



# 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 (Open when energized)
- City gas
- Port size: 25A (JIS flange)



\* This product is labeled "increased fire safety specifications" to be distinguished from the standard product VNM-25.

### 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.

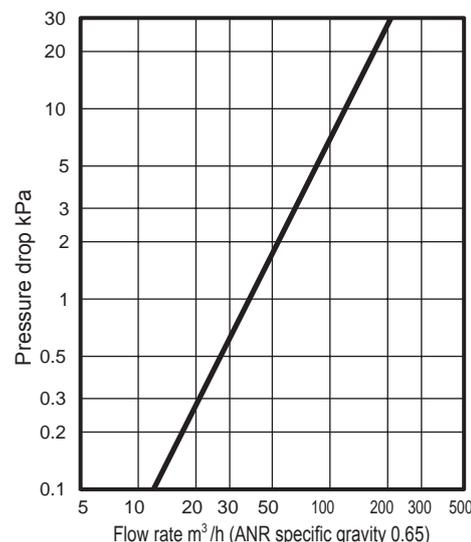
### Features

- 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] gas combustion to which Incineration facilities

### Flow characteristics

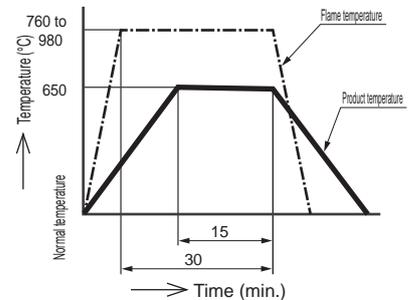


### Specifications

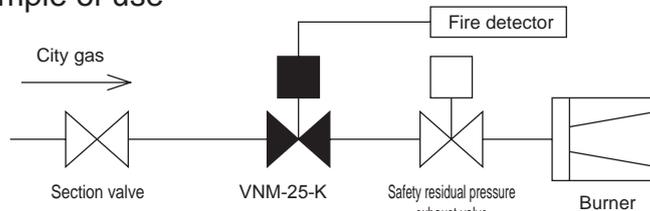
Item	VNM-25-K	
Working gas	City gas	
Working pressure MPa	0 to 0.3	
Flow rate <small>Specific gravity of city gas 0.65 ΔP=0.25kPa</small> m³/h(ANR)	19	
Cv	12.8	
Rated voltage V	100 AC ±10%, 200 AC ±10%	
Frequency Hz	Common to 50 and 60	
Power consumption (apparent power) VA	82	
Ambient temperature °C	-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
	Load current mA	50 or less
		100 AC
		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 1.2t/h or less and external leakage is 1.5t/h or less.



### 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

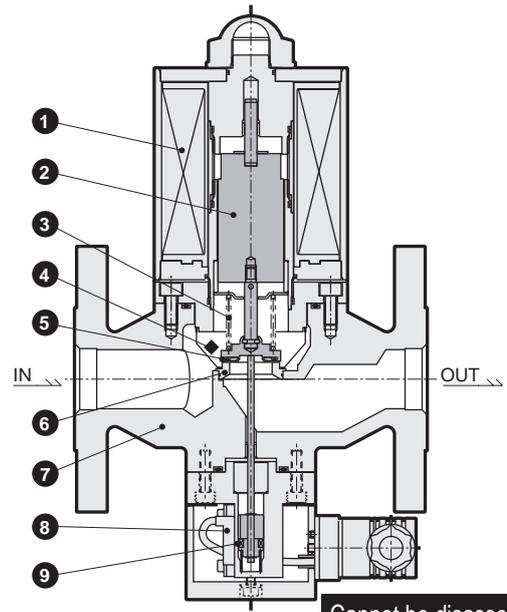
VNM - 25 - K - AC100V

Model No.

### A Voltage

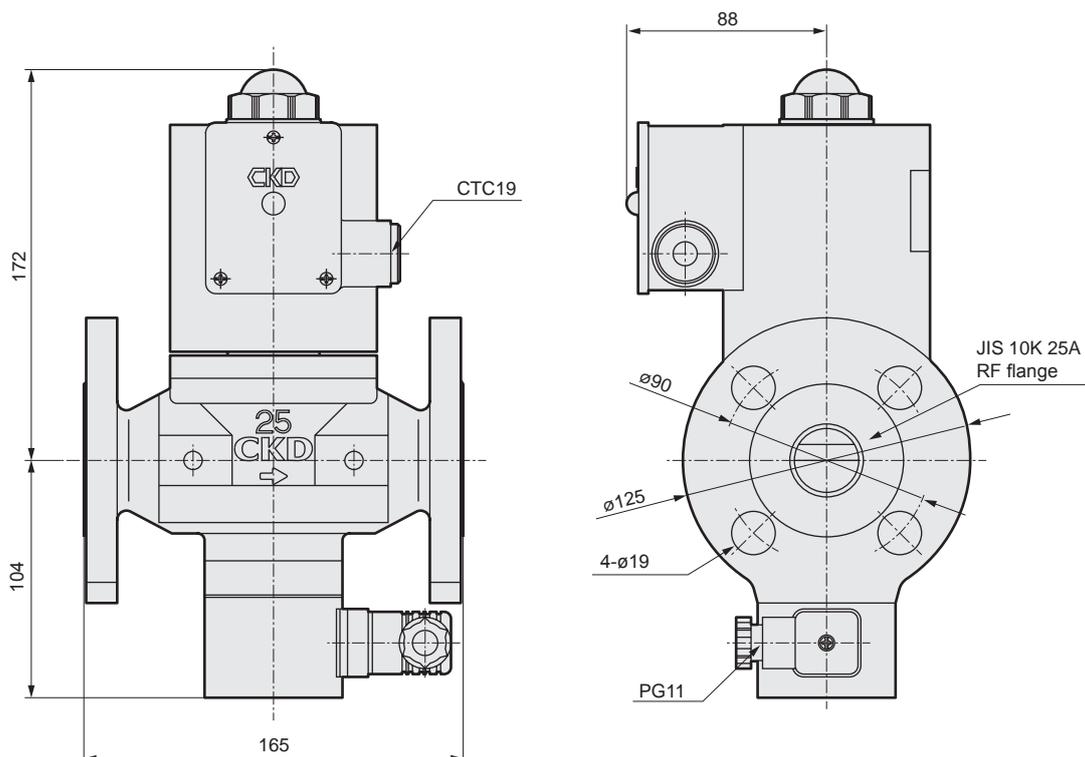
AC100V	100 VAC	50/60 Hz
AC200V	200 VAC	50/60 Hz

## Internal structure and parts list



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



- EXA
- FWD
- HNB/G
- USB/G
- FAB/G
- FGB/G
- FVB
- FWB/G
- FHB
- FLB
- AB
- AG
- AP/AD
- APK/ADK
- DryAir
- EX-XPLNprf
- XPLNprf
- HVB/HVL
- S/B/NAB
- LAD/NAD
- Water-Rela
- NP/NAP/NVP
- SNP
- CHB/G
- MXB/G
- Other valves
- SWD/MWD
- DustColl
- CVE/CVSE
- CCH/CPE/D
- LifeSci
- Gas-Combus
- Auto-Water
- Outdoor
- SpecFld
- Custom
- Ending