

KITAGAWA MULTI-SPINDLE NC ROTARY TABLES



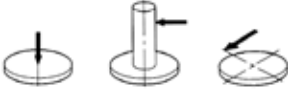

<u>MODEL NO.</u>	<u>KIW NO.</u>
TM-100-2R	TM2100
TM-100-3R	TM3100
TM-160-2R	TM2160
TM-160-3R	TM3160



- **SOLID-BODY DESIGN FOR MAXIMUM RIGIDITY AND COMPACTNESS**
- **HIGH SPEED TABLE ROTATION**
83.3 RPM FOR TM100-2R
69.4 RPM FOR TM100-3R
33.3 RPM FOR TM160-2R AND TM160-3R
- **PRECISE INDEXING ACCURACY**
60" WITH +/-2.5" REPEATABILITY FOR 100 MODELS
30" WITH +/-2" REPEATABILITY FOR 160 MODELS
- **POWERFUL DOUBLE DISC CLAMPING**
BOTH AIR AND HYDRAULIC TYPES ARE AVAILABLE IN 160 MODELS
- **EXTRA LARGE CROSS ROLLER BEARING**
- **AIR-PURGE**
MOTOR COVER IS AIR-PURGED TO PREVENT MOISTURE AND FOREIGN MATERIALS FROM ENTERING

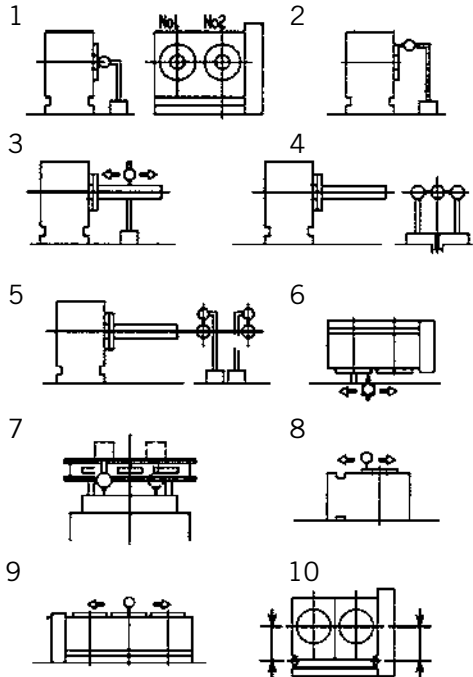
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LOAD CAPACITIES

		PERMISSIBLE LOAD		MAX. MACHINE FORCE			*MAX. TORQUE CAP.
							
MODEL	KIW NO.	lb.	lb.	lb.	ft-lb.	ft-lb.	ft-lb. W
TM-100-2R, TM-100-3R	TM2100, TM3100	132	66	1349	148	(89)	133
TM-160-2R, TM-160-3R	TM2160, TM3160	353	176	2248	443	295(130)	221

Note: Clamping force is based on air pressure at 71 PSI and hydraulic oil pressure at 500 PSI. Number in () means air clamping force.

GUARANTEED ACCURACIES

ITEM	DESCRIPTION OF INSPECTION	GUARANTEED ACCURACY	
1	Run-out of Table I.D.	.0004	
2	Run-out of Table Face	.0008	
3	Parallelism Between Spindle and Base	.0008	
4	Parallelism Between Spindle and Guide Block	.0008	
5	Variation in Center Heights	.0008	
6	Variation Between Guide Block and Each Table Face	.0012	
7	Flatness of Table Face	.0004	
8	Parallelism Between Table Face and Base	.0004	
9	Variation in Height Between Each Table Face and Base	.0008	
10	Variation Between Guide Block and Each Spindle	.0008	
11	Indexing Accuracy (second)	*30	
12	Repeatability (second)	**±2	

