

FDF 15 M G - 12 S - 220Vac

氟化物电磁阀
Fluoride Solenoid Valve

阀口通径
Valve Orifice DN

线圈电压 **AC220V, 110V, 380V**
DC12V, 24V, 48V
Solenoid Coil Voltage

连接类型 无None: 扩口螺纹SAE flare
S: 焊接口 Solder
F: 法兰 Flange
Connection type

连接尺寸 1/4"-7/8" 螺纹Thread
1/4"-2-1/8" 焊接口 Solder
FDF25, 32, 40 提供法兰 Flange available
Connection size

无None: 3.0MPa最大工作压力 Max. Working Temp. -25~+130°C 介质温度 Medium Temp.
G: 4.5MPa最大工作压力 Max. Working Temp. -40~+130°C 介质温度 Medium Temp.

B: 直接动作式 Direct Acting
M: 伺服式 Pilot operated with a "floating" diaphragm

名义制冷量 Nominal liquid capacity(kw)

型号 Model	液体liquid					吸气Suction					热蒸汽hot gas				
	R22	R134a	R404A R507	R407c	R410A	R22	R134a	R404A R507	R407c	R410A	R22	R134A	R404A R507	R407c	R410A
FDF3G	6.20	3.90	3.70	5.70	6.48	0.68	0.54	0.40	0.62	0.70	2.92	2.32	1.73	2.66	3.02
FDF6MG	15.60	14.20	10.60	14.80	15.80	1.75	1.27	1.40	1.70	2.20	7.20	5.50	5.70	7.40	11.00
FDF8MG	19.50	17.70	13.30	18.50	19.70	2.18	1.58	1.75	2.10	2.75	9.00	6.87	7.12	9.25	13.75
FDF10MG	35.00	32.00	24.00	33.30	35.20	3.92	2.84	3.15	3.78	4.95	16.20	12.30	12.80	16.60	24.75
FDF15MG	69.00	55.20	41.40	63.00	72.00	7.59	6.07	4.55	6.93	7.92	32.24	25.80	19.35	29.42	33.65
FDF20MG	103.50	82.80	62.10	94.50	108.00	11.38	9.10	6.83	10.39	11.88	48.37	38.70	29.02	44.17	50.48
FDF25MG	230.00	213.00	162.00	236.00	242.00	22.80	16.30	20.40	21.92	24.70	92.30	73.20	75.30	96.90	98.60
FDF32MG	346.00	320.00	254.00	358.00	363.00	34.20	24.40	30.60	35.80	38.10	138.00	109.00	113.00	145.00	151.20
FDF40MG	503.00	464.00	351.00	534.00	580.80	57.00	40.80	38.60	59.00	61.00	231.00	188.00	183.00	240.00	242.00

液体和吸气名义制冷量为:

