

GFA-H/HB series

CNC Tilting Rotary Table

G F A - 2 5 5 H(B)

new optimization model
five axes
worm gear transmission
tilting motor mounted at the back of table
superior pneumatic clamp
hydraulic clamp



- Worktable diameter Ø210, Ø255, Ø320.
- The hydraulic brake equipped with radial and axial bearings.(P.18)
- Exclusive patented dual pneumatic piston braking system.(P.19) (GFA-210S)
- Enlarged the high precision cross roller bearing. (GFA-210S)
- Full gear depth transmitted by dual lead worm drive, resulting in higher efficiency and lower backlash.(P.20)

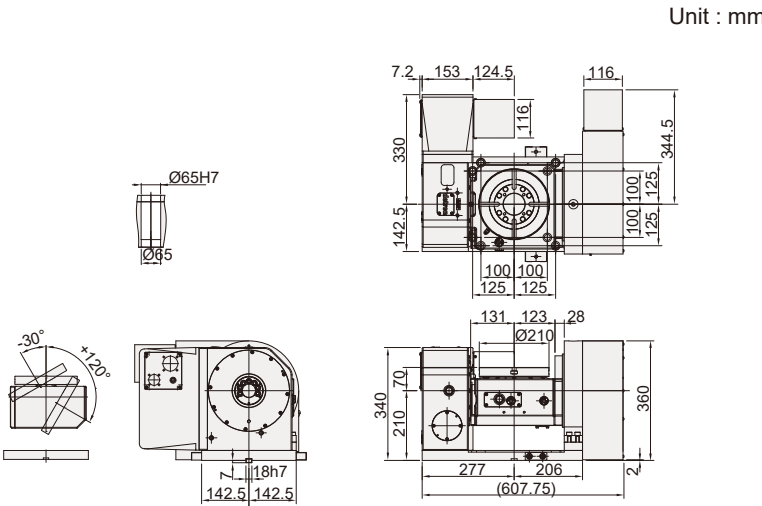
SPECIFICATIONS

MODEL		Unit	GFA-210S/H		GFA-255H/HB		GFA-320H	
Worktable diameter		mm / inch	Ø210 / Ø8.26		Ø255 / Ø10.04		Ø320 / Ø12.60	
Center bore diameter		mm / inch	Ø65H7 / Ø2.55H7		Ø140H7 / Ø5.51H7		Ø180H7 / Ø7.09H7	
Height of table (horizontal)		mm / inch	280 / 11		325 / 12.8		355 / 13.98	
Height of center (vertical)		mm / inch	210 / 8.26		225 / 8.86		255 / 10.04	
Width of T-slot		mm / inch	12H7 / 0.47H7		12H7 / 0.47H7		14H7 / 0.55H7	
Width of guide block		mm / inch	18 / 0.71		18 / 0.71		18 / 0.71	
Clamping method /pressure		MPa / psi	P:0.55~0.7 / 79.7~101 H:2.5 / 362.5		Hydraulic 5 / 725		Hydraulic 5 / 725	
Servo motor spec			refer to page 78					
Transmission ratio			R	T	R	T	R	T
			1:90	1:90	1:90	1:120	1:120	1:120
Max. table speed / at specified servo motor speed		min ⁻¹	33.3/3000	22.2/2000	22.2/2000	16.6/2000	22.2/2664	16.6/2000
Clamping torque		N.m / ft. lbs.	400/295 600/442	600/442 800/590	900/663.8	900/663.8	1600/1179.2	1600/1179.2
Allowable loading capacity	In Horizontal 	kg / lb	100 / 220		120 / 264		200 / 440	
	In Tilting (0~90°) 	kg / lb	70 / 154		90 / 166.33		150 / 330	
Allowable unbalancing work moment	WxL 	N.m / ft. lbs.	62 / 46		92 / 68		130 / 95.8	
F FxL When table clamped	F 	N / lbs	14000 / 3147		16000 / 3590.40		20000 / 4488.0	
	FxL 	N.m / ft. lbs.	400 / 295 600 / 442		900 / 663.8		1600 / 1179.2	
	FxL 	N.m / ft. lbs.	600 / 442 800 / 590		900 / 663.8		1600 / 1179.2	
Allowable loading inertia	$(\frac{W.D^2}{8})$ 	kg.m ²	0.55		0.98		2.6	
Resolution		deg.	0.001		0.001		0.001	
Indexing accuracy		sec	15	50	15	50	15	50
Repeatability (ISO 230-2/JIS B6192)		sec	6	8	6	8	6	8
Repeatability (JIS B6330)		sec	4	4	4	4	4	4
Tilting angle range		deg.	-30 ~ +120		-30 ~ +120		-30 ~ +120	
Net weight (servo motor excluded)		kg / lb	230 / 507		320 / 704 347 / 765		470 / 1037	
Allowable cutting torque		N.m / ft. lbs.	250 / 184		370 / 272.9		780 / 569.4	
Allowable Max. rotary joint quantity		Port	4		6 / 6		6	