Note: * means 60 seconds for models TM2100 and TM3100

Note: ** means ±2.5 seconds for models TM2100 and TM3100

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MODEL		TM-100-2R (TM2100)	TM-100-3R (TM3100)	TM-160-2R (TM2160)	TM-160-3R (TM3160)
Table Diameter		4.13	4.13	6.50	6.50
Center Height in Vertical		4.33	4.33	5.51	5.51
Overall Height in Vertical		8.27	8.27	9.92	9.92
Thru Hole Diameter		1.26	1.26	1.57	1.57
AC Servo Motor	Fanuc	αiF4/4000			
	Mitsubishi	HF-104T			
	Yaskawa	SGMGH-05			
	OSP	BL-ME40J			
Gear Ratio		1/36	1/36	1/90	1/90
*Maximum R.P.M.		83.3	69.4	33.3	33.3
Minimum Resolution (Degree)		0.001	0.001	0.001	0.001
Indexing Accuracy (second)		60	60	30	30
Repeatability (second)		±2.5	±2.5	±2	±2
Maximum Workpiece Diameter		4.13	4.13	6.5	6.5
Clamping Force (ft.-lb.)	Air Pressure at 71PSI	86	86	130	130
	Hydraulic Pressure at 500PSI	—	—	295	295
Permissible Load (lb.)	Horizontal	132	132	353	353
	Vertical	66	66	176	176
Maximum Work Inertia (lb.-in-sec ²)		0.48	0.48	4.51	4.51
Weight (lb.)		187	220	220	331

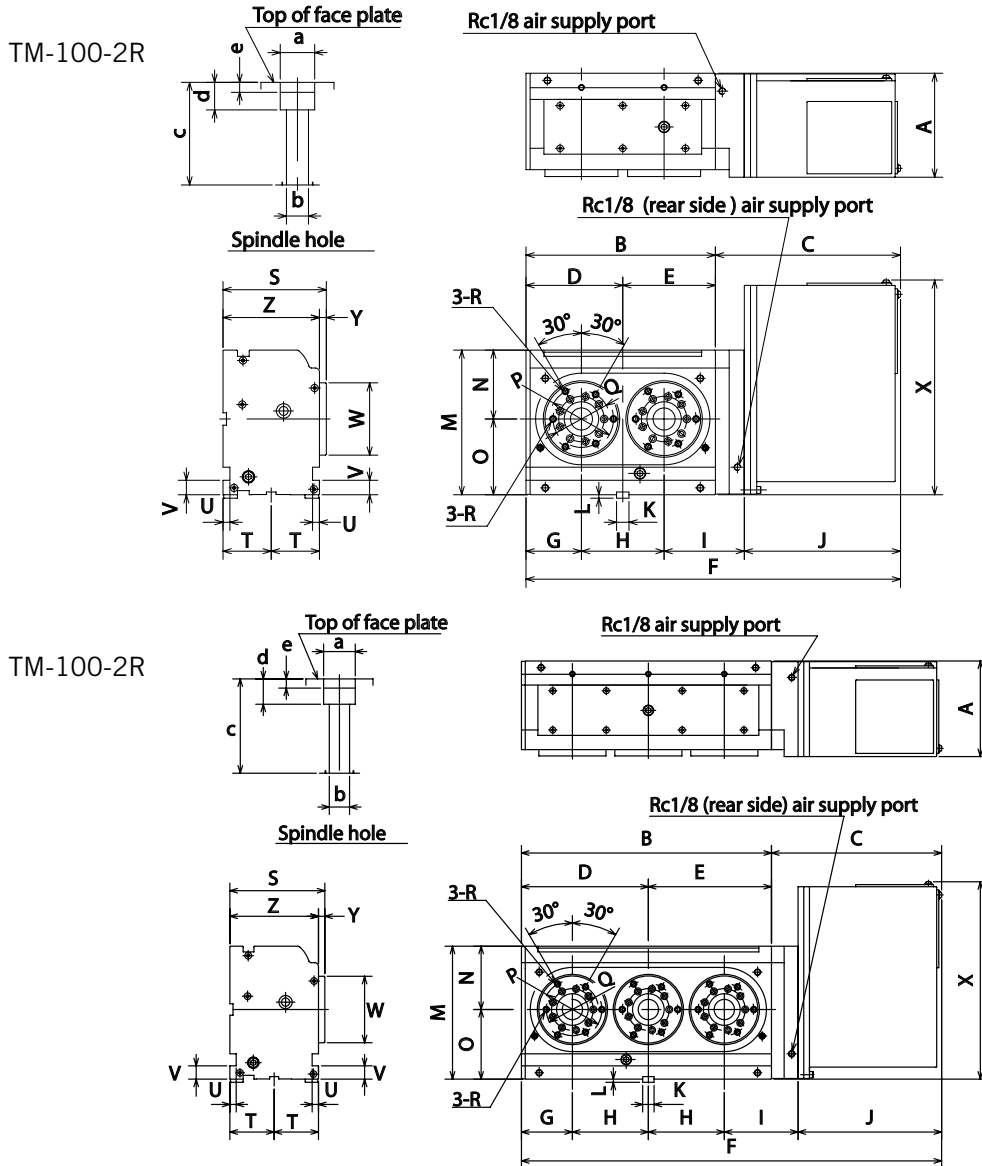
Note: * means that max RPM is obtained at motor speed of 3,000 rpm for TM2100, TM2160 & TM3160, and at motor speed of 2,500 rpm for TM3100.

