



Product Features

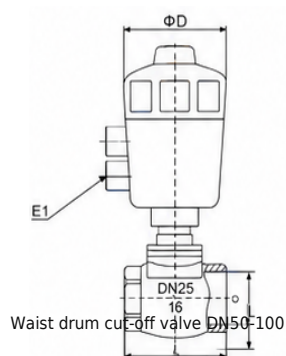
1. Compact structure, light weight, large flow, low cost.
2. Service life is 10 times that of a membrane type cut-off valve.
3. The tube interface can rotate 360°, and the valve head can be removed.
4. Maintenance-free seal with imported sealing ring.

Control function: bidirectional or unidirectional
 Optional types: normally open, normally closed
 Control pressure: 0.2-0.5 MPa
 Medium temperature: -10°C to 220°C
 Ambient temperature: -10°C to 80°C
 Working medium: neutral gas, air

Scope of Application

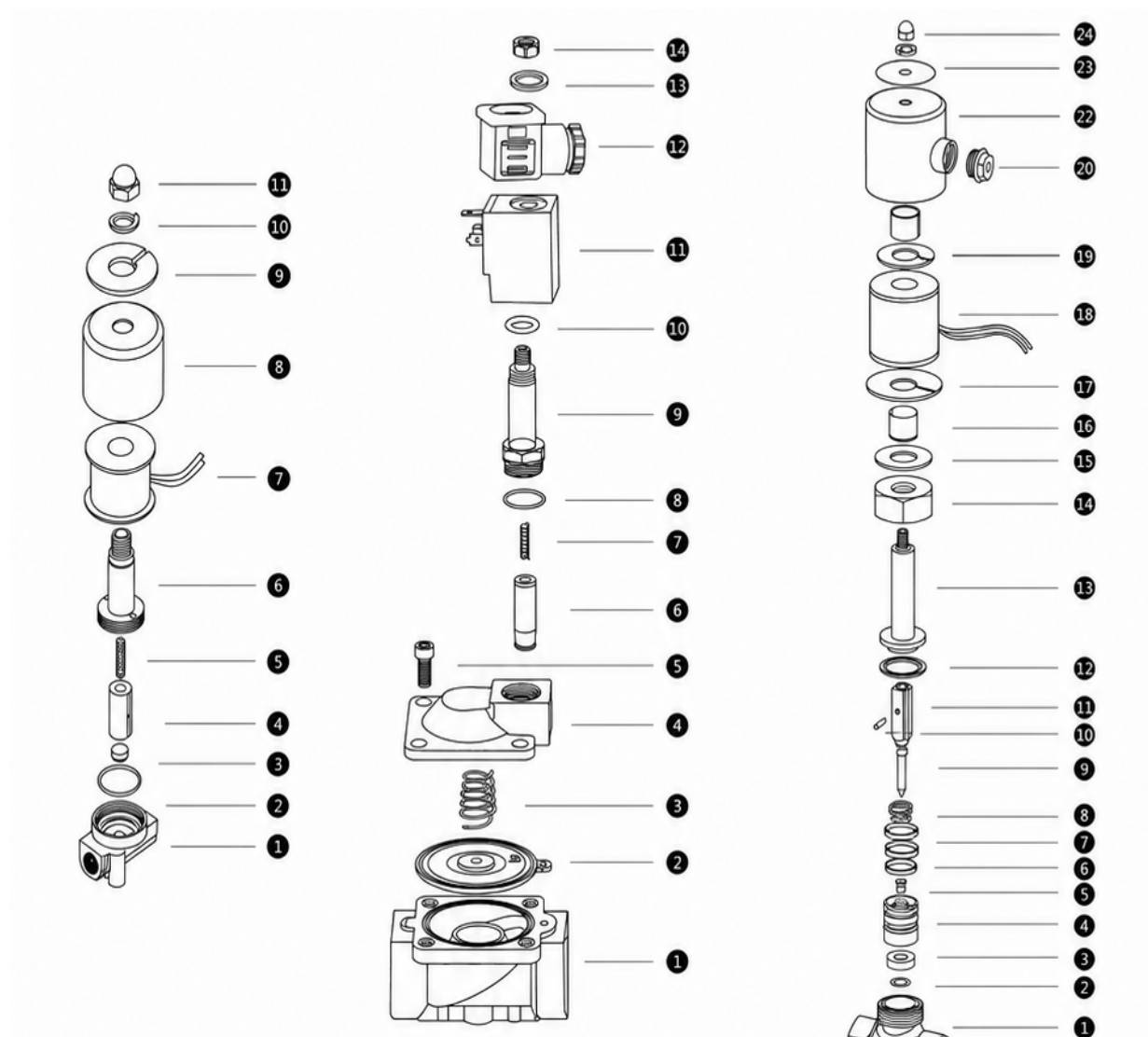
- It can replace film-type cut-off valves and is used for gas, drying equipment, petrochemical industry, water treatment, dyeing and finishing, foam molding machinery, etc.

