

GTFAE-L(S) series

CNC Trunnion Tilting Rotary Table

GTFAE-410XBL(S)

Flat supplemental base for standard 3 axis M/C

new optimization model

Five axis Trunnion type for lower gravity

Worm gear transmission

with sub-table enlarged swing scope

Tilting motor mounted at the back of table

X

hydraulic clamp by air booster converter built-in

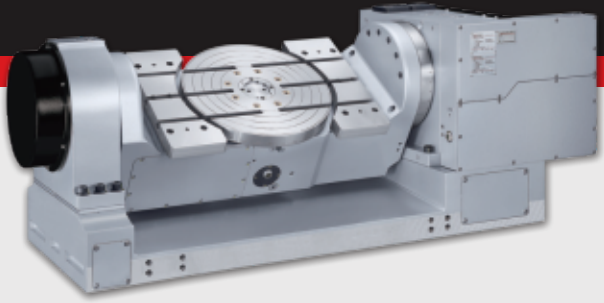
S

superior pneumatic clamp

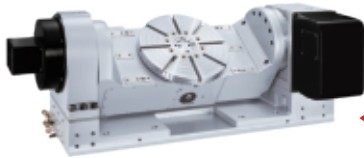
H

hydraulic brake

Table size



- Worktable diameter, Ø255, Ø320, Ø410, Ø500.
- The hydraulic brake equipped with radial and axial bearings.(P.18)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)
- Enlarged swing to allow more working envelope.
- Sub- table available as "S" model.



GTFAE-410HL(S) with tilting axial motor at front.

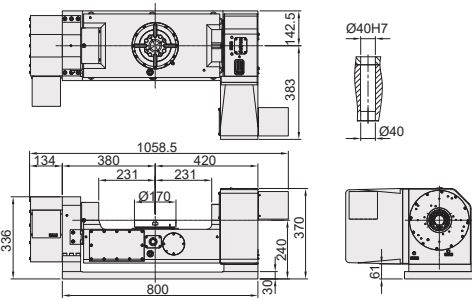
SPECIFICATIONS

MODEL		Unit	GTFAE-170SL		GTFAE-255SBL(S)		GTFAE-320XBL(S)		GTFAE-410XBL(S)/ HL(S)		GTFAE-500XBL	
Worktable diameter		mm / inch	Ø170 / Ø6.69		Ø255 / Ø10.455		Ø320 / Ø12.60		Ø410 / Ø16.14		Ø500 / Ø19.69	
Center bore diameter		mm / inch	Ø40H7 / Ø1.57H7		Ø40H7 / Ø1.57H7		Ø50H7 / Ø1.97H7		Ø70H7 / Ø2.76H7		Ø70H7 / Ø2.76H7	
Height of table (horizontal)		mm / inch	240 / 9.45		360 / 14.17		365 / 14.37		411 / 16.18 370 / 14.57		460 / 18.11	
Height of center (vertical)		mm / inch	240 / 9.45		360 / 14.17		365 / 14.37		411 / 16.18 370 / 14.57		460 / 18.11	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		12H7 / 0.47H7		14H7 / 0.55H7		14H7 / 0.55H7	
Clamping method /pressure		MPa / psi	P: 0.55~0.7 / 72.5~101.5		*P:0.55~0.7/ 72.5~101.5		*P: 0.6~0.7/ 87~101.5		*P:0.6~0.7/87~101.5 *H:5/725		*P: 0.6~0.7/ 87~101.5	
Servo motor spec							refer to page 74					
Transmission ratio			R	T	R	T	R	T	R	THL(S)	R	T
			1/90	1/90	1:90	1:120	1:100	1:120	1:120	1:150 1:120	1:120	1:180
Max. table speed / at specified servo motor speed		min ⁻¹	22.2 / 2000	22.2 / 2000	22.2 / 2000	16.6 / 2000	25 / 2500	16.6 / 2000	16.6 / 2000	11.1 / 1665 1332	16.6 / 2000	11.1 / 2000
Clamping torque		N.m / ft. lbs.	300/221	400/294.7	400/295	600/442.48	750/553.17	1500/1106.25	1600/1180	2000/1475	2500/1843.75	3000/2212.5
Allowable loading capacity	In Horizontal 	kg / lb	75 / 165		100 / 220		200 / 440		200 / 440		300 / 660	
	In Tilting (0~90°) 	kg / lb	50 / 110		75 / 165		100 / 220		150 / 330		250 / 550	
Allowable unbalancing work moment	WxL 	N.m / ft. lbs.	40 / 29.5		53 / 39.06		100 / 73.7		200 / 147.40		300 / 221.0	
FxL When table clamped	F 	N / lbs	7000 / 1570.8		20000 / 4488.0		20000 / 4488.0		20000 / 4488.0		30000 / 6732.0	
	FxL 	N.m / ft. lbs.	300 / 221		400 / 295		750 / 553.17		1600 / 1180		2500 / 1843.75	
	FxL 	N.m / ft. lbs.	400 / 294.7		600 / 442.48		1500 / 1106.25		2000 / 1475		3000 / 2212.5	
Allowable loading inertia	($\frac{W.D^2}{8}$) 	kg.m ²	0.28		0.55		2.6		4.3		9.6	
Resolution		deg.	0.001		0.001		0.001		0.001		0.001	
Indexing accuracy		sec	20"	60"	20"	60"	20"	60"	15"	60"	15"	60"
Repeatability		sec	6"	8"	6"	8"	6"	8"	6"	8"	6"	8"
Tilting angle range		deg.	-120 ~ +30		-120 ~ +30		-120 ~ +30		-120 ~ +30		-120 ~ +30	
Net weight (servo motor excluded)		kg / lb	275 / 606.3		560 / 1235		750 / 1653		1020 / 2175 850 / 1860		1270 / 2800	
Allowable cutting torque		N.m / ft. lbs.	200 / 147.4		250 / 182.5		550 / 401.5		780 / 569.4		1700 / 1241	
Allowable Max. rotary joint quantity		Port	-		4		6		6		6	

