

# VALVES

## Production Program



HIGH WEAR  
RESISTANCE



LONGEVITY



QUICK  
RESPONSE



LOW  
NOISE

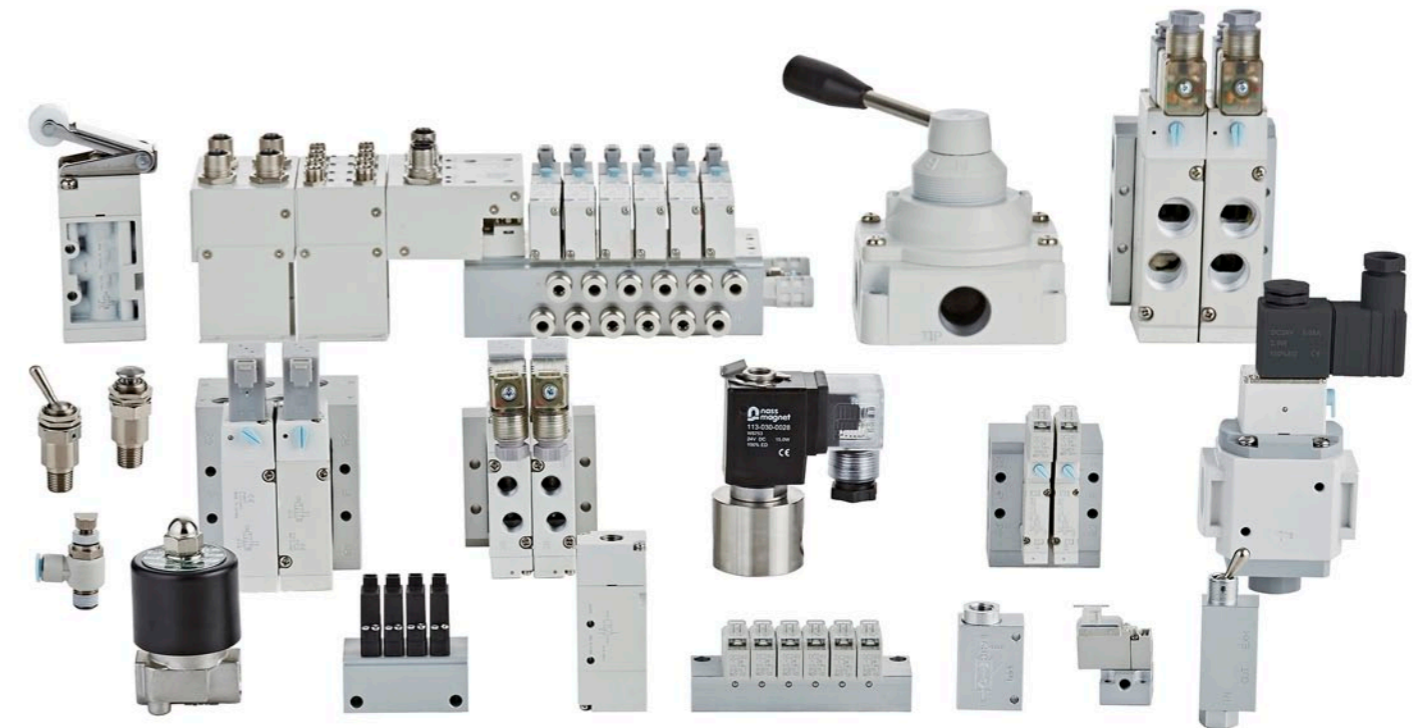


INTEGRATION



ENERGY  
SAVING

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NEW ENERGY  
INDUSTRY



TEXTILE  
INDUSTRY



MACHINE  
TOOL



INDUSTRY  
4.0

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**solenoid valves | electro-pneumatic operated**

### VSA

Electro-pneumatic distributors with 22 mm coil

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSA22V	1/8, 1/4	3/2, 5/2, 5/3	4.8, 4.8, 4.5	890+1000	<40	2+8	AC24V
VSA26V	1/4	5/2, 5/3	4.8, 4.5	890+1000	<40	2+8	AC110V AC220V
VSA30V	3/8	3/2, 5/2, 5/3	6.2, 6.7, 5.6	1390+1940	<50	2+8	DC12V
VSA46V	1/2	3/2, 5/2, 5/3	8.7, 8.0, 6.2	1670+3330	<50	2+8	DC24V

**solenoid valves | electro-pneumatic operated**

### VSD

Extra-size electro-pneumatic distributors

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSD26V	1/4	5/2, 5/3	4.8, 4.5	890+1000	<40	2+12	AC24V
VSD30V	3/8	5/2, 5/3	6.7, 6.6	1920+1940	<50	2+12	AC110V AC220V
VSD50V	1/2	5/2	7.2	2280	<50	2+12	AC220V
VSD51V	1/2	5/2	9.1	3610	<60	2+7	DC24V
VSD60V	3/4, 1	5/2	11.1, 11.3	5330, 7500	<80	2+7	DC24V

