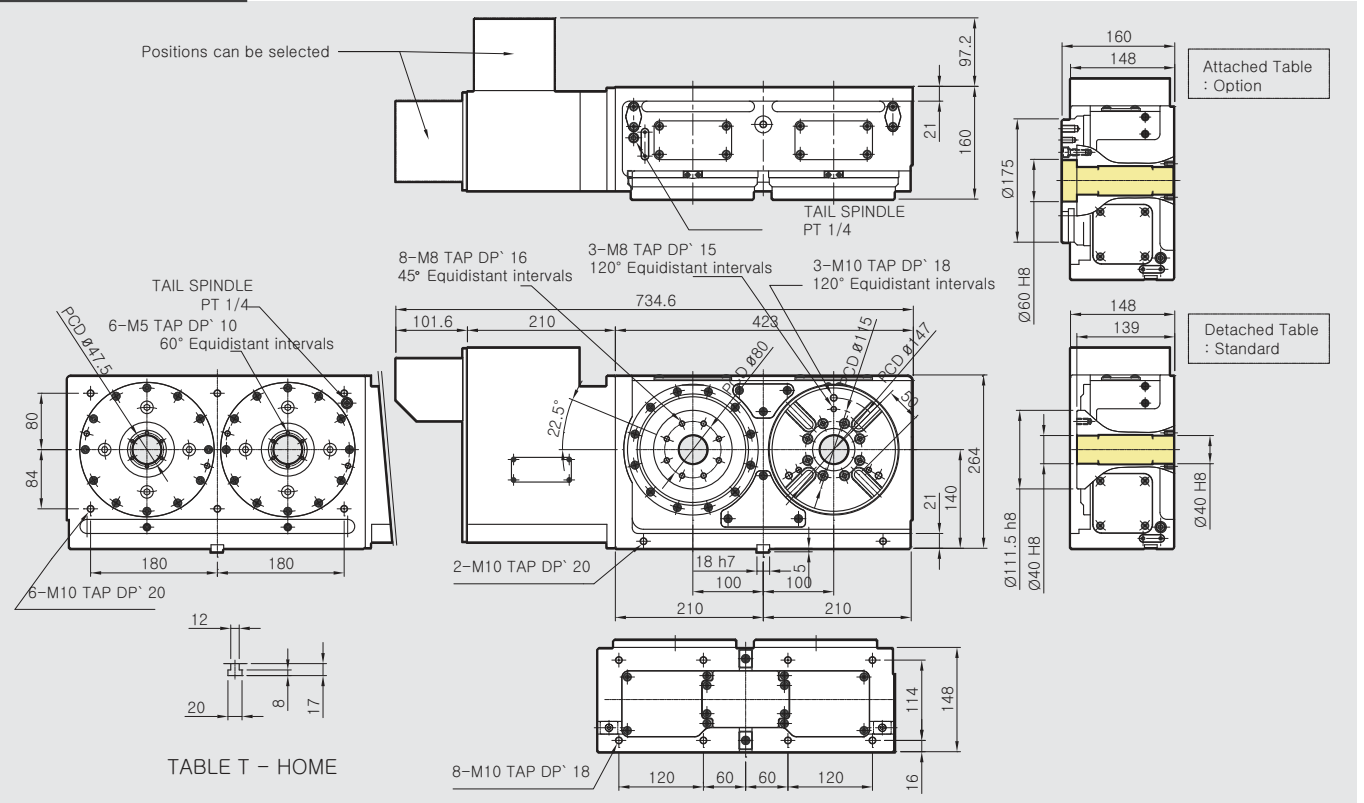
* Servo Motor Brand

AC Servo Motor is ABSOLUTE Type

- F : FANUC
- S : SIEMENS
- M : MITSUBISHI
- P : PANASONIC
- Y : YASKAWA
- H : HEIDENHAIN
- L : LS MECAPION
- SY : SANYO
- FA : FAGOR
- O : OKUMA

Table Dia.	Center Height	Resister Dia. On face plate	Spindle Thruhole Dia.	Clamp Method	Allowable Work Inertia	Clamp Torque
[mm]	[mm]	[mm]	[mm]		[kgm²]	[N·m]
(Table: Option) Ø175	140	Ø60H8	Ø40H8	Pneumatic	0.51	380
Max. Spindle Speed	Gear Ratio	Repeatability Accuracy	Indexing Accuracy	Net Weight	Servo Motor	
[mm·1]		[sec]	[sec]	[kg]	[FANUC]	
33.3	1/90	4	30	87	αiF4 / 4000	
Allowable Load					Allowable Cutting Torque	
Horizontal	Vertical	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
						
160	80	10	600	380	300	

MS2-170LF4

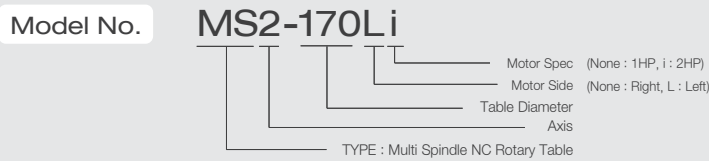


MS2-170i, 170Li

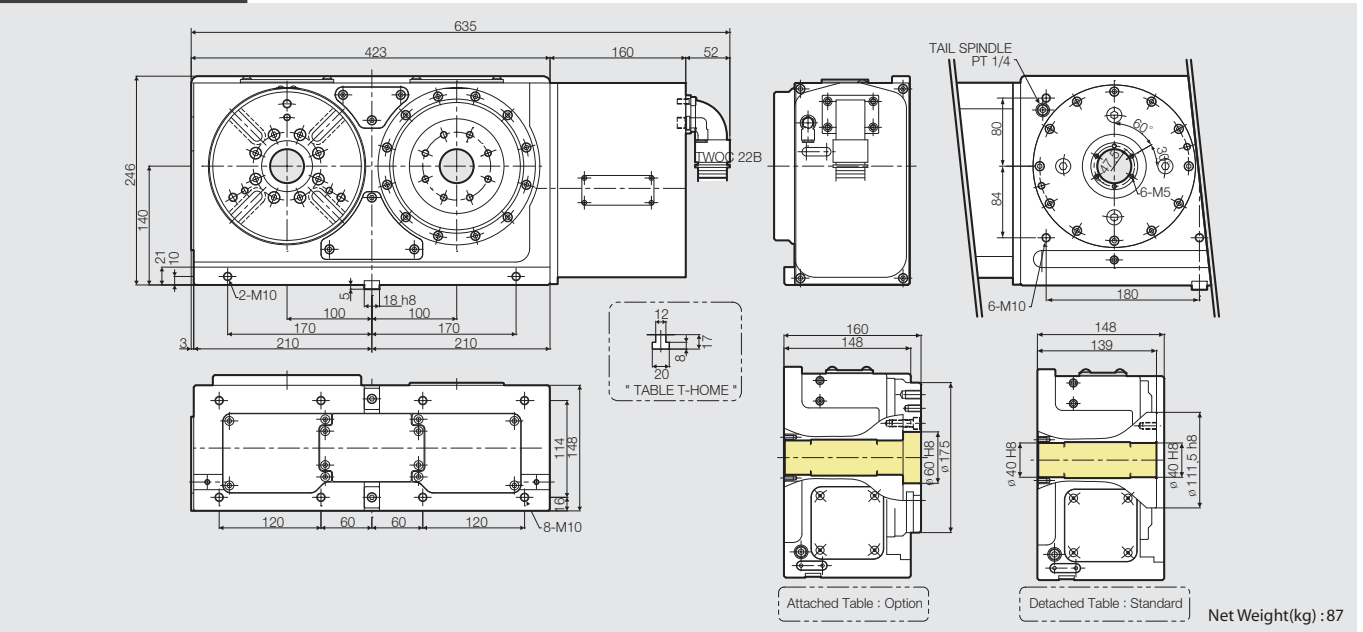
Controller type for Multi Spindle NC Rotary Table

- Doubles production output
- Ideal for balanced work-pieces
- Realize High Clamping Force by applying Double Piston

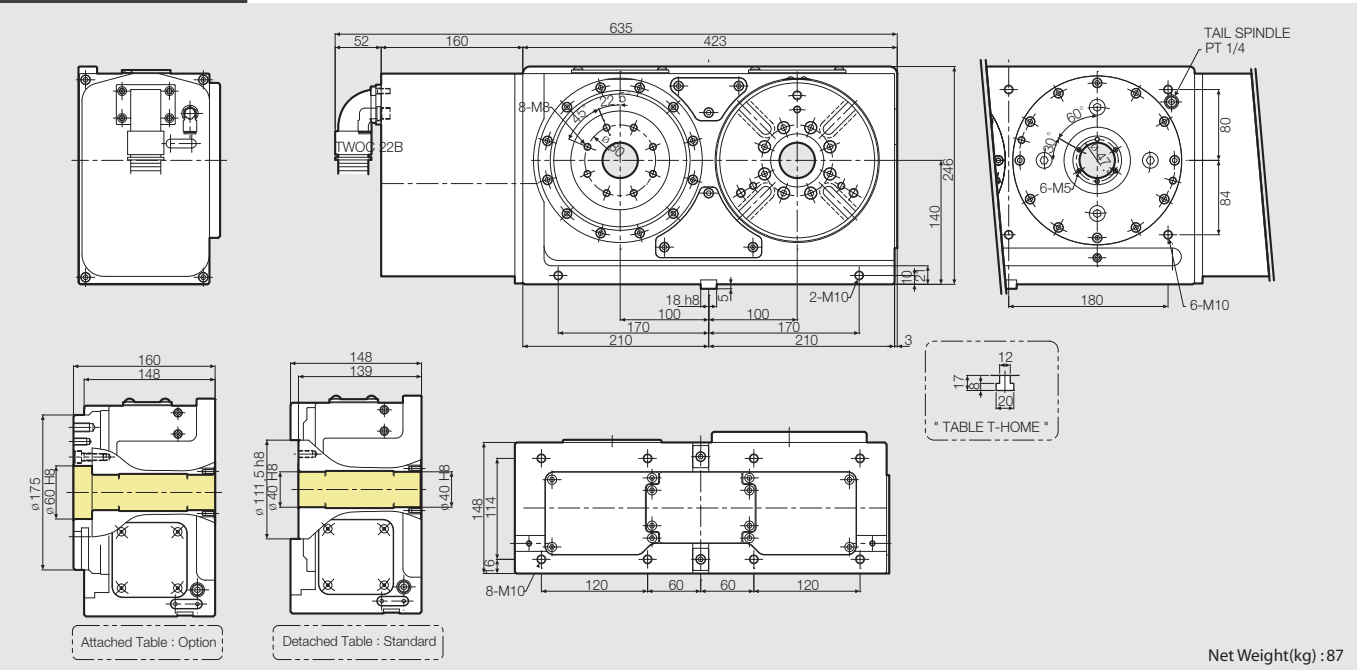
MS-SERIES



MS2-170i



MS2-170Li



DM-170

Direct Drive Motor NC Rotary Table

- Max. table speed 200min⁻¹
- High Precision indexing system (With DD Motor)
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Yaskawa Direct Drive Motor

