



Gas solenoid valve equipped with main & bypass flow rate adjustment mechanism, switchable between low and high gas combustion.

Flow rate switching solenoid valve (quick open) **VNA-R/RH Series**

- City gas/LPG
- Port size: Rp3/4, Rp1, Rp1¹/₄, Rp1¹/₂

RoHS

Features

- The DC driven actuator with rectifier has eliminated noise and coil burnout for safety.
- Equipped with main and bypass flow rate adjustment mechanism as well as locking mechanism.
- High combustion gas rate supplied when energized and low combustion gas rate supplied when not energized (there is no closing function).
- Amount of gas can be arbitrarily adjusted with flow rate adjustment mechanism.
- Switching among three levels (low/medium/high combustion) can be done by using two units.
- Conventional bypass circuit (orifice plate) unnecessary, piping work-hours, cost, installation space and maintenance cost reduced.
- With power indicator lamp.
- Hydrogen-related equipment (only hydrogen gas option is used as the working fluid).

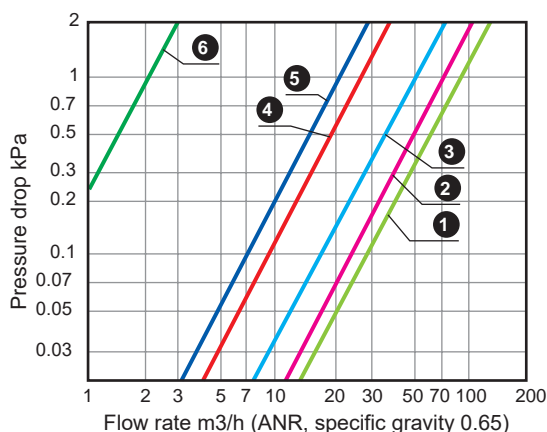
Specifications

Item		VNA-20-R	VNA-25-R	VNA-32-R	VNA-40-R	VNA-20-RH	VNA-25-RH	VNA-32-RH	VNA-40-RH
Working fluid		City gas/LPG (hydrogen gas *1)					City gas/LPG		
Working pressure MPa		0 to 0.055△when P=0.035 or less					0 to 0.1		
Flow rate m³/h(ANR) Specific gravity of city gas 0.65 △P=0.25kPa	Main + Bypass	19	23	42	45	19	23	42	45
	Bypass only	7.4	6.4	9.3	9.1	7.4	6.4	9.3	9.1
Cv		12.8	15.5	28.3	30.3	12.8	15.5	28.3	30.3
Rated voltage V		100AC ^{+10%} _{-15%}					200AC ^{+10%} _{-15%}		
Frequency Hz		Common to 50 and 60							
Power consumption (apparent power) VA		31		50				82	
Ambient temperature °C		-20 to +60 (no freezing)							
Opening time s		0.5 or less							
Closing time s		1.0 or less							
Frequency cycles/min		30 or less							
Flow rate adjustment %	Main flow rate	50 to 100							
	Bypass flow rate	10 to 100							
Mounting orientation		Vertical direction with the coil on top or horizontal direction with the coil horizontal							
Connection		Screw-in (Rp)							
Port size		3/4	1	1¼	1½	3/4	1	1¼	1½
Weight kg		2.6	2.5	4.1	4.0	3.0	2.9	5.1	5.0
Proof pressure MPa		0.1				0.3			
Degree of protection		IPX4							

* Cv value is the value at main fully open (+), bypass fully open (H).

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

Flow characteristics (typical: VNA-40-R, VNA-40-RH)



No.	Main	Bypass
①	Fully open (+)	Fully open (H)
②	Fully open (+)	Fully open (L)
③	Fully open (-)	Fully open (H)
④	Fully open (-)	Fully open (L)
⑤	Solenoid valve OFF	Fully open (H)
⑥	Solenoid valve OFF	Fully open (L)

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

VNA - **20** - **R** **H2** - **AC100V**



Model No.

① Port size

② Working pressure

③ Hydrogen compatible option

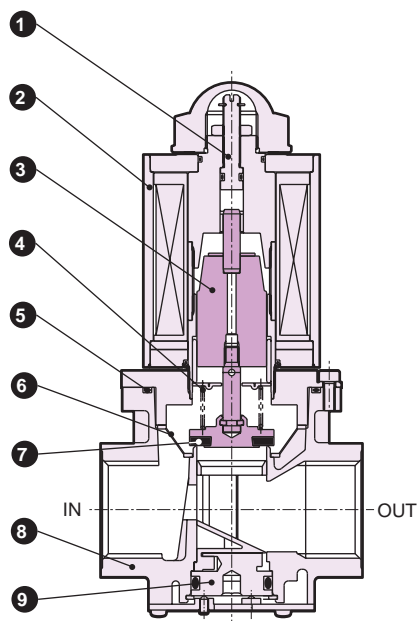
④ Voltage
*1

Code	Description	
① Port size		
20	Rp3/4	
25	Rp1	
32	Rp1¼	
40	Rp1½	
② Working pressure		
Blank	0 to 0.055 MPa	
H	0 to 0.1 MPa	
③ Hydrogen compatible option		
Blank	Standard	
H2	Working fluid: Hydrogen gas	
④ Voltage		
AC100V	Standard	100 VAC 50/60 Hz
AC200V		200 VAC 50/60 Hz
AC110V		110 VAC 50/60 Hz
AC220V		220 VAC 50/60 Hz
DC24V		24 VDC
DC100V		100 VDC

*1: For voltages other than above, contact CKD.



Since it does not have a shutoff function, use it for flow rate switching.

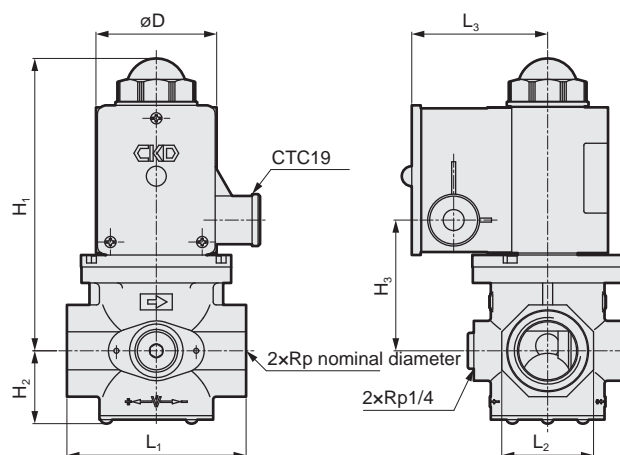


Cannot be disassembled

Part No.	Part name	Material
1	Adjusting screw	Stainless steel
2	Bonnet	Steel
3	Plunger	Stainless steel
4	Spring	Stainless steel wire
5	O-ring	Nitrile rubber
6	Strainer	Resin
7	Valve disc	Nitrile rubber (R), urethane rubber (RH)
8	Body	Aluminum die-casting
9	Flow rate adjustment screw	Aluminum

Dimensions

● VNA-20 to 40-R/RH



Code Model No.	Port size	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	øD
VNA-20-R	3/4	147	37	65.5	89	46	73	60.5
VNA-25-R	1	147	37	65.5	89	46	73	60.5
VNA-32-R	1 1/4	166	45	84.5	128	65	78	70
VNA-40-R	1 1/2	166	45	84.5	128	65	78	70
VNA-20-RH	3/4	147	37	65.5	89	46	78	70
VNA-25-RH	1	147	37	65.5	89	46	78	70
VNA-32-RH	1 1/4	193	45	111.5	128	65	88	90
VNA-40-RH	1 1/2	193	45	111.5	128	65	88	90