

# Shuttle Valve

200 Series  
Pneumatic  
Shuttle Valve



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## Function Principle

This valve opens and closes through piston motion forced by compressed air. As fluid pressure acts onto valve seat, the piston experiences little resistance and thereby enables the valve to quickly open/close. The latest design improvement results in more efficient fluid dynamics and less pressure loss.

## Applications

- Food & Beverage
- Air Separation
- Filling Operation
- Ceramic Molding
- Semi-conductor Cleaning
- Automobile
- Others

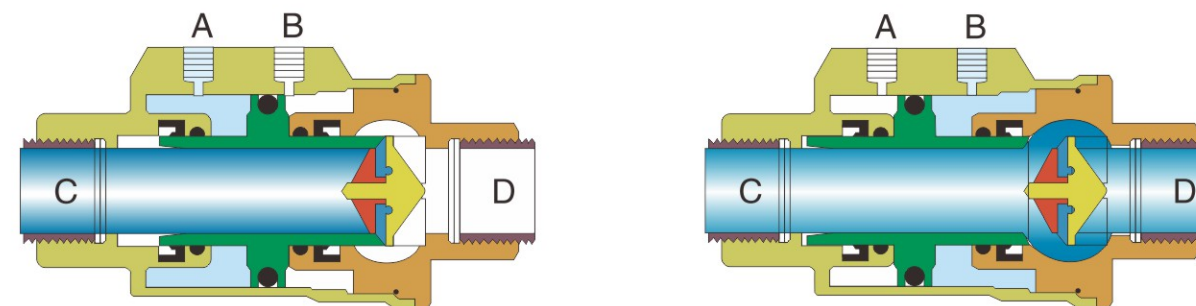
## Advantages

- Compact and aesthetic design. Stainless steel body ensures superb durability.
- Easy to use with many possible mounting positions. Valve operates efficiently with minimum pressure loss.
- Excellent sealing, works well with relative vacuum.

## Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control medium: Filtered compressed air or neutral gas
- Body material: CF8M/CF8
- Seal material: EPDM/FPM
- Applicable medium: FKM—Suitable for most fluid, except for steam.  
EPDM—Suitable for steam and hot water, unsuitable for oils, greases, fuels etc.
- Medium temperature: –20°C — +150°C (FPM),  
–20°C — +130°C (EPDM)
- Ambient temperature: –20°C — +80°C
- Control type: Normally closed, Normally open,  
Double acting normally closed, Double acting without spring
- Connection type: Threaded connection (BSP, BSPT, NPT)
- Leakage class: DIN EN 12266 Class A

## Open/Close



### Closing

When hole "A" is supplied with air (hole "B" must be discharging), the piston moves towards and eventually presses onto the seat, thereby closing the valve.