DM-SERIES



Model No. DM-170					
TYPE : Direct Drive Motor Type NC Rotary Table					
Max. Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Clamp Torque [N·m]
Ø170	125	Ø50H7	-	Pneumatic	-
Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Allowable Work Inertia [10 ⁻⁴ kgm ²]	Net Weight [kg]
200	1/1	±1.3	15	-	64
Allowable Load					AllowableCuttingTorque
Horizontal	Vertical	F [N]	F x L [N·m]	F x L [N·m]	[N·m]
-	-	3300	-	-	-

DM-260

Direct Drive Motor NC Rotary Table

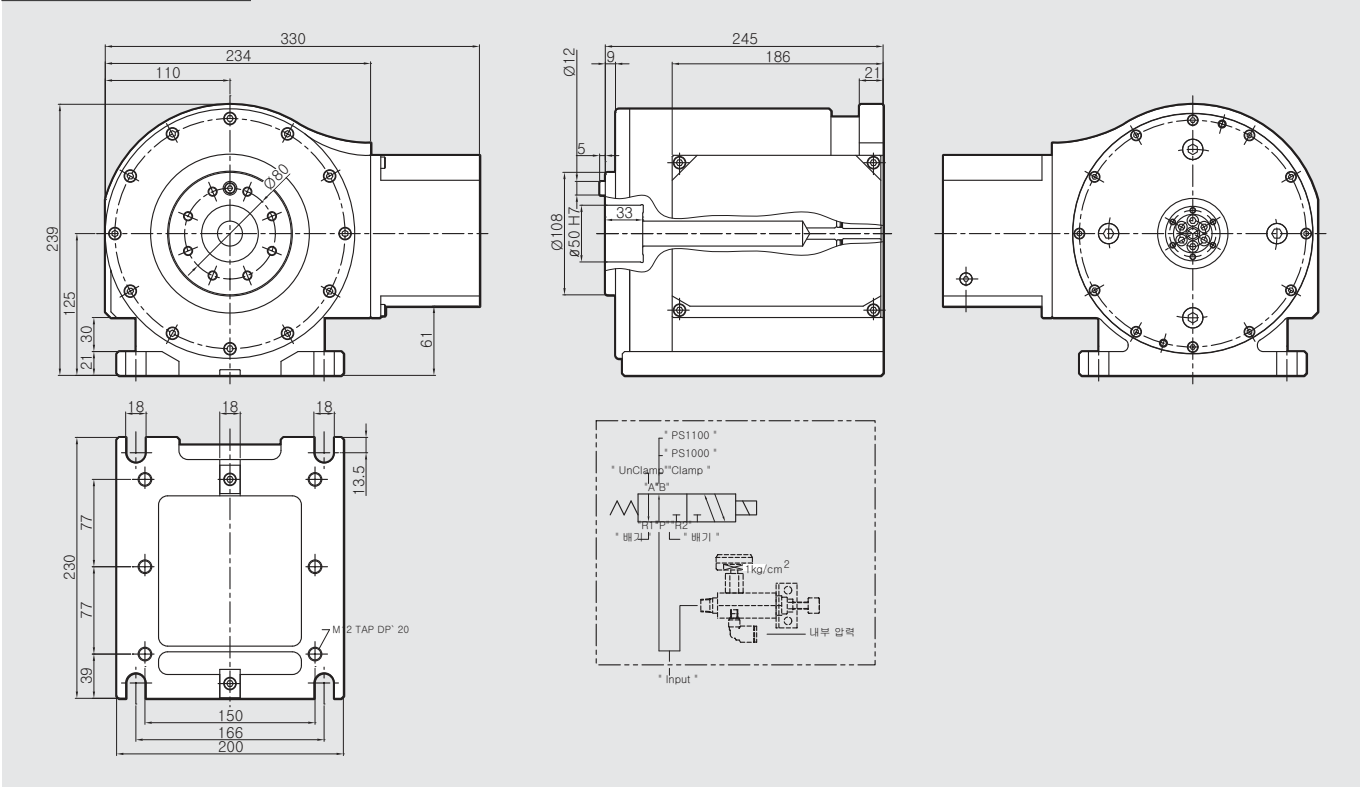
- Max. table speed 200min⁻¹
- High Precision indexing system (With DD Motor)
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Yaskawa Direct Drive Motor

DM-SERIES

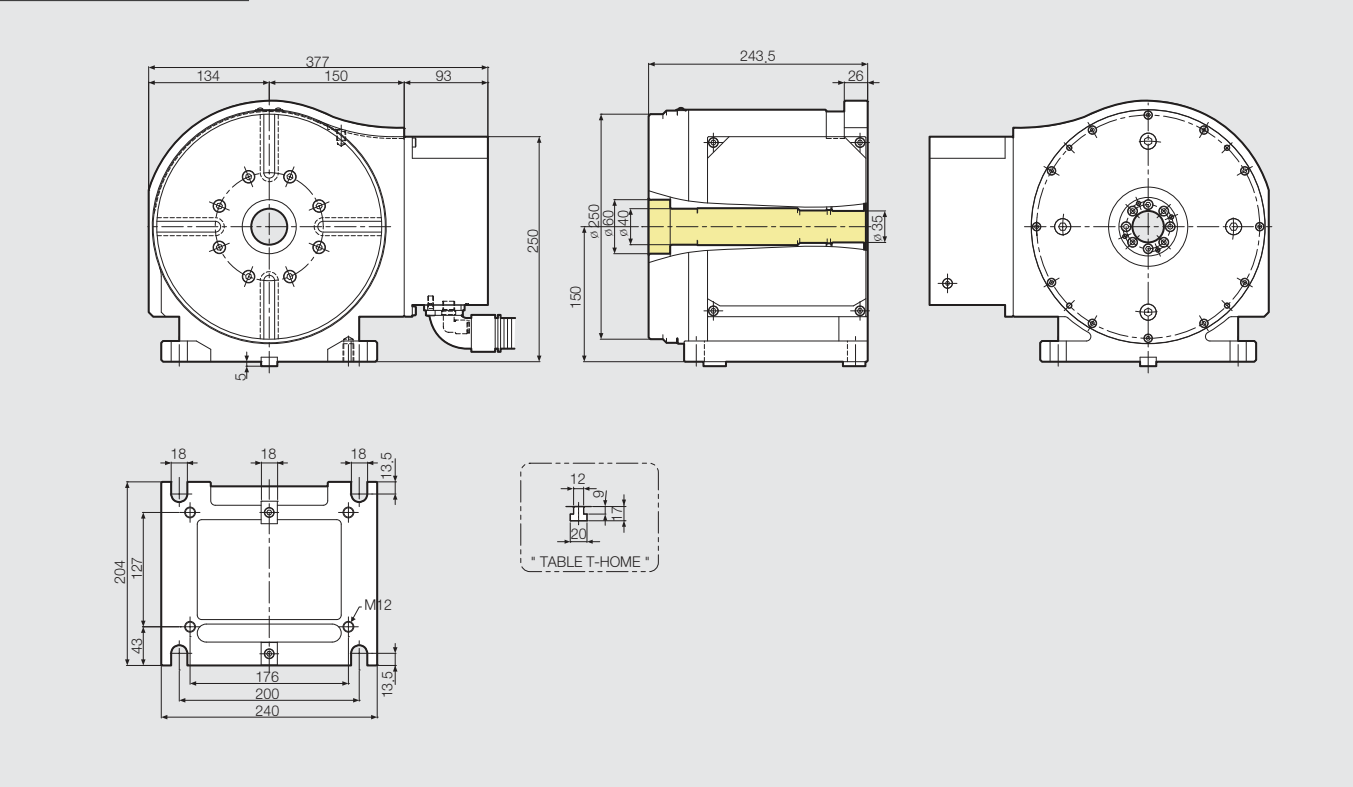


Model No. DM-260					
TYPE : Direct Drive Motor Type NC Rotary Table					
Max. Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Clamp Torque [N·m]
Ø258	150	Ø60H7	Ø35H8	Pneumatic	400
Max. Spindle Speed [mm ⁻¹]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Allowable Work Inertia [10 ⁻⁴ kgm ²]	Net Weight [kg]
200	1/1	±1.3	10	-	84
Allowable Load					AllowableCuttingTorque
Horizontal	Vertical	F [N]	F x L [N·m]	F x L [N·m]	[N·m]
70	35	4000	-	400	51

DM-170



DM-260



SR-200F4

Rear Mounted Motor 4th axis NC Rotary Table

- Maximize space with motor mounted on rear
- Increased clamping force through double piston technology
- Compact Design
- Extremely Rigid Body

