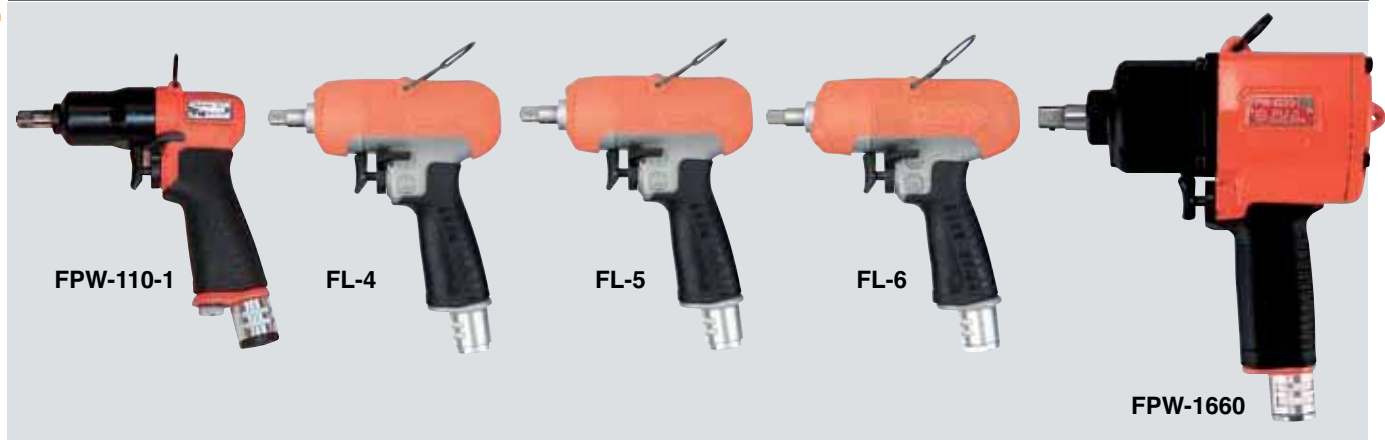


# Pulse Wrenches

Featured with dual chamber air motor, FPW and FL series pulse wrenches are designed to generate higher torque and yet reducing vibration, torque reaction and noise levels. Combined with 2-blade impulsing mechanism, 9-blade dual chamber motor creates about 50% higher power-to-weight ratio than our former series of the same physical size. The reduction of vibration and torque reaction helps reduce operator fatigue and other problems associated with repeated vibration or impact motion.

