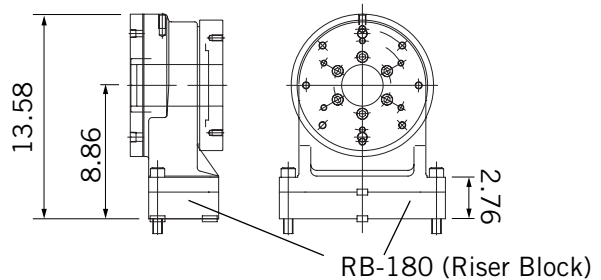
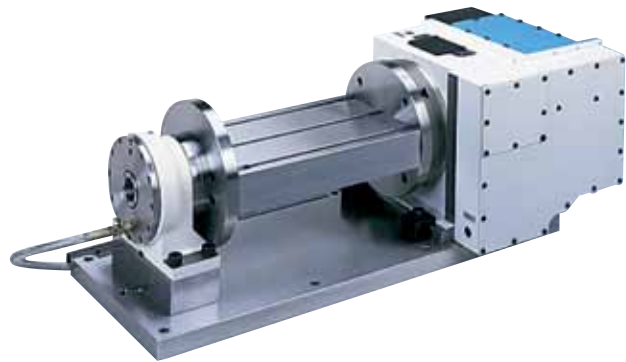
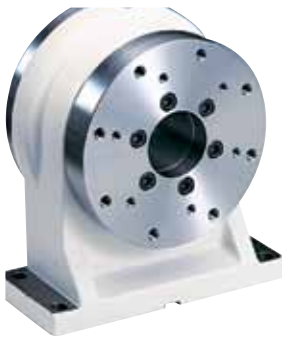


## TAIL SUPPORTS FOR KITAGAWA NC ROTARY TABLES

- Designed for cradle type rotary tables or indexers
- Strong clamping force for heavy duty machining



TSR180A(H)\*\* with RB-180 (Riser Block)

MODEL	Center Height	Thru Hole Dia	CLAMPING FORCE (ft-lb)	
			Air Pressure at 71PSI	Hydraulic Pressure at 500PSI
TSR121	4.72	1.57	228	—
TSR142	5.51	1.57	331	—
TSR180A(H)*	7.09	2.76	92	663
TSR180A(H)* with RB-180 (Riser block)	8.86	2.76	92	663

Note: RB-180 (Riser Block) can be purchased separately.

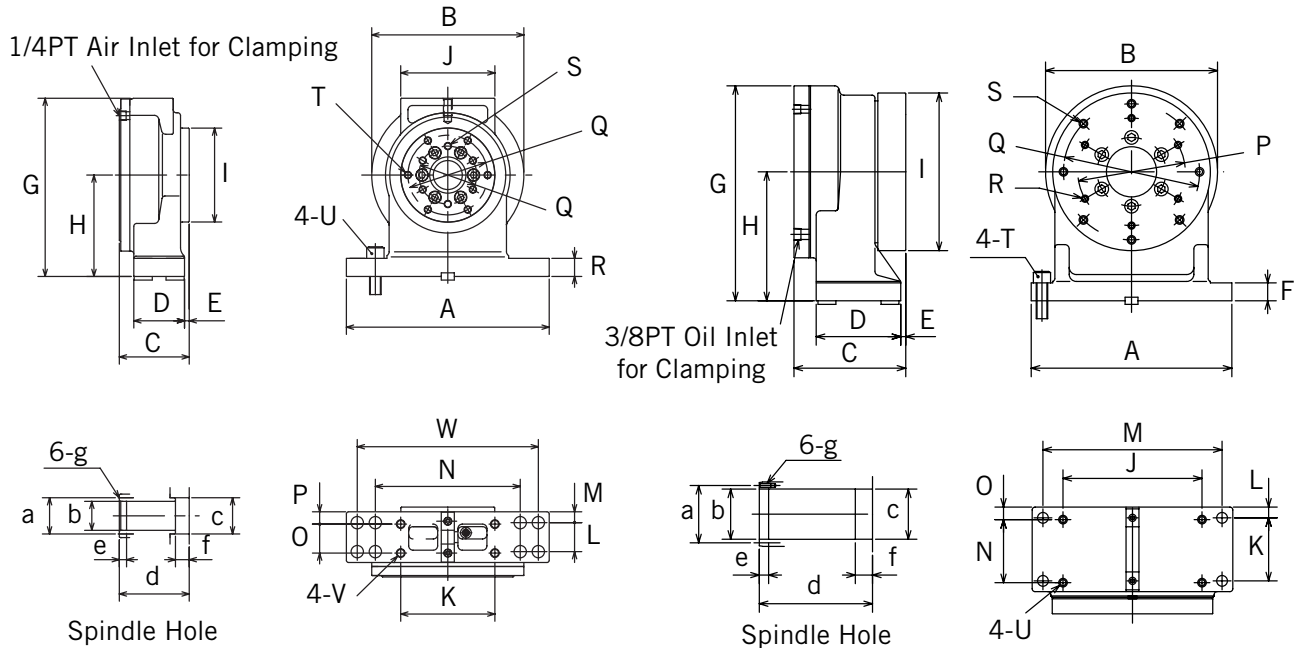
Note: \* H means hydraulic unit.

