

# rotork®

Keeping the World Flowing



## RSV01

Solenoid Valve Range

A comprehensive solenoid valve range of zero pressure differential valves with optimised flow rates, covering the majority of performance needs for a wide variety of operating conditions.

The spring coupling of the diaphragm enables opening of the valve without any pressure differential. A minimum differential pressure then supports the complete opening of the diaphragm and full flow.

The spring coupling improves the life of the valve and the compatibility with different media and temperatures.

There are no changes to the standard construction when used with vacuum applications; this is an added benefit when compared with other zero pressure valves.

### Key features

- Available in increased optional pressure ranges by mounting a different coil option
- Offered in brass and stainless steel
- Suitable for vacuum applications as standard
- With tested MTBF in vertical position
- With optional WRAS approval for food and beverage applications
- Available as Exd and Exm configuration
- In normally closed and normally open function

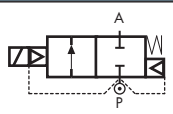


The RSV01 joins Rotork's extensive solenoid valve range

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A rotork® Brand

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# RSV01 Series, General Purpose – 2/2 Normally Closed

Specifications	
Function (single acting)	 Flow direction underseat 1 → 2
Maximum Viscosity	Max. 21cST (3 °E)
Body Material (Std)	Brass CW617N (EN 12165)
Tube Flange	Stainless Steel 1.4305 EN 10088 (AISI 303)
Tube	Stainless Steel AISI 304
Plunger	Stainless Steel 1.4106 EN 10088 (AISI 430F)
Top Stop	Stainless Steel 1.4105 EN 10088 (AISI 430F)
Springs	Stainless Steel AISI 302
Seal Material (Std)	NBR
Connection Type (Std)	G parallel thread (ISO 228-1)
Shading Ring	Copper
Electrical Characteristics	
Standard Coil Voltage DC (=)	12 V , 24 V
Standard Coil Voltage AC 50 Hz (-)	24 V, 110 V, 200 V, 230 V
Standard Coil Voltage AC 60 Hz (-)	24 V, 120 V, 220 V, 240 V
Voltage Tolerance	+10% to -15% (AC)
	+10% to -5% (DC)
Duty Cycle	100% ED
Protection Class	IP65 (EN 60529) with plug and gasket correctly fitted *
Electrical Connection	to EN 175301 - 803 - A (ex DIN 43650)
Standard Coil Insulation	Class F 155 °C
High Power Coil Insulation	Class H 180 °C
Power Rating (Standard)	AC 18 VA (holding) AC 36 VA (inrush) DC 14 W
Power Rating <sup>1</sup> (High Power)	DC 22 W

<sup>1</sup> Only for 7221 coil.

- Two way shut-off valves for the control of gaseous and liquid media compatible with max viscosity and materials
- Robust construction for industrial applications
- Zero pressure rated
- AC and DC versions
- Diaphragm operation
- Fully ported orifices for high flow
- Suitable for vacuum up to -950 mbar
- Response time 50 to 500 mS
- Tested in accordance with EN 12266-1
- Meets all relevant EC directives (LVD, PED, Art. 4.3)



Pipe Size	Cv (gpm)	Kv (m <sup>3</sup> /h)	OPD (bar)		Orifice (mm)	Seal Material	Valve Code
			AC Voltages	DC Voltages			
¼"	1.8	1.5	0 - 16	-	16	NBR FKM EPDM <sup>2</sup>	RSV01BG20A0WB- RSV01BG20A0WV- RSV01BG20A0WE-
⅜"	3.9	3.3				NBR FKM EPDM <sup>2</sup>	RSV01CG20A0WB- RSV01CG20A0WV- RSV01CG20A0WE-
½"	4.9	4.2				NBR FKM EPDM <sup>2</sup>	RSV01DG20A0WB- RSV01DG20A0WV- RSV01DG20A0WE-
¾"	6.3	5.4			20	NBR FKM EPDM <sup>2</sup>	RSV01EG20A0XB- RSV01EG20A0XY- RSV01EG20A0XE-
1"	8.7	7.4	NBR FKM EPDM <sup>2</sup>	RSV01FG20A0XB- RSV01FG20A0WV- RSV01FG20A0XE-			
¼"	1.8	1.5	-	0 - 12 <sup>1</sup>	16	NBR FKM EPDM <sup>2</sup>	RSV01BG20C0WB- RSV01BG20C0WV- RSV01BG20C0WE-
⅜"	3.9	3.3				NBR FKM EPDM <sup>2</sup>	RSV01CG20C0WB- RSV01CG20C0WV- RSV01CG20C0WE-
½"	4.9	4.2				NBR FKM EPDM <sup>2</sup>	RSV01DG20C0WB- RSV01DG20C0WV- RSV01DG20C0WE-
¾"	6.3	5.4			20	NBR FKM EPDM <sup>2</sup>	RSV01EG20C0XB- RSV01EG20C0XY- RSV01EG20C0XE-
1"	8.7	7.4	NBR FKM EPDM <sup>2</sup>	RSV01FG20C0XB- RSV01FG20C0WV- RSV01FG20C0XE-			