SR-SERIES

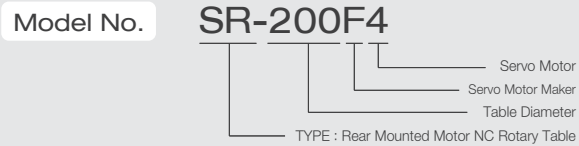
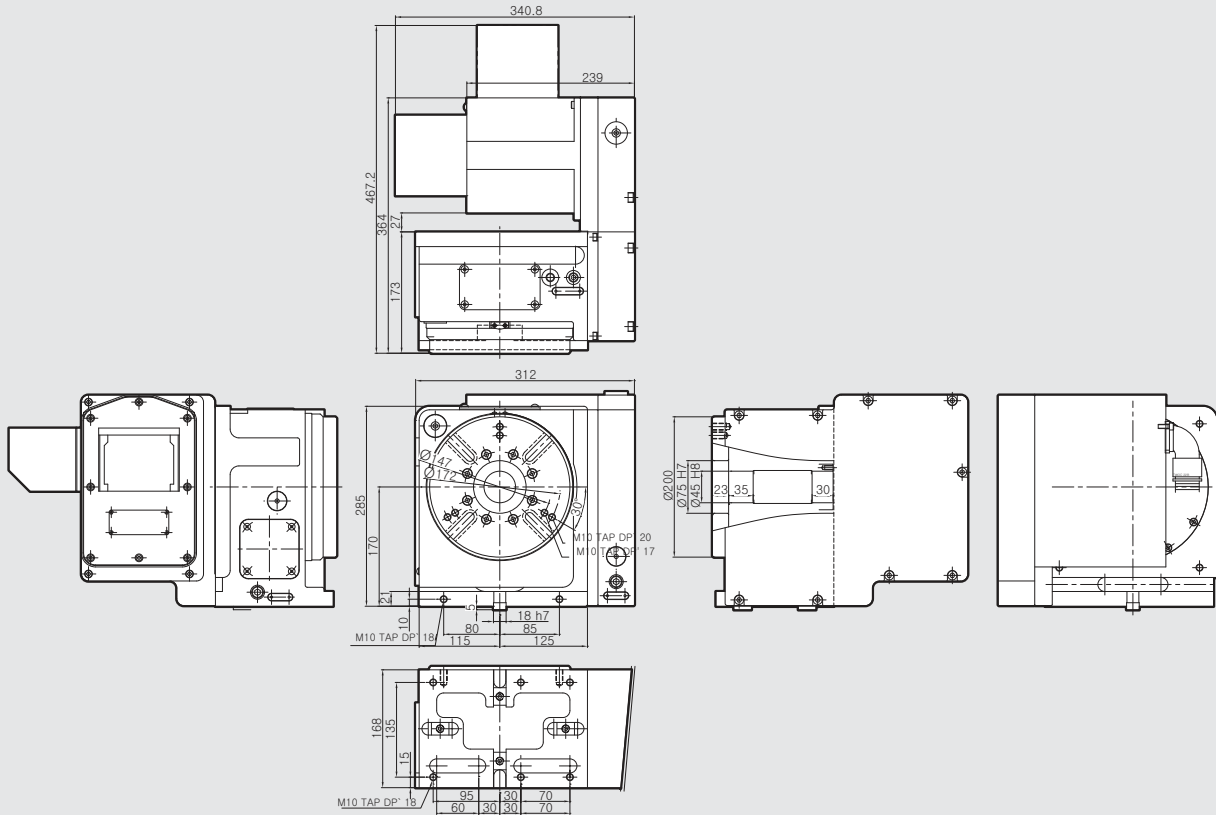


Table Dia. [mm]	Center Height [mm]	Resister Dia. On face plate [mm]	Spindle Thruhole Dia. [mm]	Clamp Method	Allowable Work Inertia [kgm ²]	Clamp Torque [N·m]
Ø200	170	Ø75H7	Ø45H8	Pneumatic	0.50	500
Max. Spindle Speed [mm ³]	Gear Ratio	Repeatability Accuracy [sec]	Indexing Accuracy [sec]	Net Weight [kg]	Servo Motor [FANUC]	
33.3	1/90	4	40	78	αiF4/4000	
Allowable Load					Allowable Cutting Torque	
Horizontal [kg]	Vertical [kg]	F [kN]	F x L [N·m]	F x L [N·m]	[N·m]	
-	100	17	1100	500	310	

SR-200F4

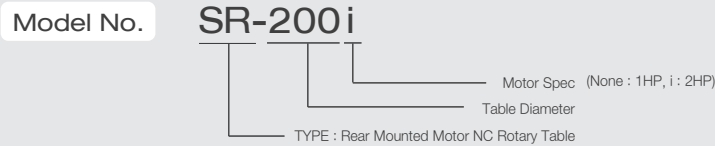


SR-200i

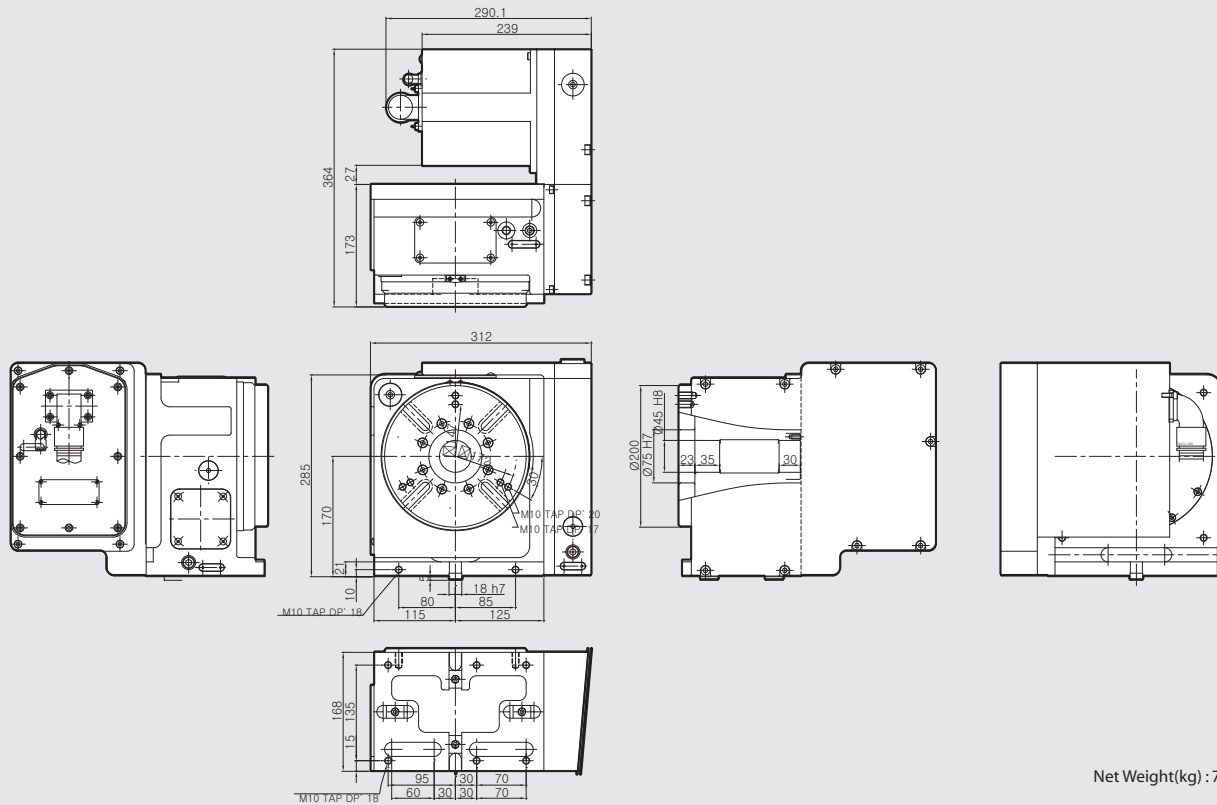
Rear Mounted Motor Controller type NC Rotary Table

- Maximize space with motor mounted on rear
- Increased clamping force through double piston technology
- Compact Design
- Extremely Rigid Body

