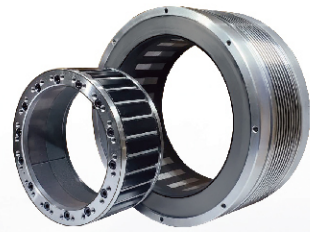


The 4th & 5th Axis Direct Drive Motor Series The 4th Axis Direct Drive Motor Series

- Pneumatic Brake / Hydraulic Brake



D.D. Motor



FAD-170F
(Two D.D. Motors)



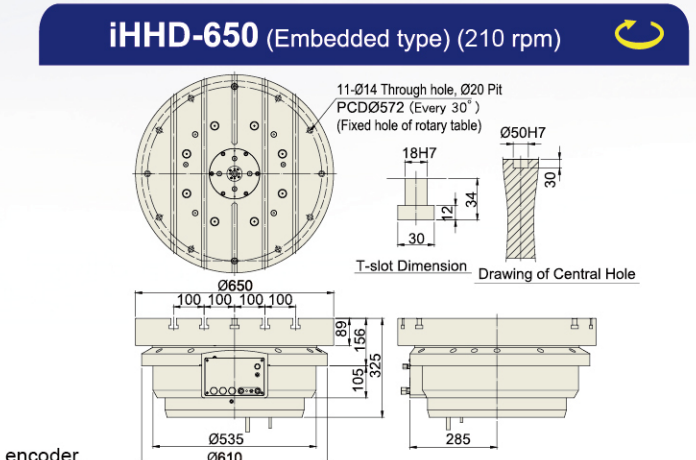
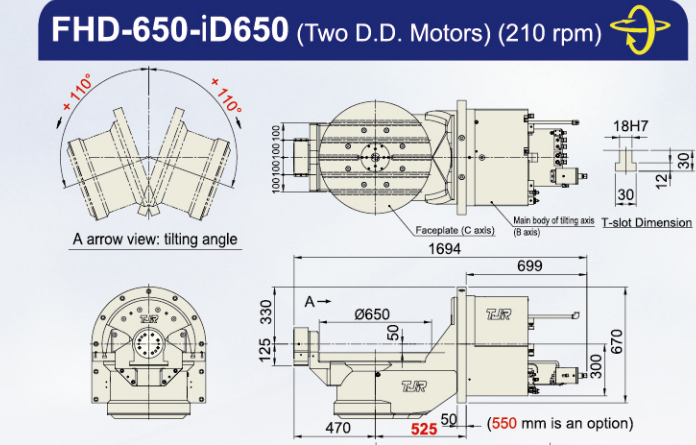
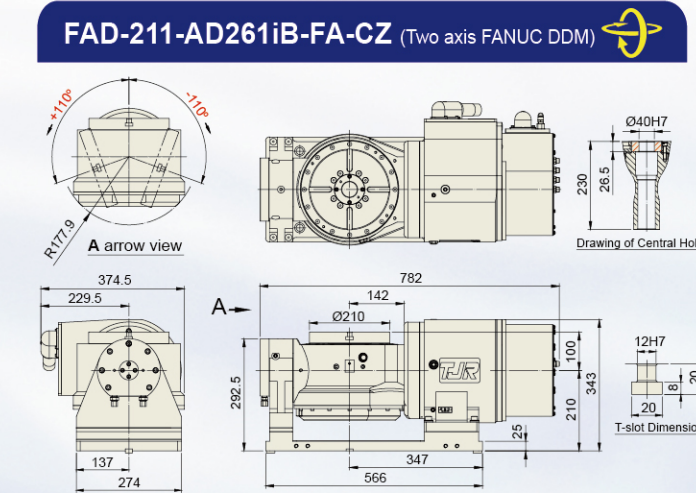
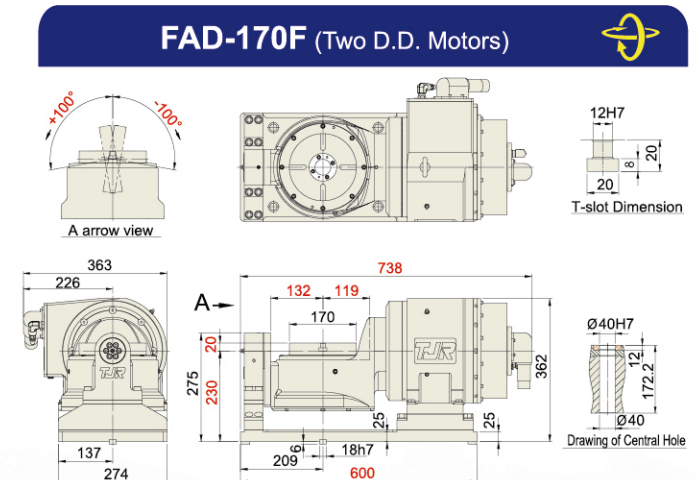
FAD-211F-AD261iB-FA-CZ
(Two D.D. Motors)
(FANUC DDM)



