



Stepper Motor

Provisionally, we have selected standard models. However, the possibilities for custom-designed motors are limitless. Please contact Muirhead Aerospace who will be pleased to discuss your individual requirement.

- Typical Applications:**
- Infra-red Detector Scanning
 - Antenna Drive Systems
 - Valve Actuation
 - Optical Scanning Drives
 - Camera Control Mechanisms

Stepper Motors – Permanent Magnet

Model No.	Holding Torque	No Load Pull-in Rate	Rotor Inertia	Resist. per phase	Motor Dia.	Motor Length	Shaft Type	Shaft Dia.	Shaft Length	Remarks :
	g.cm	PPS RPM	g.m ²	Ohms	mm	mm	mm	mm	mm	Step angle mode 'A' 'B' 120° 'C' 60° 3 Phase 28V D.C. Nom. Modes A & B only.
08MR102	45	800 4000	0.85	49	19.0	26.16	Spline 13T	3.17	9.5	Flyleads 25cm long - Rear exit Mounting facility. Clamp fixing only
08MR401	45	8004000	0.85	49	19.0	26.16	Spline 13T	3.17	5.08	Mounting facility. Screwed nose for 08 series gearheads. Flyleads 25cm long - Rear exit
11MR3	120	600 3000	2.5	47	27.0	48.77	Spline 13T	3.17	9.5	Terminal block - Rear end
11MR4	120	600 3000	2.5	47	27.0	48.77	Plain	3.05	12.7	Terminal block - Rear end
11MR8	120	600 3000	2.5	47	27.0	36.83	Spline 13T	3.17	9.5	Flyleads 25cm long - Rear exit
11MR10	120	600 3000	2.5	47	27.0	48.77	Plain	3.17	12.7	Terminal block - Rear end



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Typical Applications

- Infra-red Detector Scanning
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Stepper Motors – Variable Reluctance

Model No.	No. of Phases	Holding Torque	No Load Pull-in Rate	Rotor Inertia	Resist. per phase	Motor Dia.	Motor Length	Shaft Type	Shaft Dia.	Shaft Length	Remarks :
		g.cm	PPS RPM	g.m ²	Ohms	mm	mm	mm	mm	mm	Step angle mode 'A' 'B' 15° 'C' 7½° Nominal Voltage 28V D.C. Modes A - Flyleads 25cm long
08MR201	4	40	700 1750	0.1	200	19.0	19.0	Spline 13T	3.17	5.08	Mounting facility. Screwed nose for 08 series gearheads only
08MR501	4	40	700 1750	0.1	200	19.0	19.0	Spline 13T	3.17	9.5	Mounting facility. Clamp fixing only
08M34G1	4	60	900 2250	0.18	100	19.0	27.3	Spline 13T	3.17	5.5	Mounting facility. Screwed nose for 08 series gearheads.
08M34H1	4	60	900 2250	0.18	100	19.0	27.3	13T	3.17	9.5	Mounting facility. Clamp fixing only
11MR201	3	160	450 1125	0.85	90	27.0	31.75	Spline 13T	3.17	9.5	Standard & Epicyclic gearheads can be supplied with adaptors for size 11 motors
11MR202	3	200	450 1125	0.85	44	27.0	31.75	Spline 13T	3.17	9.5	Standard & Epicyclic gearheads can be supplied with adaptors for size 11 motors
15MR202	3	600	650 1625	0.90	24	36.6	50.8	Spline 15T	4.50	11.1	
15MR203	3	600	650 1625	0.90	24	36.6	50.8	Plain	3.56	15.9	
18MR201	4	1296	650 1625	3.6	42	44.5	47.2	Plain	6.15	38.1	
20MR205	3	2880	360 900	12.5	10	50.8	63.5	Plain with gear fitted	6.35	16.5	Additional rear exit shaft 6.35mm dia by 12.70mm long
20MR206	3	2880	425 1060	24.0	15.5	50.8	76.2	Lead-screw	12.03	103.3	
20MR209	3	3024	400 1000	12.0	20	50.8	63.5	Plain Thru	6.35	F.16.0 R13.0	4 holes tapped 4-40UNC -28 x 3.175mm full thread depth on 3.175 PCD in front face of housing. No clamp groove
20MR221	4	3240	370 925	7.68	20	50.8	63.5	Plain Thru	6.35	21.8	Additional rear exit shaft 6.35mm dia by 20.50mm long

Stepper Motors – Hybrid

Model No.	Nom. Volts Amps	Holding Torque	No Load Pull-in Rate	Rotor Inertia	Resist. per phase	Motor Dia.	Motor Length	Shaft Type	Shaft Dia.	Shaft Length	Remarks :
	Volts Amps	g.cm	PPS RPM	g.m ²	Ohms	mm	mm	mm	mm	mm	Step angle mode 'A' 'B' 1.8° 'C' 0.9° 4 Phase Modes B - Flyleads 25cm long
13MR301	2.5V 0.5A	600	700 210	37	5.0	33.0	57.4	Plain	3.995	10.67	4 mounting holes 3.0mm dia. equally
13MR303	15.0V 0.3A	800	700 210	37	50.0	33.0	57.4	Plain	3.995	10.67	spaced on 38.2mm PCD in front face of housing.
13MR310	1.9V 0.5A	400	1000 300	19	3.8	33.0	36.5	Plain Thru	3.995	10.67	
23MR301	10.0V 0.5A	2520	800 240	69.5	18.5	55.8	36.5	Plain	6.345	F 18.5 R 14.0	4 mounting holes 5.0mm dia. equally
23MR302	5.0V 1.0A	3240	1000 300	11	5.0	55.88	50.8	Plain	6.345	21.00	spaced on 66.67mm PCD in front face of housing.
34MR301	1.6V 4.0A	9700	400 167	644	0.4	85.725	61.9	Plain Thru	9.525	F 30.15 R 32.77	
34MR302	3.0V 4.0A	14400	500 150	644	0.75	85.725	61.9	Plain	9.525	30.15	4 mounting holes 5.0mm dia. equally
34MR303	3.0V 4.0A	18000	400 120	900	0.75	85.725	93.65	Plain	9.525	30.15	spaced on 98.425mm PCD in front face of housing.
34MR306	6.0V 4.0A	14400	500 150	644	1.5	85.725	61.9	Plain	9.525	30.15	

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