Note: See accessory chart (p223) for complete listing of optional accessories.

Note: Specify pneumatic/hydraulic clamping for TM-160-2R & -3R when ordering.

Note: Order AB25T (p220) optional airbooster for hydraulic clamping units on machines with no hydraulic unit.

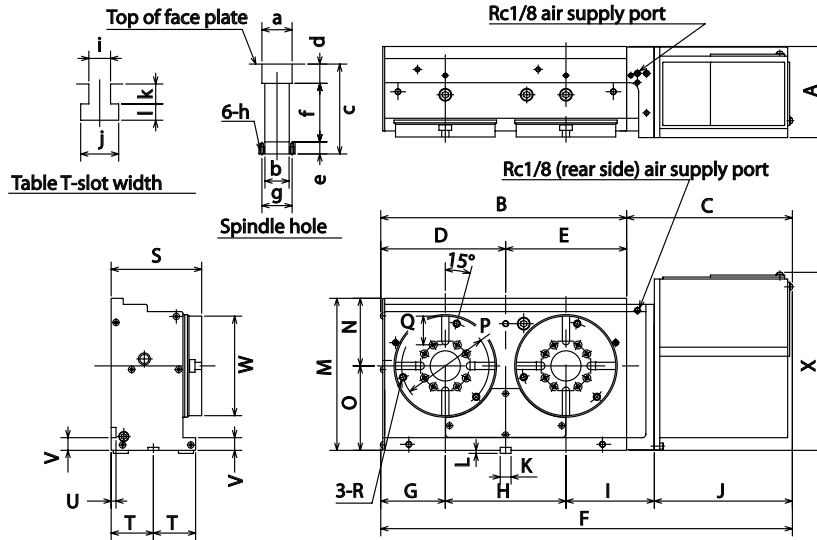
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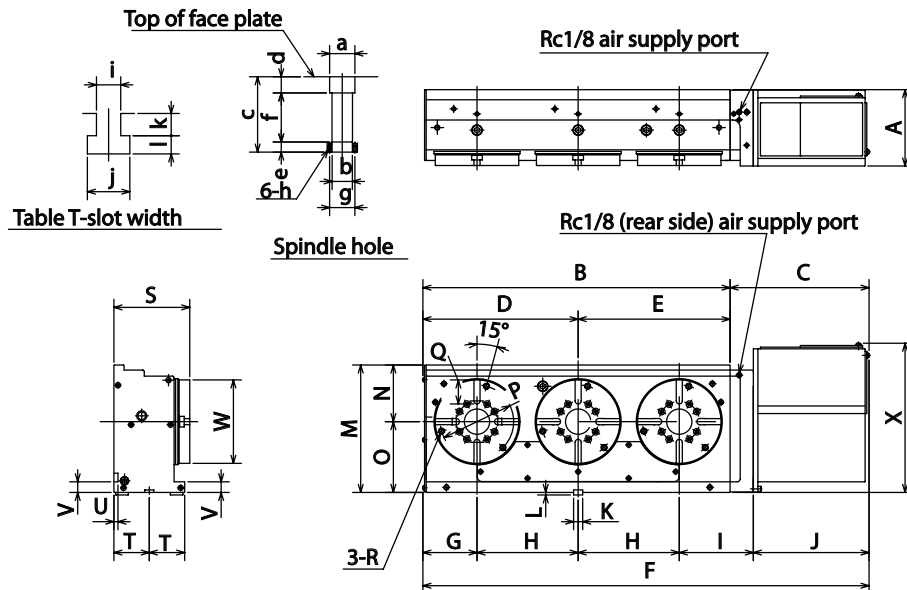
MODEL	KIW NO.	A	B	C	D	E	F	G	H	I	
TM-100-2R	TM2100	5.94	10.83	10.59	5.55	5.28	21.42	3.19	4.7244±.00079	4.57	
TM-100-3R	TM3100	5.94	15.55	10.59	7.91	7.64	26.14	3.19	4.7244±.00079	4.57	
J	K	L	M	N	O	P	Q	R	S	T	U
8.94	.7087 h7	.20	8.27	3.94	4.33	3.66	3.25	M8	5.91	2.76	.39
8.94	.7087 h7	.20	8.27	3.94	4.33	3.66	3.25	M8	5.91	2.76	.39
V	W	X	Y	Z	a	b	c	d	e		
.83	4.13	12.28	.39	5.51	1.9685 H7	1.26	5.87	1.57	.57		
.83	4.13	12.28	.39	5.51	1.9685 H7	1.26	5.87	1.57	.57		