FHD-650-iD650
(Two D.D. Motors / Hydraulic Brake)



iHHD-650



Item	Unit	Two D.D. Motors : 300 rpm		Two axis FANUC DDM		Two D.D.Motors		Embedded type
		FAD-170F / FAD-210F		FAD-211-AD261iB-FA-CZ		FHD-650-iD650		iHHD-650
Table Diameter	mm	Ø170 / Ø210		Ø210		Ø650		Ø650
Diameter of Table Central Hole	mm	-		-		-		Ø50 x 30 deep
Inner Diameter of Mandrel Sleeve	mm	Ø40H7		Ø40H7		-		-
Diameter of Center Through Hole	mm	Ø40		Ø40		-		-
Table Height (Horizontal)	mm	250		310		-		-
Table T-slot Width	mm	12H7		12H7		18H7		18H7
Guide Block Width	mm	18h7		18h7		-		-
Axis	-	Rotary axis		Tilt axis ±100°		Rotary axis		Tilt axis ±110°
Transmission Mechanism	-	DD Motor		DD Motor		DD Motor		DD Motor
Cooling System	-	Free Cooling		Free Cooling (Water Cooling)		Free Cooling		Free Cooling (Oil Cooling)
Min. Increment	deg.	0.001		0.001		0.001		0.001
Indexing Precision (while tilt 0°~+90°)	sec.	20		30		20 ^{*1}		30 ^{*1}
Repeatability	sec.	4		4		4		4
Clamping System (Pneumatic)	kgf/cm ²	6		6		6		6
Clamping Torque	Nm	310		450 (Powerful)		310		450
Servo Motor Model	FANUC MITSUBISHI	Taper shaft with key		DD Motor		FANUC DiS DD Motor		FANUC DiS DD Motor
Speed Reduction Ratio	-	Direct Drive		Direct Drive		Direct Drive		Direct Drive
Rated / Max. Speed	r.p.m	200 / 300		50 / 150		200 / 300		150 / -
Rated / Max. Cutting Torque	Nm	29 / 143		48 (Water cooling 118) / 143		48 (Water cooling 80) / 200		57 (Oil cooling 80) / 300
Allowable Inertia Load Capacity (Horizontal)	kg·cm·sec ²	1.08 (Ø170) / 1.65 (Ø210)		-		1.65		264
Allowable Workpiece Load	kg	50		30		50 (Rated Speed)		300
Allowable Load (with clamping)	Nm	4000		450		4000		25000
Net Weight (D.D motor included)	kg	220 (Ø170) / 223 (Ø210)		237		1173		479
Electrical Specification								
Encoder	-	Renishaw or Heidenhain		FANUC aiCZ		Heidenhain		Heidenhain
Voltage (Back E.M.F)	Vrms/100rpm	Rotary axis 38.8		-		125.6		125.6
Rotor Poles	-	44		Rotary axis : 28		Tilt axis : 28		66
Rated / Max. Current	Arms	4.25 / 12.75		10.2 / 28.3 (Rotary axis)		19.5 / 53.2 (Tilt axis)		29.8 / 75.7 (Water Cooling)
Power Rating	kW	0.77		0.76		-		4.7

★ In accordance with the foreign trade control ordinance, permission of the ministry of economy, trade and industry is required when exporting dual-axis products overseas.

★ *1. Indexing precision can be better after installing an additional angle encoder. Please refer to the table on page 70 for more details.

Driven by Direct Drive Motor