VOICE COIL

Celera MOTION
A Novanta Company

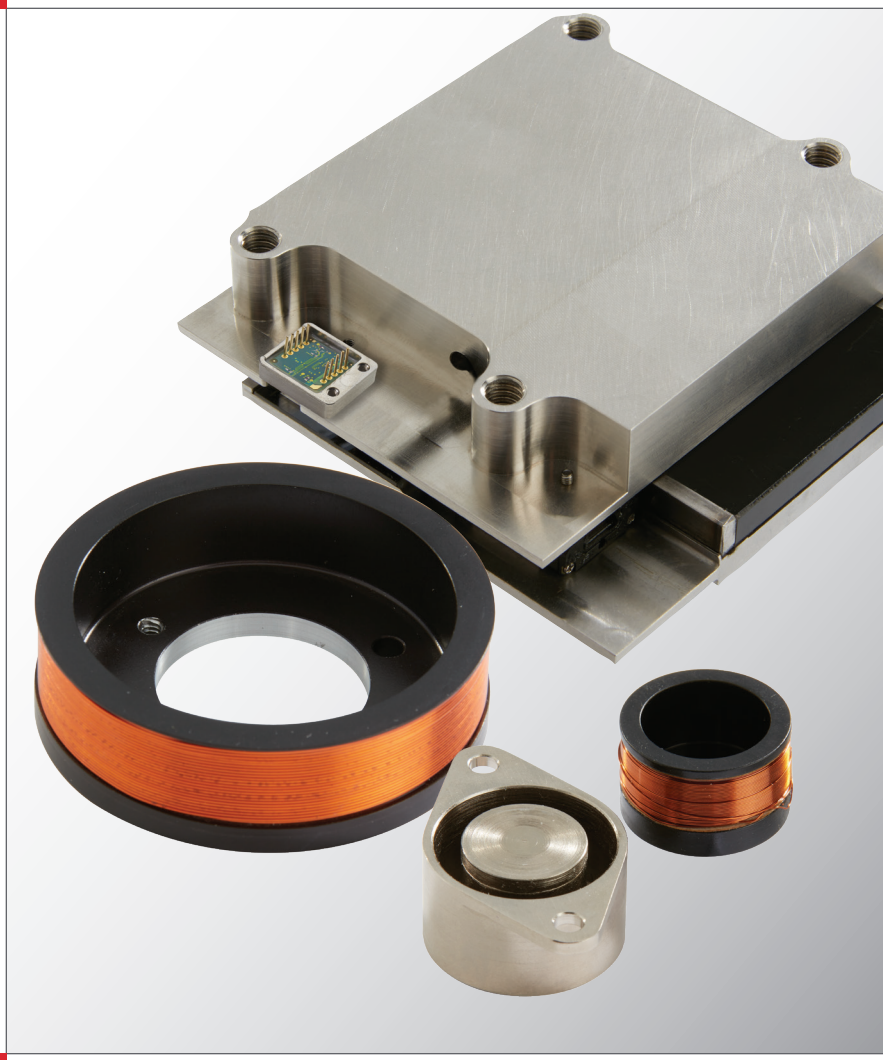
Applimotion
Motors & Actuators

PRODUCT DATA SHEET

Juke™ Series Motors

Compact Voice Coil Motors for Highly Dynamic Motion Profiles

The Juke Series enables OEMs to move light payloads with high acceleration and dynamic motion profiles.



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Juke™ Series Motors

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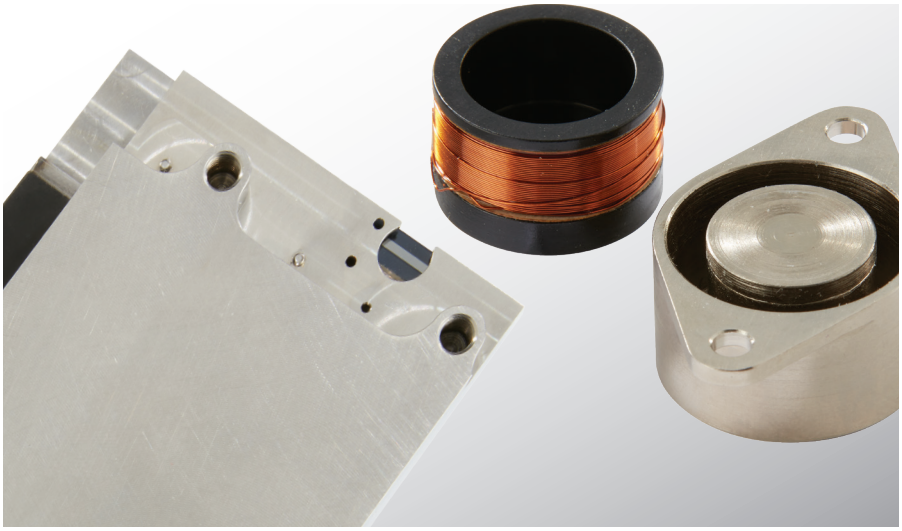