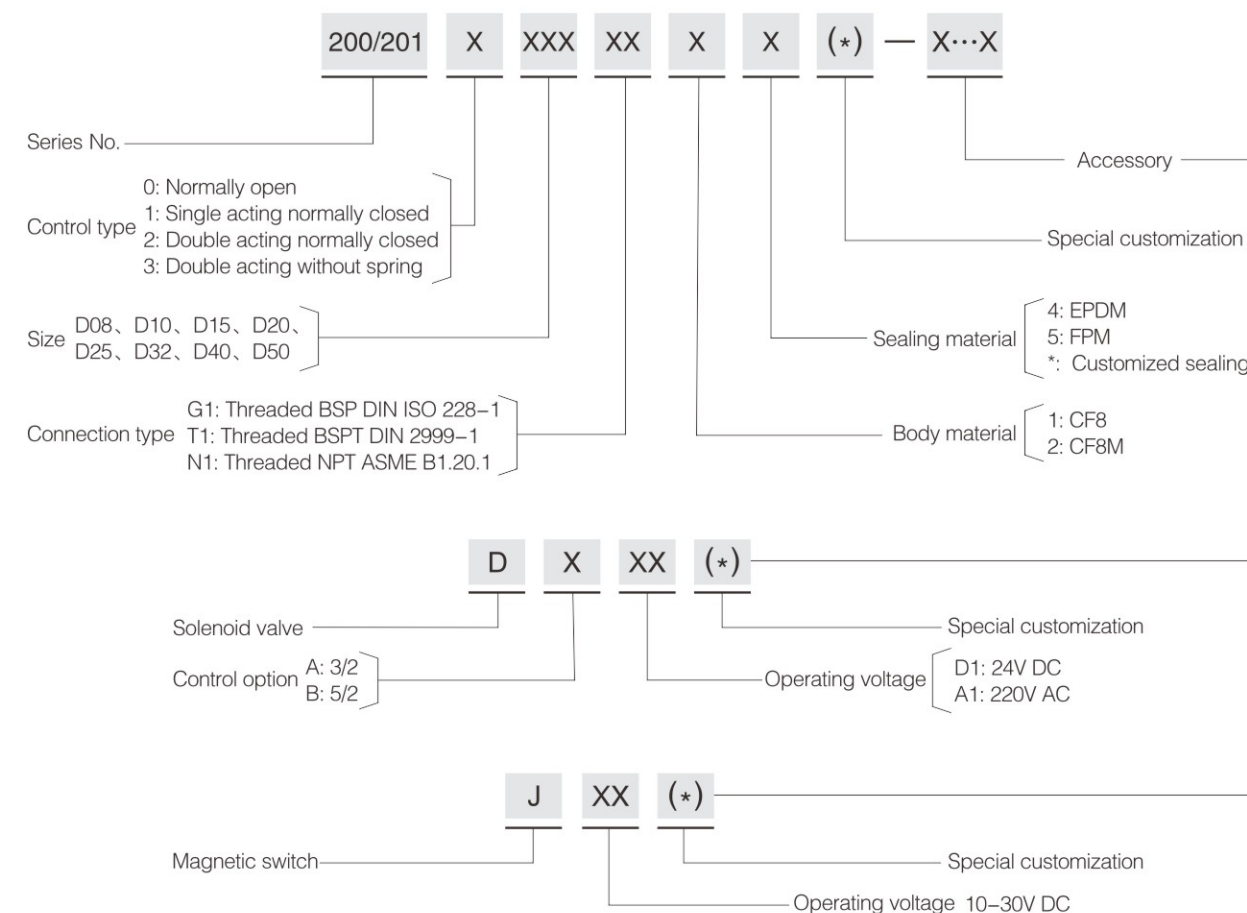
For a single acting N.C. shuttle valve, a spring is installed in "A" chamber, pressing the piston against seat seal and allowing the valve to remain closed in its idle state.

### Opening

When hole "B" is supplied with air (hole "A" must be discharging), the piston move towards "C" and away from seat seal, thereby opening the valve.

For a single acting N.O. shuttle valve, a spring is installed in "B" chamber, forcing the piston away from seat seal and allowing the valve to remain open in its idle state.

## Order Instruction



## 200 Series Pressure Data Sheet

## Single Acting, Normally Closed-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m <sup>3</sup> /h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0-1.6	0.3-0.5
DN15	G1/2"	15	6.4	0-1.6	0.4-0.5
DN20	G3/4"	20	8.9	0-1.6	0.4-0.5
DN25	G1"	25	13.7	0-1.6	0.3-0.5
DN32	G1 1/4"	32	21.6	0-1.6	0.3-0.5
DN40	G1 1/2"	40	36.5	0-1.6	0.3-0.5
DN50	G2"	50	55.0	0-1.6	0.5-0.6

## Single Acting, Normally Closed-Below Seat

Size	Interface	Orifice mm	Flow value Kv(m <sup>3</sup> /h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0-1.6	0.3
DN15	G1/2"	15	6.4	0-1.6	0.4
DN20	G3/4"	20	8.9	0-1.6	0.4
DN25	G1"	25	13.7	0-0.9	0.3
DN32	G1 1/4"	32	21.6	0-1.4	0.3
DN40	G1 1/2"	40	36.5	0-1.2	0.3
DN50	G2"	50	55.0	0-0.8	0.5

