

# Brushless DC Motor

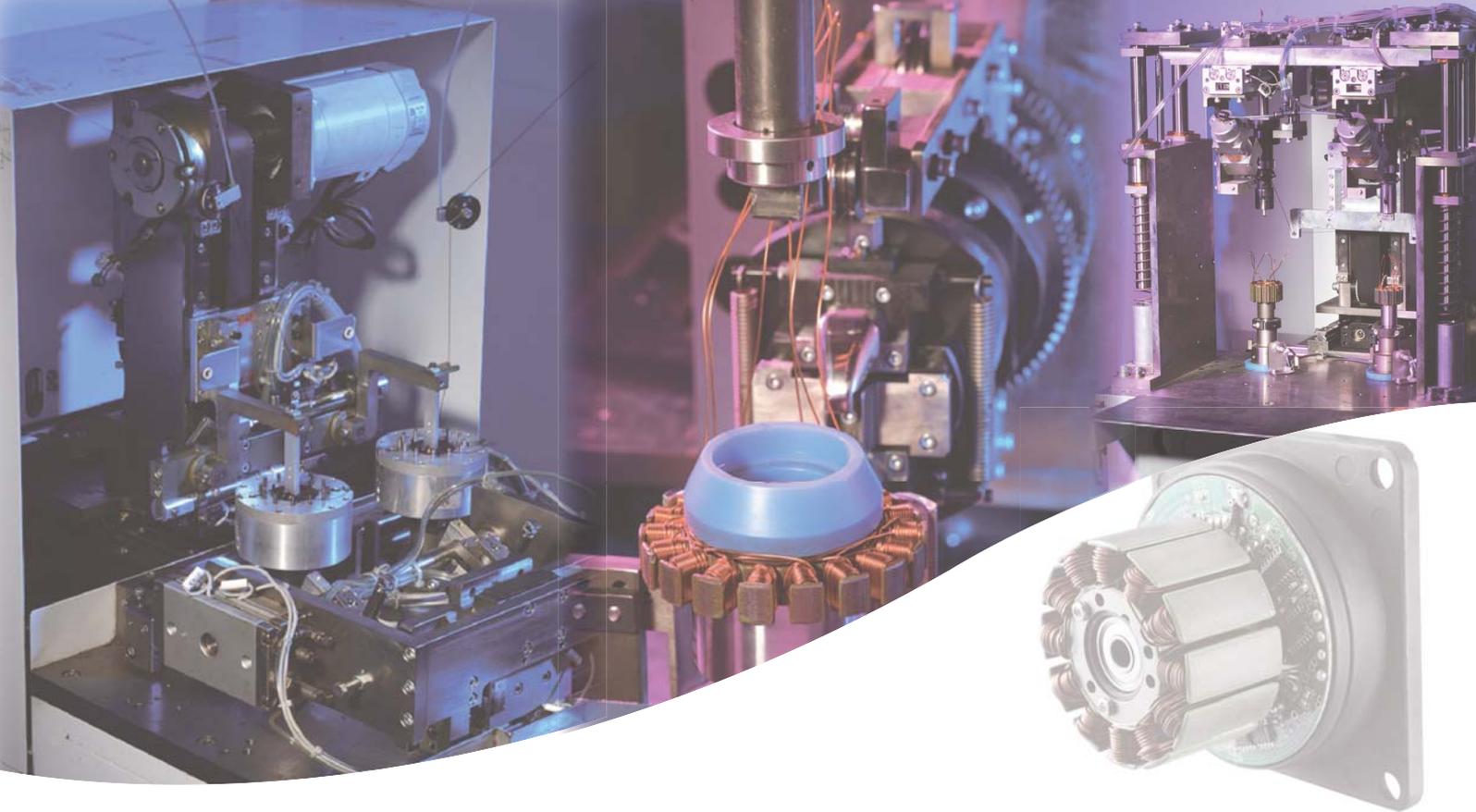
INNOVATION

PRECISION

ENERGY

ACARE





**Acare Technology Co., Ltd.** is a Taiwan-based Brushless DC (BLDC) motor and blower manufacturer. Acare has developed a line of motors with durable structure and efficient parameter control. Most of our BLDC motor models are with integrated controllers, which can minimize the size to fit in compact applications. All of Acare's BLDC motor models are designed and manufactured for long-term usage. Moreover, we also specialize in customizing BLDC motor and blowers according to specific systemic requirements.

