Air Motors

Air Motors

Fuji Air Motors are compact and light weight, yet sturdy and offer high power-to-weight ratios. Fuji offers a wide range of air motors from small 0.1 kW hand-held motor to large 20 kW stationary motor which are found at versatile industries like ships, chemical plants, mines and power plants etc. As air motors are less likely to generate sparks (unlike brushes in electric motors), they are better suited for use in hazardous environments.

REVERSIBLE TYPE

F-5SM-8.5R

F-5SM-2R

F-6SM-2.5R~28R

F-8SM-12R~28R

F-8SM-8.5R

Model	Stall Torque			Horse Power		Free Speed	Overall Length		Weight		Max. Air Consumption		Air Inlet Thread Size	Air Hose Size	
	N・m	kgf・m	ft・lb	kW	PS	min⁻¹	mm	in	kg	lb	m³/min	ft³/min	BSP or NPT	mm	in
F-5SM-8.5R	5.4	0.55	4.0	0.12	0.16	850	147	5 51/64	0.6	1.3	0.28	9.9	1/8	6.3	1/4
F-5SM-2R	21.6	2.20	15.9	0.10	0.14	190	182	7 11/16	0.8	1.8	0.28	9.9	1/8	6.3	1/4
F-6SM-28R	3.3	0.34	2.5	0.25	0.34	2,300	147	5 51/64	0.8	1.8	0.34	12.0	1/8	8.0	5/16
F-6SM-21R	4.0	0.41	3.0	0.26	0.35	2,000	146	5 3/4	0.9	2.0	0.34	12.0	1/8	8.0	5/16
F-6SM-12R	5.9	0.60	4.3	0.23	0.31	1,000	157	6 3/16	0.8	1.8	0.34	12.0	1/8	8.0	5/16
F-6SM-8R	9.8	1.00	7.2	0.23	0.31	750	179	7 1/16	1.0	2.2	0.34	12.0	1/8	8.0	5/16
F-6SM-5R	14.7	1.50	10.8	0.22	0.30	500	180	7 3/32	1.0	2.2	0.34	12.0	1/8	8.0	5/16
F-6SM-2.5R	26.0	2.65	19.2	0.21	0.29	250	192	7 9/16	1.2	2.6	0.34	12.0	1/8	8.0	5/16
F-8SM-28R	6.4	0.65	4.7	0.38	0.52	2,300	183	7 13/64	1.5	3.3	0.50	17.7	1/4	9.5	3/8
F-8SM-12R	9.8	1.00	7.2	0.37	0.50	1,100	199	7 53/64	2.2	4.8	0.50	17.7	1/4	9.5	3/8
F-8SM-8.5R	14.7	1.50	10.8	0.37	0.50	850	222	8 3/4	2.4	5.3	0.50	17.7	1/4	9.5	3/8

*Specify type of spindle when ordering.

NON-REVERSIBLE TYPE

F-5SM-8.5

F-6SM-2.5~28

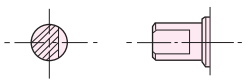
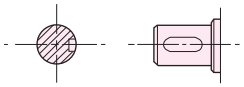
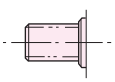
F-5SM-2

F-8SMA-8.5~28

Model	Stall Torque			Horse Power		Free Speed	Overall Length		Weight		Max. Air Consumption		Air Inlet Thread Size	Air Hose Size	
	N・m	kgf・m	ft・lb	kW	PS	min⁻¹	mm	in	kg	lb	m³/min	ft³/min	BSP or NPT	mm	in
F-5SM-8.5	5.9	0.60	4.3	0.13	0.18	950	153	6 1/32	0.6	1.3	0.28	9.9	1/8	6.3	1/4
F-5SM-2	23.5	2.40	17.4	0.12	0.16	200	187	7 3/8	0.9	2.0	0.28	9.9	1/8	6.3	1/4
F-6SM-28	3.9	0.40	2.9	0.29	0.40	2,800	167	6 37/64	0.7	1.5	0.34	12.0	1/4	9.5	3/8
F-6SM-21	4.4	0.45	3.3	0.29	0.40	2,400	167	6 37/64	0.8	1.8	0.34	12.0	1/4	9.5	3/8
F-6SM-12	7.4	0.75	5.4	0.29	0.40	1,300	181	7 1/8	0.9	2.0	0.34	12.0	1/4	9.5	3/8
F-6SM-8	10.8	1.10	8.0	0.26	0.35	900	200	7 7/8	1.0	2.2	0.34	12.0	1/4	9.5	3/8
F-6SM-5	15.7	1.60	11.6	0.26	0.35	600	200	7 7/8	1.0	2.2	0.34	12.0	1/4	9.5	3/8
F-6SM-2.5	28.4	2.90	21.0	0.26	0.35	300	213	8 25/64	1.2	2.6	0.34	12.0	1/4	9.5	3/8
F-8SMA-28	5.9	0.60	4.3	0.44	0.60	2,600	171	6 47/64	1.5	3.3	0.50	17.7	1/4	9.5	3/8
F-8SMA-12	11.8	1.20	8.7	0.44	0.60	1,300	200	7 7/8	2.0	4.4	0.50	17.7	1/4	9.5	3/8
F-8SMA-8.5	16.7	1.70	12.3	0.44	0.60	900	208	8 3/16	2.2	4.8	0.50	17.7	1/4	9.5	3/8

*Specify type of spindle when ordering.

