



USER MANUAL

RATCHET WRENCHES

MODELS : FRW-13N-3,-4



FRW-13N-3



FRW-13N-4

SPECIFICATIONS

Model	Capacity (Screw Size) (Guidance)		Max. Torque			Free Speed min ⁻¹	Head Size			Socket Hex. Size (Standard)	Overall Length		Mass		Air Consumption (Under Load)				
	mm	in	N·m	kgf·m	ft·lb		Thickness	Width	Length		mm	in	kg	lb	Nm/min	ft·lb/min			
FRW-13N-3	12	1/2	58.8	60.0	43.4	130	18	45/64	36	1 27/64	116	4 9/16	18, 19, 21	401	14 11/64	2.7	6.0	0.78	27.5
FRW-13N-4	12	1/2	78.4	80.0	57.9	100	18	45/64	46	1 13/64	129	4 5/64	22, 24, 26, 27	408	15 5/64	3.0	6.6	0.78	27.5

*Air Inlet Thread Size... 1/4"PT or NPT

*Air Hose Size... 9.5mm (3/8")

*The performance figures are at 0.63MPa (6.3bar)



Refer to instructions and warning for safety use enclosed in each tool box.

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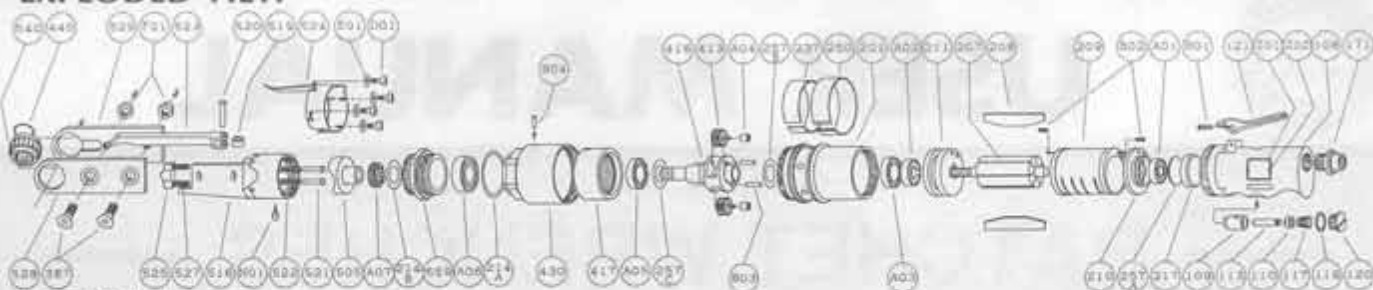
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PARTS LIST MODEL: FRW-13N-3,-4

