MINI-MOTOR, 1.5-3 VDC
- Dimensions: 12 x 10 x 16mm
- Shaft: 1.5mm dia. x 4mm
- Two tapped mounting holes on 8mm centers
- Draws 50 mA @ 1.5 Vdc, no-load
- Solder terminals
CAT# DCM-491 $0.60 each
100 for $0.55 each 1000 for $0.50 each each

3 VDC DUAL SHAFT MOTOR
- 3 VDC, 0.35A
- Rotation speed: 15,000RPM
- Dimensions: 25 x 20 x 15mm
- Shaft: 2mm diameter x 8mm
- Solder tabs
CAT# DCM-495 $1.25 each
10 for $1.10 each 100 for 95¢ each

1.5-6 VDC MOTOR
- Ideal for battery-operated projects
- 27 x 20 x 15mm
- 2mm diameter shaft
- Solder-loop terminals
CAT# DCM-496 $0.95 each
100 for 65¢ each

1.5-4.5 VDC MINI-MOTOR, VIBRATOR
- Operates on 1.5-4.5 Vdc
- 4mm D x 15mm L including shaft
- Rubber casing is 5 x 6.5 x 11mm
- Gold contacts
CAT# DCM-371 $1.25 each
10 for $1.10 each 100 for 95¢ each

1.5 - 4.5 VDC VIBRATING MOTOR
Vibrating motor with offset weighted shaft. Fairly vigorous vibration at 3Vdc, 150mA. A nice low-voltage motor with or without weight. Weight is press-fit and easily removable.
- Operating voltage: 1.5-4.5Vdc
- Dimensions: 0.9” dia. x 1.05”
- 2mm diameter shaft
- Half-moon weight: 0.81” dia. x 0.22”
- Solder loop terminals
CAT# DCM-478 $1.00 each
100 for 85¢ each 240 for 70¢ each

12 VDC VIBRATING MOTOR
Powerful, smooth-running vibrating motor with offset weight
- Nichibô LD5B-12160E-R-CE
- 12 Vdc @ 350ma/24Vdc @ 800mA
- Body: 27.5mm dia. x 38mm long
- Weight: 14mm dia. x 12mm long
- Solder-loop terminals
CAT# DCM-494 $1.50 - $1.15 each
10 for $1.00 each 120 for 80¢ each

2-8 VDC MINI-MOTOR
- Mabuchi # FF-030PA 08250
- Body: 15.5 x 12 x 20mm long
- Shaft: 1.5mm diameter x 6mm
- Two mounting holes, 10mm centers, M2.0 x 0.4
- No-load rating: 10,500RPM @ 6Vdc, 41mA
- Solder terminals
CAT# DCM-433 70¢ ea. • 100 for 50¢ ea.

6 VDC MOTOR
Nissei Denki motor
- 20.0mm dia. x 29.4mm
- Shaft, 10mm long x 1.5mm dia.
- No-load specs: 12,000 RPM @ 6Vdc, 40mA
- Operates on 1-8 Vdc range
- Two tapped mounting holes on 12mm centers
- Solder-lug terminals.
CAT# DCM-410 $1.25
100 for 95¢ each

6 VDC 13,000 RPM MOTOR
- Relatively powerful little motor
- 13,000 RPM @ 6Vdc / 250 Ma
- 1.08” diameter x 1.83”
- 2mm diameter shaft with 9mm gear.
- 18 AWG leads, red/black
CAT# DCM-485 $1.50
$1.25 each
10 for 95¢ each

6 VDC MINI-MOTOR
- Mabuchi #RF-130CH 12250
- Body: 17mm diameter x 22.5mm L including shaft
- Rubber casing is 5 x 6.5 x 11mm
- Gold contacts
CAT# DCM-371 $1.25 each
50 for 90¢ each 100 for 80¢ each
800 for 75¢ each 1600 for 65¢ each

6-12 VDC JOHNSON MOTOR
- Johnson Motor HC613LG-6411
- 1.5A @ 12Vdc, no load rating
- Operates as low as 2Vdc.
- 37mm diameter x 57mm long.
- 3mm diameter shaft
- Solder-lug terminals
CAT# DCM-462 $1.75 each
10 for $1.50 each

8 - 16 VDC MOTOR
- Mabuchi # FC-280PT-20150
- Body: 24.2 x 18.3 x 30.5mm
- Splined shaft:
- 2mm diameter x 9mm
- No-load rating: 11,800 RPM @ 12Vdc, 0.56A
- Push wire into slots to make connection.
CAT# DCM-374 $1.29
$1.00 each
10 for 85¢ each 100 for 70¢ each