Note: Specify pneumatic or hydraulic for TSR180 when ordering.

Note: \*\* Above drawing represents TSR180A(H)\*with RB-180 (Riser Block). Please refer to the dimensional chart of TSR180A(H) (p217) for specifications not shown in above drawing.

### TAIL SUPPORTS FOR KITAGAWA NC ROTARY TABLES

- Designed for cradle type rotary tables or indexers
- Strong clamping force for heavy duty machining



TSR121 and TSR142

TSR180

MODEL	A	B	C	D	E	F	G	H	I
TSR121	9.06	7.48	3.54	2.76	.20	.79	8.50	4.72	4.69
TSR142	11.02	8.27	3.80	2.76	.26	.98	9.69	5.51	5.12
TSR180A(H)	11.02	9.45	6.14	4.65	.28	.98	11.81	7.09	8.66

J	K	L	M	N	O	P	Q	R	S	T
4.72	5.12	1.57	.59	7.87	1.57	.59	3.94	—	—	12-M8
5.12	5.12	1.57	.59	7.87	1.57	.67	4.33	3.15	6-M10	6-M10
7.64	3.46	.59	9.84	3.46	.69	5.91	7.48	6-M10	8-M12	M16x50

U	V	W	a	b	c	d	e	f	g
M16x45	M12	—	1.97	1.5748 H8	1.5748	3.54	.39	.59	M6
M16x50	M12	9.84	1.97	1.5748 H8	1.9685	3.80		.75	
M12	—	—	3.15	2.7559 H8	2.7559	6.10		.94	

Note: Specify pneumatic or hydraulic for TSR180 when ordering.