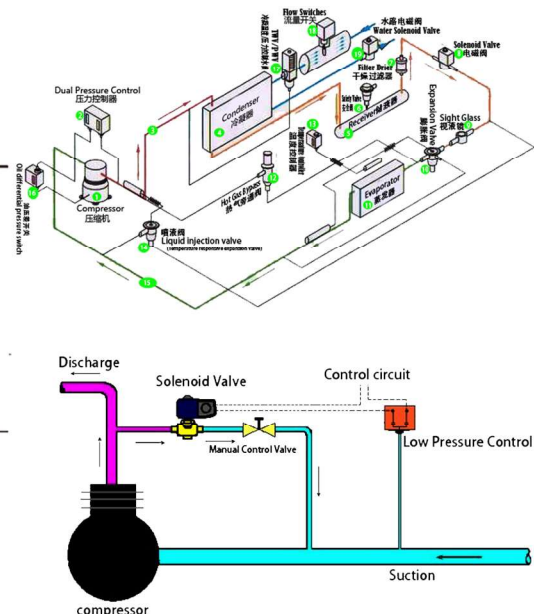
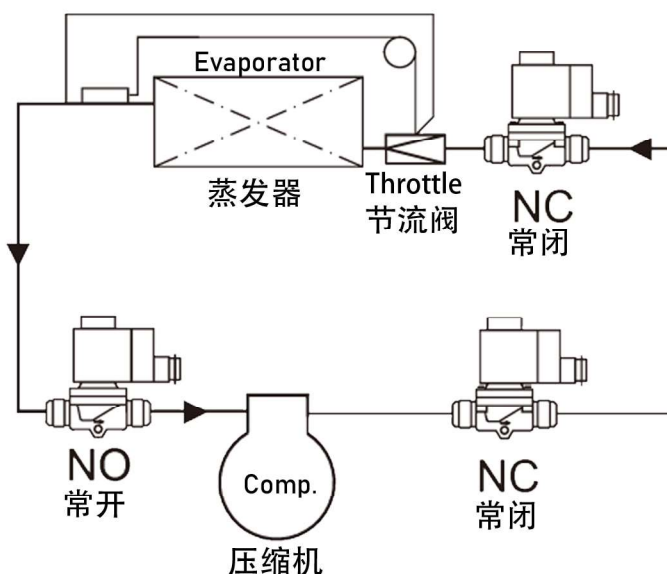
蒸发温度 $t_e=4.4^\circ\text{C}$
阀前液体温度 $t_l=38^\circ\text{C}$
通过电磁阀压力降 R134a $\Delta P=0.15\text{bar}$
R22/R404A/R507/R407c/R410A $\Delta P=0.21\text{bar}$

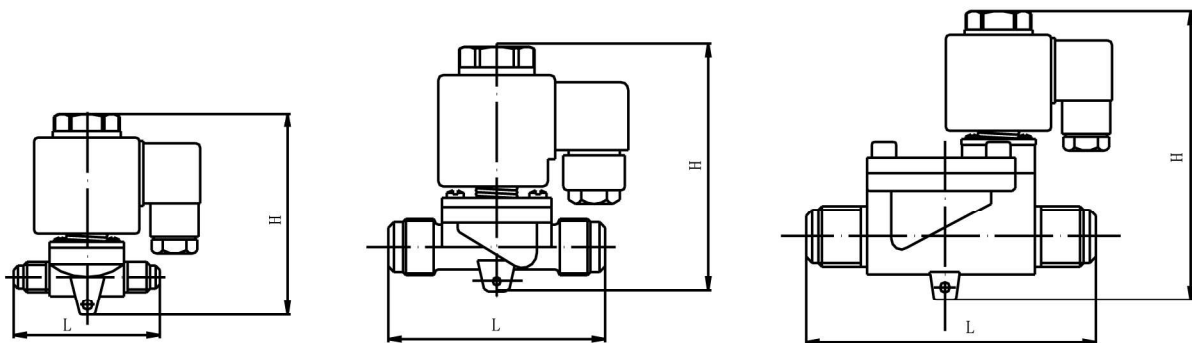
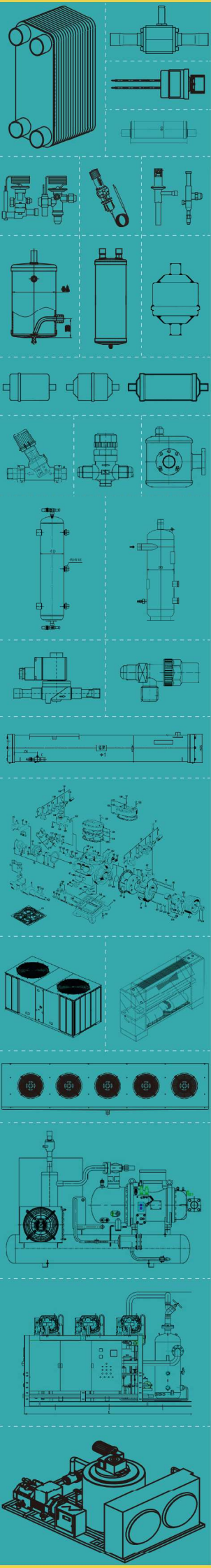
热气名义制冷量工况条件为:

