

# Atom Series

## High Efficiency BLDC Motors



Nidec Motor Corporation's Atom Series motors provide the flexibility to handle a wide variety of demanding automation and robotic applications. The Atom Series is available in five sizes to match your application requirements. Multiple sizes make it easy to implement a scalable platform for all your needs.

**Peak Torque Range:** .495Nm to 12.9Nm

**Rated Power Range:** .1kW to .99kW

**IP Rating:** IP65

**Rated Voltage:** 12Vdc-60Vdc

**Warranty:** One year limited warranty

**Encoder Options:** 100-4096 line available



### Product Features

- Compatible DC drives available
- Lightweight with low rotor inertia
- High torque density
- Low cogging torque
- High efficiency and accuracy
- ROHS compliant
- UL Recognized Component
- Optional hall effect sensors and encoder
- Compact design that is machine wound for reliability
- Gearbox options available



Atom Series

Part Number	A35	A52	A64	A77	A100
<b>Stack height range (mm)</b>	15-35	15-35	15-35	20-50	25-75
Input voltage	24V	24V	24V	24V	24V
Ref stack height for data below	20.5	18.5	25.5	28	35
Continuous stall torque (Nm)	0.175	0.55	1.1	2.4	4.4
Peak torque (Nm)	0.495	1.35	3	6.9	12.9
Standard inertia (kgcm <sup>2</sup> )	.013	.047	.158	.445	1.593
Insulation rating (deg C)	155	155	155	155	155
Stator weight (kg)	0.077	0.172	0.417	0.635	1.193
Rotor weight (kg)	0.027	0.045	0.099	0.158	0.326
Number of poles	6	6	8	10	10
Ke @ 1000 rpm (V/krpm)	3.3	7	9	9.3	11.2
Kt @ 1000 rpm (Nm/A)	0.045	0.11	0.139	0.144	0.175
Rated torque (Nm)	0.165	0.45	1	2.3	4.3
Stall current (A)	3.8	4.5	8	16.5	25
Rated power (kW)	0.1	0.14	0.31	0.72	0.99
R (ph-ph) (Ohms)	2.6	1.55	0.74	0.24	0.1
L (ph-ph) (mH)	1	1.92	1.1	0.6	0.42

## Product Overview and Options

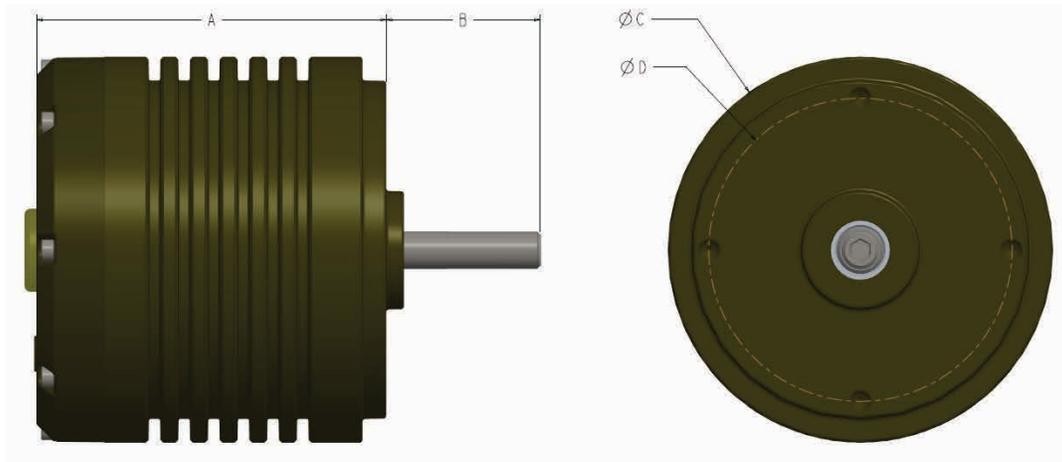
### Additional Features and Options:

- Custom configurations to suit any application
- Ease of installation
- 155 C rating for continuous operation
- Customizable for drop in applications
- Shock and vibration resistant design

### Typical Applications:

- Automation
- Robotics
- Industrial applications
- Pumps
- Medical equipment
- Indexing and positioning
- General purpose

Atom Series Dimensions	A35	A52	A64	A77	A100
A	59	62	65	68	70
B	26	28	30	32	34
C	65	80	90	100	120
D	51	65	75	80	90



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