

HIGH DYNAMIC BRUSHLESS SERVO MOTORS

High power density and acceleration
for highly dynamic applications.



The HD series servo motors are permanent magnet brushless servo motors that stand out for their extremely high level of performance and high acceleration.

These motors are available in a wide range of sizes, with nominal torque from 2 Nm to 909 Nm and peak torques from 11 Nm to 2,089 Nm. This wide range of continuous and peak performance, combined with an excellent dynamic response, makes this HD series suitable for various applications.

The HD series has the capability to incorporate special windings to optimize the performance. The motors can also be equipped with resolvers, different types of encoders, along with brakes. The modular construction of the motor enables it to be offered with customized shafts and flanges.

The wide range, modular construction, combined with the ability to seamlessly integrate with existing applications, helps reduce the need for redesign: thereby redefining the possibility for greater flexibility and reliability.

Liquid, Fan and Natural Cooling HD Motors



ADVANTAGES

- High dynamics
- Exceptional power density
- Optimum reliability
- High level of overloadability and high acceleration speeds
- Extraordinary power/mass ratio with the liquid-cooled version
- Flexible and modular design

APPLICATIONS

- Metal forming
- Presses
- Plastics
- Robotics
- Electric and hybrid vehicles

SPECIFICATIONS

TECHNICAL DATA

Motor size	Square flange mm (in)	Maximum torque Nm (lbf in)	Continuous stall torque Nm (lbf in)	Rated speed rpm	Rotor inertia kg cm ² (lb in ²)
HDN100	100 (3.93)	11.00 - 54.00 (97.36 - 477.94)	2.91 - 10.50 (25.76 - 92.93)	1500 - 6000	1.77 - 9 (25.17 - 128.01)
HDF100	100 (3.93)	11.00 - 54.00 (97.36 - 477.94)	8.20 - 17.40 (72.58 - 154.00)	1500 - 6000	1.77 - 9 (25.17 - 128.01)
HDW100	100 (3.93)	11.00 - 54.00 (97.36 - 477.94)	9.60 - 24.50 (84.97 - 216.84)	1500 - 6000	1.77 - 9 (25.17 - 128.01)
HDN115	115 (4.52)	13.40 - 68.00 (118.60 - 601.85)	4.00 - 17.50 (35.40 - 154.89)	900 - 4500	3.92 - 19 (55.75 - 270.24)
HDF115	115 (4.52)	13.40 - 68.00 (118.60 - 601.85)	11.50 - 26.00 (101.78 - 230.12)	900 - 4500	3.92 - 19 (55.75 - 270.24)
HDW115	115 (4.52)	13.40 - 68.00 (118.60 - 601.85)	14.20 - 123.00 (125.68 - 1088.64)	900 - 4500	3.92 - 19 (55.75 - 270.24)
HDN140	140 (5.51)	45.00 - 273.00 (398.28 - 2416.25)	9.00 - 47.50 (79.66 - 420.41)	750 - 3900	11.61 - 56.32 (165.13 - 801.05)
HDF140	140 (5.51)	45.00 - 273.00 (398.28 - 2416.25)	28.70 - 81.20 (254.02 - 718.68)	750 - 3900	11.61 - 56.32 (165.13 - 801.05)
HDW140	140 (5.51)	45.00 - 273.00 (398.28 - 2416.25)	40.70 - 123.00 (360.23 - 1088.64)	750 - 3900	11.61 - 56.32 (165.13 - 801.05)
HDN200 - STD	200 (7.87)	43.40 - 456.00 (384.12 - 4035.94)	17.10 - 132.80 (151.35 - 1175.38)	1000 - 3500	49.90 - 455 (709.74 - 6471.62)
HDF200 - STD	200 (7.87)	43.40 - 456.00 (384.12 - 4035.94)	42.40 - 178.00 (375.27 - 1575.43)	1000 - 3500	49.90 - 455 (709.74 - 6471.62)
HDW200 - STD	200 (7.87)	43.40 - 456.00 (384.12 - 4035.94)	49.10 - 274.00 (434.57 - 2425.10)	1000 - 3500	49.90 - 455 (709.74 - 6471.62)
HDN200 - SPECIAL	200 (7.87)	79.50 - 837.00 (703.63 - 7408.07)	23.00 - 169.00 (203.57 - 1495.78)	600 - 3000	49.90 - 455 (709.74 - 6471.62)
HDF200 - SPECIAL	200 (7.87)	79.50 - 837.00 (703.63 - 7408.07)	57.90 - 228 (512.46 - 2017.97)	600 - 3000	49.90 - 455 (709.74 - 6471.62)
HDW200 - SPECIAL	200 (7.87)	79.50 - 837.00 (703.63 - 7408.07)	74.50 - 409.00 (659.38 - 3619.96)	600 - 3000	49.90 - 455 (709.74 - 6471.62)
HDN275	275 (10.82)	677.50 - 2089.00 (5996.38 - 18489.21)	166.00 - 417.00 (1469.22 - 3690.76)	500 - 1400	700 - 2038.5 (9956.31 - 28994.28)
HDF275	275 (10.82)	677.50 - 2089.00 (5996.38 - 18489.21)	215.00 - 545.00 (1902.91 - 4823.66)	500 - 1400	700 - 2038.5 (9956.31 - 28994.28)
HDW275	275 (10.82)	677.50 - 2089.00 (5996.38 - 18489.21)	347.00 - 996.00 (3071.21 - 8815.34)	500 - 1400	700 - 2038.5 (9956.31 - 28994.28)

OPTIONS

Moog HD Series Servo Motors are available with a variety of standard and customized options to address the unique requirements of any application.

Flexible Design Options:

- Natural convection, forced (fan) convection and liquid cooling
- Integral holding brake
- Thermal sensor
- Key and key-less shaft option
- Special motor windings
- Frameless options
- Custom shafts and flanges
- Custom connectors
- Custom feedback options
- Special coatings



Fan Cooling Example



Custom Shaft Example

Moog DM2020 Servo Drives are matched to the HD Series Servo Motors for optimized system performance.



Moog has offices around the world. For more information or the office nearest you, contact us em-motioncontrol@moog.com

For product information, visit

www.moog.com

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This technical data is based on current available information and is subject to change at any time. Specifications for specific systems or applications may vary.

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