## 201 Series Pressure Data Sheet

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DN8	G1/4"	10	2.2	0-1.6	0.35-0.5
DN10	G3/8"	10	3.1	0-1.6	0.35-0.5
DN15	G1/2"	15	5.7	0-1.6	0.35-0.5
DN20	G3/4"	20	10.6	0-1.6	0.35-0.5
DN25	G1"	25	17.4	0-1.6	0.35-0.5
DN32	G1 1/4"	32	21.9	0-1.6	0.35-0.5
DN40	G1 1/2"	40	40.5	0-1.6	0.35-0.5
DN50	G2"	50	59.3	0-1.6	0.5-0.6

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DN20	G3/4"	20	10.6	0-1.6	0.35
DN25	G1"	25	17.4	0-1.6	0.35
DN32	G1 1/4"	32	21.9	0-1.2	0.35
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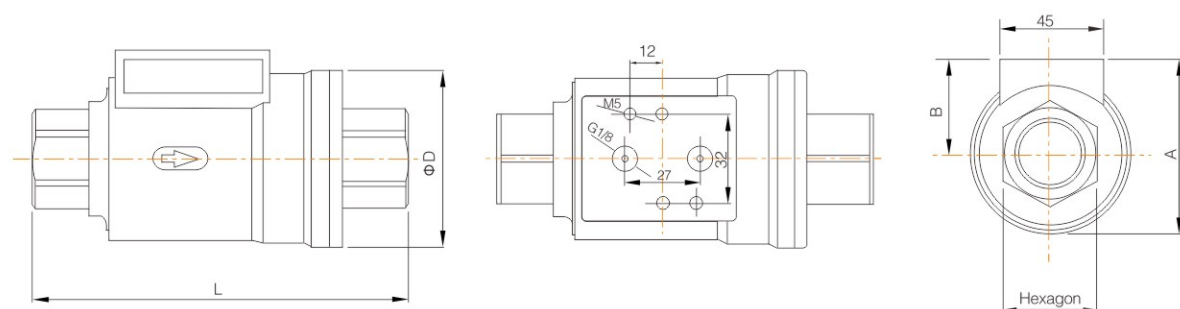
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DN20	G3/4"	20	10.6	0-1.6	0.5
DN25	G1"	25	17.4	0-1.6	0.5
DN32	G1 1/4"	32	21.9	0-1.6	0.7
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DN50	G2"	50	59.3	0-1.6	0.7



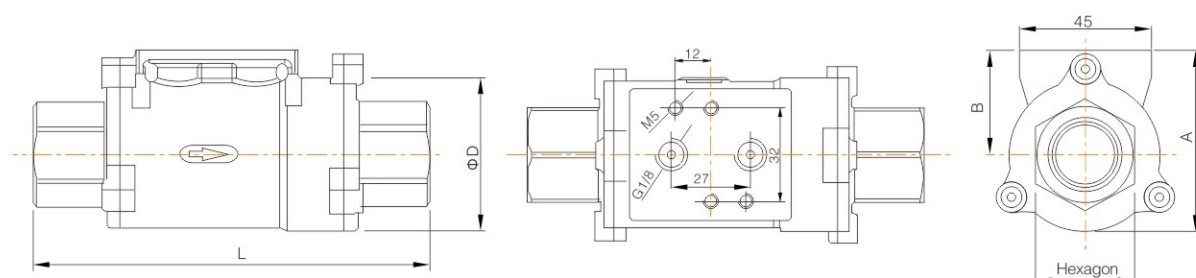
# Shuttle Valve

Shuttle Valve with Solenoid Valve



## Main Dimension (200 Series)

Size	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Thread end	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A (mm)	56	61	72	78	94	104	116
ΦD (mm)	46	52	64	69	86	96	108
Hexagon (mm)	22	26.5	32	41	50	56	70
B (mm)	33	35	40	43	51	56	62
L (mm)	98	112	135	143	165	180	207
Weight (Kg)	0.76	0.94	1.43	1.85	2.98	3.66	5.64