<sup>1</sup> 0-14 bar with 7221 coil (22W).

<sup>2</sup> EPDM with WRAS approval can be ordered replacing the seal material ref 'E' in the coding with 'Y', example p/n RSV01FG20A0XY.

## Options available

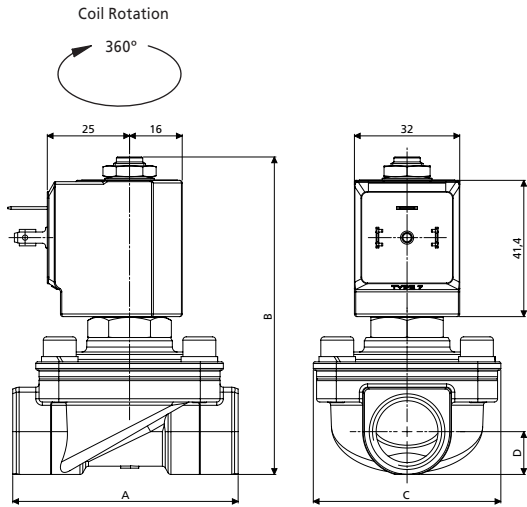
Exd and Exm Solenoid Enclosure	
Exd T6 (IP67)	See separate datasheet
Exd T4 (IP67)	
Exm T5 (IP65)	

Main Valve Body Options (see coding chart)	
Stainless Steel body (AISI 316L)	
NPT threads (minimum batch may be required)	

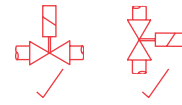
Seal Material <sup>3</sup> and Media Temperature Range	Media	Ambient Temperature Range	
		Min	Max
NBR (-10 °C to +90 °C)	Water, oil, air	-10 °C	+50 °C
FKM (-10 °C to +130 °C)	Water, oil, air	-10 °C	+50 °C
EPDM (WRAS approved up to 1") -10 °C to +85 °C	Water, hot water	-10 °C	+50 °C
EPDM (-10 °C to +120 °C)	Water, hot water	-10 °C	+50 °C

<sup>3</sup> See corrosion reference guide and sealing solutions for material compatibility.

# RSV01 Series, General Purpose – 2/2 Normally Closed



Preferred Valve Mounting Options



Pipe Size	A	B	C	D	Weight (kg)
	Dimensions (mm)				
1/4"	68.5	96.5	57	13	0.5
3/8"	68.5	96.5	57	13	0.5
1/2"	68.5	96.5	57	13	0.5
3/4"	81.5	110.5	57	20	0.8
1"	81.5	110.5	57	20	0.7

## Solenoid enclosures

### 7--0 Type Coil - Insulation class F

External material: PBT (reinforced glass fibre 30%)  
 Electrical connection: DIN EN 175301-803 form A  
 Winding insulation: Class F (E155)  
 Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted\*



### Type 600 011- Plug

Rated Voltage (max.): 250 VAC / 300 VDC  
 Nominal current: 10A (rated) / 16A (max)  
 Wire cross-section: 1.5 mm<sup>2</sup> max  
 Cable entry: PG9 (6 to 8 mm)  
 Enclosure classification: Conforms to IP65 (according to EN 60529) with supplied gasket  
 Insulation class: Group C - VDE 0110  
 Housing colour: Black  
 UL approved, file No: E205538



### 7221 Type Coil - Insulation class H

External material: PPS (glass fibre and mineral filled)  
 Electrical connection: DIN EN 175301-803 form A  
 Winding insulation: Class H (E180)  
 Enclosure classification: Conforms to IP65 (according to EN 60529) with plug and gasket correctly fitted\*

\* Plug and gasket not supplied as standard, must be ordered separately.