# TAIL SUPPORTS

## BASIC MODEL - NO CLAMPING MECHANISM FOR KITAGAWA NC ROTARY TABLES

- Designed for cradle type rotary tables or indexers

FIG. 1

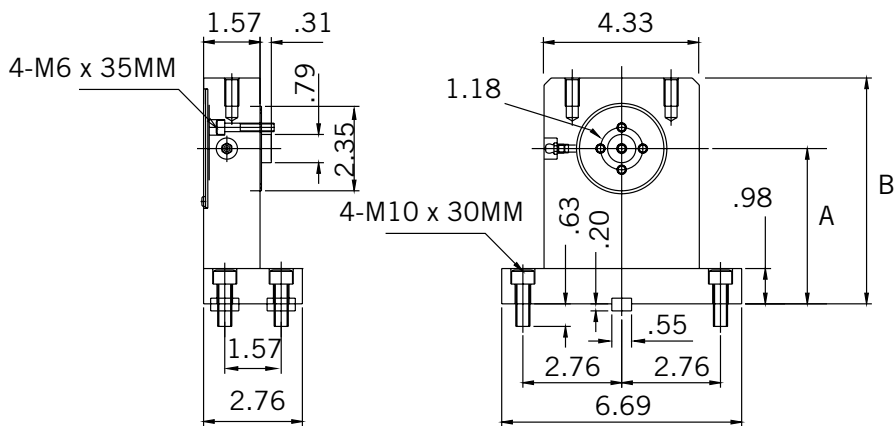
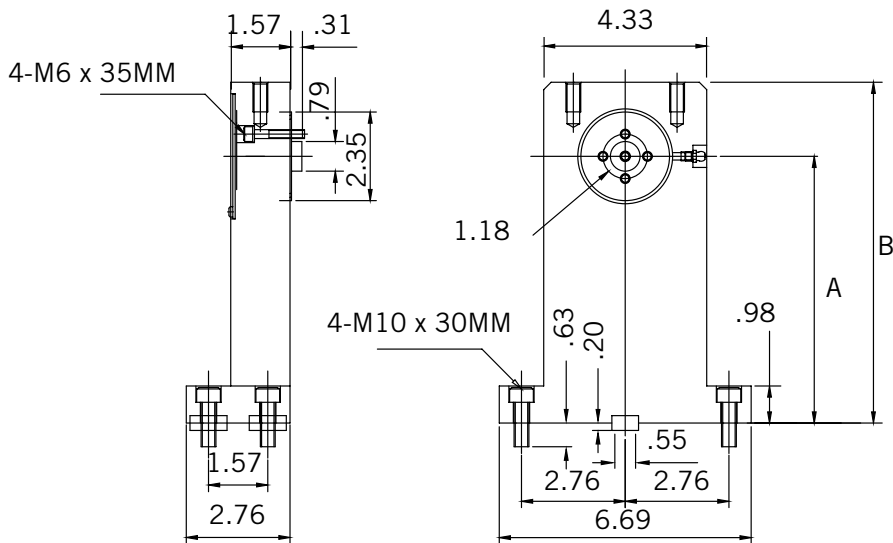