SR-SERIES



SR-200i



Manual Turn Table

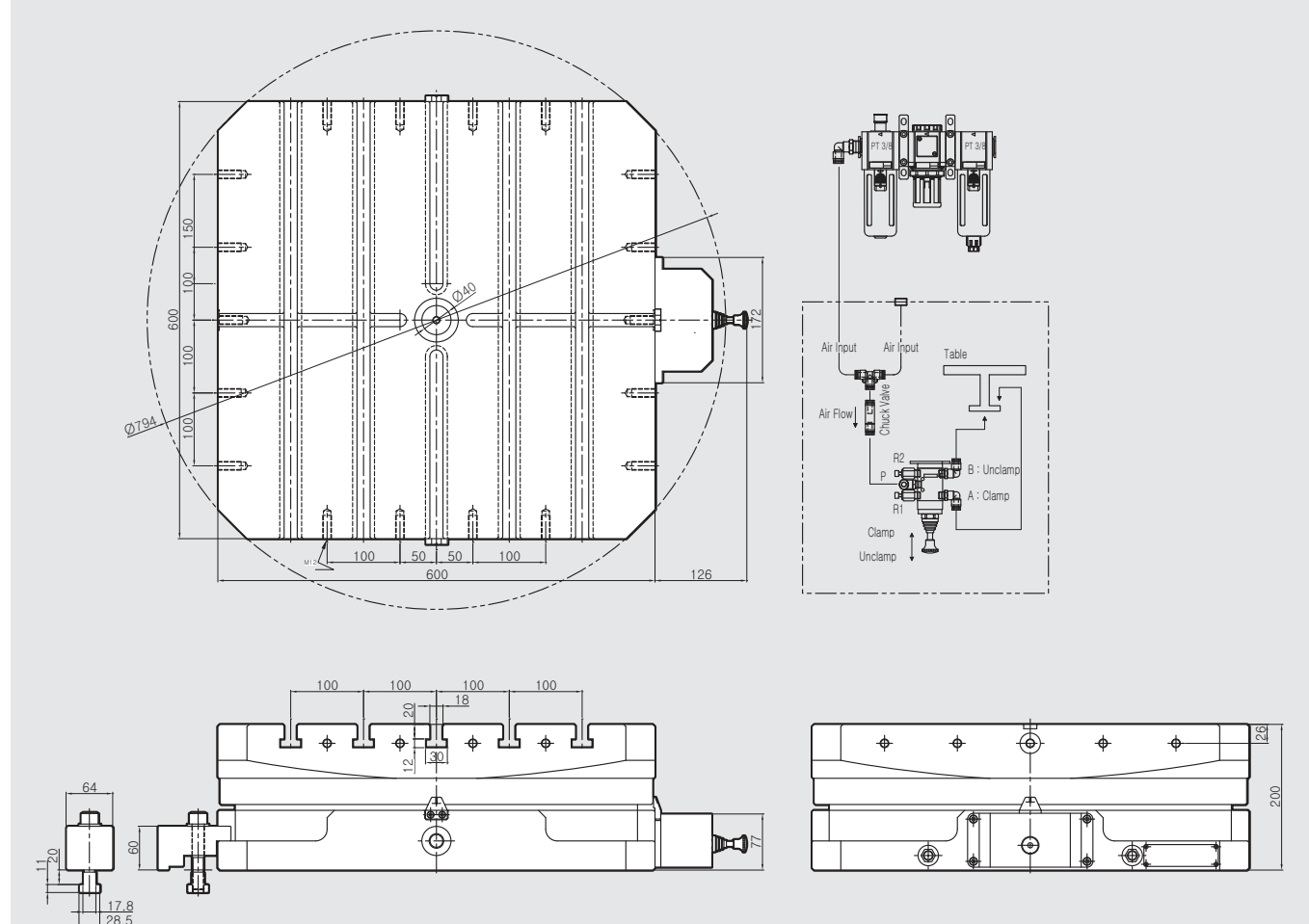
- ## MUT-SERIES



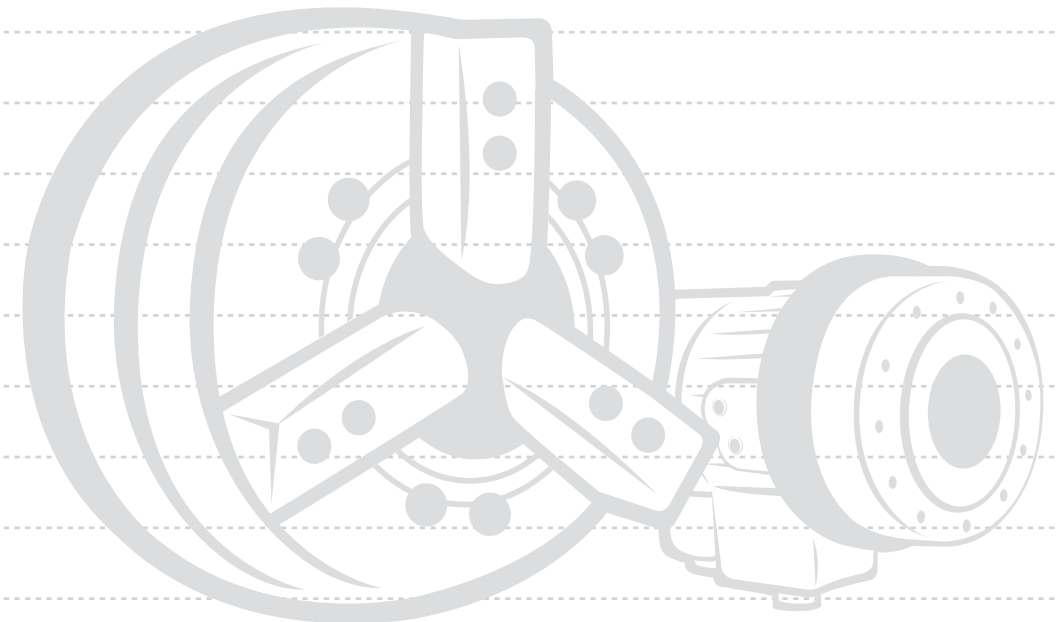
Table Diameter
TYPE : MUT series / Manual Turn Table

Table Dia.	Center-Hole Dia.	Rounded Corners	Overall Height	Driving Method		Allowable Work Inertia	Clamp Capacity
[mm]	[mm]	[mm]	[mm]			[kgm ²]	[kgf]
Ø600	Ø40	Ø794	200	Pneumatic 7kg/cm ²		90	3200
Width of T-slot	Indexing Accuracy	Min. Increment	Max. Thrust Load			Max. Work Load	Net Weight
[mm]	[sec]	[deg.]	Axial Force F	Radial Moment FxL	Tilting Moment FxL	[kg]	[kg]
20H7	6	1 or 5					400
			3500	140	220	2000	

MUT-600



notes





- NeoCon Series : 1 axis
- Minimum setting unit: 0.001°
- 100ch 100,000 Block



Ease of use

- Programmable using standard G-codes
- Offers various parameters for convenience
- Zero point adjustment, manual control and various modes including edit(compilation) function

Special Features

- 4.8" Full Color LCD allows display of diverse characters
- Line by line programing is displayed
- Capable of storing 90 channels
- A program may contain up to 100,000 blocks
- : 100ch (0~99), Each Channel 1000 Block (000~999)

Interfacing

- May use as an individual unit
- Ability to store part-specific programs; reduces setup time
- Compatible with drilling/tapping machines and horizontal and vertical machining centers

Multi-modal function

- **Auto**
Executes line by line upon receipt of start signal
- **Manual Control**
Rotates the table manually
- **Edit**
Inputs and edits programs
- **Parameter**
Checks and sets parameters
- **Single**
Operates the controller independently

Specifications and Functions

Specifications	Descriptions
Controlled axes	1 axis
Program Capacity	Back up the External SD card (Parameter, Work Program)
Servo Motor Specification	AC servo motor with absolute encoder
Setting Unit	0.001°
Max. setting angle	999 Rotation + 360° (±999,999°)
Programmable capacity	100,000 Block (100 channels, Each Channel 1,000 Block)
Command Method	ABSOLUTE /INCREMENTAL methods (Choice between G90/G91)
Zero position return	Zero and zero point return
Manual Feed	Rapid traverse, slow speed feed and step feed, STEP traverse, MPG traverse
Emergency Stop	Emergency stop button or forced servo stop by external interlock input and master stop
Halt	Halt of rotary table by key input or external SP input
Feedrate override	Settable 1 to 100% (can be notched 1 to 100%)
Preparatory function	DWELL, LEAD CUTTING, BUFFER FUNCTION, CLAMP PRESENCE, DEVIATION CHECK FUNCTION, INTERLOCK START, CONTINUOUS START, MZRN, WZRN, REPEATING FUNCTION, LOOP JUMP FUNCTION, ABSOLUTE/INCREMENTAL, FIN SIGNAL CONTROL COMMAND
Jump to subprogram	Jump to subprogram
Software limit function	Software can be set from machine zero position to prevent interference with the machine by mounting jigs or workpiece
Over travel stop function	Hard limit mode can control the rotary range of rotary table
Pitch error compensation	Pitch error can be compensated per 15° (min. set unit: 0.001°)
Backlash	Backlash compensation is adjustable
Alarm function	When error is detected, alarm number and alarm message are automatically displayed
Self-Diagnosis Function	Machine coordinate, work coordinate (command value, encoder value), remained movement, I/O signal state, position deviation, current %, encoder electric angle
Input Power	Single Phase AC200/230V ±10% 50/60Hz, 3 Phase AC220/230V ±10% 50/60Hz
Apparent Power	1.0 KVA
Net Weight	7.5 kg
Environment	Controller Temperature: 0-45℃ Storage Temperature: -10℃~60℃ C Humidity: below 85% RH Internal Vibration: 0,5 Internal Impact: Below 1G
Display	4.8" TFT LCD
Optional Port	RS232C cable, MPG Handle, USB AM Cable (external equipment can I/O program, parameters, etc.)
External Input Signal	START, STOP, external EMG STOP, external channel selection
External Output Signal	Block completed, 360° comp., optional completed signal, MZRN completed, EMG STOP output signal, alarm output signal

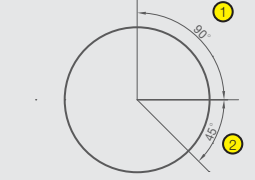
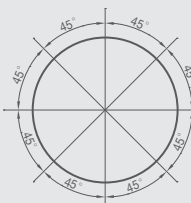
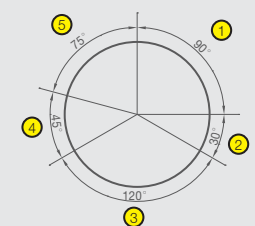
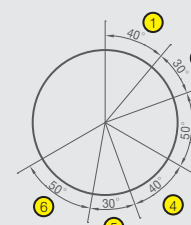
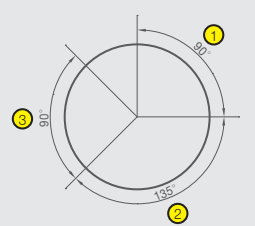
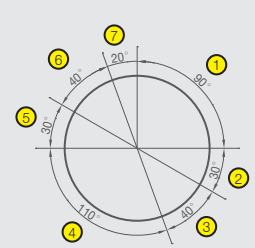
Address Function

Address	Description	Setting Unit	Setting Range	Remark
G	Refer to the G Code function section.			
A	Rotation angle command	degree	±999.999	
	Dwel time command	sec	0.01~999.99	
F	Rotation speed command	0.01min-1	0~5000	1/60 (differ as Gear Ratio)
J	Jump command	Block No.	0~99	Jump prior to the command block
	Subroutine command	Block No.	0~99	Jump prior to the command block
	Return command	Return No.	-1	End of 1 turn subroutine
D	Partition command	No.of partitions	0~999	
S	Beginning block NO. command of repetition function (G27)	Block No.	1~999	
E	End block NO. command of repetition function (G27)	Block No.	1~999	
R	Frequency of repetition function (G27) command	No. of repetitions	1~99	
	G99 command of interlinked start function(G21)	G99 command No.	99	G99 command is executed in the same block as the G21 command.

G Code Function

G Code	Function	Description
None	Rotation speed command	Only calculation command is available.
G04	Dwell	No movement, wait for time.
G07	Lead cut	Rotate the table by multiple turns.
G08	Continuous buffer	Executes program block continuously, until the following G09 command.
G09	Continuous buffer cancel	Cancel the continuous beffer of G08, return to the ordinary single block run.
G10	Clamp unused	Set the clamp device at table stop to unused, which is effective until the next G11 command.
G11	Clamp used	Cancel the clamp device of G10 unused state, and apply clamp at table stop.
G15	Emphasizes the interlink	Emphasis the interlink by checking the deviation in the positions of the program blocks when the continuous buffer is effective (G08). The checking of deviation in positioin is effective until the next G16 command.
G16	Position check deviation invalid	Cancel the effectiveness of the position deviation check function. Do not check the deviation in the positions of the programs.
G21	Interlink start	This function outputs block finish signal prior to motion in program running, which is used for the interlinked operation with the machine, etc.
G22	Continuos start	If G22 is commanded, the table rotates continuously until the next start input.
G23	Machine start point return	Position at the machine origin point of the table.
G24	Process start point return	Position at the origin of the process coordinate system of the table.
G25	Escape loop	Run the program inloop until the process start point is reached. When reached, escape from the loop and execute the next block.
G27	Repetition	Repeat execution of the program by specified number of times, from the designated block to the block.
G90	Absolute	Execute positioning in the absolute coordinates of the process coordinate system.
G91	Incremental	Execute positioning in the relative coordinates.
G92	Process coordinate system setting	Process start point can be set up as desired in the program.
G97	No block finished	Do not output the block finish (BLKFIN).
G98	Block arbitrary finish output	In the program execution, too, provide block finish (BLKFIN) and arbitrary finish (G99 FIN) output.
G99	Arbitrary finish output	Output the arbitrary finish (G99FIN) only, not block finish .

