Nidec
All for dreams

Aerodynamic Bearings

Micro Blowers

NIDEC COPAL ELECTRONICS CORP.

Aerodynamic Bearings
Micro Blowers

Our unique Aerodynamic Bearings technology generates a non-contact rotational motion to provide ultra-high speed rotation.
(Max.50,000 rpm)

Compact
Light weight

Actual size ratio

Dime
Coin diameter
ϕ0.705 inch (ϕ17.9 mm)

TF029B-1000-F
Impeller diameter
ϕ1.142 inch (ϕ29 mm)

TF037F-2000-F
Impeller diameter
ϕ1.457 inch (ϕ37 mm)

TF037C-2000-F
Impeller diameter
ϕ1.457 inch (ϕ37 mm)

TF037C-2100-F
Impeller diameter
ϕ1.457 inch (ϕ37 mm)

TF037E-2000-F
Impeller diameter
ϕ1.457 inch (ϕ37 mm)

High static
Pressure

Ultra high-speed rotation

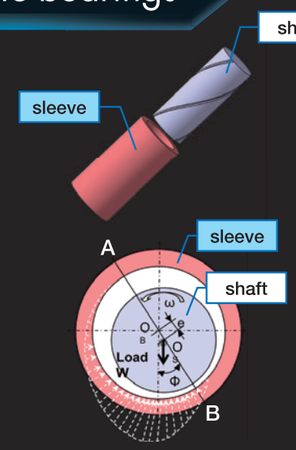
Low vibration
Long life

No wear on shaft and sleeve

Please watch the high performance of our Micro Blowers with the video on YouTube.
https://youtu.be/UWwYQcCXxtk

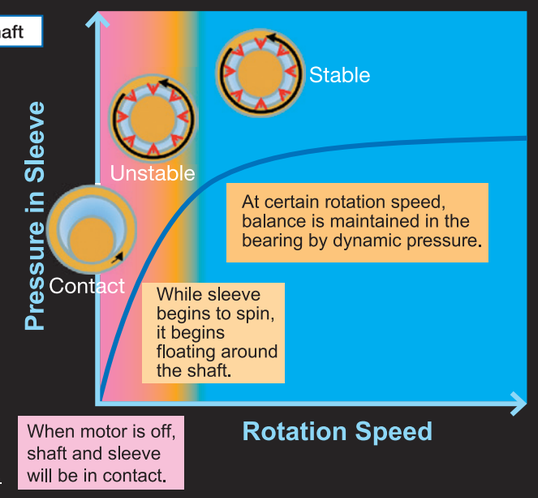
Aerodynamic bearings

Non-contact bearing structure



∗The above is the deformed image.

balancing optimization



Applications

Compact and high power microblowers are ideal for the following applications.

CPAP (Medical Devices)

Fuel Cell System

Server

Air Cleaner

Ionizer

3D Printer

Quick Reference Table

Item \ Part No.	TF037C-2100-F / TF037C-2000-F	TF037E-2000-F	TF037F-2000-F	TF029B-1000-F
Rated Voltage	24 VDC ±10%	24 VDC ±10%	12~24 VDC	12~27 VDC
Rated Power Supply Current	1.2 A Max.	0.86 A Max.	0.67 A Max.	0.62 A Max.
Rated Power Consumption	29 W Max.	22.7 W Max.	16.1 W Max.	14.9 W Max.
Rated Rotation Speed	40,000 r/min	35,500 r/min	31,000 r/min	36,000 r/min
Rated Air Flow	100 ℓ/min	100 ℓ/min	100 ℓ/min	100 ℓ/min
Rated Pressure	4 kPa	3 kPa	2 kPa	2 kPa
Maximum Rotation Speed	45,000 r/min	45,000 r/min	45,000 r/min	50,000 r/min
Maximum Pressure	4.5 kPa	4.5 kPa	4.5 kPa	3.5 kPa
Acoustic Audible Noise	67.0 dB (A) Max.	65.0 dB (A) Max.	65.0 dB (A) Max.	65.0 dB (A) Max.
Weight	2100-F: 94 g / 2000-F: 90 g	165 g	72 g	55 g
Material in Resin	Full compliance with UL94 V0		Full compliance with FDA standards	

AERODYNAMIC BEARINGS

MICRO BLOWERS

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