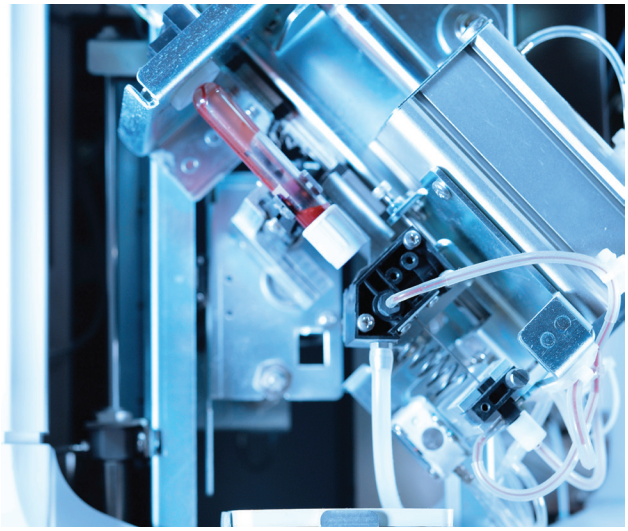

Swift and Simple.

The Juke Series motors are ideal for optics, laser scanning, pick and place, medical probes, hexapods and other applications that require highly dynamic moves of light payloads over short distances.

Low electrical and mechanical time constants, low moving mass and no cogging allow for extremely high accelerations and precise control of position, velocity or force. No commutation is required, simplifying wiring and increasing system reliability.

Moving magnet and moving coil configurations make it easy for the Juke Series to be tightly integrated into compact, lightweight precision assemblies. Flat and circular body form factors are offered for linear applications. Rotary and partial segment designs are also available.

All models are compatible with a wide range of controllers and drives. Windings and form factors can be customized to meet application requirements.

Benefits

- Compact size, high force-to-weight ratio
- High acceleration
- Simple wiring and control
- Smooth, accurate motion
- Easy integration into system design
- Compatible with wide range of drives and controllers
- Custom windings and form factors available to meet application requirements

SPECIFICATIONS	UNITS	FLAT BODY VOICE COILS	CIRCULAR BODY VOICE COILS
Peak Force:	N	8 to 175	5 to 46
Stroke:	mm	6 to 20	2 to 40
Continuous Power:	W	25 to 65	3 to 18
Width:	mm	55 to 140	19 to 32 (OD)
Length:	mm	40 to 120	25 to 38

Product groups listed and corresponding data are provided as a reference. Actual motor attributes are model and configuration specific. Standard and custom models are available within each group. Peak torque output is based on a 3:1 peak to continuous current ratio in the amplifier, and is based on limited duty cycle. Specifications subject to change.

RoHS
CE

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Juke™ Series Motors

Compact Voice Coil Motors for Highly Dynamic Motion Profiles

Juke Round Body Voice Coil Motors

MODEL		1617	1395	1716
Coil Resistance	Ohm	12.7	4.5	2.7
Voltage Nominal	Volts	24	24	24
Current Continuous	Amps	0.66	2.03	2.96
Force Constant	N/amp	6.0	7.3	16.3
Voltage Constant	Volts meter/sec	6.0	7.3	16.3
Inductance	mh	2.4	0.9	1.1
Peak Force (for 1-3 sec)	Newton	10N	29.5	96.5
Continuous Force	Newton	3.96	14.77	48.25
Electrical Time Constant	sec	0.00019	0.00020	0.00041
Stroke	mm	5	10	10
Thermal Resistance	degC/watt	15.5	7	5.5
Max coil temp allowed	degC	155	155	155
Weight of Coil	gram	15.2	40	42
Weigh of Magnet Body	gram	33.5	200	470
Lead length	mm	300	300	300
Km	N / watt^{½}	1.68	3.44	9.92

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Juke™ Series Motors

Compact Voice Coil Motors for Highly Dynamic Motion Profiles

Juke Flat Body Voice Coil Motors

MODEL		1235	1343	1200
Coil Resistance	Ohm	2.2	5.1	3.4
Voltage Nominal	Volts	24	24	24
Current Continuous	Amps	3.44	2.91	4.37
Force Constant	N/amp	2.35	10.4	36.5
Voltage Constant	Volts meter/sec	2.35	10.4	36.5
Inductance	mh	0.3	4.8	4.7
Peak Force (for 1-3 sec)	Newton	7.5	31.2	284
Continuous Force	Newton	5.0	24	142
Electrical Time Constant	sec	0.00014	0.00094	0.00138
Stroke	mm	10.1	20	+/- 1.5
Thermal Resistance	degC/watt	5	3	2
Max coil temp allowed	degC	155	155	155
Weight of Coil	gram	32	567	1198
Weigh of Magnet Body	gram	170	595	5670
Lead length	mm	300	300	300
Km	N / watt^{½}	1.58	4.60	19.75

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