Program

Angle Index		① N000 G91 A90 F1000 Angle Rotation speed ② N001 G91 A45 F1000 J00 Jump function	90° rotation 45° rotation and N000 movement
Equipartition		N000 G91 A360 F1000 D8 J00 Angle Partition	360° angle with 8 partitions and N000 movement
Uneqaul Partition		① N000 G91 A90 F1500 ② N001 G91 A30 F1500 ③ N002 G91 A120 F2000 ④ N003 G91 A45 F2000 ⑤ N004 G91 A75 F2000 J00 Rotation speed	90° rotation 30° rotation 120° rotation 45° rotation 75° rotation, change to rpm 2000 and N000
Repetition		N000 G27 S4 E6 R2 Repetition command Start End Cycle ① ④ N004 G91 A40 F2000 ② ⑤ N005 G91 A30 F2000 ③ ⑥ N006 G91 A50 F2000	N004 ~ N006 2 cycles 40° rotation, 30° rotation, 50° rotation (1 time/cycle) 40° rotation, 30° rotation, 50° rotation (2 times/cycles)
Absolute / Incremental		① N000 G90 A90 F1000 Absolute Angle ② N001 G90 A225 F1000 ③ N002 G91 A90 F1000 Incremental Angle	90° rotation from absolute coordinates 225° rotation from absolute coordinates 90° rotation from opposite coordinate
Subprogram		① N000 A90 F1000 J10 Angle Jump ④ N001 G90 A270 J10 Absolute Jump ⑦ N002 A20 J00 Angle ② ⑤ N010 G91 A30 ③ ⑥ N011 A40 J-1 Return Function	90° rotation, N010 movement 30° rotation from opposite coordinate 40° rotation and return N001 movement 270° rotation from absolute coordinate and N010 movement 30° rotation from opposite coordinate 40° rotation and return (N002 movement) 20° rotation and N000 movement

12, 17, 20, 25, 32TS

Tail Stock (Manual Type)

- Center of Main Axis support
- Usable Clamp Lever for Both side

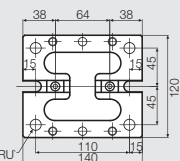
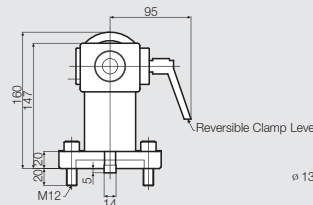
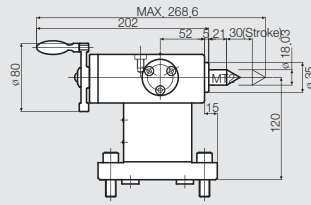
TS-SERIES

Model No. **17 TS**

TYPE : TS -Series / Tail Stock
Apply Model / S-170

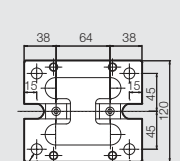
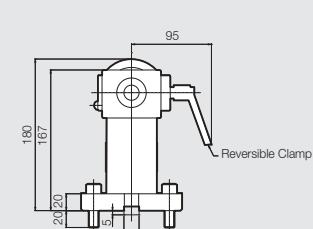
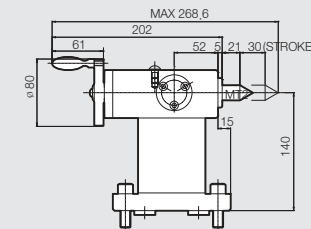


12TS



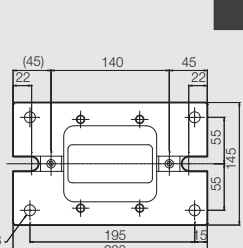
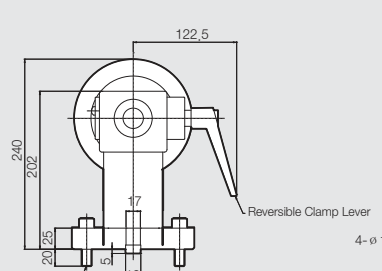
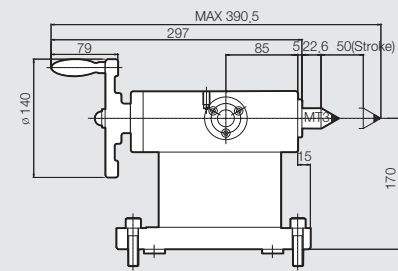
Net Weight(kg) : 9

17TS



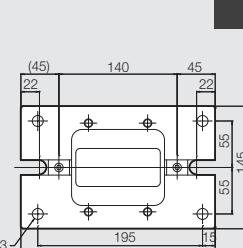
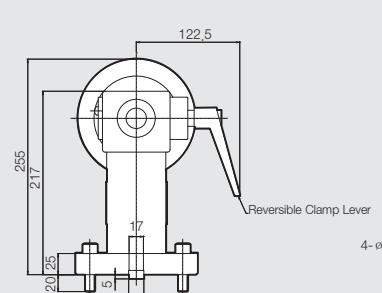
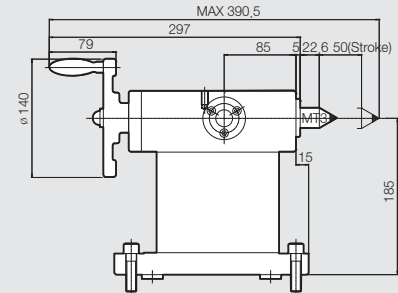
Net Weight(kg) : 10

20TS



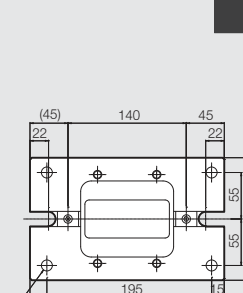
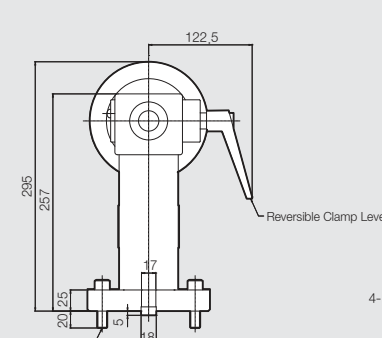
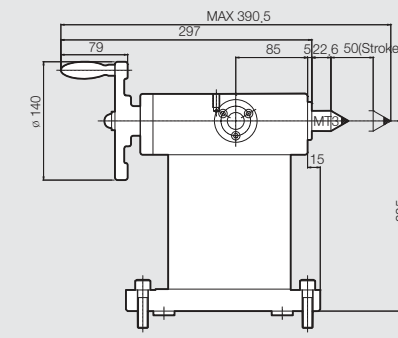
Net Weight(kg) : 19

25TS



Net Weight(kg) : 20

32TS



Net Weight(kg) : 21

43, 51, 65TS

Tail Stock (Manual Type)

- Center of Main Axis support
- Usable Clamp Lever for Both side

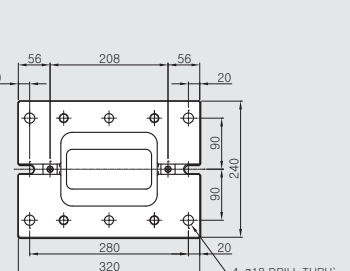
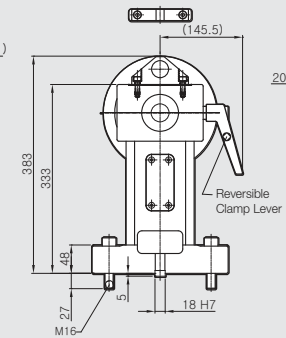
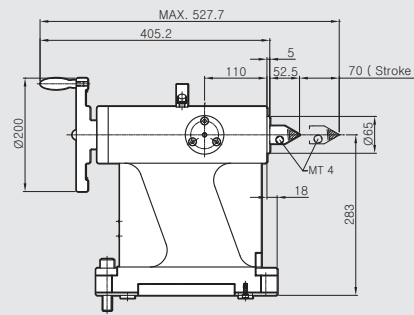
TS-SERIES

Model No. **43 TS**

TYPE : TS -Series / Tail Stock
Apply Model / S-430

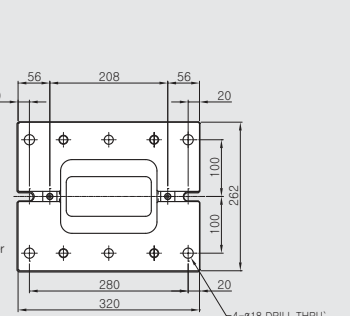
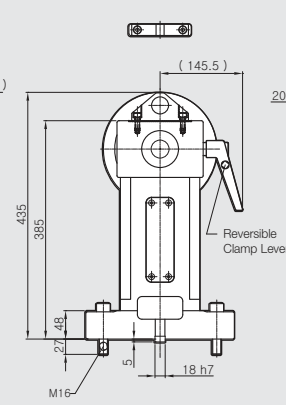
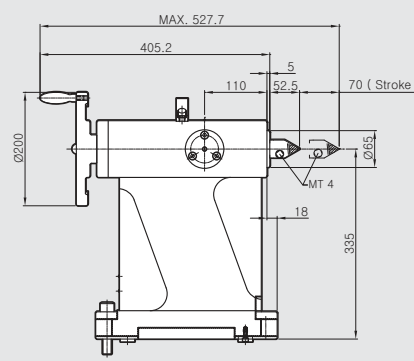


