

MAXIMUM DYNAMIC BRUSHLESS SERVO MOTORS

Offering higher productivity for
electric motion control systems



We understand the challenges that injection molding machine builders face when designing their machine for example for higher performance and faster operation. That's why we provide expert motion control solutions that consistently deliver world-class performance, design flexibility and reliability.

Today's performance-oriented injection molding machines need to achieve very short fill times and quick clamping cycles. Traditional electric machine systems have limitations in acceleration and speed caused by the high inertia of their power train.

Moog's innovative Maximum Dynamic Brushless Servo Motors (MD Series) address the evolving needs for more dynamics and higher performance in industrial applications. This brushless permanent magnet AC servo motor is the centerpiece for low-inertia transmission systems. The unique system architecture ensures a more repeatable process, less overshoot and tighter tolerances on part weight.

Moog also provides Servo Drives that are matched to our Servo Motors for optimized system performance.

FEATURES AND BENEFITS

- Greater productivity due to higher performance and faster operation
- Improve product quality through more accurate control
- Increase energy efficiency by reducing moving masses
- Provide a higher level of customer flexibility through a full range of servo motors with the highest dynamics

APPLICATIONS

- Metal forming and presses
- Injection molding including injections, ejector and core pull axis
- Blow molding including mold carriage and clamp axis
- Die casting
- Magnesium molding



TECHNICAL DATA

Motor type ¹⁾	Stall torque natural cooling		Stall torque fan cooling		Stall torque liquid cooling		Maximum torque		Nominal speed natural/fan/liquid cooling ²⁾ r/min	Rotor inertia		Square flange natural & fan/liquid cooling	
	Nm	lbf in	Nm	lbf in	Nm	lbf in	Nm	lbf in		kg cm ²	10 ⁻⁴ lbf in s ²	mm	in
JSx3-020	2.2	19.5	-	-	-	-	10.0	88.5	5,400 / - / -	0.78	6.90	70 / -	2.8 / -
JSx3-040	4.1	36.3	-	-	-	-	20.0	177	4,700 / - / -	1.24	11.0	70 / -	2.8 / -
JSx3-050	5.1	45.1	-	-	-	-	25.0	221	3,700 / - / -	1.46	12.9	70 / -	2.8 / -
JSx3-060	6.0	53.1	-	-	-	-	30.0	266	3,100 / - / -	1.69	15.0	70 / -	2.8 / -
JSx3-075	7.4	65.5	-	-	-	-	37.0	327	2,400 / - / -	2.03	18.0	70 / -	2.8 / -
JSx4-026	4.9	43.4	-	-	-	-	19.0	168	5,100 / - / -	2.20	19.5	100 / -	3.9 / -
JSx4-040	6.8	60.2	-	-	-	-	29.0	257	4,300 / - / -	3.08	27.2	100 / -	3.9 / -
JSx4-053	8.5	75.2	-	-	-	-	38.0	336	4,100 / - / -	3.92	34.7	100 / -	3.9 / -
JSx4-067	10.2	90.3	-	-	-	-	48.0	425	3,200 / - / -	4.80	42.5	100 / -	3.9 / -
JSx4-080	11.7	104	-	-	-	-	58.0	513	2,700 / - / -	5.64	49.9	100 / -	3.9 / -
JHx5-047	21.5	190	30.8	273	46.1	408	64.2	568	2,500 / 2,300 / 2,000	10.8	95.6	140 / 145	5.5 / 5.7
JHx5-063	27.7	245	38.3	339	61.1	541	85.5	757	2,500 / 2,300 / 2,000	14.0	124	140 / 145	5.5 / 5.7
JHx5-079	33.3	295	44.8	397	75.3	666	107	947	2,500 / 2,400 / 2,000	17.1	151	140 / 145	5.5 / 5.7
JHx5-094	39.4	349	51.8	458	90.5	801	128	1,136	2,500 / 2,400 / 2,000	20.2	179	140 / 145	5.5 / 5.7
JSx5-063	29.3	259	39.3	348	63.6	563	135	1,193	3,500 / 3,400 / 3,000	28.8	255	140 / 145	5.5 / 5.7
JSx5-084	38.0	336	48.8	432	84.2	745	180	1,589	2,600 / 2,500 / 2,300	37.5	332	140 / 145	5.5 / 5.7
JSx5-105	46.6	412	58.0	513	105	930	225	1,991	2,100 / 2,000 / 1,800	46.1	408	140 / 145	5.5 / 5.7
JSx5-126	55.1	488	66.6	589	126	1,112	270	2,387	1,700 / 1,700 / 1,500	54.7	484	140 / 145	5.5 / 5.7
JHx6-079	70.8	627	95.4	844	114	1,004	276	2,440	1,900 / 1,800 / 1,700	84.2	745	190 / 190	7.5 / 7.5
JHx6-105	92.9	822	121	1,070	151	1,337	365	3,234	1,800 / 1,700 / 1,600	110	969	190 / 190	7.5 / 7.5
JHx6-131	115	1,014	145	1,284	188	1,664	456	4,038	1,600 / 1,500 / 1,500	135	1,192	190 / 190	7.5 / 7.5
JHx6-157	136	1,207	169	1,498	225	1,995	547	4,845	1,600 / 1,500 / 1,400	160	1,416	190 / 190	7.5 / 7.5
JSx6-100	84.0	743	119	1,050	139	1,226	583	5,160	2,400 / 2,300 / 2,300	260	2,302	190 / 190	7.5 / 7.5
JSx6-134	110	976	150	1,330	180	1,597	777	6,879	1,800 / 1,700 / 1,700	336	2,974	190 / 190	7.5 / 7.5
JSx6-167	136	1,207	181	1,604	222	1,964	972	8,599	1,400 / 1,400 / 1,400	411	3,641	190 / 190	7.5 / 7.5
JSx6-201	163	1,438	212	1,873	263	2,329	1,166	10,319	1,200 / 1,100 / 1,100	487	4,309	190 / 190	7.5 / 7.5
JSx7-122	315	2,787	-	-	495	4,381	1,000	8,853	1,000 / - / 950	989	8,754	275 / 275	10.8 / 10.8
JSx7-163	418	3,698	-	-	655	5,799	1,339	11,850	725 / - / 700	1,304	11,544	275 / 275	10.8 / 10.8
JSx7-204	520	4,598	-	-	813	7,198	1,675	14,820	575 / - / 550	1,621	14,347	275 / 275	10.8 / 10.8
JSx7-245	616	5,455	-	-	964	8,533	2,012	17,808	600 / - / 575	1,975	17,475	275 / 275	10.8 / 10.8

1) Motor type code (e.g. JSx3-020):
 J = MD Series Servo Motor
 S = Standard dynamic, H = High dynamic
 x = Cooling (C = Natural cooling, F = Fan cooling, W = Liquid cooling)
 3 = Flange size
 020 = Stack length, active length in 0.1 in
 Winding voltage 565 V_{DC}
[Please see full catalog for details.](#)

2) Nominal speed can be easily adjusted by changing the stator windings. Please refer to your local Moog application engineer for information.

Moog has offices around the world. For more information or the office nearest you, contact us online.

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