VISIT OUR WEBSITE - WWW.ALLELECTRONICS.COM
6-24 VDC MOTOR
- Mabuchi # FK-130SH
- Body: 25.1 long x 15.4 x 20.4mm
- Shaft: 2mm diameter x 8mm
- No-load ratings: 7200 RPM @ 12Vdc @ 0.30A
- Solder-loop terminals
CAT# DCM-476 $1.20 each
50 for $1.05 each • 600 for 90¢ each

24 VDC MOTOR
- Operates on 18-30 Vdc
- 24 Vdc, 0.2A no-load rating
- Body: 36mm diameter x 57mm
- Shaft: 3mm diameter x 20mm
- Solder/qc terminals
CAT # DCM-461 $1.25 each
10 for $1.00 each

16MM PRECISION DC MOTOR
Namiki #SC L16-3424.
Precision DC coreless motor.
The low inertia coil provides quick response, quiet operation,
and no cogging.
- 16mm diameter x 34mm long
- 1.5mm dual shaft
- No-load: 9000 RPM @ 18V @ 11mA
- Power maximum: 3.7W (0.005 hp)
- Power minimum: 2.9W (0.004 hp)
CAT # DCM-3424 $9.00 each

DC GEAR MOTORS

MINI 3-12VDC GEAR MOTOR
Mini DC gear motor. Light weight, high torque
and low RPM. Metal gears.
- Model: GA12-N20
- 100RPM @ 6VDC, 0.07A
- Load Speed: 80RPM
- Reduction Ratio: 1:10
- Motor and Gearbox: 24 x 12 x 10mm
- Shaft: 3 x 10mm(D x L)
- Rated Torque: 2 kg.cm
- Stall Torque: 16 kg.cm
- Stall Current: 1A
- Net Weight: 10g
CAT# DCM-497 $5.00 each

SMALL DC GEAR MOTOR, 3V 20 RPM
- Mini DC motor w/ plastic/nylon gear assembly.
- 20 RPM @ 3Vdc, no load
- Plastic gear housing, nylon gears
- Body: 42mm x 42mm x 17mm
- 2mm shaft with square plastic extension
- Overall shaft dimensions: 36mm L x 5mm diameter
CAT # DCM-542 $3.00 • $2.75 each

3.7 VDC MOTOR WITH PROPELLER
- Tiny motor and gear-driven propeller for model airplanes or
propeller driven cars
- Overall propeller length, 75mm
- Motor, 7mm diameter x 26mm long
- Approximately 5g
CAT# DCM-498 $4.75 each

6 VDC, 25 RPM GEAR MOTOR
Gear head motor with an arm that rotates an offset axle
in a 1” circle.
Includes a slotted link rod that can be used to facilitate
reciprocating action.
- Motor dimensions: 1.45”D x 3.00”L
- No-load specs: 25RPM @ 6Vdc, 150mA
- Offset axle rotates in a 1” circle
- Includes a metal mounting bracket and
slotted link rod
- Prepped w/ wire leads
CAT# DCM-470 $4.25 each
10 for $4.00 each • 100 for $3.75 each

6-24 VDC GEAR MOTOR, 1:84 RATIO
- Hennkwell# PZ22GR9120R-084BBH
- 22mm dia. planetary gear brush motor
- Smooth, quiet operation.
- Wide operating range, 6-24Vdc.
- Dual ball bearings.
- Rated 142RPM @ 24Vdc, no-load.
113 RPM with load.
- 6mm diameter x 14mm shaft with hole.
2mm diameter shaft at rear of motor.
- Overall length of motor and gearbox, 60mm.
- Solder lug terminals.
CAT# DCM-9120 $7.95 each

12 VDC GEAR MOTOR
- No-load measurements:
520 RPM @ 12Vdc, 250mA
- Operates as low as 3Vdc (approx. 100RPM)
- Gearbox: 27mm diameter x 23mm long
- Motor: 24mm diameter x 30mm long
- Flattened shaft: 6mm diameter x 20mm long.
- 48mm leads
CAT# DCM-475 $4.25 each
25 for $3.75 each • 100 for $3.25 each

85 RPM 12 VDC GEAR MOTOR
- 33JPF-15380-50
- 12Vdc, 85rpm @ 42mA (no-load)
- Operates from 2 - 20vdc
- Approx. 160ma typical 12Vdc load
- Overall dimensions,
50mm L x 33mm D excluding shaft
- Flattened shaft 6.5mm L x, 4.0mm D
- Solder lugs
- Ideal for robotics, modelers, hobby projects.
CAT# DCM-416 $4.50 each
10 for $4.00 each

12-24 RPM VENDING MACHINE
GEAR MOTOR W/ SWITCH
- P/N CJM-2407-12
- 12-24 Vdc, 60-70mA,
no-load rating
- Motor: 1” diameter x 1.5” long
- Plastic gearbox: 3.5” x 2.5” x 0.6”
- Plastic output shaft is 0.3” cube
with holes on two sides
- Motor and switch terminals can be accessed
via a pc board on rear of motor
- Actuates a momentary SPDT Microswitch
once every rotation.
CAT # DCM-594 $4.00 each
24 VDC GEAR MOTOR
W/ TURN TABLE
Relatively powerful, low-current DC motor and gearbox with a 4.9" dia. plastic (nylon?) turntable with a rubber o-ring circumference that could be used to drive another wheel. Turntable can be removed from motor and rubber ring on turntable can be removed as well.