43TS



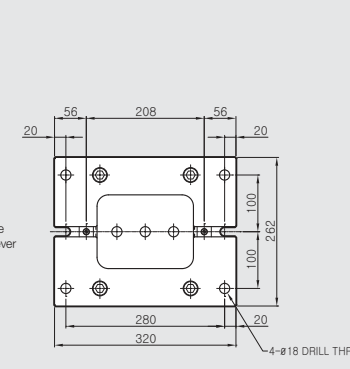
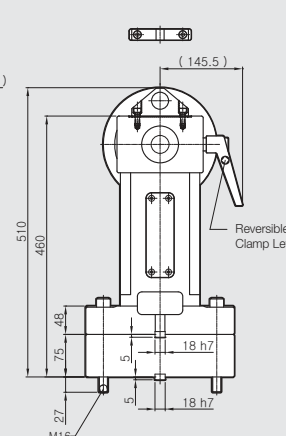
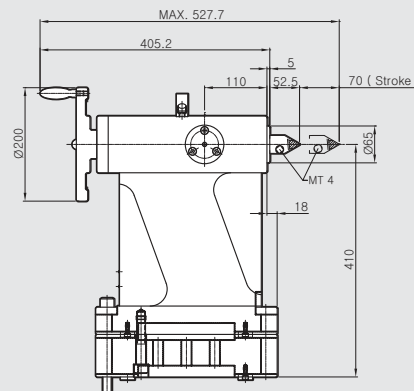
Net Weight(kg) : 70

51TS



Net Weight(kg) : 95

65TS



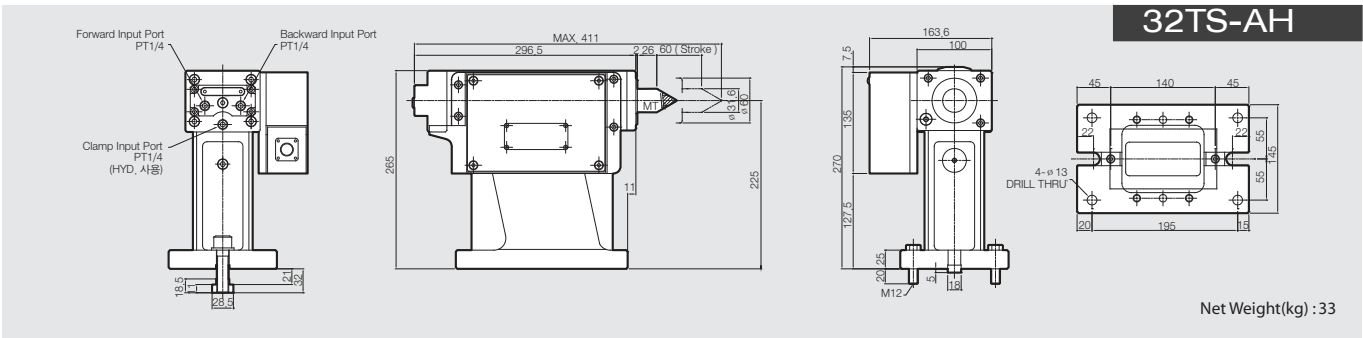
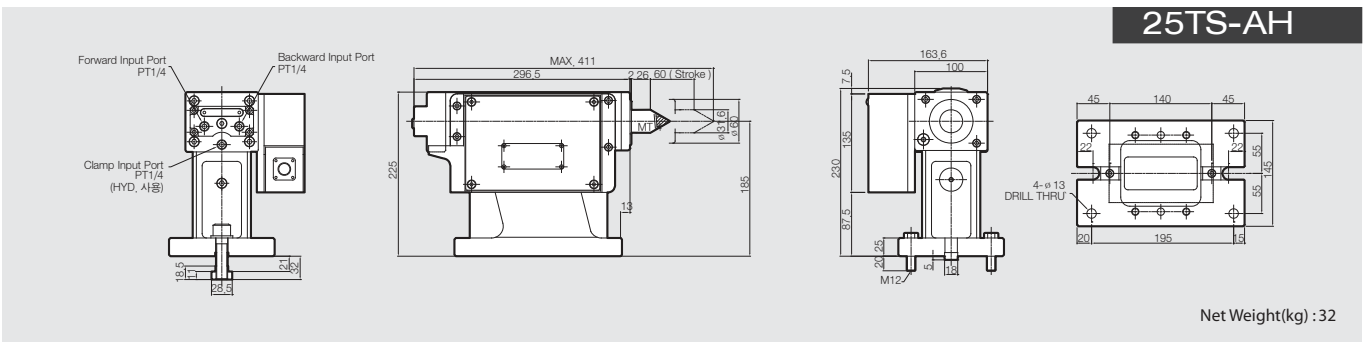
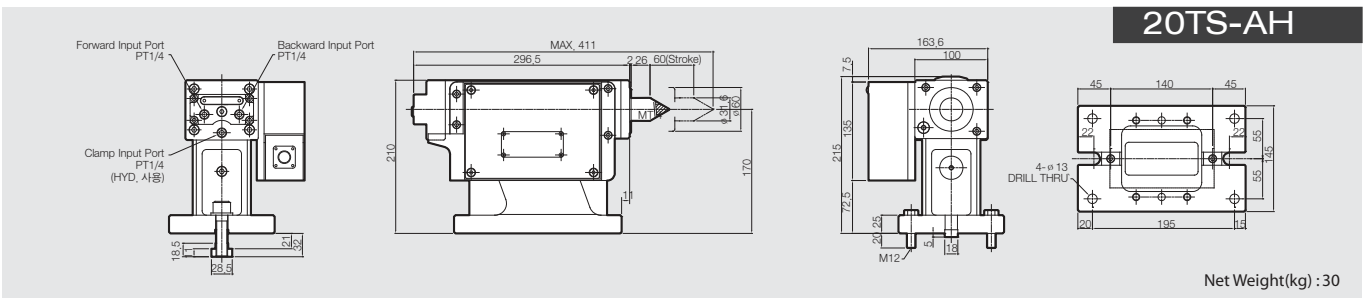
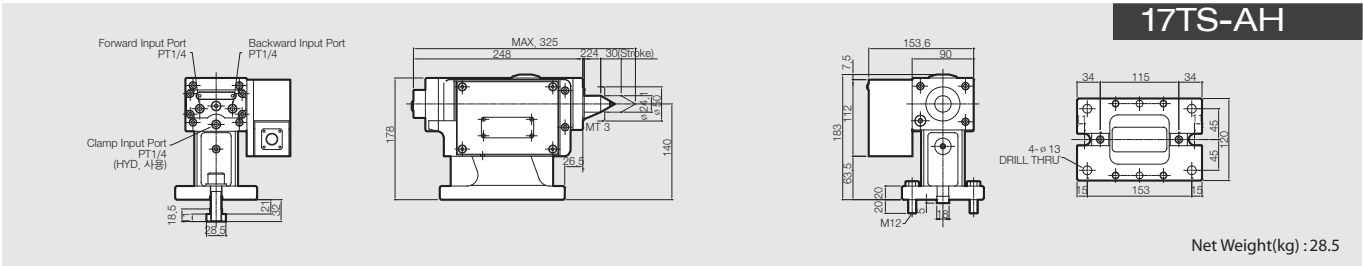
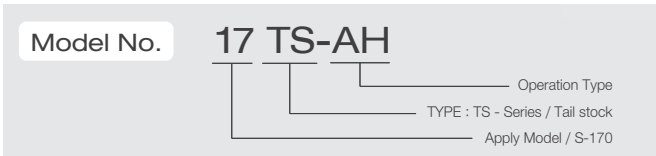
Net Weight(kg) : 135

17, 20, 25, 32TS-AH

Tail Stock (Air / Hydraulic Type)

- For both Hydraulic and Pneumatic operation
- Applicable to automation system.
- Hydraulic Clamp Max. 35bar