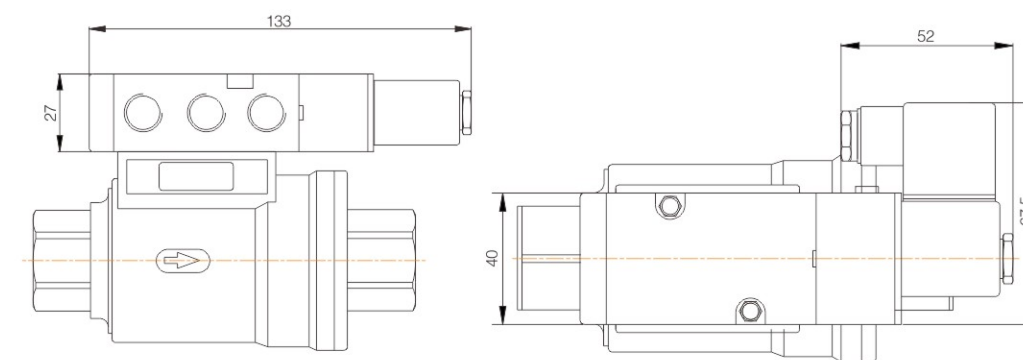
## Main Dimension (201 Series)

Size	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Thread end	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A (mm)	49.5	49.5	53.3	63.5	70	85.5	95	109
ΦD (mm)	37	37	42.5	52	60	75	84	97
Hexagon (mm)	22	22	26	32	40	49	53	68
B (mm)	31	31	32	37.5	40	48	53	60
L (mm)	98	98	112	135	143	165	180	207
Weight (Kg)	0.54	0.54	0.67	1.05	1.45	2.32	2.82	4.38



## Solenoid Valve

2/5 way NAMUR solenoid valve is suitable for 200 and 201 series.



## Technical Specification

- Connection type: G1/4"
- Air pressure: 3–8bar (43.5–116psi)
- Power: 220V AC 24V DC
- Voltage range: ± 10%
- Power consumption: AC 4.5W DC 3W
- Ambient temperature: 5°C — 55°C
- Max frequency: 3 times/second
- Protection level: IP65
- Leakage class: DIN EN 12266 Class A

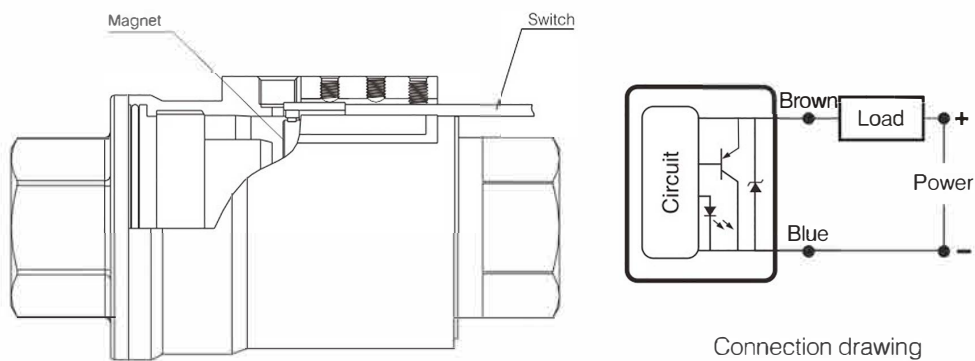
# Shuttle Valve

Shuttle Valve with  
Magnetic Switch



## Magnetic Switch

Magnetic switch mounted on 200 series shuttle valve can indicate the valve operating state and feedback open/close status signal.



## Technical Specification

- Size: DN10–DN50
- Indication: Red LED
- Power: 10–30V DC/AC
- Max.current: 100mA
- Cable: 2PVC cables
- Working temperature:  $-10^{\circ}\text{C}$  —  $+70^{\circ}\text{C}$
- Protection: IP67
- Leakage class: DIN EN 12266 Class A

Note: Since the magnets must be assembled inside the valve, the limit switches must be requested when ordering the valve.