



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



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 shut-off 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 devices (only working fluid is hydrogen gas option)

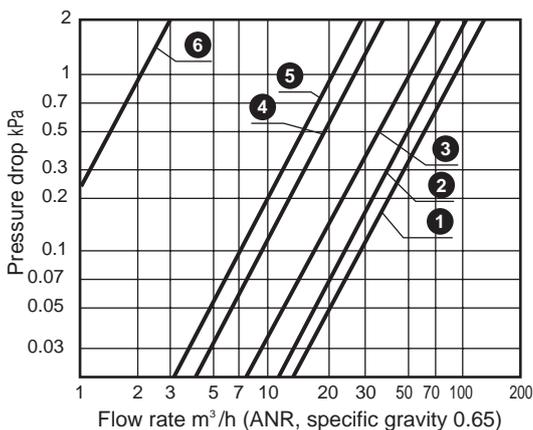
Specifications

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 *)								
Working pressure MPa	0 to 0.055 when $\Delta P=0.035$ or less				0 to 0.1				
Flow rate m ³ /h (ANR) <small>Specific gravity of city gas 0.65 $\Delta P=0.25$KPa</small>	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	100 AC ^{+10%} / _{-15%} 200 AC ^{+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	1 ¹ / ₄	1 ¹ / ₂	3/4	1	1 ¹ / ₄	1 ¹ / ₂	
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 working fluid hydrogen gas option can be used.

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



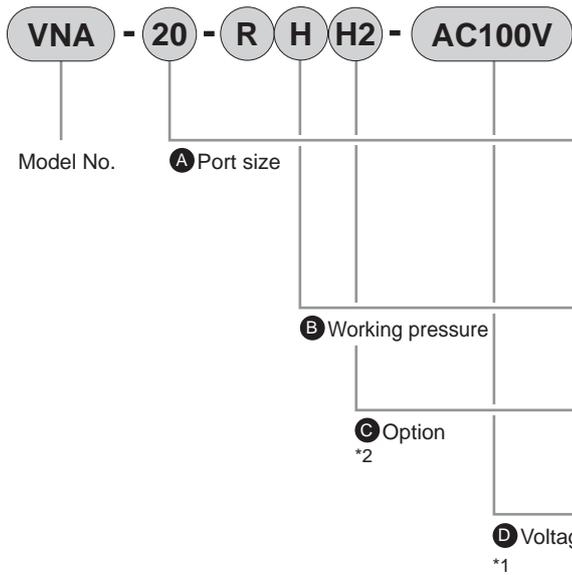
No.	Main	Bypass
1	Fully open (+)	Fully open (H)
2	Fully open (+)	Fully open (L)
3	Fully open (-)	Fully open (H)
4	Fully open (-)	Fully open (L)
5	Solenoid valve OFF	Fully open (H)
6	Solenoid valve OFF	Fully open (L)

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



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

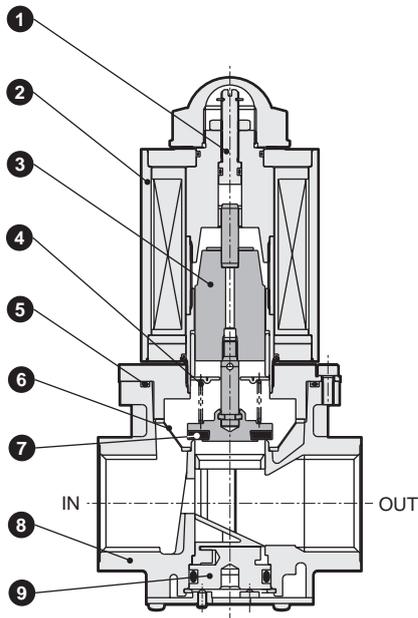
*1: For voltages other than above, contact CKD.

*2: Working gas: Hydrogen gas option cannot be combined with 0.1MPa specifications (Item B H).

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

VNA-R/RH Series

Internal structure and parts list

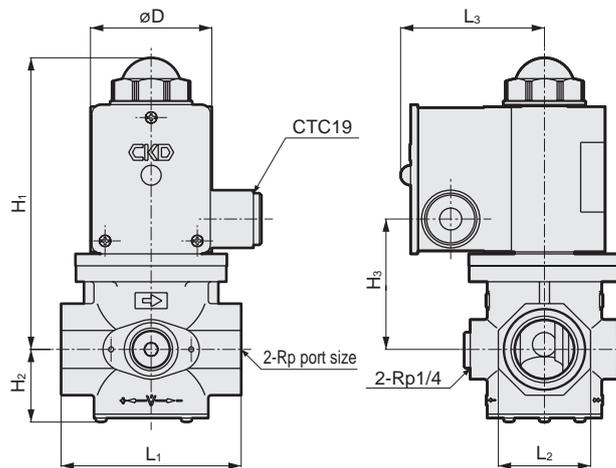


Cannot be disassembled

No.	Part name	Material
1	Adjustment 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	Port size	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	øD
Model No.								
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