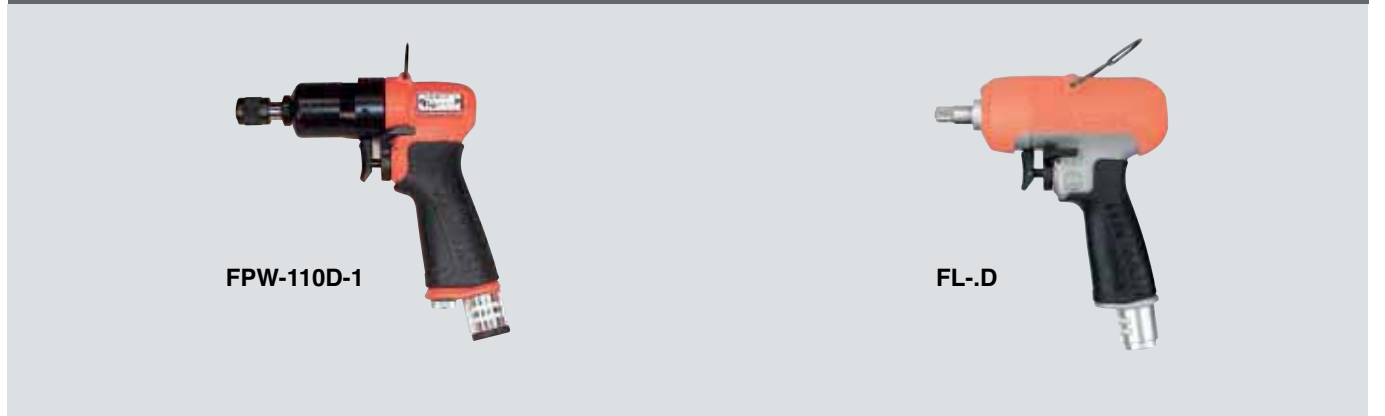
## SQUARE DRIVE TYPE



Model	Bolt Size	Recommended Torque Range			Free Speed	Square Drive Size		Overall Length (without socket)		Weight (without socket)		Air Consumption (at Load)		Air Hose Size	
		mm	N · m	kgf · m		ft · lb	min <sup>-1</sup>	mm	in	mm	in	kg	lb	m <sup>3</sup> /min	ft <sup>3</sup> /min
<b>Pistol Grip Models</b>															
FPW-110-1	M4~M5	7.5~13 (2~7.5)	0.8~1.3 (0.2~0.8)	5.5~9.6 (1.4~5.5)	4,500	9.5	3/8	143	5 41/64	0.75	1.7	0.20	7.1	6.3	1/4
FL-4-1	M6	16~24	1.6~2.4	11.8~17.7	6,700	9.5	3/8	139.5	5 31/64	0.79	1.7	0.36	12.7	6.3	1/4
FL-5-1	M6~M8	20~40	2.0~4.0	14.7~29.5	6,300	9.5	3/8	139.5	5 31/64	0.79	1.7	0.40	14.1	6.3	1/4
FL-6-1	M8	28~56	2.8~5.6	20.6~41.3	6,700	9.5	3/8	151.5	5 31/32	0.83	1.8	0.42	14.8	9.5	3/8
FL-7-1	M8~M10	34~60	3.4~6.1	25.0~44.2	6,100	9.5	3/8	155	6 7/64	1.02	2.2	0.60	21.1	9.5	3/8
FL-9-1	M10	52~96	5.3~9.7	38.3~70.8	5,000	12.7	1/2	173	6 13/16	1.45	3.2	0.65	22.9	9.5	3/8
FL-11-1	M10~M12	80~136	8.1~13.8	59.0~100.3	5,000	12.7	1/2	184	7 15/64	1.80	4.0	0.80	28.2	9.5	3/8
FL-13-1	M12~M14	120~172	12.2~17.5	88.5~126.8	3,800	12.7	1/2	192	7 9/16	2.10	4.6	0.85	30.0	9.5	3/8
FPW-1660-1	M16~M18	160~270	16.3~27.5	118~199.1	3,000	19.0	3/4	243	9 37/64	3.80	8.4	1.20	42.4	9.5	3/8

\*Air Inlet Thread Size: BSP or NPT 1/4", (FPW-1660)PT or NPT 3/8".  
 \*Figures in ( ) can be obtained at the position of "L" mark on the regulator knob, but for another, at "H" mark.

## BIT SHANK TYPE



Model	Bolt Size	Recommended Torque Range			Free Speed	Bit Shank Size		Overall Length (without socket)		Weight (without socket)		Air Consumption (at Load)		Air Hose Size	
		mm	N · m	kgf · m		ft · lb	min <sup>-1</sup>	mm	in	mm	in	kg	lb	m <sup>3</sup> /min	ft <sup>3</sup> /min
<b>Pistol Grip Models</b>															
FPW-110D-1	M4~M5	7~11 (2~7)	0.7~1.1 (0.2~0.7)	5.2~8.1 (1.4~5.1)	4,500	6.35	1/4	149	5 7/8	0.76	1.7	0.20	7.1	6.3	1/4
FPW-110D-10	M4~M5	7~11	0.7~1.1	5.2~8.1	4,500	6.35	1/4	149	5 7/8	0.76	1.7	0.20	7.1	6.3	1/4
FL-4D-1	M6	14~20	1.4~2.0	10.3~14.7	6,700	6.35	1/4	140	5 3/64	0.79	1.7	0.36	12.7	6.3	1/4
FL-4D-10	M6	14~20	1.4~2.0	10.3~14.7	6,700	6.35	1/4	140	5 3/64	0.79	1.7	0.36	12.7	6.3	1/4
FL-5D-1	M6~M8	18~32	1.8~3.2	13.2~23.6	6,300	6.35	1/4	140	5 3/64	0.79	1.7	0.40	14.1	6.3	1/4
FL-5D-10	M6~M8	18~32	1.8~3.2	13.2~23.6	6,300	6.35	1/4	140	5 3/64	0.79	1.7	0.40	14.1	6.3	1/4
FL-6D-1	M8	25~42	2.5~4.2	18.4~30.9	6,700	6.35	1/4	152	5 63/64	0.83	1.8	0.42	14.8	6.3	1/4
FL-6D-10	M8	25~42	2.5~4.2	18.4~30.9	6,700	6.35	1/4	152	5 63/64	0.83	1.8	0.42	14.8	6.3	1/4

\*Air Inlet Thread Size: BSP or NPT 1/4".  
 \*Figures in ( ) can be obtained at the position of "L" mark on the regulator knob, but for another, at "H" mark.