FIG. 2



MODEL	A	B	FIG.
TSR-110Z-01	4.33	6.30	1
TSR-120Z-01	4.72	6.70	1
TSR-140Z-01	5.51	7.48	1
TSR-180Z-01	7.09	9.06	2

# TAILSTOCKS

## KITAGAWA NC ROTARY TABLES

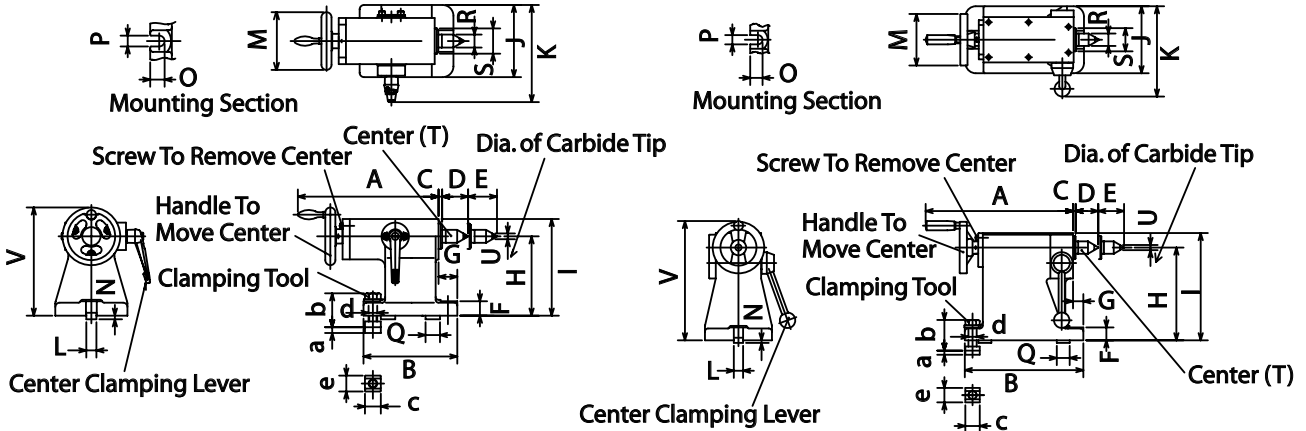


FIG. 1

FIG. 2

MODEL	KIW NO.	A	B	C	D	E*	F	G	H	I	J	K
TS100	RS100RN	7.68	5.12	.20	1.42	1.57	.79	1.02	4.33	5.28	3.94	5.31
—	MR120RN	7.28	5.12		1.42	1.18	.79	1.02	4.72	5.67	3.94	5.31
—	MR160RN	7.28	5.51		1.42	1.18	.98	1.22	5.51	6.46	4.72	5.70
TS160	TS160RN	11.26	8.66		1.73	1.97	.79	.59	4.72	5.89	4.33	6.30
TS200	MR200RN,TS200RN	11.26	9.06		1.73	1.97	.98	.79	5.51	6.67	4.72	6.42
TS250	MR250RN,TS250RN	11.26	9.06		1.73	1.97	.98	.79	7.09	8.25	5.12	6.93
TS320	MR320RN,TS320RN	11.26	9.06	1.73	1.97	.98	.79	8.86	10.02	5.91	7.32	
TS400	TS400RN	16.30	12.60	.12	2.06	2.76	1.38	.67	10.04	12.01	8.27	10.28
TS500	TS500RN	16.30	12.60	.12	2.06	2.76	1.38	.67	12.20	14.17	8.27	10.28
TS630	TS630RN	18.15	12.99	.20	2.76	3.15	1.57	.59	15.75	17.72	10.24	12.48

L	M	N	O	P	Q	R	S	T	U**	a	b	c	d	e	FIG.		
.5512 h7	3.15	.20	.79	.59	.79	.71	1.38	MT-2	.31	.34	1.85	1.12	.47	.87	1		
.5512 h7	3.15		.79	.59	.79	.71	1.38	MT-2	.31	.34	1.85	1.12	.47	.87	1		
.7087 h7	3.15		.97	.75	.98	.71	1.38	MT-2	.31	.43	2.28	2.15	2.34	1.18	.63	1.12	1
	3.94		.87			.95	1.77	MT-3	.39								2
	3.94		.97			.95	1.77	MT-3	.39								2
	3.94		.97			.95	1.77	MT-3	.39								2
	3.94		.97			.95	1.77	MT-3	.39								2
	5.51		1.12			1.24	2.56	MT-4	.55								2
	5.51		1.12			1.24	2.56	MT-4	.55								2
	6.30		1.28			1.76	3.15	MT-5	.71								3.05

Note: \* means maximum dimension  
 Note: \*\* means in diameter.  
 Note: "T" means the size of Morse Taper of Center.