冷凝温度 $t_c=+40^\circ\text{C}$
经过阀门压力降 $\Delta P=0.8\text{bar}$
热蒸汽温度 $t_h=+65^\circ\text{C}$
液体制冷剂过冷度 $\Delta t_{\text{sub}}=4\text{K}$

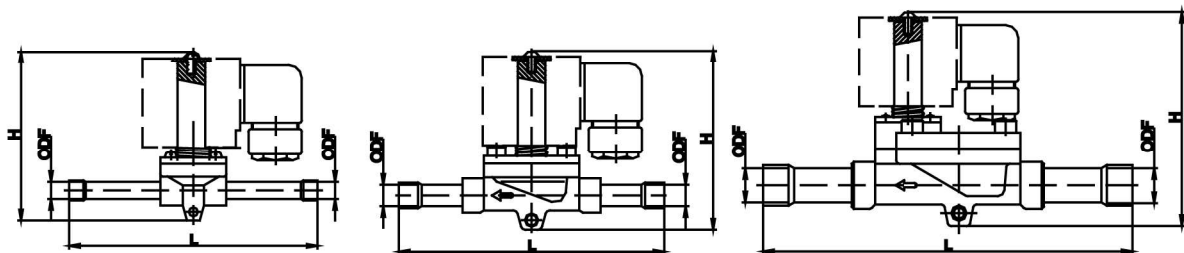
Rated liquid and suction vapour capacity is based on evaporating temperature $t_e=4.4^\circ\text{C}$, liquid temperature ahead of valve $t_l=38^\circ\text{C}$, and pressure drop in valve R134a, $P=0.15\text{bar}$, R22, R404A, R507, R407c, R410A $\Delta P=0.21\text{bar}$.

Rated hot gas capacity is based on condensing temperature $t_c=+40^\circ\text{C}$, pressure drop across valve $\Delta P=0.8\text{bar}$, hot gas temperature $t_h=+65^\circ\text{C}$, and subcooling of refrigerant $\Delta t_{\text{sub}}=4\text{K}$.