**solenoid valves | electro-pneumatic operated**

### VSN

Electro-pneumatic distributors according to NAMUR

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSN22V	1/8, 1/4	5/2	4.8	1000	<38	2+8	AC24V
VSN30V	1/4	5/2, 5/3	6.7, 6.2	1670+1940	<50	2+8	AC110/220V DC24V

**solenoid valves | electro-pneumatic operated**

### VSJ

Electro-pneumatic distributors with 10 mm not removable coil, with low energy consumption and increased loading capacity

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSJ10V	M5	5/2, 5/3	2.4 ... 2.5	250+290	<15	2+7	AC110/220V
VSJ16V	1/8	5/2, 5/3	3.2 ... 4.3	450+810	<20	1.5+7	DC6/12/24V
VSJ19V	1/4	5/2, 5/3	3.7 ... 5.9	610+1500	<50	1.5+7	DC6/12/24V

**solenoid valves | direct operated**

### VDC

Direct-operated valves suitable for air and low vacuum

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating Pressure [bar]	Voltage
VDC22V	1/8	2/2, 3/2	1.0	44	<20	0+7	AC24V AC110/220V DC24V
VDC30V	1/8, 1/4	3/2	2.2 ... 2.4	220+260	<20	-1+10	DC24V

**solenoid valves | direct operated**

### VDA

Direct-operated spool valves suitable for low vacuum

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VDA22V	1/8	3/2	2.6 ... 2.8	290+340	<20	-1+7	AC24V DC24V

**solenoid valves | electro-pneumatic operated**

### VSF

Electro-pneumatic distributors with 15 mm not removable coil

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSF15V	M5	5/2	2.2	210	DC<23, AC<35	1.5+8	AC110V AC220V
VSF18V	1/8	3/2, 5/2, 5/3	4.4, 3.9, 3.4	500+830	DC<30, AC<45	1.5+8	DC12/24V

**solenoid valves | electro-pneumatic operated**

### VSS

Electro-pneumatic distributors according to ISO

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSS26V	5/2, 5/3	5, 3, 5, 0	1110, 1220	<40	2+7	AC24V	AC110V AC220V
VSS45V	5/2	5, 9	1500	<40	2+7	AC24V	AC110V AC220V
VSS51V	5/2	9, 1	3610	<60	2+7	DC24V	DC24V

**solenoid valves | electro-pneumatic operated**

### VSH

Electro-pneumatic distributors with 15 mm not removable coil, with low energy consumption and increased loading capacity

Model	Port size	Port/Position	Effective orifice [mm]	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VSH16V	1/8	5/2, 5/3	3.1 ... 4.3	450+810	AC<46, DC<25	1.5+7	AC110V AC220V DC12V
VSH19V	1/4	5/2, 5/3	3.7 ... 5.9	610+1500	AC<45, DC<33	1.5+7	DC24V

**solenoid valves | direct operated**

### VDB

Direct-operated valves with a compact design and quick response

Model	Port size	Port/Position	Flow rate [NI/min]	Response time [ms]	Operating pressure [bar]	Voltage
VDB08V	M5, 1/8	2/2, 3/2	25, 28	ON<2, OFF<1	0+12	DC12/24V
VDB12V	M5	2/2, 3/2	80, 100	ON<5, OFF<2	0+8	DC12/24V

**solenoid valves | direct operated**

### VDD

Direct-operated valves with 10 mm coil

Model	Port size	Port/Position	Effective orifice [mm]	Response time [ms]	Operating pressure [bar]	Voltage
VDD10V	M5	3/2	P→A: 0.3 ... 0.6 A→R: 0.7	DC<4 AC<20	0+9	AC110/220V DC6/12/24V

**solenoid valves | multi connector systems**

### VSL-VSM

- 25 Pin sub-D connector (VSL)
- 26 Pin flat connector (VSM)
- Max operating frequency: 5Hz

Model	Port size	Port/Position	Flow rate [NI/min]	Manifold stations [min+max]	Applicable solenoid valves
VSL10Y	1/8	5/2, 5/3	250+290	2+12	VSJ10V
VSM10Y	1/8	5/2, 5/3	250+290	5+12	VSJ10V
VSL16Y	Ø4, Ø6, Ø8	5/2, 5/3	450+810	2+12	VSJ16V / VSH16V
VSL22Y	1/8, 1/4	3/2, 5/2, 5/3	890+1000	2+12	VSA22V
VSL30Y	3/8	3/2, 5/2, 5/3	1390+1940	2+12	VSA30V
VSL46Y	1/2	3/2, 5/2, 5/3	1670+3330	2+12	VSA46V

**proportional valves**

### VRA

Proportional valves designed for mixing and dosing gases in ventilation, respiratory equipment, anesthesia, and analytical instruments.