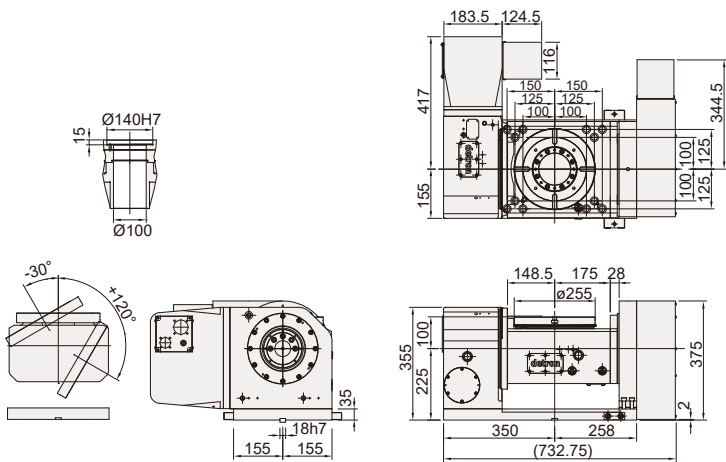
Note: 1. R: Rotary Axis T: Tilt Axis
2. FxL When table clamped is a reference data, the users should consider proper safety factor or contact detron for details.

DIMENSIONAL DRAWINGS

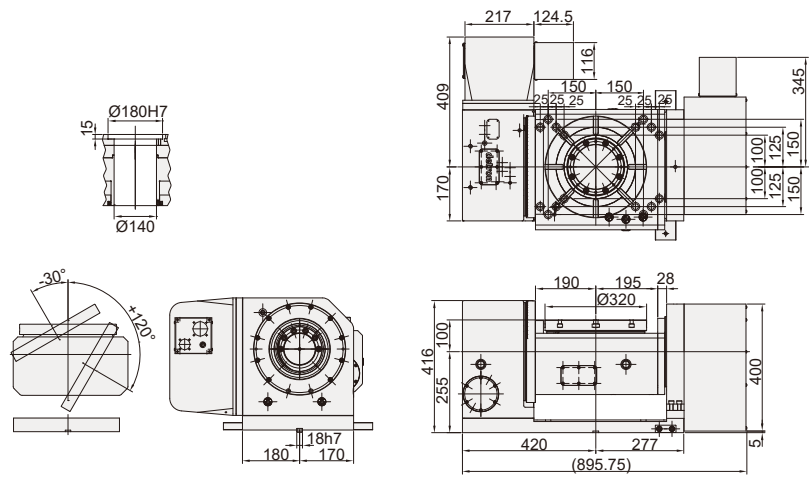
GFA-210S/H



GFA-255H/HB Optional Interface For BT / HSK / CAPTO Tool Holder



GFA-320H



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.