- 45 RPM @ 24 Vdc, 60mA - 23 RPM @ 12Vdc
- Drive motor - Mabuchi RS-380SH, 1.1" D x 1.67" L
- Gearbox - Molon CHM-2435, 2.75" x 3.00" x 0.57"
- 5/16" diameter shaft, flatted and splined
- Threaded mounting holes in four corners.

CAT# DCM-351 $9.75 each

GEARMOTOR & WHEEL ASSEMBLY
- 4.5 - 10 Vdc gear motor
- 120 RPM @ 6 Vdc, 100Ma (no-load rating)
- Motor with gearbox is 2.5" x 0.75" x 0.90" excluding axle or wheel.
- 2.75" D x 1" hard plastic wheel and rubber tire
- Wheel can be attached to either side of motor

CAT# AC-32 $3.00 each

12VDC AUTOMOBILE
DOOR LOCK ACTUATOR
- 12 Vdc motor-drive actuator for automotive door locks
- Push or pull 0.75" depending on polarity
- Overall dimensions (retracted): 5.50" x 2.45" x 1.25"
- Nylon plunger
- Mounting hardware w/ 9.5" metal linkage rod
- Rubber boot protects against moisture & dust

CAT# DLA-1 $5.50 each

MOTOR SPEED CONTROLLERS

3 AMP DC MOTOR
SPEED CONTROLLER
Controls the speed of a DC motor using Pulse-Width-Modulation. Has a potentiometer with on-off switch and a four-position screw terminal strip for easy connection to motor & power source. Can be used as a lighting dimmer and similar applications with DC loads up to 3A. 30 x 28mm pc board.

CAT# MSC-35 $5.75 each

10A DC MOTOR SPEED
CONTROL / DIMMER
Can also be used as a lighting dimmer for DC loads up to 10A. On-board potentiometer and knob. Four-position screw-terminal strip for easy connection to motor and power source. Replaceable fuse.

CAT# MSC-10 $7.95 each

STEPPER MOTORS

STEPPER MOTOR & DRIVER BOARD
Includes our driver board, CAT# ME-16 (see below) and a 5-wire stepper motor that plugs directly into the board. Ideal for beginning robotics projects. Motor is a 4-phase, unipolar stepper, #28BYJ-48.

CAT# ME-125 $5.35 set

STEPPER MOTOR DRIVER BOARD
Four LEDs indicate the status of the stepper. Jumper for 5V / 12V use. 5-contact header mates with connector on some standard stepper motors. 32 x 34 x 11mm.

CAT# ME-16 $2.50 each

HIGH-RESOLUTION BI-POLAR
STEPPER MOTOR, USED
- Oriental Motor Co., VEXTA PK244-01AA-C21
- 4V, 1.2A, 2-Phase, 1.8 Degrees per step
- 42mm square x 40mm
- 5mm dia. x 18mm flatted shaft w/ cogbelt pulley
- 6 leads, 120mm length with 6-pin female connector (2mm spacing).
- From used equipment, in good condition.

CAT# SMT-376 $6.50 each

TINY STEPPER MOTORS
W/ WORM SCREW
- 2-phase, 4-conductor stepper motors with worm screw
- 3-5Vdc. Working current: 200-350mA
- Step angle: 22.5 degrees (16 pulses per revolution).
- Motors do not have drive sleeves
- Available w/ two drive screw lengths

19mm Worm Screw
29 x 13 x 8mm overall dimensions
CAT# SMT-585 $1.10 each
10 for 90¢ each

30mm Worm Screw
40 x 13 x 8mm overall dimensions
CAT# SMT-595 $1.15 each
10 for $1.00 each

STEPPER / SERVO MOTOR
CONTROLLER,
DK Electronics V1.0.
Arduino compatible motor shield. The board has two STMicroelectronics L293D Motor H-Bridge IC’s which can drive up to 4 DC motors (or up to 2 stepper motors) with 0.6 A per bridge (1.2 A peak). 70 x 54 x 13mm.

CAT# SMD-293 $6.95 each

12VDC GEAR MOTOR
W/ TURNTABLE
Relatively powerful, low-current DC motor and gearbox with a 4.9" dia. plastic (nylon?) turntable with a rubber o-ring circumference that could be used to drive another wheel. Turntable can be removed from motor and rubber ring on turntable can be removed as well.