Type of Spindle

Chord Type		Key Type		Thread Type			
							
Model		Model		*Model		Spindle Thread Size	Applicable Drill Chuck
F-5SM Series		F-8SMA Series		F-6SM-5, 8, 12, 21 F-8SMA-12, 28 F-6SE, 6SF, 6PFX		3/8-24(UNF)	DCK-6.5 DCK-8 DCK-10
F-6SM Series		F-8SM Series		F-8SMA-8.5 F-10MT		1/2-20(UNF)	DCK-13

*Drill chucks are applicable to thread type spindle models.

Hose Connection

Non-Reversible Type

Reversible Type

NON-REVERSIBLE TYPE

F-6SE

F-6SF

F-6PFX

F-10MT

Application Example
Stirring propeller attached to F-6PFX

Model	Stall Torque			Horse Power		Free Speed	Overall Length		Spindle Thread Size	Weight		Max. Air Consumption		Air Inlet Thread Size	Air Hose Size	
	N・m	kgf・m	ft・lb	kW	PS	min⁻¹	mm	in	in	kg	lb	m³/min	ft³/min	BSP or NPT	mm	in
F-6SE	15.7	1.6	11.6	0.26	0.35	600	210	8 9/32	3/8-24UNF	1.0	2.2	0.42	14.8	1/4	9.5	3/8
F-6SF	28.4	2.9	21.0	0.26	0.35	300	225	8 55/64	3/8-24UNF	1.1	2.4	0.43	15.2	1/4	9.5	3/8
F-6PFX	28.4	2.9	21.0	0.26	0.35	300	184	7 1/4	3/8-24UNF	1.7	3.7	0.43	15.2	1/4	9.5	3/8
F-10MT	78.5	8.0	57.8	0.37	0.50	180	270	10 41/64	1/2-20UNF	3.4	7.5	0.63	22.3	1/4	9.5	3/8

*For application examples, please refer to the stirring propellers on page 56.

PORTABLE TYPE

FM-2R-2C

FNR-20

FM-14RK~27RK

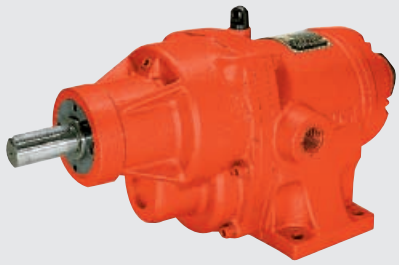
Model	Stall Torque			Horse Power		Free Speed(min⁻¹)		Socket	Spindle Square Size	Overall Length		Weight		Max. Air Consumption		Air Inlet Thread Size	Air Hose Size	
	N・m	kgf・m	ft・lb	kW	PS	R	L	M.T.#	mm	mm	in	kg	lb	m³/min	ft³/min	BSP or NPT	mm	in
FM-2R-2C	161.8	16.5	119.3	0.74	1.0	150	170	-	19	630	22 13/16	10.5	23.1	1.50	53.1	1/2	12.7	1/2
FNR-20	171.6	17.5	127.0	0.66	0.9	150	135	-	16	506	19 15/16	7.0	15.4	1.10	38.9	1/2	12.7	1/2
FNR-20S	171.6	17.5	127.0	0.66	0.9	150	135	-	16	506	19 15/16	7.0	15.4	1.10	38.9	1/2	12.7	1/2
FM-14RK-101	73.5	7.5	54.2	0.88	1.2	430	390	2	13	473	18 5/8	7.4	16.3	1.50	53.1	1/2	12.7	1/2
FM-24RK-101	166.6	16.6	120.0	1.69	2.3	350	310	3	14	579	22 51/64	13.5	29.7	2.25	79.6	1/2	19.0	3/4
FM-24RK-201	392.0	40.0	289.2	1.54	2.1	140	125	4	19	596	23 15/32	16.2	35.6	2.25	79.6	1/2	19.0	3/4
FM-27RK-101	745.0	76.0	549.5	1.90	2.6	85	75	5	31	652	25 43/64	20.0	44.0	2.50	88.5	1/2	19.0	3/4

*Stall Torque, Horse Power and Max. Air Consumption shown in this table are of clockwise rotation.

Air Motors

STATIONARY TYPE

FM-1R~3R



FM-5R~10R

Model	Stall Torque			Horse Power		Free Speed(min^{-1})		Overall Length		Weight		Max. Air Consumption		Air Inlet Thread Size	Air Hose Size	
	N・m	kgf・m	ft・lb	kW	PS	R	L	mm	in	kg	lb	m^3/min	ft^3/min	BSP or NPT	mm	in
FM-1R-5	56.9	5.8	41.9	0.90	1.2	600	600	273	10 3/4	7.0	15.4	1.5	53.1	1/2	12.7	1/2
FM-1R-12	28.4	2.9	20.9	0.90	1.2	1,250	1,250	273	10 3/4	7.0	15.4	1.5	53.1	1/2	12.7	1/2
FM-2R-5	137.0	14.0	101.2	2.35	3.2	650	650	375	14 3/4	13.0	28.6	3.1	109.7	3/4	19.0	3/4
FM-3R-3	284.0	29.0	209.7	2.79	3.8	320	296	395	15 1/2	17.0	37.4	4.4	155.8	3/4	19.0	3/4
FM-3R-5	177.0	18.0	130.1	2.79	3.8	525	485	395	15 1/2	17.0	37.4	4.4	155.8	3/4	19.0	3/4
FM-5R-2	471.0	48.0	247.1	3.68	5.0	300	300	435	17 1/8	21.0	46.2	5.6	198.2	1	25.4	1
FM-10R-2	1,140.0	116.0	839.0	7.35	10.0	240	240	570	22 7/16	42.0	92.4	10.0	354.0	1 1/4	32.0	1/4

*Stall Torque, Horse Power and Max. Air Consumption shown in this table are of clockwise rotation.