



NO ideal for gas relief line of industrial combustion equipment

Solenoid relief valve **VNR Series**

- NO (when energized Closed) type
- City gas/LPG
- Port size: Rp1/2, Rp3/4, Rp1, Rp1¹/₄, Rp1¹/₂



Features

- The DC driven actuator with rectifier has eliminated noise and coil burnout for safety.
- Equipped with a robust dedicated terminal box with JIS standard conduit thread, making electrical wiring easy too.

Applications

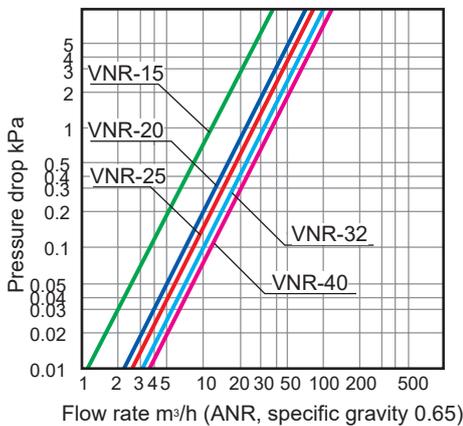
- Industrial furnaces
- Drying furnaces
- Hydrogen-related devices (only hydrogen gas option is used as the working fluid)

Specifications

Item	VNR-15	VNR-20	VNR-25	VNR-32	VNR-40
Working fluid	City gas/LPG (hydrogen gas *1)				
Working pressure kPa	0 to 20				
Flow rate ^{Specific gravity of city gas 0.65} _{ΔP=0.29Pa} m ³ /h (ANR)	5.8	11.7	12.7	16.6	17.2
Cv	3.8	7.8	8.4	11.0	11.4
Rated voltage V	100 AC ^{+10%} _{-15%}		200 AC ^{+10%} _{-15%}		
Frequency Hz	Common to 50 and 60				
Power consumption (apparent power) VA	31		50		
Ambient temperature °C	-20 to +60 (no freezing)				
Closing time s	1.0 or less				
Opening time s	Approx. 0.5				
Frequency cycles/min	30 or less				
Mounting orientation	Vertical direction with the coil on top or horizontal direction with the coil horizontal				
Connection	Screw-in (Rp)				
Port size	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂
Weight kg	1.6	2.3	2.2	3.4	3.3
Proof pressure MPa	0.1				
Degree of protection	IPX4				

* 1: Only the option for hydrogen gas as the working fluid can be used.

Flow characteristics



Reference: Conversion coefficient

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

Gas	City gas (13A)	Propane	Butane	Hydrogen gas *1
Specific gravity (air = 1)	0.65	1.6	2.0	0.07
Coefficient	1.0	0.63	0.57	3.04

How to order

VNR - 15 - H2 - AC100V

Model No.

1 Port size

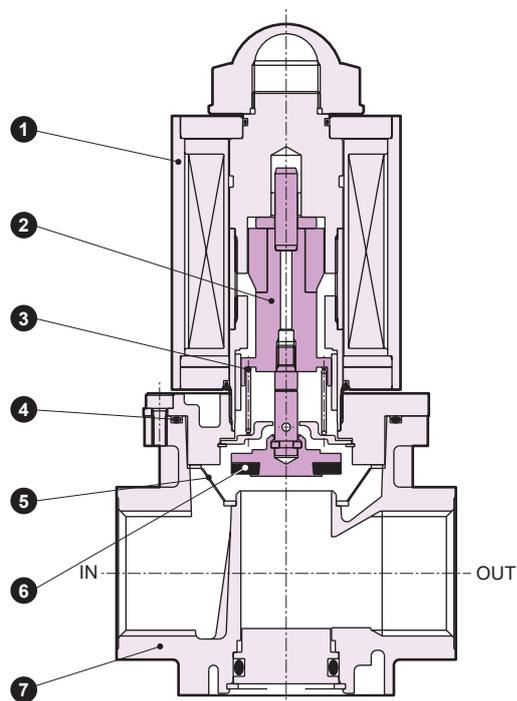
2 Hydrogen compatible Option

3 Voltage

Code	Description
1 Port size	
15	Rp1/2
20	Rp3/4
25	Rp1
32	Rp1 ¹ / ₄
40	Rp1 ¹ / ₂
2 Hydrogen compatible option	
Blank	Standard 
H2	Working fluid: Hydrogen gas 
3 Voltage	
AC100V	100 VAC 50/60 Hz
AC200V	200 VAC 50/60 Hz

For voltages other than above, contact CKD.

Internal structure/material

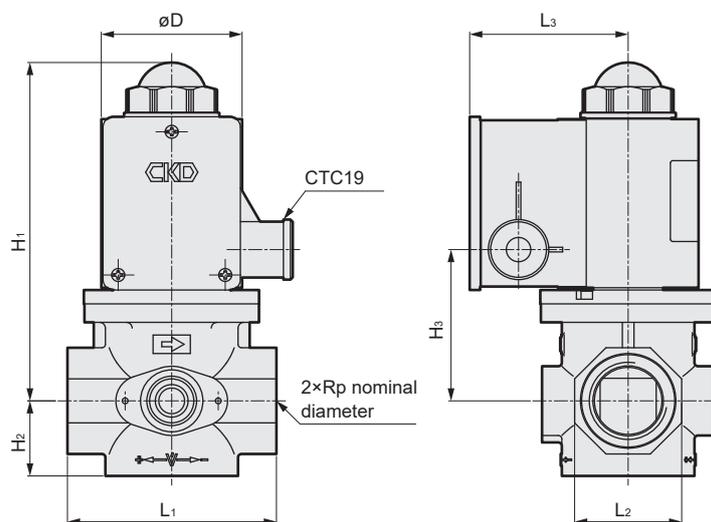


Cannot be disassembled

Part No.	Part name	Material
1	Bonnet	Steel
2	Plunger	Stainless steel
3	Spring	Stainless steel wire
4	O-ring	Nitrile rubber
5	Strainer	Resin
6	Valve disc	Fluoro rubber
7	Body	Aluminum die-casting

Dimensions

● VNR-15 to 40



Code Model No.	Port size	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	øD
VNR-15	1/2	132.5	24.5	51	69	32	63	50
VNR-20	3/4	147	33	65.5	89	46	68	60.5
VNR-25	1	147	33	65.5	89	46	68	60.5
VNR-32	1 1/4	166	39.5	84.5	128	65	73	70
VNR-40	1 1/2	166	39.5	84.5	128	65	73	70