### AIR/HYDRAULIC TAILSTOCKS KITAGAWA NC ROTARY TABLES

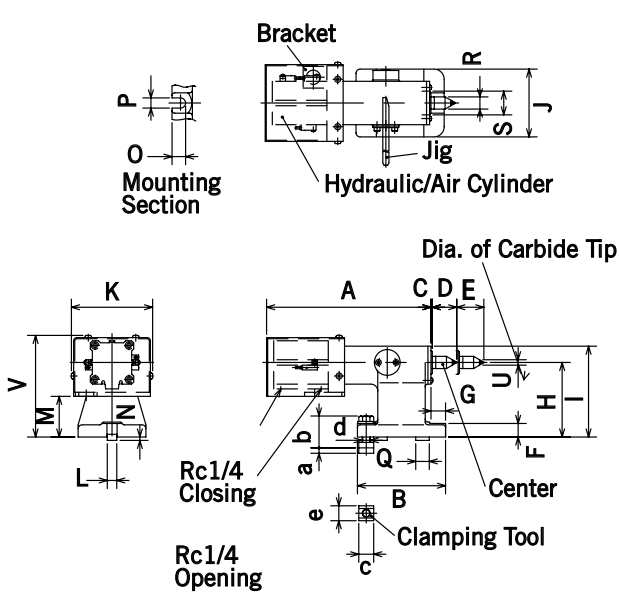


FIG. 1

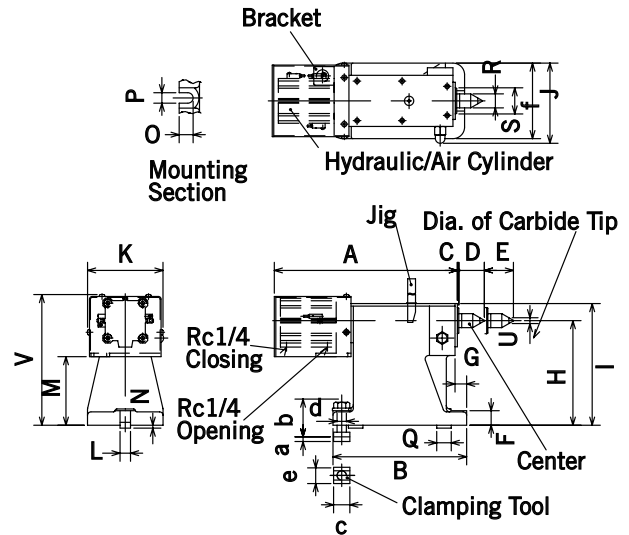


FIG. 2

MODEL	KIW NO.	A	B	C	D	E*	F	G	H	I	J
TS100 RSA(H)	RS100A(H)N,RS100RA(H)N	10.08	5.12	1.42	5.28	1.57	.79	.85	4.33	3.94	—
—	MR120A(H)N,MR120RA(H)N	9.29	5.12	1.42	5.67	1.18	.79	.85	4.72	3.94	—
—	MR160A(H)N,MR160RA(H)N	9.29	5.51	1.42	6.46	1.18	.98	1.04	5.51	4.72	—
TS160 RSA(H)	TS160A(H)N	12.72	8.66	1.73	5.89	1.97	.79	.43	4.72	4.33	4.84
TS200 RSA(H)	TS200A(H)N	12.72	9.06	1.73	6.67	1.97	.98	.63	5.51	4.72	4.96
TS250 RSA(H)	MR250A(H)N,TS250A(H)N	12.72	9.06	1.73	8.25	1.97	.98	.63	7.09	5.12	5.16
TS320 RSA(H)	MR320A(H)N,TS320A(H)N	12.72	9.06	1.73	10.02	1.97	.98	.63	8.86	5.91	—

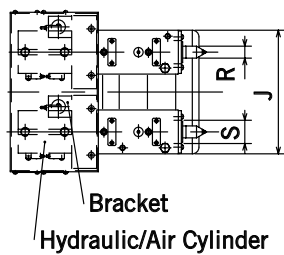
K	L	M	N	O	P	Q	R	S	T	U**	V	a	b	c	d	e	FIG.		
.5512 h7	.20	4.72	.59	.79	.79	.71	1.38	5.91	2.36	.31	.08	.34	1.85	1.12	.47	.87	1		
.5512 h7		4.72	.59	.79	.79	.71	1.38	6.30	2.76	.31	.08	.34	1.85	1.12	.47	.87	1		
.7087 h7		4.72	.75	.96	.98	.71	1.38	7.09	3.54	.31	.08	.43	2.28	1.18	.63	1.12	.87	1	
		5.12				.89	.95	1.77	6.50	2.28	.39		.10					2.15	2
		5.12				.96	.95	1.77	7.28	3.07	.39		.10					2.34	2
		5.12				.96	.95	1.77	8.86	4.65	.39		.10					2.34	2
	5.12	.96	.95	1.77	10.63	6.42	.39	.10	2.34	2									

Note: \* means maximum dimension

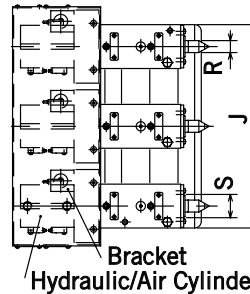
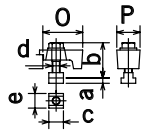
Note: \*\* means in diameter.

Note: (H) means hydraulic type

### AIR/HYDRAULIC TAILSTOCKS MULTI-SPINDLE TYPE FOR KITAGAWA NC ROTARY TABLES



Clamping Parts



Clamping Parts

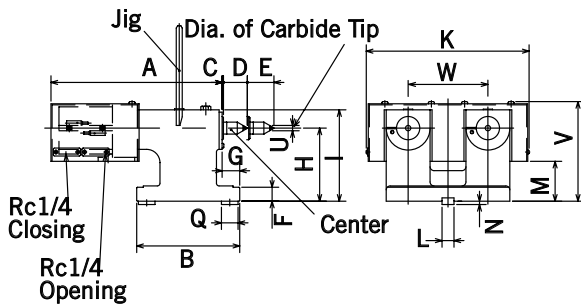
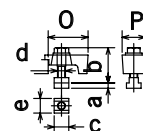