## Typical BLDC motor applications include:

### 1. Industrial Automation

- Wood machinery
- Printing machinery
- Paper machinery
- Textile machinery
- Packaging machinery
- Semiconductor machinery
- Food and beverage machinery
- Plastic industry
- Material handling
- Mechanical handling

### 2. Medical & Lab

- Adjustment of operating tables, chairs and beds
- X-ray equipment, wheelchairs and stair lifts
- Analytical laboratory equipment
- Dialysis equipment
- Recording equipment
- Infusion systems
- Dental equipment
- Medical pumps

### 3. Door automation

- Building entrances
- Train and bus doors
- Roller doors
- Elevator doors
- Clean-room doors
- Prison doors
- Garage doors
- Access systems

### 4. Basic automation

- Copiers and fax machines
- Printers and plotters
- Card readers
- Automatic dispensers
- Franking and labeling machines
- Money sorters
- Scanners
- Height-adjustable tables
- Displays

# BLDC Motor



- ★ High Torque Low Noise
- ★ Minimal Temperature Rise

## Features

## Application

**Model: BMA07**  
**43 Small Size High Torque BLDC Motor**



- Small size, Long life
- External Motor Driver
- Hall Effect Sensors
- Inner Rotor
- Customizations Available

- Pump / Compressor
- Industrial applications/ Gear Motor
- Factory Automation

	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
BMA07	DC24V	1600	100±5%	650	1280	0.5
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Pout [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	1500	70	10	4	43*43*80	455

**Model: BMA06**  
**42 High Torque BLDC Motor**



	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
BMA06	DC24V	5100	500±5%	1600	4500	4
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Pout [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	250	78	75	3	42*42*80	500

**Model: BMA08**  
**60 High Speed BLDC Motor**



	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
BMA08	AC220V	20000	250±5%	1340	16500	0.9
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Pout [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	1470	80	230	2	60*60*54	585

# Intergrated BLDC motor

- ★ High Torque Low Noise
- ★ Minimal Temperature Rise



## Features

## Application

**Model: BMA02**  
**82 Integrated BLDC Motor**

- Integrated Motor Driver
- Hall Effect Sensors
- Outer Rotor
- Customizations Available

- Medical Devices
- Fuel Cell Pump
- Pump / Compressor
- Industrial applications/ Gear Motor
- Factory Automation



BMA02-4500	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DC24V	4500	350±5%	950	3650	2
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	400	75	35	5	82*82*82	650

BMA02-4000	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DV24V	4000	370±5%	950	3000	2
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	400	70	35	5	82*82*77	550

**Model: BMA04**  
**61 Integrated BLDC Motor**

- Integrated Motor Driver
- Hall Effect Sensors
- Outer Rotor
- Customizations Available

- Medical Devices
- Fuel Cell Pump
- Pump / Compressor
- Industrial applications/ Gear Motor
- Factory Automation



BMA04-4700	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DC24V	4700	310±5%	850	4250	2
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	370	80	35	4	61*61*55	450

BMA04-2500	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DC24V	2500	250±5%	450	2200	2.5
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	350	75	20	4	61*61*55	450

## Features

## Application



**Model: BMA03**  
**43 Integrated**  
**High BLDC Motor**

- Small size Long life
- Integrated Motor Driver
- Hall Effect Sensors
- Inner Rotor
- Customizations Available

- Medical Devices
- Fuel cell pump
- Pump/Compressor
- Industrial/Gear motor
- Factory Automation

BMA03-24	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DC24V	4000	250±5%	400	3450	1
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	200	75	20	2	43*43*72	450

BMA03-12	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DV12V	3950	450±5%	350	3400	1.74
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	150	70	12	2	43*43*72	450



**Model: BMA05**  
**42 Integrated**  
**BLDC Motor**

- Integrated Motor Driver
- Hall Effect Sensors
- Inner Rotor
- Customizations Available

- Medical Devices
- Suction Pump
- Pump/Compressor Motor
- Industrial applications/  
Gear Motor
- Factory Automation
- Linear Actuator

BMA05-24	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DC24V	5000	≤ 250	370	4400	0.95
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	400	70	17	2	42*50	210

BMA05-12	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Torque [ g-cm ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	DC12V	3700	≤ 150	200	3000	0.75
	Torque Constant [ g-cm/A ]	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	280	70	7	2	42*50	210



**Model: BMA09**  
**82 Integrated**  
**BLDC Motor**

BMA09	Rated Voltage [ V ]	No-Load Speed [ r/min ]	No-Load Current [ mA ]	Rated Speed [R.P.M.]	Rated Current [ A ]
	36VDC	2500	≤ 500	2200	1000
	Max-Efficiency [ % ]	Out-Put [ Watt ]	Number of Pole Pair	Dimensions [ mm ]	Weight [ g ]
	70	35	4	82*60	797

