

选型 Specification

型号Model	规格Connection Type		开启差值 ΔP (bar)		最大工作压力 Max. Operating Pressure (bar)	Kv值 Kv (m ³ /h)
	喇叭口Flare	焊接口Welded	最小Min.	最大工作压力差 Max.MOPD Liquid		
EVR3-2	1/4 SAE	1/4 ODF	0.0	30	40	0.16
EVR3-3	3/8 SAE	3/8 ODF	0.0			0.27
EVR6-3	3/8 SAE	3/8 ODF	0.2			0.8
EVR6-4	1/2 SAE	1/2 ODF				0.8
EVR10-4	1/2 SAE	1/2 ODF				1.9
EVR10-5	5/8 SAE	5/8 ODF				1.9
EVR15-5	5/8 SAE	5/8 ODF				2.6
EVR15-6	3/4 SAE	3/4 ODF				2.6
EVR15-7	--	7/8 ODF				2.6
EVR20-7	--	7/8 ODF				5.0
EVR25-9	--	1 ¹ / ₈ ODF		0.2	10	

- 1) Kv值: 密度为1吨/m³的水在通过电磁阀的压差等于100KPa时的流量, 单位为m³/h;
- 2) 气态介质的MOPD约高0.1MPa。
- 1) Kv: The flow rate (m³/h) of water of density 1 t/m³ passing through the solenoid valve under the pressure differential of 100 KPa.
- 2) The MOPD of gaseous medium is about 0.1 MPa higher than that of liquid.

型号Model	名义制冷量 Nominal Refrigerating Capacity kW								
	液体 Liquid			吸气 Air Suction			热蒸气 Hot Vapor		
	R22\ R407C	R134a	R404A\ R507	R22\ R407C	R134a	R404A\ R507	R22\ R407C	R134a	R404A\ R507
EVR3	5.40	5.00	3.80	---	---	---	2.50	2.00	2.00
EVR6	16.10	14.80	11.20	1.80	1.30	1.60	7.40	5.90	6.00
EVR10	38.20	35.30	26.70	4.30	3.10	3.90	17.50	13.90	14.30
EVR15	52.30	48.30	36.50	5.90	4.20	5.30	24.00	19.00	19.60
EVR20	101.0	92.80	70.30	11.40	8.10	10.20	46.20	36.60	37.70
EVR25	201.0	186.0	141.0	22.80	16.30	20.40	92.30	73.20	75.30

The working condition of the nominal refrigerating capacity of liquid and air suction is as follows:

Evaporation Temperature: $t_e = -10^\circ\text{C}$;

Liquid Temperature before Valve: $t_l = +25^\circ\text{C}$;

Pressure Drop after Solenoid Valve: $\Delta P = 15\text{KPa}$

The working condition of the nominal refrigerating capacity of hot vapor is as follows:

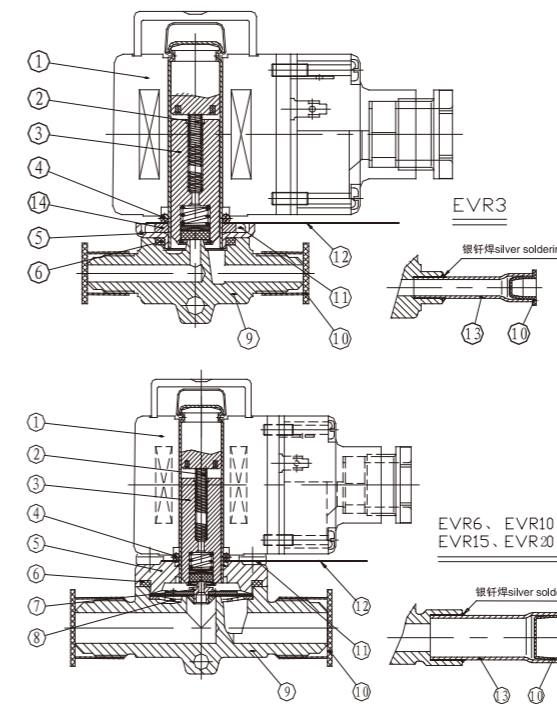
Condensation Temperature: $t_c = +40^\circ\text{C}$;

Pressure Drop after Solenoid Valve: $\Delta P = 80\text{KPa}$;

Hot Vapor Temperature: $t_h = +65^\circ\text{C}$;

Liquid Refrigerant Overcooling: $\Delta t = 4\text{K}$

结构 Structure



1. 电磁线圈 (10W) solenoid (10W)
2. 回复弹簧 return spring
3. 芯铁部件 iron core component (改性PTFE密封) (modified PTFE seal) (进口不锈钢磁钢) (imported stainless magnet steel)
4. O-Ring (CR) O-ring (CR)
5. 阀盖部件 valve bonnet
6. 密封圈 (CR) sealing (CR)
7. 阀芯部件 (移动式) valve core (movable) (改性PTFE复合膜片) (modified PTFE compound diaphragm)
8. 挡片 baffle
9. 阀体 valve body
10. 防尘帽 cap
11. 紧固螺钉(4个)fixing screws (4)
12. 标贴牌 label
13. 铜接管 copper tube
14. 铁垫圈 steel washer

EVR型电磁阀基于以下两个工作原理设计: Model EVR solenoid valve is designed in accordance with following two operating principles:

1. Direct-operated Solenoid Valve

Model EVR 3 is a direct-operated solenoid valve. When the iron core component (3) moves upward by the magnetic force of the solenoid, the solenoid valve will open directly, that is, the solenoid valve could be operated under zero pressure differential.

The sealing valve core (modified PTFE) is directly mounted on the iron core component (3).

The inlet pressure is applied onto the iron core from the upper side. Therefore, the joint action of the inlet pressure, spring force and the self-gravity of the iron core component will close the valve when the solenoid is not energized.

2. Servo-operated Solenoid Valve

Model EVR 10/15/20 are servo-operated solenoid valves with movable valve core (7). The guide valve core and diaphragm (modified PTFE compound diaphragm) are mounted on the valve core.

The main valve port and guide valve port are closed when the solenoid is not energized. The joint action of the self-gravity of the iron core component, spring force and the pressure differential between inlet and outlet will close the valve.

When the solenoid is energized, the iron core component (3) moves upward to open the guide valve on the diaphragm. The moment the pressure on the diaphragm is decreased and the space above the diaphragm is communicated with the outlet of the valve. The pressure differential between the inlet and outlet moves the diaphragm upward and open. Therefore it needs a minimum pressure differential to open the valve and maintain the opening.

When the power is cut off, the guide valve on the diaphragm is closed and the balance hole on the diaphragm will make the pressure rise as the same as the inlet pressure. Consequently the diaphragm will move downward to close the main valve port.