## Coding chart

Main valve assembly										Coil options			
Size	Process Connection	Function	Operation	Valve Material	Orifice	Seal Material	Valve Options	Material Options	Approvals	Voltage / Power Class F <sup>4</sup>	Electrical Connection		
B 1/4"	G GAS ISO 228-1	20 2/2 Way	A AC NC	0 Brass	W 16 <sup>2</sup>	B NBR	0 None	K Nickel Plating	0 CE	7 w/o coil -	0	DIN, no plug fitted	
C 3/8"	N NPT		C DC NC	5 AISI 316L stainless	X 20 <sup>2</sup>	E EPDM		0 None	W WRAS	7700 230 V / 50 Hz 240 V / 60 Hz	18VA	A DIN weatherproof IP65 / NEMA 4X with plug 600 011-	
D 1/2"			R N/O AC & DC <sup>1</sup>			Y EPDM (WRAS)		A Silver Shading Ring		7200 24 V / 50/60 Hz	18VA		
E 3/4"						V FKM				7400 110 V / 50 Hz 120 V / 60 Hz	18VA		
F 1"										7100 12V / 50/60 Hz	18VA		
										7600 200 V / 50 Hz 220 V / 60 Hz	18VA		
										7300 48 V / 50/60 Hz	18VA		
										7250 24 VDC	14W		
										7150 12 VDC	14W		
										Class H, High Power			
										7221 24 VDC	22W		
RSV01	•	•	20	•	•	•	0	•	•	••••	•		

Notes: 1. See separate datasheet 2. 3/8" & 1/2" only 3. 3/4" & 1" only 4. For use with UL approved coils contact Sales Department

## Product coding example:

RSV01 C G 20 A 0 W B 0 K 0 7700 0 = 3/8" BSP G, 2/2, AC NC, brass body, 16 mm orifice, NBR seals, nickel plating, DIN coil, 230 V 50 Hz, without plug.

#### Overview of available features and options

Function	2/2 Normally Closed	✓	Voltage Tolerance	+10% to -15% (AC), +10% to -5% (DC)	✓
	Optional 2/2 Normally Open	✓		Duty Cycle	100% ED
Body Material	Brass	✓	Protection	IP65 (with DIN plug & gasket fitted)	✓
	Optional Stainless 316L	✓	Electrical Connection	DIN 43650	✓
Flange Tube	Stainless 303	✓	Coil Insulation	Class F	✓
Plunger	Stainless 430F	✓	Power Rating	18 VA (holding)	✓
Springs	Stainless 302	✓		36 VA (inrush)	✓
Seal Materials	NBR (-10 °C to +90 °C)	✓		14W DC	✓
	Optional FKM (-10 °C to +130 °C)	✓	22W DC	✓	
	Optional EPDM (-10 °C to +120 °C)	✓	Explosionproof Options	Exd T6 & Exd T4	✓
	Optional EPDM WRAS (-10 °C to +85 °C)	✓		Exm T5	✓
Connection	G parallel thread (ISO 228-1)	✓	Response Time	50 - 500 mS	✓
	Optional NPT	✓	Approvals	PED compliance	✓
Shading Ring Material	Copper	✓		CE	✓
	Optional Silver	✓		ATEX (optional)	✓
Voltages	DC 12, 24, 110	✓		WRAS (optional)	✓
	AC 50 Hz 24, 110, 230	✓	Mounting Orientation	Horizontal (coil uppermost)	✓
	AC 60 Hz 24, 120, 240	✓		Vertical	✓

A full listing of the Rotork sales and service network is available on our website.

[www.rotork.com](http://www.rotork.com)

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