

# Zirconia Sensing Oxygen Sensor TB—Ⅱ VNE series



## What' s TB—Ⅱ VNE series

Detective element is made of Zirconia electrolyte.

The mainly use of this sensor is for measurement of partial oxygen pressure in the vacuum atmosphere.

※The sensor works as oxygen analyzer together with the control unit.

## Features

- ◎ Direct installation for sealed vessel or vacuum furnace.
- ◎ Measuring vacuum atmosphere under the pressure of  $1 \times 10^{-5} \text{Pa}$  ( $1 \times 10^{-7} \text{Torr}$ ) .
- ◎ Optional mounting flange is available.

## Specifications ※1

Flange size	VF25, NW40, NW25 etc. (Please feel free to contact for other sizes)
Installation	Vertical ~ Horizontal, above vacuum flange (Customer preparation)
Measuring range	1ppm~100%O <sub>2</sub> $1 \sim 1 \times 10^{-30} \text{atm O}_2$
Linearity	Large one either of less than $\pm 1\% \text{FS}$ or $\pm 1 \text{ppm}$
Repeatability	Large one either of less than $\pm 1\% \text{FS}$ or $\pm 1 \text{ppm}$
Response	90% reading 10sec. (Swinging to a high density side)
Drift	Less than $\pm 2\% \text{FS} / \text{wk}$
Sampling	Diffusion
Sample Temp.	300°C MAX
Sample pressure	2atm~ $1 \times 10^{-5} \text{Pa}$ ( $1 \times 10^{-7} \text{Torr}$ )
Warm up time	About 20 minutes
Option	The port connection for calibration ※2

※1 For the improvement, the specification and design may be changed without prior notice.

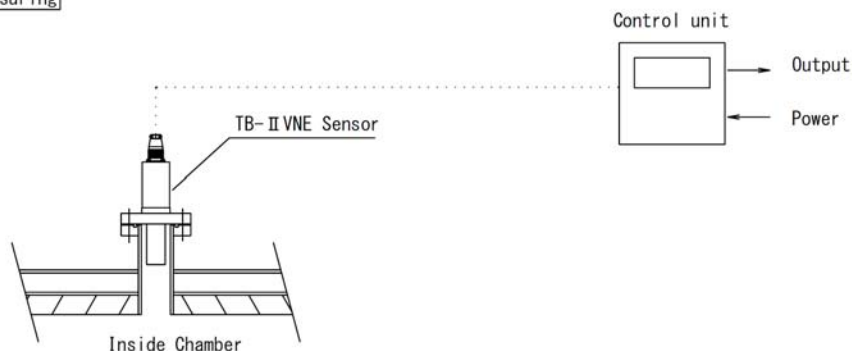
※2 The special housing is necessary for standard gas calibration.

## Dimensions & Flow Diagram

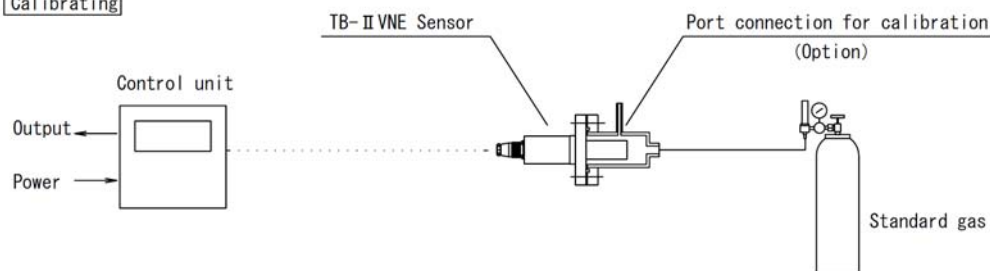
TB-II VNE-VF25	TB-II VNE-NW40	TB-II VNE-NW25

## Flow Diagram

### Measuring



### Calibrating



※ At the calibration, sensor is necessary to remove from the chamber and install a special port for calibration.

- ※ NW25, NW40, ICF70 are standard model. Please feel free to contact us about other flange size.
- ※ Gasket, Volts and Nuts are not attached
- ※ There is an explosion hazard if there was cell breakage when measuring the combustible gas atmosphere such as hydrogen under decompression etc.

## Inquiry

 **Daiichi Nekken CO., LTD.**

13-22 Nishikura-Cyo Ashiya-City  
Hyogo-Prefecture Japan  
TEL 0797-31-2410 / FAX 0797-31-8951  
URL <http://www.daiichinekken.co.jp>  
E-mail [info@daiichinekken.co.jp](mailto:info@daiichinekken.co.jp)