TS-AH SERIES

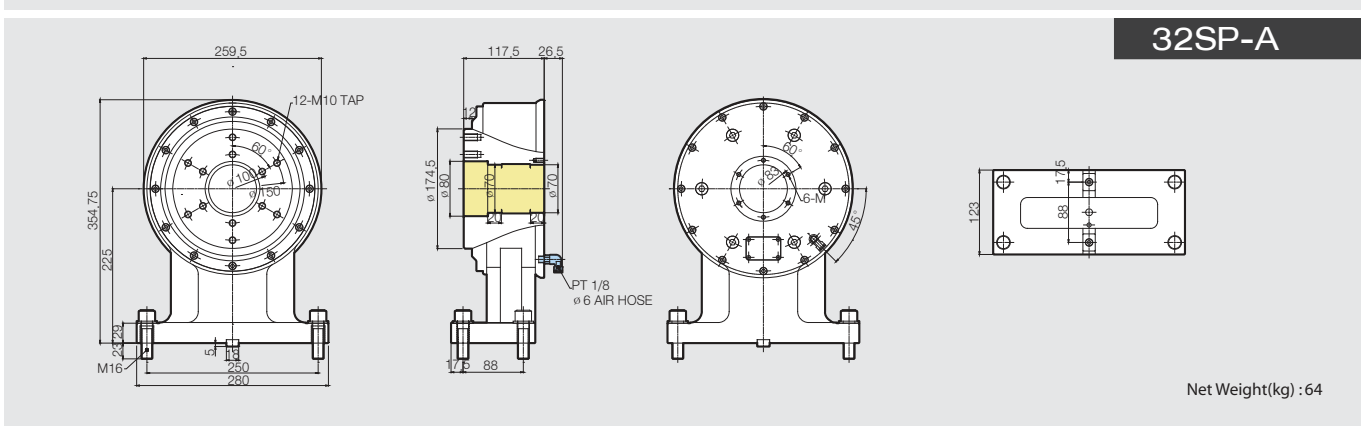
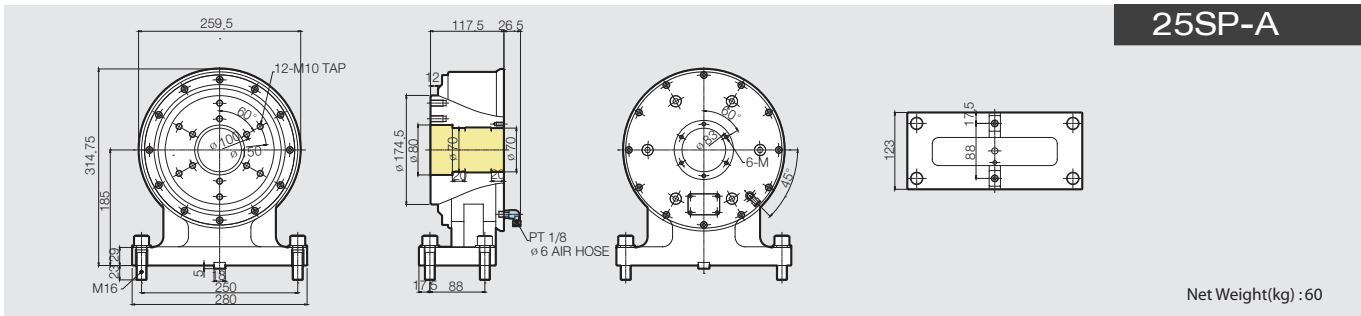
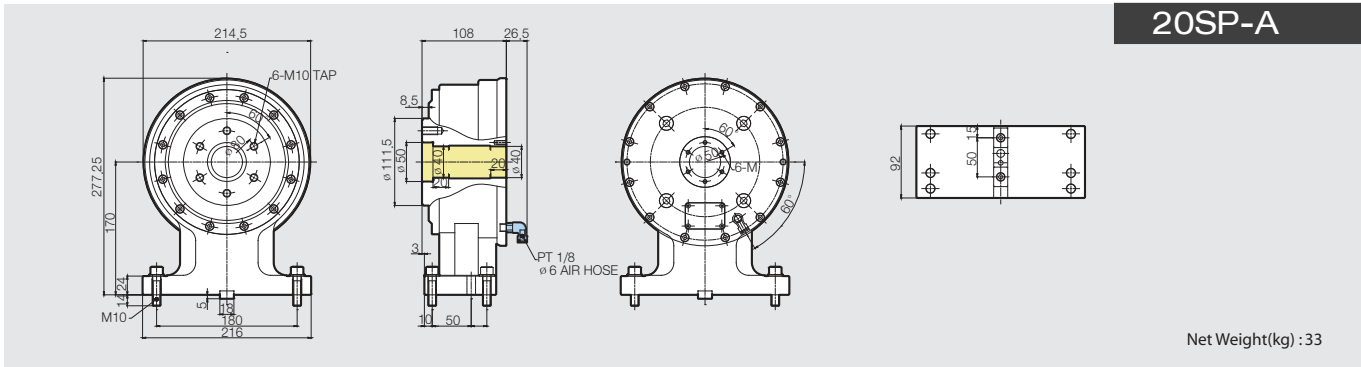
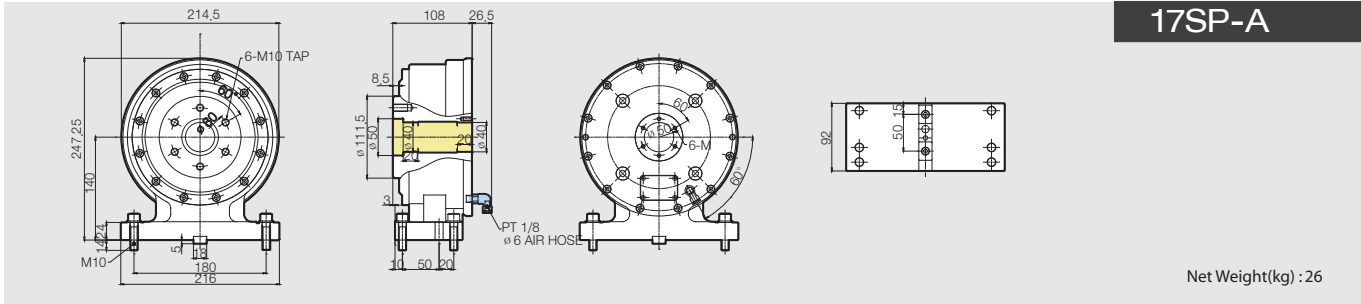
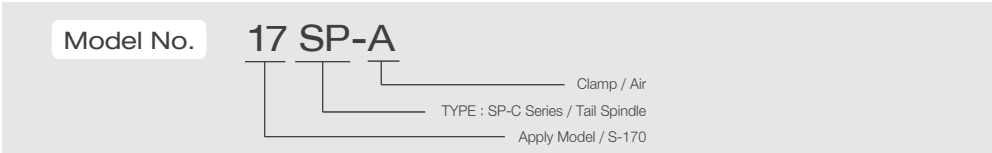


17, 20, 25, 32SP-A

Tail Spindle (Air Clamp Type)

- Rotation of Work & Jig with Weight Support
- Air Clamp type

SP-A SERIES



50AH-C

Air Booster (Single)

- Effects of hydraulic clamp force using pneumatic
- S series Large Type, HRS series applicable



AH-C SERIES

Model No. 50 AH-C

Operation Type / Single
TYPE : AH -C series / Air Booster
Pressure

Input Air Pressure [MPa]	Output Hydraulic Pressure [MPa]	Multiplication Ratio	Recommended Oil	Discharge Rate	Mass of Product [kg]
0.4 ~ 0.45	3.2 ~ 3.6	1 : 8	Turbin Oil #32	50cc	7

50AH-T

Air Booster (Twin)

- Effects of hydraulic clamp force using pneumatic
- TR, MTR series applicable



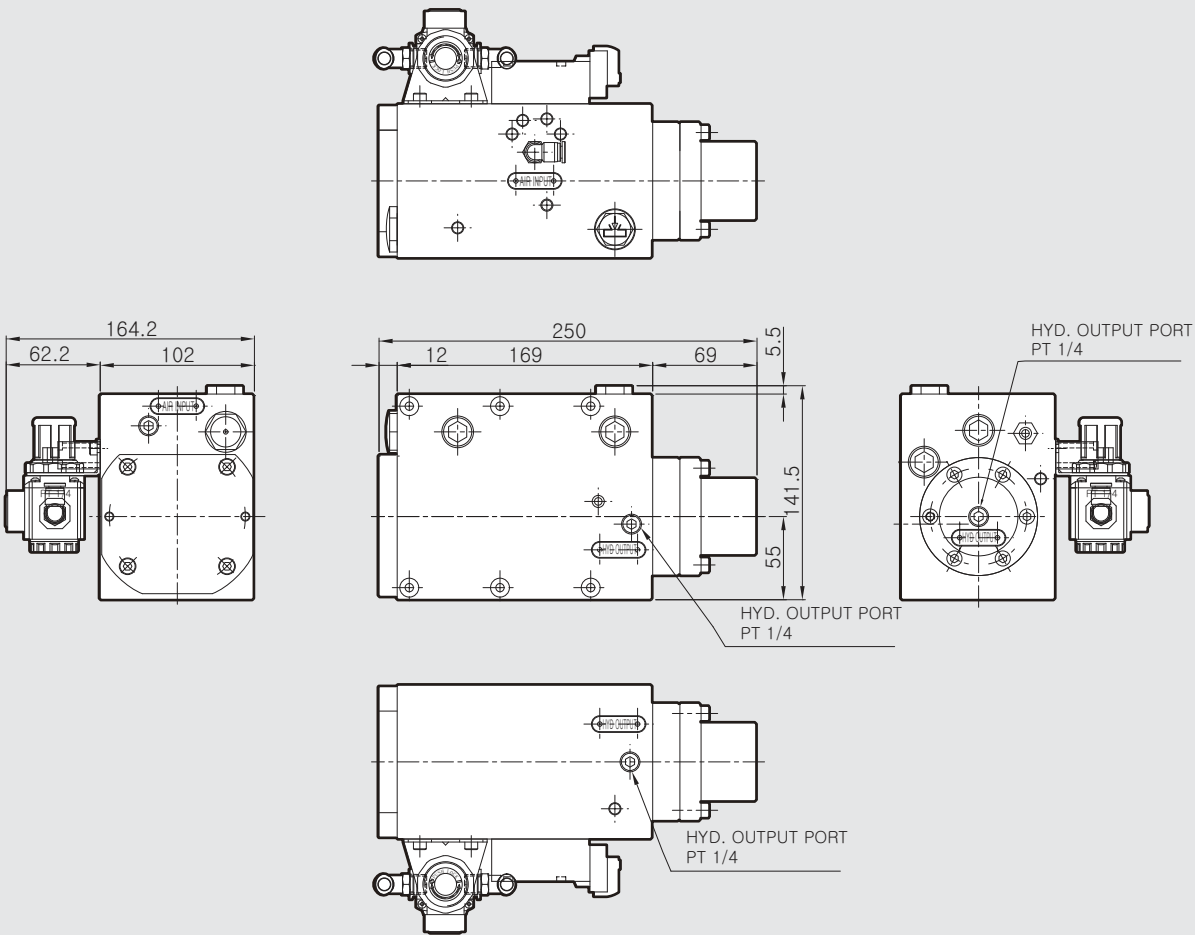
AH-T SERIES

Model No. 50 AH-T

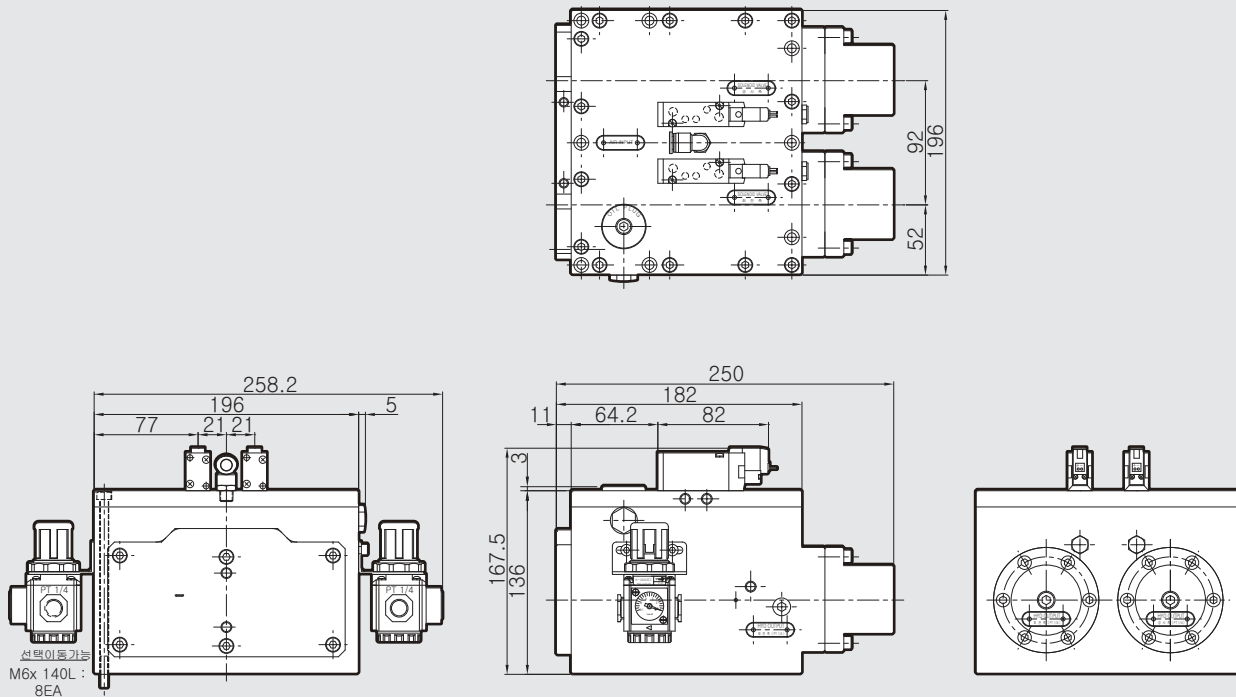
Operation Type / Twin
TYPE : AH-T series / Air Booster
Pressure