## BLDC Blower

- ★ High Pressure High Flow
- ★ Minimal Temperature Rise
- ★ Low Noise Low Vibration



### Features

### Application

#### **Model: BBA03** **145 High Pressure** **BLDC Blower**



- High Pressure
- Hall Effect Sensors
- External Motor Driver
- Customizations Available

- Respiration
- Air Bed
- Air Vest
- Fuel Cell Blower

Rated Voltage [ V ]	No-Load Speed [ r/min ]	Rated Pressure [ cmH2O ]	Rated Speed [ R.P.M. ]	Current Maximum [ A ]
DC24V	20000	100	18000	18
OutPut [ Watt ]	Rotating Direction [ CW / CCW ]	Pressure Maximum (Sealed Pressure) [ CmH2O ]	Flow Rate Maximum (Open Flow) [ LPM ]	Weight [ g ]
400	CCW	≥ 125	1600	1250

#### **Model: BBA04** **120 Integrated** **BLDC Blower**



- High Pressure
- Hall Effect Sensors
- Integrated Motor Driver
- Customizations Available

- Respiration
- Air Bed
- Air Vest
- Fuel Cell Blower

Rated Voltage [ V ]	No-Load Speed [ r/min ]	Rated Pressure [ cmH2O ]	Rated Speed [ R.P.M. ]	Current Maximum [ A ]
DC24V	13000	40	11000	4
OutPut [ Watt ]	Rotating Direction [ CW / CCW ]	Pressure Maximum (Sealed Pressure) [ CmH2O ]	Flow Rate Maximum (Open Flow) [ LPM ]	Weight [ g ]
100	CCW	≥ 50	800	1000



**Model: BBA02**  
**High Voltage**  
**Integrated Blower**

- AC Voltage Input
- Minimal Temperature Rise
- High Pressure High Flow
- With Integrated Drive Electronics
- Customizations Available
- Respiration
- Air Mattress
- Air Vest
- Fuel Cell Blower

BBA02-120	Rated Voltage [ V ]	No-Load Speed [ r/min ]	Rated Pressure [ cmH2O ]	Rated Speed [ R.P.M. ]	Current Maximum [ A ]
	AC120V	12000	60	11000	4
	OutPut [ Watt ]	Rotating Direction [ CW / CCW ]	Pressure Maximum (Sealed Pressure) [ CmH2O ]	Flow Rate Maximum (Open Flow) [ LPM ]	Weight [ g ]
	300	CCW	≥85	1300	1750

BBA02-240	Rated Voltage [ V ]	No-Load Speed [ r/min ]	Rated Pressure [ cmH2O ]	Rated Speed [ R.P.M. ]	Current Maximum [ A ]
	AC240V	12000	60	11000	2
	OutPut [ Watt ]	Rotating Direction [ CW / CCW ]	Pressure Maximum (Sealed Pressure) [ CmH2O ]	Flow Rate Maximum (Open Flow) [ LPM ]	Weight [ g ]
	300	CCW	≥85	1300	1750



**Model: CB-01**  
**CPAP BLDC Blower**

- DC Voltage Input
- Long Life Low Noise
- Customizations Available
- Respiration
- Air Mattress
- Air Vest

Rated Voltage [ V ]	No-Load Speed [ r/min ]	Rated Pressure [ cmH2O ]	Rated Speed [ R.P.M. ]	Current Maximum [ A ]
DC24V	22500	10	14000	1.6
OutPut [ Watt ]	Rotating Direction [ CW / CCW ]	Pressure Maximum (Sealed Pressure) [ CmH2O ]	Flow Rate Maximum (Open Flow) [ LPM ]	Weight [ g ] [ Unit Measure ]
40	CCW	≥28	280	200



**Model: VB-01**  
**BiPAP BLDC Blower**

- Mini Size Quick Speed Response
- Hall Effect Sensors
- Customizations Available
- Respiration
- Air Mattress
- Air Vest
- Fuel Cell Blower

Rated Voltage [ V ]	No-Load Speed [ r/min ]	Rated Pressure [ cmH2O ]	Rated Speed [ R.P.M. ]	Current Maximum [ A ]
DC24V	39000	40	27700	6
OutPut [ Watt ]	Rotating Direction [ CW / CCW ]	Pressure Maximum (Sealed Pressure) [ CmH2O ]	Flow Rate Maximum (Open Flow) [ LPM ]	Weight [ g ] [ Unit Measure ]
145	CCW	≥85	800	230



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