



\* In order to prevent confusion with the standard product VNM-25, a label stating "Increased fire safety specifications" is affixed to this product.

# Fire-resistant to shut off the gas without fail in case of fire accidents

## Safety residual pressure exhaust valve

### VNM-25-K Series

(increased fire safety specifications)

- NC (normally closed)
- City gas
- Port size: 25A (JIS flange)



### Overview

Increased fire safety specifications have been jointly developed by three gas companies to ensure resistance to fire heat so that the product can endure for the time (about 30 minutes) necessary to start initial firefighting in case of fire due to an unpredictable cause. This product normally functions as a safety shut-off valve for a gas circuit double cutoff system to increase safety of automatic startup and operation. In a fire-related emergency, it endures high heat, keeping the gas cut off, and thus prevents fire from spreading.

### Features

- Heat resistant structure and materials have enabled higher fire safety levels compared with conventional safety shut-off valves.
- The DC driven actuator with rectifier has eliminated noise and coil burnout for safety.
- Checking valve open/close state is easy with the valve closing confirmation switch and power indicator.

### Applications

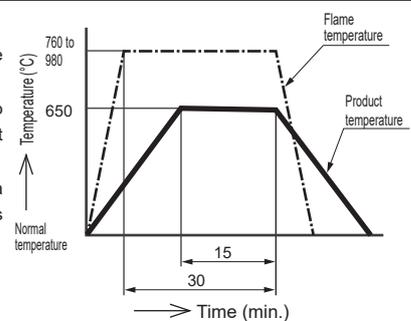
Gas combustion systems to which the "Safety Guidelines for automatic startup and operation of industrial gas combustion systems" issued by Tokyo Gas, Osaka Gas and Toho Gas are applied

### Specifications

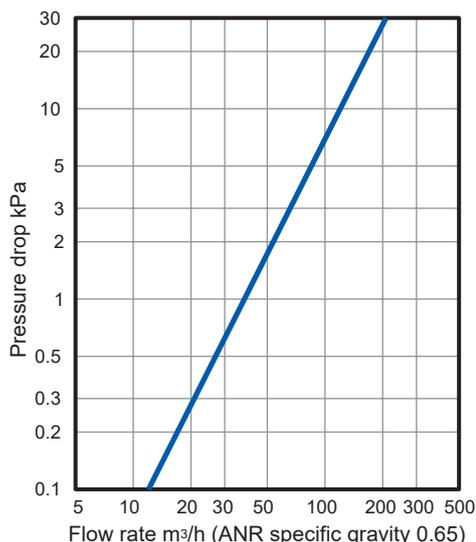
Item	VNM-25-K		
Working gas	City gas		
Working pressure MPa	0 to 0.3		
Flow rate $C_v$ <small>Specific gravity of city gas 0.65</small> m <sup>3</sup> /h (ANR)	19		
Cv	12.8		
Rated voltage V	100 AC±10%, 200 AC±10%		
Frequency Hz	Common in 50 and 60		
Power consumption (apparent power) VA	82		
Ambient temperature °C	-10 to +60 (no freezing)		
Opening time s	0.5 or less		
Closing time s	1.0 or less		
Frequency cycles/min	30 or less		
Fire-resistance*	Refer to the descriptions below.		
Mounting orientation	Vertical direction with the coil on top or horizontal direction with the coil horizontal		
Connection	Flange (JIS 10K RF)		
Port size	25 A		
Weight kg	10		
Proof pressure MPa	0.5		
Valve closing confirmation switch	Load voltage V	12, 24 DC	100 AC
	Load current mA	50 or less	20 or less
Degree of protection	IPX4		

#### \* Fire safety performance

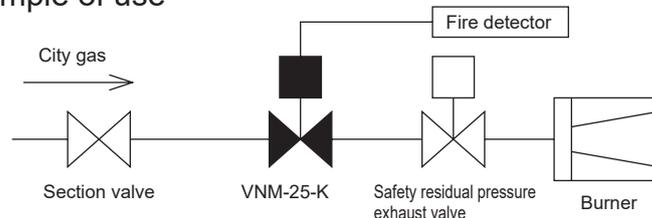
Fire safety performance of this product is based on the API607 standard (American Petroleum Institute). The product is exposed to a fire atmosphere of 760 to 980°C for 30 minutes within which the product temperature is kept at 650°C for 15 minutes. When the product is naturally cooled and 0.2MPa water pressure is applied, the internal leakage is 1.2L/h or less and external leakage is 1.5L/h or less.



### Flow characteristics



### Example of use



Install this product as an upstream safety shut-off valve for a double shutdown system and connect it to the fire detector so that the valve can be triggered by the fire detector to shut off the gas in case of fire, thus preventing fire spreading due to gas leakage.

#### Reference: Conversion coefficient

Converted flow rate = (flow rate in table) x (coefficient)

Gas	City gas (13A)
Specific gravity (air = 1)	0.65
Coefficient	1.0

# VNM-25-K Series

Internal structure and dimensions

## How to order

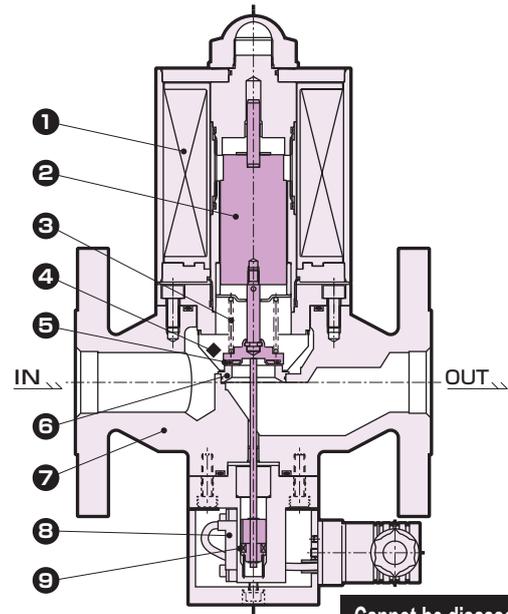
VNM - 25 - K - AC100V

Model No.

### 1 Voltage

AC100V	100 VAC 50/60 Hz
AC200V	200 VAC 50/60 Hz

## Internal structure/material



Part No.	Part name	Material
1	Coil winding	EIW
2	Plunger	SUS403
3	Spring	Inconel
4	Strainer	SUS304
5	O-ring	U
6	Valve seat	S45C
7	Body	FCD450
8	Reed switch	—
9	Magnet	Plastic magnet

## Dimensions