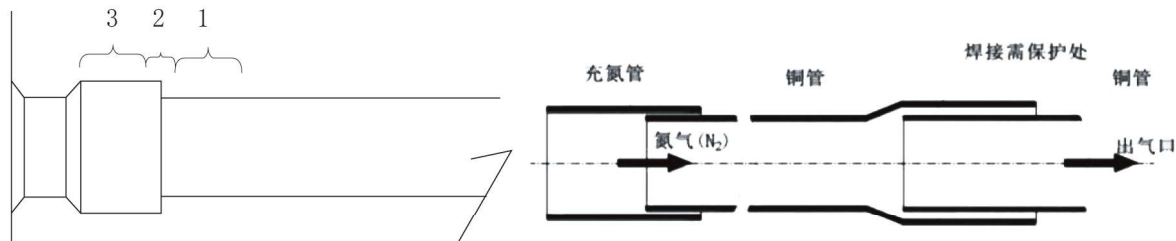




型号 Model	代组并工全袋大最 Max. Working Pressure	KV值 KV value	连接类型及尺寸 Connection type & Size			开阀压差 Opening Diff. Pressure			外形尺寸 Overall dimension				
			SAE flare	Solder		最小 Min.	最大 Max.		L	W	H		
							AC	DC					
				m³/h	Inch	Inch	mm	bar			mm		
FDF3B-6S	30bar	0.18	-	1/4	6	0	21	17	117	31	76		
FDF3B-8S			-	5/16	8				60				
FDF3B-10S			-	3/8	10				117				
FDF3B-6			1/4	-	-				60				
FDF3BG-6S	45bar		-	1/4	6		28	24	117				
FDF3BG-10S			-	5/16	8				60				
FDF3BG-6			1/4	-	-								
FDF6M-8S	30bar	0.4	-	5/16	8	0.05	21	17	127	45	88		
FDF6M-8			5/16	-	-				85		85		
FDF6MG-10	45bar	0.6	3/8	-	-		28	24	127	32	80		
FDF6MG-12			1/2	-	-								
FDF6MG-10S			-	3/8	10								
FDF6MG-12S			-	1/2	12								
FDF8M-10S	30bar	0.8	-	3/8	19	0.05	21	17	127	32	88		
FDF8M-12S			-	1/2	12								
FDF8M-10			3/8	-	-								
FDF8M-12			1/2	-	-								
FDF8MG-10	45bar	1.0	3/8	-	-		28	24	133	38			
FDF8MG-12			1/2	-	-				162				
FDF8MG-16			5/8	-	-								
FDF8MG-10S			-	3/8	10								
FDF8MG-12S			-	1/2	12								
FDF8MG-16S			-	5/8	16								
FDF10M-12S	30bar	1.9	-	1/2	12	0.05	21	17	151	45	86		
FDF10M-16S			-	5/8	16				112			58	98
FDF10M-12			1/2	-	-								
FDF10M-16			5/8	-	-								
FDF10MG-12	45bar	1.8	1/2	-	-		28	24	151	45	86		
FDF10MG-16			5/8	-	-								
FDF10MG-12S			-	1/2	12								
FDF10MG-16S			-	5/8	16								



型号 Model	代通井工全变大最 Max. Opening Pressure	KV值 KV value	连接类型及尺寸 Connection type & Size			开阀压差 Opening Diff. Pressure			外形尺寸 Overall dimension		
			SAE flare	Solder		最小 Min.	最大Max.		L	W	H
		AC					DC				
		m³/h	Inch	Inch	mm	bar			mm		
FDF13M-16S	30bar	3.0	-	5/8	16	0.05	21	17	174	52	98
FDF13M-19S			-	3/4	19						
FDF13M-22S			-	7/8	22						
FDF13M-16			5/8	-	-				112	58	98
FDF13M-19			3/4	-	-				144	58	108
FDF13M-22			7/8	-	-						
FDF15MG-16S	45bar		-	5/8	16		28	24	174	52	96
FDF15MG-19S			-	3/4	19						
FDF15MG-22S			-	7/8	22						
FDF15MG-16			5/8	-	-				112	58	105
FDF15MG-19			3/4	-	-				144		
FDF15MG-22			7/8	-	-						
FDF16M-19S	30bar	4.5	-	3/4	19	0.05	21	17	190	58	98
FDF16M-19			3/4	-	-				128	58	108
FDF19M1-22S			-	7/8	22				190	58	98
FDF19M-22S		5.0	-	7/8	22				230	72	108
FDF19M-28S			-	1-1/8	28				250		
FDF19M-35S			-	1-3/8	35				144		
FDF19M-22	45bar	5.0	7/8	-	-		190	58	115		
FDF20MG-22S			-	7/8	22		250				
FDF20MG-28S			-	1-1/8	28		144				
FDF20MG-22			7/8	-	-						
FDF25M-28S	30bar	9.8	-	1-1/8	28	0.05	21	17	236	72	116
FDF25M-35S			-	1-3/8	35				254		
FDF25MG-28S	45bar		-	1-1/8	28		28	24	236		119
FDF25MG-35S			-	1-3/8	35				254		
FDF32M-35S	30bar	15.0	-	1-3/8	35	0.05	21	17	281	86	133
FDF32M-42S			-	1-5/8	42						
FDF32MG-35S	45bar		-	1-3/8	35		28	24			
FDF32MG-42S			-	1-5/8	42						
FDF40M-42S	30bar	25.0	-	1-5/8	42	0.05	21	17	312	126	158
FDF40M-54S			-	2-1/8	54						
FDF40MG-42S	45bar		-	1-5/8	42		28	24			
FDF40MG-54S			-	2-1/8	54						