EXPLODED VIEW



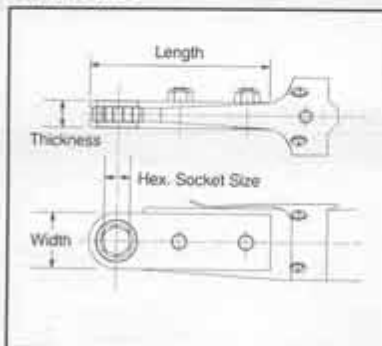
PARTS LIST

Index No.	Parts No.	Parts Name	Qt.	Index No.	Parts No.	Parts Name	Qt.
FRW-13N-3, -4							
CP No.	W-274003-00	Throttle Valve Body C.P		516	W-274516-00	Cam Case	1
108	W-274003-50	Throttle Valve Body	1	519	W-274519-02	Cam Roller	1
(109)	G-028109-00	Throttle Valve Bushing	1	520	W-274520-00	Cam Roller Spindle	1
110	H-001110-02	Throttle Valve	1	521	W-273521-00	Cam Roller Push Rod	2
113	H-063113-00	Throttle Valve Rod	1	522	W-273522-00	Cam Roller Push Rod Spring	2
117	D-001117-00	Throttle Valve Spring	1	523	W-274523-00	Push Rod	1
119	G-028119-00	T.V. Cover Packing	1	524	W-274524-00	Push Rod Cover	1
120	G-028120-00	Throttle Valve Cover	1	525	W-274525-00	Pole	1
121	W-032121-00	Throttle Valve Lever	1	527	W-274527-00	Pole Push Rod Spring	2
171	W-273171-00	Inlet Joint (PT)	1	659	W-274659-01	Adaptor	1
171	W-273171-01	Inlet Joint (NPT)	1	A01	BB-609	Ball Bearing	1
B01	SP-418	Spring Pin	1	A02	BB-6000	Ball Bearing	1
201	W-274201-00	Housing	1	A03	BB-6903	Ball Bearing	1
207	W-274207-00	Rotor	1	A04	NB-HK0509T2	Needle Bearing	2
208	W-274208-00	Rotor Blade	5	A05	BB-6903	Ball Bearing	1
209	W-035209-00	Cylinder	1	A06	BB-6804	Ball Bearing	1
(B02)	SP-38	Spring Pin	2	A07	BB-51104	Thrust Bearing	1
210	W-274210-00	Cylinder Upper Plate	1	B03	NR-518	Needle Roller	2
211	W-274211-00	Cylinder Lower Plate	1	B04	GP-48GCH	Grooved Pin	1
214A	W-130214-00	Adjusting Washer (T=0.2)	1	D01	S-58P	Screw	4
214A	W-130214-01	Adjusting Washer (T=0.3)	1	E01	TLW-5B	Lock Washer	4
214A	W-130214-02	Adjusting Washer (T=0.1)	1	F01	UN-8	Nut	2
214B	W-274214-00	Adjusting Washer (T=0.3)	1	N01	GN-1/4	Grease Nipple	1
214B	W-274214-01	Adjusting Washer (T=0.5)	1	Z01	NP-1069	Name Plate	1
217	A-152217-00	Bearing Cover	1	Z02	NPN-0X3.2	Screw Rivet	2
237	W-274237-00	Muffler Pad	1	FRW-13N-3			
250	W-274250-00	Exhaust Cover	1	440	W-275440-01	Ring (21HEX)	1
257A	A-152257-00	Washer	1	528	W-275528-00	Side Plate (A)	1
257B	W-274257-00	Washer	2	529	W-275529-00	Side Plate (B)	1
387	W-273387-00	Locking Bolt	2	540	W-275540-11	Socket (21HEX)	1
413	W-274413-00	No.1 Planet Gear	2	FRW-13N-4			
416	W-274416-01	No.1 Planet Gear Frame	1	440	W-275440-11	Ring (24HEX)	1
417	W-274417-00	No.1 Internal Gear	1	528	W-275528-01	Side Plate (A)	1
430	W-274430-00	No.1 Gear Case	1	529	W-275529-01	Side Plate (B)	1
505	W-274505-01	Cam	1	540	W-275540-31	Socket (24HEX)	1

- CP No. denotes the assembled parts comprising of more than 1 pc. of parts. The related parts are shown in the thick frame.
- # 108 and 209 are supplied together with parts shown in ().
- Specify parts number and quantity in ordering.

LIST OF AVAILABLE SOCKETS

Head Size



Socket Type



LIST OF AVAILABLE SOCKETS: HEX SOCKET

Model	Index No.	Parts No.	Name of Part	Socket Height Size (mm)
FRW-13N-3	440	W-275440-02	Ring	18
	540	W-275540-12	Socket	18
	440	W-275440-00	Ring	19
	540	W-275540-10	Socket	19
	440	W-275440-01	Ring	21
	540	W-275540-00	Socket	21
FRW-13N-4	440	W-275440-10	Ring	22
	540	W-275540-30	Socket	22
	440	W-275440-11	Ring	24
	540	W-275540-31	Socket	24
	440	W-275440-12	Ring	26
	540	W-275540-32	Socket	26
440	W-275440-13	Ring	27	
540	W-275540-33	Socket	27	

OPTIONAL PARTS: W. HEX. SOCKET

Model	Index No.	Parts No.	Name of Part	Socket Height Size (mm)
FRW-13N-3	540	W-275540-00	Socket	21W.
		W-275540-01	Socket	19W.
FRW-13N-4	540	W-275540-02	Socket	24W.
		W-275540-03	Socket	27W.
		W-275540-04	Socket	22W.
		W-275540-05	Socket	26W.

*Specify Hex. size of ratchet socket when ordering. Otherwise, the standard ratchet is equipped.