



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  
φ 0.705 inch (φ 17.9 mm)



**TF029B-1000-F**  
Impeller diameter  
φ 1.142 inch (φ 29 mm)



**TF037F-2000-F**  
Impeller diameter  
φ 1.457 inch (φ 37 mm)



**TF037C-2000-F**  
Impeller diameter  
φ 1.457 inch (φ 37 mm)



**TF037C-2100-F**  
Impeller diameter  
φ 1.457 inch (φ 37 mm)



**TF037E-2000-F**  
Impeller diameter  
φ 1.457 inch (φ 37 mm)

**High static**  
**Pressure**



Ultra high-speed rotation



**Low vibration**  
**Long life**



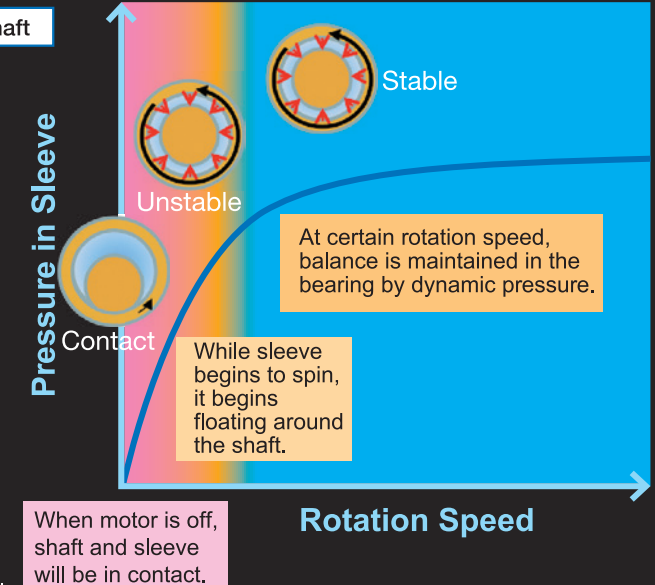
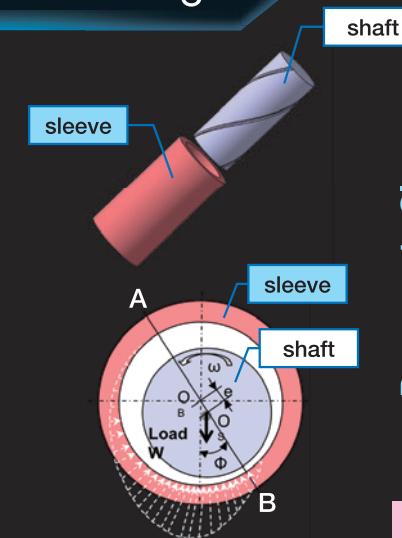
No wear on shaft and sleeve



Aerodynamic bearings

Non-contact bearing structure

balancing optimization



\*The above is the deformed image.

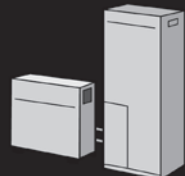
Please watch the high performance of our Micro Blowers with the video on YouTube.  
<https://youtu.be/UWwYQcCXxtk>

### Applications

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



**CPAP**  
(Medical Devices)



**Fuel Cell System**



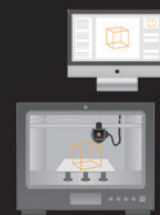
**Server**



**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**

**NIDEC COPAL ELECTRONICS CORP. (Head Office)**

7-5-25 Nishi-Shinjuku, Shinjuku-ku, Tokyo 160-0023 JAPAN  
Phone:+81-3-3364-7055 Fax:+81-3-3364-7098

**NIDEC COPAL ELECTRONICS, INC.**

367 Van Ness Way, Suite 601  
Torrance, CA 90501 U.S.A  
Phone:+1-310-618-0225 Fax:+1-310-618-9984

**NIDEC COPAL ELECTRONICS GmbH**

Mergenthalerallee 79-81  
65760 Eschborn GERMANY  
Phone:+49-6196-92775-0 Fax:+49-6196-92775-75

**NIDEC COPAL ELECTRONICS SINGAPORE PTE. LTD.**

180B Bencoolen Street #07-05 The Bencoolen Singapore 189648  
Phone +65-6535-0056 Fax:+65-6535-0087

**NIDEC COPAL ELECTRONICS (SHANGHAI) CO.,LTD.**

Unit A, 4/F, No.4 Bldg., No.253, Ai Du Rd., Wai Gao Qiao  
Free Trade Zone, Shanghai 200131, CHINA  
Phone:+86-21-5046-3009 Fax:+86-21-5046-3115

**NIDEC COPAL ELECTRONICS (TAIWAN) CO., LTD.**

18F-1, No.57, Sec.2, Tun Hwa S.Rd., Taipei 106, TAIWAN  
Phone:+886-2-27030577 Fax:+886-2-27010577

**NIDEC COPAL ELECTRONICS KOREA CORP.**

Woolim Lion's Valley, C- 406, 371-28, Gasan-dong,  
Geumcheon-gu, Seoul, 153-786, KOREA  
Phone:+82-2-3482-5861 Fax:+82-2-3482-5860

<https://www.nidec-copal-electronics.com>

**Sales agent:**