Input Air Pressure [MPa]	Output Hydraulic Pressure [MPa]	Multiplication Ratio	Recommended Oil	Discharge Rate	Mass of Product [kg]
0.4 ~ 0.45	3.2 ~ 3.6	1 : 8	Turbin Oil #32	50cc	12.5

50AH-C



50AH-T



Application

Technical Information

NC Rotary Table

Works with the CNC Controller to allow operation in multiple axes.
A rigid clamping break allows for high cutting force with high precision required for piece work or mass production.

A. Controller type (NeoCon-TYPE)

- Rotational accuracy ensures precise segment and angular accuracy with minimal backlash
- External signal (M Code) controls operation.
- Simple attachment, fast installation, minimal cost.
- Available with G code option.

B. Multi Axes type (4th Axes-type)

- Thread cutting, contour cutting, CAM, helical operation
- Power and precision with multi axes machining.
- Operates with both rotary table controls and the CNC controller.

Gear Ratio

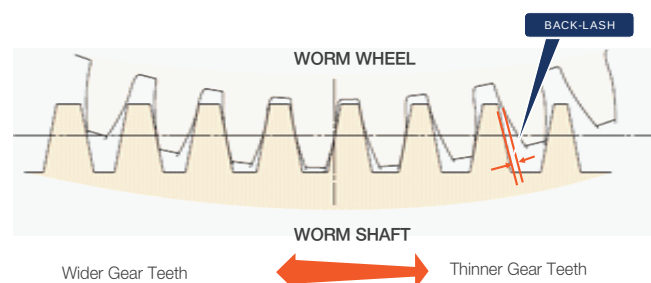
The calculation of the RPM : This is done by calculating the rotation of the motor and the table.

$$\text{Rotary Table Spindle Speed} = \frac{\text{Motor Spindle Rotation speed}}{\text{Gear Ratio}}$$

$$\text{NT-170 Spindle Speed} = \frac{3000}{72} = 41,6 \text{ RPM}$$

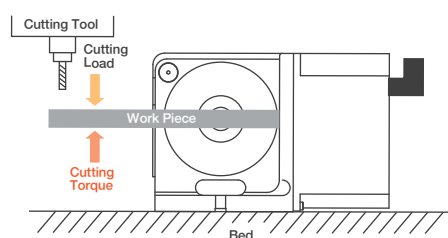
DUAL – LEAD WORM GEAR

The adjustable worm gear allows the operator to remove backlash as the worm wheel and worm shaft wear.



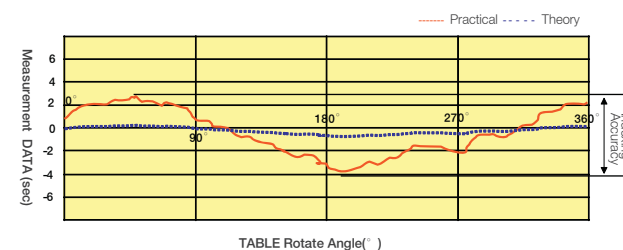
Cutting torque limit (N.m)

Failure to limit the cutting torque can damage the worm wheel and worm shaft.



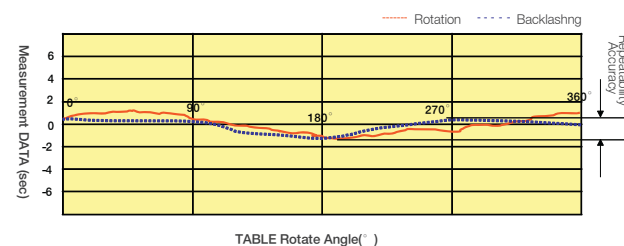
Indexing Accuracy

The variance between the worm wheel and worm shaft when rotated a full 360°

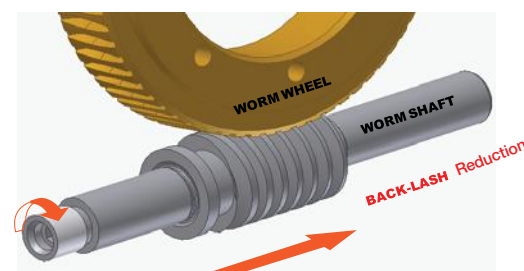


Repeatability Accuracy

Accuracy variance when operated in both directions.

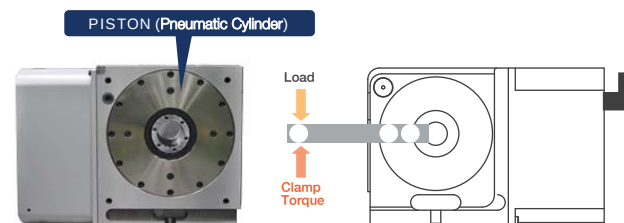


BACK-LASH



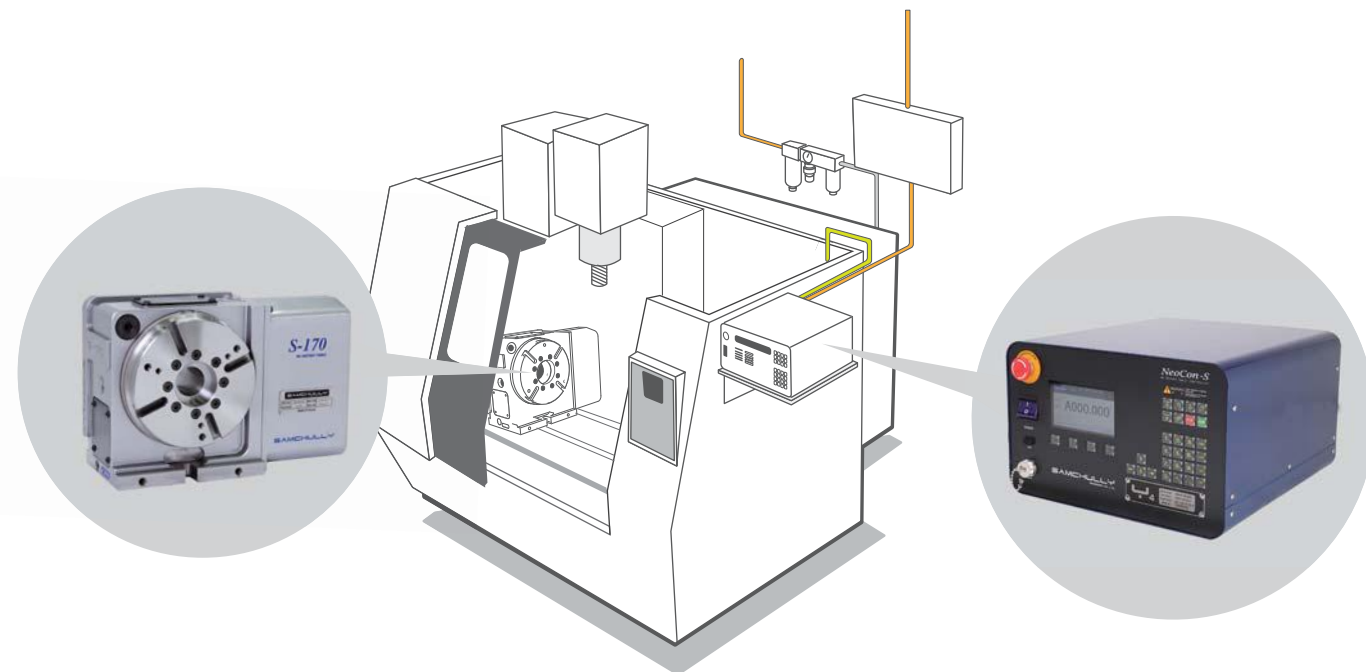
Clamp Torque (N.m)

Clamping the Break disk with air pressure



Application

NC Rotary Table Installation

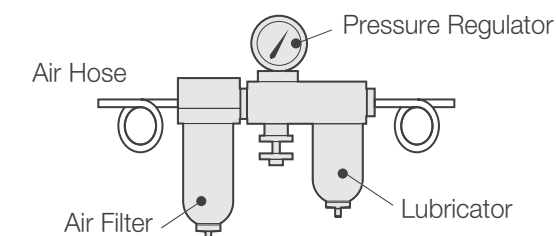


Air Supply Installaton

Air clamp system is located inside of the NC Rotary Table.
Air filter regulation is needed to use the clamp functions.
This is an option to the standard supply.

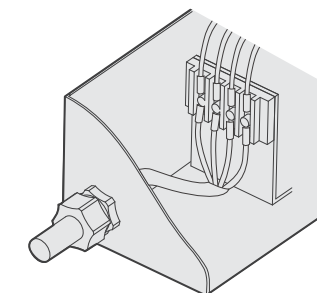
Parts Required:

- Air filter & regulator
- Air hose



Controller Type

The Samchully NeoCon controller is ideal for simple machining that requires turn and lock functionality. The controller is simple to install and economical.



4th Axis Type

The 4th axes option allows for contour / helical cutting. The rotary table connects directly with the controller for optimal manufacturing flexibility. The Samchully rotary table is compatible with Fanuc, Siemens, Mitsubishi, Panasonic, Yaskawa, Heidenhain, LS mecapian, Sanyo, Fagor, and Okma controllers.