Note: 1. P: Pneumatic H:Hydraulic R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

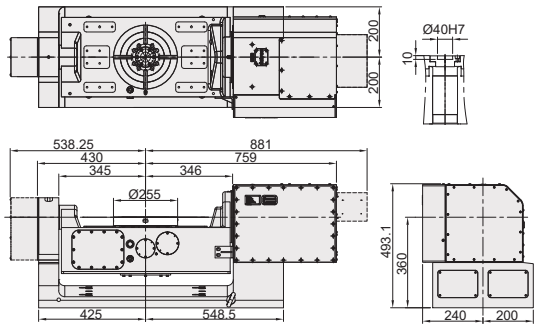
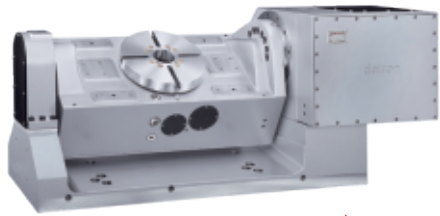
DIMENSIONAL DRAWINGS

GTFAE-170SL



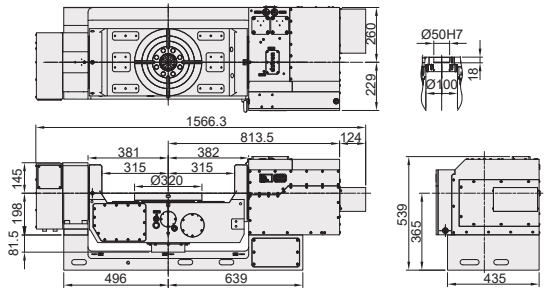
Unit : mm

GTFAE-255SBL(S)



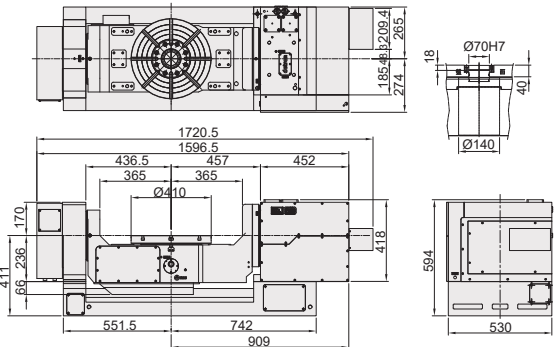
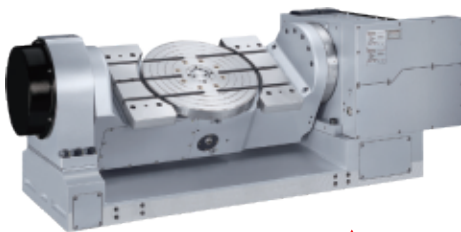
sub table as available option

GTFAE-320XBL(S)



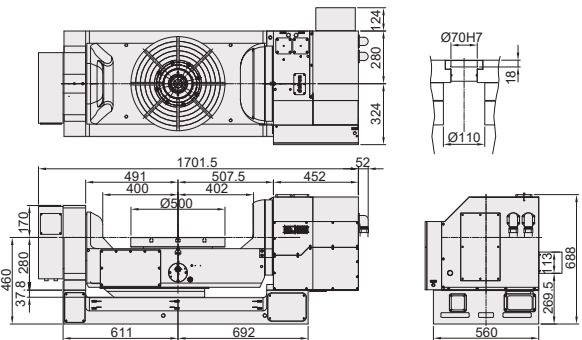
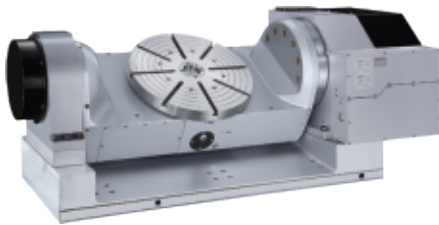
sub table as available option

GTFAE-410XBL(S)



sub table as available option

GTFAE-500XBL



air-oil converter built-in

Note: 1. The length of servo guard may vary with servo motor type. (the metal sheet dimensions shown at above are based on Fanuc motor)
2. Allowable wheel torque at table speed of 1 min⁻¹.
3. According to application engineering, optical encoder is recommended for tilting axis.
4. Customized table Ø630mm and dual drive at tilting axis are available.