- High-flow pressure compensated
- Product life: 100 millions cycles
- Application industry: Printing industry, textile industry, packaging industry, fuel cell

Model	Ways / Function	Media	Filter of front end [µm]	Operating pressure [bar]	Flow [SLM]
VRA	2/2 NC Proportional	Air, oxygen, neutral gases	recommended <20	0+70	≥ 190 @ 2.4 bar rel. @ 20°C

**pneumatic valves**

### VPA

Pneumatic actuated valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VPA15V	M5	5/2	0+8	2.2
VPA18V	1/8	3/2, 5/2	0+8	3.9
VPA22V	1/4	3/2, 5/2, 5/3	0+8	4.8
VPA26V	1/4	5/2	0+8	4.8
VPA30V	3/8	3/2, 5/2, 5/3	0+8	6.7
VPA46V	1/2	3/2, 5/2, 5/3	0+8	8.0

**hand valves**

### VMB-VMC

Button valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VMB22V	1/4	3/2	1.5+8	4.8
VMC22V	1/4	5/2	1.5+8	4.8
VMC30V	3/8	5/2	1.5+8	6.2

**hand valves**

### VH\*

Push button/Toggle valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VHAV	M5	2/2, 3/2	0+9	1.5
VHBV	M5	5/2	0+9	1.6
VHCV	1/8	3/2	0+9	2.4
VHDV	1/8	5/2	0+9	2.6

**hand valves | push-pull**

### VHG

Push-pull valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VHG22V	1/8, 1/4	3/2, 5/2	0+8	4.8

**hand valves | rotary hand lever**

### VHK

Rotary hand lever valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VHK*V	1/8, 1/4, 3/8, 1/2, 3/4	5/2, 5/3	0.5+10	3.0 ... 9.5

**hand valves | hand slide**

### VHL

Hand slide valves

Model	Port size	Operating pressure [bar]	Effective orifice [mm]
VHL	1/4, 3/8, 1/2, 3/4	0.5+10	P→A: 6.2 ... 10.4, A→R: 6.6 ... 10.8

**proportional valves**

### VRB

Precision Flow: suited for dosing precisely gases in medical and analytical field.

- Direct acting orifice size from ø0.2 to 2 mm
- Pressure up to 12 bar
- Application industry: Gas analysis, chromatography, biotechnology, semiconductor facility, liquid flow

Model	Ways / Function	Media	Operating pressure [bar]	Flow [SLM]
VRB	2/2 NC Proportional	Air, oxygen, neutral gases	0+120	≥ 3.8 + ≥ 70 @ 12 bar rel. @ 20°C

**mechanical valves**

### VMA

5/2 Roller lever valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VMA26V	1/4	5/2	0+8	4.8
VMA30V	3/8	5/2	0+8	6.7

**hand valves**

### VME-VMD

21-25 mm Button valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VME21V	1/8, 1/4	3/2	0+10	4.9
VMD25V	1/4	2/2, 3/2	0+10	4.8

**mechanical operator**

### VH\*

Manual/Mechanical operators

Model	Type	Material
VH01	Fingertip operator	Nickel-plated steel
VH02	Cam operator	Level: Nickel-plated steel; Roller: POM
VH03	One-way cam operator	Level: Nickel-plated steel; Roller: POM
VH04	Ball operator	Level: Nickel-plated steel; Ball: Chrome steel
VH05	Air pilot operator	Nickel-plated brass

**hand valves | hand lever**

### VHF

Hand lever valves

Model	Port size	Port/Position	Operating pressure [bar]	Effective orifice [mm]
VHF22V	1/4	5/2, 5/3	0+8	4.8, 4.5
VHF26V	1/4	5/2, 5/3	0+8	4.8
VHF30V	3/8	5/2, 5/3	0+12	6.6
VHF50V	1/2	5/2, 5/3	0+12	7.2

<b>U-Packing (NBR)</b>	DISK seal. High wear resistance, wide working temperature -30+100 °C, excellent sealability.
<b>Plunger material</b>	Resulfurized stainless steel with 17% chromium and 1.5% silicon. Provide a very low coercive field and a very high permeability.
<b>Terminal material</b>	PA6 is the material of terminal housing. It has good chemical resistance and weather resistance.
<b>Contact spring</b>	Contact spring makes wiring quick and easy. Also, it prevents wire damage.
<b>Coil</b>	Insulation class H. Heat-resistant to 180 °C (the operating temperature of the valve is -5 + 50 °C).
<b>Low Noise</b>	Bridge rectifier design. Converting AC voltage to DC, it can eliminate operating noise.
<b>Multi connector system</b>	Simplification and integration reduce air consumption and pressure drop, making less piping and wiring jobs.
<b>Flow rate</b>	To 6 bar and Δp 1 bar