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DK Electronics V1.0.
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NEW ITEM

10A DC MOTOR SPEED
CONTROL / DIMMER
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CAT# MSC-10 $7.95 each

NEW ITEM

3 AMP DC MOTOR
SPEED CONTROLLER
Controls the speed of a DC motor using Pulse-Width-Modulation. Has a potentiometer with on-off switch and a four-position screw terminal strip for easy connection to motor & power source. Can be used as a lighting dimmer and similar applications with DC loads up to 3A. 30 x 28mm pc board.

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CAT# MSC-10 $7.95 each

NEW ITEM
**SERVOS**

**STANDARD SERVO**
Digital high torque servo. Metal gears and bushing, 180° rotation. Servo arms and screws included. Dimensions: 40.7 x 19.7 x 42.9mm.
CAT# DCS-116
$9.20 each

**SG92R MINI SERVO**
TowerPro SG92R 9g digital servo. POM with Carbon fiber gears. 180° rotation. Teflon bushing. Servo arms and screws included. Servo Plug fits JR and Futaba "S" type connector. 23 x 12.2 x 27mm
CAT# DCS-118
$4.75 each
10 for $4.50 each

**CONTINUOUS ROTATION SERVO**
Model DS04-NFC 360° rotation, standard size servo. For remote control projects. 40.8 x 20 x 39.5mm Servo Plug fits JR and Futaba "S" type connector that fits most receivers.
CAT# DCS-117
$9.50 each

**3-CHANNEL SERVO TESTER**
Connect up to three servos simultaneously to test and compare speed and reaction time without use of transmitter/receiver. Three modes of operation are manual adjust - servo rotates in conjunction with rotation of pot, neutral position - servo centers itself in neutral or middle position, and automatic "window wiper" - servo independently cycles back and forth. Power input 4.8 - 6 Vdc. 1.3" x 1.1" x 0.5" h. Mode select button.
Ideal for RC hobbyists.
CAT# STR-110
$8.00
$6.00 each

**12A RC MODEL MOTOR CONTROLLER**
HobbyWing Skywalker Series 12A ESC. This motor controller is good choice for general R/C applications such as Airplane/Heli/Multicopter projects. Full Protection Features: Low voltage cutoff protection / Over-heat protection / Throttle signal lost protection. Output: Continuous 12A, Burst 15A up to 10 Secs. Can be used with our 3-phase brushless motors.
CAT# SC-112
$12.75 each

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**BRUSHLESS DC MOTORS**

**24 VDC BRUSHLESS DC MOTORS**
Powerful brushless motors originally designed for electric scooters. Great low-end torque. Built-in 30A speed controller. Requires 5KΩ potentiometer or Hall-effect throttle to interface with speed control.

**24VDC, 600W**
MAC-BMC P/N 12570
- No-load Specs: 2480 RPM @ 24.6 VDC, 3A 142Kv
- Motor dimensions: 5.0" diameter x 3.2"
- Shaft: 0.48" diameter x 0.95" long
- 11" power cable - mates with 2-pin connectors like our CAT# CON-319
- 11" cable to motor speed control - 3-pin Molex type connector
- CCW - counter-clockwise rotation
- 3-bolt mounting pattern.
CAT# DCM-2460
$49.00 each

**24VDC, 300W**
MAC-BMC P/N 12500 2
- No-load Specs: 3650 RPM @ 25.0V, 1.78A 145Kv
- Motor dimensions: 5.0" diameter x 2.4"
- Shaft: 0.31" (8mm) dia. x 0.60" (15mm) long
- 11" power cable - mates with 2-pin connectors like our CAT# CON-319
- 11" cable to motor speed control - 3-pin Molex type connector
- CW - clockwise rotation
- 3-bolt mounting pattern
CAT# DCM-2430
$44.00 each

**3-PHASE BRUSHLESS DC MOTOR**
- BEI # DH23-30-013Z.
- Smooth, quiet, high-torque brushless DC motor
- 2.25" diameter x 3.0" long
- 0.25" diameter x 1" long shaft
- 5270 RPM with no load
- Built in speed sensor
- 7-15Vdc operating voltage.
- Spec sheet available in PDF format
Note: Requires a controller to function. See controllers (CAT# SC-120, SC-130 and SC-112) and servo tester (CAT# STR-110) for more information.
CAT# DCM-459
$16.95 each

**BRUSHLESS MOTOR**
- Rotor motor for model helicopter.
- 14mm diameter x 10mm.
- Shaft: 1.5mm diameter x 6mm.
- 10" (254mm) leads with Hitec connector.
CAT# DCM-504
$4.75 each

**NEW ITEM**

**REDUCED PRICE**

**MADE IN THE USA**

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**M ost O rders S hippe d W ithin 2 4-4 8 H ours**