FIG. 1

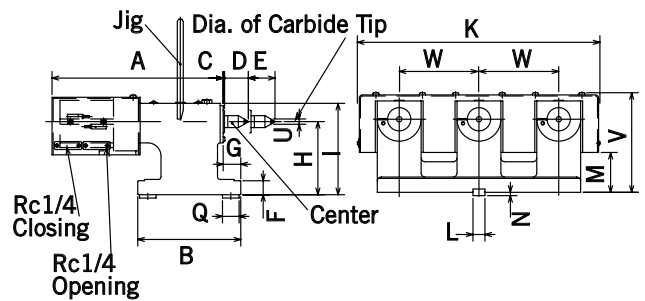


FIG. 2

MODEL	KIW NO.	A	B	C	D	E*	F	G	H	I	J	K
TS100-2RSA(H)	TS2100A(H)N	10.16	6.10	.08	1.42	1.57	.83	1.04	4.33	5.43	7.32	9.65
TS100-3RSA(H)	TS3100A(H)N	10.16							4.33	5.43	12.05	14.37
TS160-2RSA(H)	TS2160A(H)N	10.08	6.10	.08	1.42	1.57	.83	1.04	5.51	6.61	10.47	12.60
TS160-3RSA(H)	TS3160A(H)N	10.08							5.51	6.61	18.35	20.47

L	M	N	O	P	Q	R	S	T	U**	V	W	a	b	c	d	e	FIG.
.7087 h7	2.36	.20	2.83	1.77	.98	.71	1.38	MT-2	.31	5.91	4.72	.43	2.62	1.18	.63	1.12	1
	2.36									5.91	4.72						2
	3.15									7.09	7.87						1
	3.15									7.09	7.87						2

Note: \* means maximum dimension

Note: \*\* means in diameter.

Note: (H) means hydraulic type.

Note: "T" means the size of Morse Taper of Center. fonts

Note: The dimensions between center of spindles are 4.72" for models TS100-2RSA(H) & TS100-3RSA(H) and 7.87" for models TS160-2RSA(H) & TS160-3RSA(H).

## 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
TC-5C-1/ TC100	TS100	TS100-RSA	SC-4	—	—	—	MOBIL VACTRA NO. 1
TC-5C-1A/ TC100-A	TS100	TS100-RSA	SC-4				
TC-5C-2A/ TC2100-A	TS100-2	TS100-2RSA	SC-4				
TC-5C-3A/ TC3100-A	TS100-3	TS100-3RSA	SC-4				
MR120	TS160	TS160-RSA	SC-5	NRC04	RJ32H12Q		
MR160	TS200	TS200-RSA	SC-6T	NRC04	RJ40H16Q		
MR200	TS200	TS200-RSA	SC-7T	NRC06	RJ40H20Q		
MR250	TS250	TS250-RSA	SC-9T	NRC08	RJ70H25Q		
MR320	TS320	TS320-RSA	SC-12T-4	NRC10	RJ70H25M		
TMX160	TS160	TS160-RSH(A)	SC-6T	NRC04,06	RJ40H16D		
TMX200	TS200	TS200-RSH(A)	SC-7T	NRC04,06	RJ40H20D		
TMX250	TS250	TS250-RSH(A)	SC-9T	NRC06,08	RJ70H25D		
TRX320	TS320	TS320-RSH(A)	SC-12T-4	NRC10	RJ70H32K		
TR401	TS400	—	SC-14-PB	—	RJ80H40R		
TR500	TS500		SC-14-PB		RJ80H		
TP530	TS500		SC21-12.6 IC21-13.6		—		
TR630	TS630		SC-16		RJ80H		
TBX160	TS160	TS160-RSA(H)	SC-6T	NRC04,06	—	—	MOBIL VACTRA NO. 1
TBX200	TS200	TS200-RSH(A)	SC-7T	NRC04,06	RJ40H20F		MOBIL VACTRA NO. 2
TBX250	TS250	TS250-RSH(A)	SC-9T	NRC06,08	RJ70H25F		
TBX320	TS320	TS320-RSH(A)	SC-12T-4	NRC10	RJ70H32F		

## 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	—		—	
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				