## SQUARE DRIVE TYPE



FPW-110S~660S



FPW-770S-1



FPW-2220S-1

Model	Bolt Size	Recommended Torque Range			Free Speed	Square Drive Size		Overall Length (without socket)		Weight (without socket)		Air Consumption (at Load)		Air Hose Size	
		mm	N · m	kgf · m		ft · lb	mm	in	mm	in	kg	lb	m <sup>3</sup> /min	ft <sup>3</sup> /min	mm
<b>Straight Models</b>															
FPW-110S-1	M4	2~7.5	0.2~0.8	1.5~5.5	3,200	9.5	3/8	218	8 19/32	0.65	1.4	0.20	7.1	6.3	1/4
FPW-330S-1	M5	13~22	1.3~2.2	9.6~16.2	4,400	9.5	3/8	226	8 57/64	0.87	1.9	0.30	10.6	6.3	1/4
FPW-440S-1	M4~M6	20~34	2.0~3.5	14.8~25.1	5,500	9.5	3/8	226	8 57/64	0.87	1.9	0.35	12.4	6.3	1/4
FPW-550S-1	M6~M8	27~44	2.8~4.5	19.9~32.5	5,700	9.5	3/8	226	8 57/64	0.87	1.9	0.37	13.1	6.3	1/4
FPW-660S-1	M6~M8	34~54	3.5~5.5	25.1~39.8	5,800	9.5	3/8	238	9 3/8	0.95	2.1	0.50	17.7	9.5	3/8
FPW-770S-1	M8	44~76	4.5~7.8	32.5~56.1	6,300	9.5	3/8	240	9 7/16	1.25	2.7	0.50	17.7	9.5	3/8
FPW-2220S-1	M18~M20	300~500	30.6~51.0	221.3~368.8	2,500	19.0	3/4	350	10 13/16	7.00	15.4	1.30	45.9	12.7	1/2

\*Air Inlet Thread Size: BSP or NPT 1/4", (FPW-2220S) BSP or NPT 1/2".

## BIT SHANK TYPE



FPW-110SD



FPW-330SD~660SD

Model	Bolt Size	Recommended Torque Range			Free Speed	Bit Shank Size		Overall Length (without socket)		Weight (without socket)		Air Consumption (at Load)		Air Hose Size	
		mm	N · m	kgf · m		ft · lb	mm	in	mm	in	kg	lb	m <sup>3</sup> /min	ft <sup>3</sup> /min	mm
<b>Straight Models</b>															
FPW-110SD-1	M4	2~7	0.2~0.7	1.5~5.2	3,200	6.35	1/4	224	8 53/64	0.65	1.4	0.20	7.1	6.3	1/4
FPW-110SD-10	M4	2~7	0.2~0.7	1.5~5.2	3,200	6.35	1/4	224	8 53/64	0.65	1.4	0.20	7.1	6.3	1/4
FPW-330SD-1	M5	12~17	1.2~1.7	8.9~12.5	4,400	6.35	1/4	226	8 57/64	0.88	1.9	0.30	10.6	6.3	1/4
FPW-330SD-10	M5	12~17	1.2~1.7	8.9~12.5	4,400	6.35	1/4	226	8 57/64	0.88	1.9	0.30	10.6	6.3	1/4
FPW-440SD-1	M4~M6	15~25	1.5~2.6	11.1~18.4	5,500	6.35	1/4	226	8 57/64	0.88	1.9	0.35	12.4	6.3	1/4
FPW-440SD-10	M4~M6	15~25	1.5~2.6	11.1~18.4	5,500	6.35	1/4	226	8 57/64	0.88	1.9	0.35	12.4	6.3	1/4
FPW-550SD-1	M4~M6	20~34	2.0~3.5	14.8~25.1	5,700	6.35	1/4	226	8 57/64	0.88	1.9	0.37	13.1	6.3	1/4
FPW-550SD-10	M4~M6	20~34	2.0~3.5	14.8~25.1	5,700	6.35	1/4	226	8 57/64	0.88	1.9	0.37	13.1	6.3	1/4
FPW-660SD-1	M6~M8	25~37	2.6~3.8	18.4~27.3	5,800	6.35	1/4	238	9 3/8	0.95	2.1	0.50	17.7	9.5	3/8
FPW-660SD-10	M6~M8	25~37	2.6~3.8	18.4~27.3	5,800	6.35	1/4	238	9 3/8	0.95	2.1	0.50	17.7	9.5	3/8

\*Air Inlet Thread Size: BSP or NPT 1/4".

Bit Size		FPW-***SD-1, FPW-***D-1,2,3,4 A:9.5mm B:12mm
		FPW-***SD-10, FPW-***D-10,20,30,40 A:13mm B:16mm