Overall Dimension



Threaded inner bore DN	Actuator size ΦD (mm)	Body length L (mm)	Kv value (m³/h)	Pipe pressure at highest temperature	Pilot pressure	Control pressure	Flow direction
DN15	Φ50	56	3.9	180°C ≤ 16 bar	3	2.5-5	Underseat
DN20	Φ50	65	7.5	180°C ≤ 16 bar	3	2.5-5	Underseat
DN25	Φ50	72	17	180°C ≤ 16 bar	3	2.5-5	Underseat
DN32	Φ63	85	25	180°C ≤ 16 bar	3	2.5-5	Underseat
DN40	Φ63	99	40	180°C ≤ 16 bar	3	2.5-5	Underseat
DN50	Φ63	114	50	180°C ≤ 16 bar	4	2.5-5	Underseat
DN65	Φ80	129	65	180°C ≤ 16 bar	4	2.5-5	Underseat
DN80	Φ100	200	110	180°C ≤ 16 bar	4	2.5-5	Underseat
DN100	Φ100	230	135	180°C ≤ 16 bar	4	2.5-5	Underseat

Part List



No.	Name
1	Valve Body
2	O-ring
3	Plug Head
4	Pilot
5	Spring
6	Iron Core
7	Coil
8	Steel Washer
9	Magnetic Plate
10	Spring Washer
11	Nut

No.	Name
1	Valve Body
2	Diaphragm
3	Diaphragm Spring
4	Valve Cover
5	Hexagon Screw
6	Pilot Units
7	Plunger Spring
8	O-ring
9	Iron Core
10	O-ring
11	Coil
12	Connector
13	Gasket
14	Lock Nut

No.	Name
1	Valve Body
2	Washer
3	Seal Pad
4	Valve Core
5	Seal
6	Gasket
7	Guide Ring
8	Spring
9	Valve Needle
10	Pin
11	Armature
12	Seal Ring
13	Iron Core
14	Nut

No.	Name
15	Gasket
16	Bushing
17	Magnetic Plate
18	Coil
19	Magnetic Plate
20	Nut
21	Steel Cover
22	Nameplate
23	Spring Washer
24	Nut

✓ Good

X Not Good

Blank : Unknown

Valve Body and Sealing Material Reference Table									
Medium	NBR	EPDM	PTFE	VITON	SUS304	SUS316	Brass	Cast Iron	Plastic
Acetone		✓	✓	X	✓	✓	✓	✓	
Acetylene	✓	X	✓	✓	✓	✓	✓	✓	
Ethanol	✓	✓	✓	X	✓	✓	✓	✓	
Methanol	✓	✓	✓	✓	✓	✓	✓	✓	
Alcohol	✓	✓	✓	✓	✓	✓	✓	✓	✓
Air	✓	✓	✓	✓	✓	✓	✓	✓	✓
Natural Gas	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oxygen	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydrogen	✓		✓	✓	✓	✓	✓		
Nitrogen	✓	✓	✓	✓	✓	✓	✓		
City Gas	✓		✓	✓	✓	✓	✓		
Industrial Gas	✓		✓	✓	✓	✓	✓		
Refined Petroleum	✓		✓	✓	✓	✓	✓	✓	
Water	✓	✓	✓	✓	✓	✓	✓	✓	✓
Steam	✓	✓	✓	✓	✓	✓	✓	✓	
Drinking Water	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sea Water	✓	✓	✓	✓	✓	✓	✓	✓	✓
Industrial Wastewater			✓	✓	✓	✓			
Gasoline	✓	X	✓	✓	✓	✓	✓	✓	
Kerosene	✓	X	✓	✓	✓	✓	✓	✓	✓
Diesel	✓	X	✓	✓	✓	✓	✓	✓	✓
Milk	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonia	X		✓						
Toluene		X	✓	✓	✓	✓	✓	✓	
Xylene		X	✓	✓	✓	✓	✓	✓	
Propane	✓	X	✓	✓	✓	✓	✓	✓	
Methane	✓	X	✓	✓	✓	✓	✓	✓	
Sulfur Dioxide			✓	✓	✓	✓	✓	✓	
Sodium Hydroxide (10%, +20%)	✓	X	✓	✓	✓	✓		✓	
Nitric Acid (10%, +20%)			✓	✓	✓	✓			
Sulfuric Acid (<10%)			✓	✓					
Hydrochloric Acid (<10%)	✓		✓	✓					
Acetic Acid	✓	X	✓	✓	✓	✓	✓	✓	

Flow Calculation

● 1. Liquid (volume)

$$Q = 14.28 C_v \times \sqrt{(P_1 - P_2) / G}$$

Note: viscosity effect is not considered; below 20 CST (Engler), approximately 20 mm²/s.

● 2. Gas (volume)

$$Q = 198.3 C_v \times P_1 / \sqrt{G} \quad (P_2 \leq P_1 / 1.89)$$

$$Q = 396.6 C_v \times \sqrt{(\Delta P \times P_2) / G} \quad (P_2 > P_1 / 1.89)$$

Note: standard atmospheric state: 760 mmHg, 15.6°C. Q: L/min.

● Description

P1: inlet pressure, kgf/cm²

P2: outlet pressure, kgf/cm²

ΔP : P1 - P2

G: specific gravity (water = 1, air = 1)

Cv: flow coefficient (1 Kv = 14.28 Cv)

Common Pressure Unit Conversion

$$1 \text{ kgf/cm}^2 = 1 \text{ bar} = 0.1 \text{ MPa} = 100 \text{ kPa} = 14.5 \text{ PSI}$$

Common Seal Material Description

For dynamic sealing under different operating conditions, the following data is for reference only.

1. NBR

Mainly used for diaphragms, O-rings and seals. Suitable for most gases, water, light oil and similar media.

Usable medium temperature: -18°C to 80°C.

2. EPDM

Mainly used where the temperature range is higher than NBR, such as hot water and low-pressure steam. Also suitable for most gases and water. Usable medium temperature: -20°C to 139°C.

3. VITON

Mainly used where NBR and EPDM are not applicable. Suitable for many gases, water, machine oil, gasoline and solvents. Usable medium temperature: -20°C to 169°C.

4. PTFE

Applicable to almost all fluids. As a dynamic seal, it has cold-flow characteristics, so leakage may occur more easily, especially in gas applications.