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TM-160-2R



TM-160-3R



CODE NO.	MODEL	A	B	C	D	E	F	G	H	I	J		
TM-160-2R	TM2160	5.94	16.06	10.83	8.15	7.91	26.89	4.21	7.87402±.00079	5.79	9.02		
TM-160-3R	TM3160	5.94	23.94	10.83	12.09	11.85	34.76	4.21	7.87402±.00079	5.79	9.02		
K	L	M	N	O	P	Q	R	S	T	U	V	W	X
.7087 h7	.20	9.92	4.41	5.51	5.71	1.87	M10	5.91	2.76	.31	.83	6.50	11.61
.7087 h7	.20	9.92	4.41	5.51	5.71	1.87	M10	5.91	2.76	.31	.83	6.50	11.61
a	b	c	d	e	f	g	h	i	j	k	l		
1.9685 H7	1.5748 H8	5.87	1.26	.79	3.82	1.97	M6	.47	.83	.43	.35		
1.9685 H7	1.5748 H8	5.87	1.26	.79	3.82	1.97	M6	.47	.83	.43	.35		

ACCESSORY CHART & RECOMMENDED LUBRICANT OIL FOR KITAGAWA ROTARY TABLES

MODEL/ KIW NO.	TAIL STOCK	AIR/HYDRAULIC TAILSTOCK	SCROLL CHUCK	AIR CHUCK	ROTARY JOINT	AIR BOOSTER	LUBE/OIL	
TT101	—	—	SC-4	—	RJ32H	—	MOBIL VACTRA NO. 1	
TT140			SC-4	—	RJ32TT140			
TT(TW)182			SC-6T	NRC06	RJ40FTT182			
TW2180			SC-6T	—	—			
TT(S)251			SC-9T	NRC08	RJ70H25T	AB25T		MOBIL VACTRA NO. 2
TT(S)321			SC-12T-4	NRC10	RJ70H32T			
TM-100-2R/ TM2100	TS100-2	TS100-2RSA	SC-4	—	RJ32H	MOBIL VACTRA NO. 1		
TM-100-3R/ TM3100	TS100-3	TS100-3RSA	SC-4		RJ32H			
TM-160-2R/ TM2160	TS160-2	TS160-2RSA(H)	SC-6T		NRC04		RJ40H	
TM-160-3R/ TM3160	TS160-3	TS160-3RSA(H)	SC-6T		NRC04		RJ40H	
TCM100	TS100	TS100-RSA	SC-4	NRC04	—		—	MOBIL VACTRA NO. 1
TCM100A	TS100	TS100-RSA	SC-4	NRC04				
TCM2100A	TS100-2	TS100-2RSA	SC-4	—				
TCM3100A	TS100-3	TS100-3RSA	SC-4					
MRM120	TS160	TS160-RSA	SC-5	NRC04	—	—		
MRM160	TS200	TS200-RSA	SC-6T	NRC04				
MRM200	TS200	TS200-RSA	SC-7T	NRC06				
MRM250	TS250	TS250-RSA	SC-9T	NRC08				
MRM320	TS320	TS320-RSA	SC-12T-4	NRC10				



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