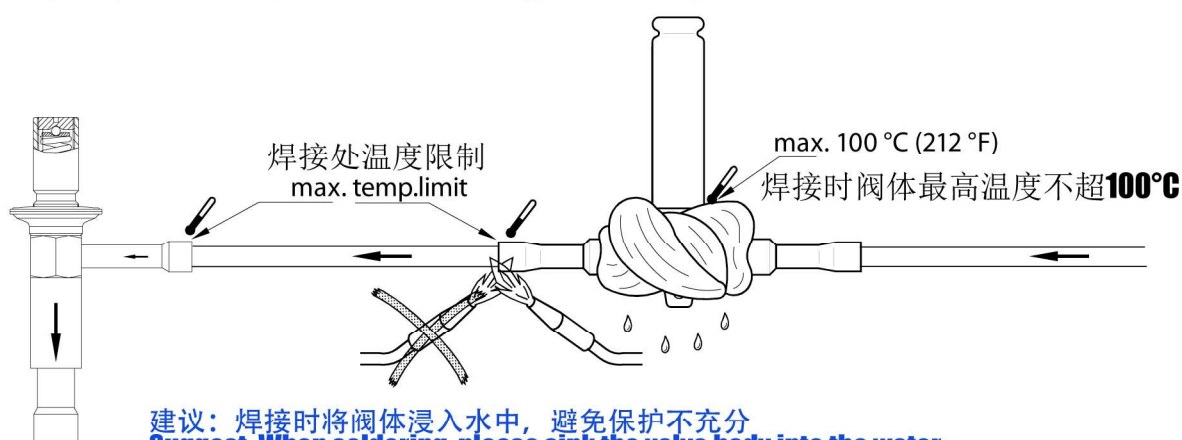


重要提示

避免堵塞，保持畅通，保持无氧流动
在钎焊过程中，氮气通过系统极低的压力。氮置换空气，防止在系统中形成铜氧化物。

IMPORTANT

No blockage, keep and maintain a flow of oxygen-free Nitrogen through the system at very low pressure during brazing. Nitrogen displaces the air and prevents the formation of copper oxides in the system.



建议：焊接时将阀体浸入水中，避免保护不充分
Suggest: When soldering, please sink the valve body into the water.

钎焊流程 Brazing procedure

- * 压缩机的吸/排气口为镀铜钢管，可类似其它铜管一样焊接。
The copper-coated steel tubes can be brazed in approximately the same manner as any copper tube.
- * 推荐使用的焊接材料：任何铜银合金材料均可使用，最好含有至少5%的银。当然，不含银也可以。
Recommended brazing materials: any silfos material is recommended, preferably with a minimum of 5% silver. However, 0% silver is acceptable.
- * 安装前保证管路内径和外径清洁。
Be sure tube fitting inner diameter and tube outer diameter are clean prior to assembly.
- * 用双嘴焊枪在1区加热。在管温接近焊接温度后，将焊枪火焰移至2区。
Using a double tipped torch, apply heat in area 1. As the tube approaches brazing temperature, move the torch flame to area 2.
- * 加热2区直至达到焊接温度，上下移动焊枪，必要时绕管转动，使管子均匀加热，在接头处加焊料。同时绕接头转动焊枪，使焊料沿周边流动。
Heat area 2 until brazing temperature is attained, moving the torch up and down and rotating around the tube as necessary to heat the tube evenly. Add braze material to the joint while moving the torch around the joint to flow braze material around the circumference.
- * 在焊料流遍接头四周后，将焊枪移至3区加热。这样可使焊料进入接头。加热3区所用时间应最短。
After the braze material flows around the joint, move the torch to heat area 3. This will draw the braze material down into the joint. The time spent heating area 3 should be minimal.
- * 对任何焊接接头，过份加热都会产生不良的影响。
As with any brazed joint, overheating may be detrimental to the final result.

断开焊接 To disconnect:

- * 加热焊接处2和3缓慢和均匀的，直到钎料软化和管子可以从焊接处拔出
Heat joint areas 2 and 3 slowly and uniformly until the braze material softens and the tube can be pulled out of the fitting.

管外径D(mm)	深度B	间隙A-D
φ6.35	6	0.05 ~ 0.21
φ9.52, φ12.7	7	
φ15.8	8	
φ19.05, φ22.2, φ25.4	10	0.05 ~ 0.27
φ28.6, φ31.8	12	
≥φ35	14	