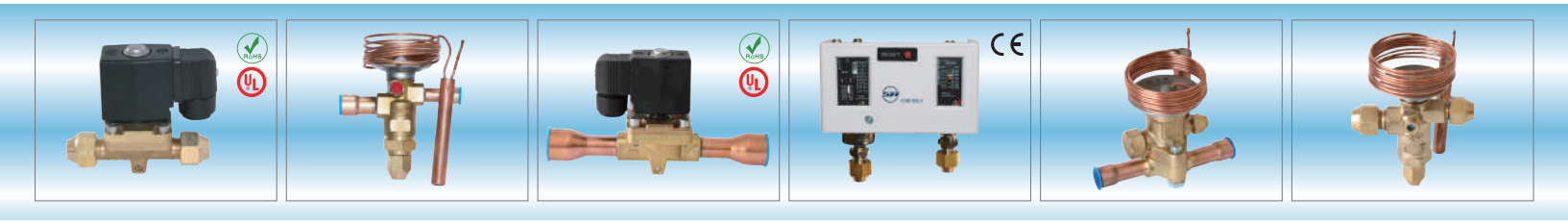
上恒

STF Catalogue



上海恒温控制器厂有限公司
Shanghai Thermostat Factory Co.,Ltd.

全国工业产品生产许可证
证书编号：XK06-015-00113
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证书编号：TS2731A39

STF 上恒

上海恒温控制器厂有限公司
Shanghai Thermostat Factory Co.,Ltd.

公司简介

上海恒温控制器厂有限公司是制冷空调自控元件专业生产厂家，前身为上海恒温控制器厂，成立于1951年，至今已有60多年的历史。

1985年上恒与美国ALCO公司合作生产T系列膨胀阀，是国内第一家掌握混合充注技术生产膨胀阀的企业；1993年与美国江森公司合资成立上海江森控制器有限公司，生产YK型压力控制器等产品；1996年公司开发的FDF—M型电磁阀荣获了国家级新产品奖，实现了国内制冷电磁阀的升级换代；从2012年开始，江森自控连续三年评定公司为优秀供应商；2013年市政府认定公司为上海市高新技术企业，多项产品获上海及国家创新基金扶持。至2016年，开利连续十六年授予公司Q+二级合格供应商。

公司主要产品为电磁阀、热力膨胀阀、能量调节阀、视液镜、干燥过滤器及压力、压差控制器、单向阀、球阀等。公司通过ISO9001：2008版质量体系认证。产品拥有UL/CUL认证，CE认证及CQC认证。

上恒产品目前已为开利、约克、特灵、顿汉布什、麦克维尔、美的、格力、申菱、天加等厂家广泛使用，是制冷元件国产化的首选产品。产品已出口至美洲、欧洲、非洲、澳洲、亚洲等国家和地区。

上恒坚持走专业化的发展道路，以不断的技术革新保持领先优势。国产化首选是我们的目标，成为世界一流的企业是我们的理想。

Company Profile

Shanghai Thermostat Factory CO., Ltd (STF) is a professional manufacturer of refrigeration and air conditioning parts with more than 60 years' history in this industry.

In 1985, STF started to cooperate with ALCO to produce T series expansion valves. STF is the first Chinese company which has the mixed infusing technology in expansion valve production.In 1993, established Shanghai Johnson Controller Co., Ltd with Johnson Controls to produce YK series pressure switches.

In 1996, FDF-M series diaphragm solenoid valve was certificated as National Grade New Product.From 2012 to 2014, Three year’s “Excellent Supplier” awarded by Johnson Controls. In 2013, Got support from the government's High-tech Innovation Fund .Till 2016, STF has kept a 16-year record of being a Carrier Q+ Level II supplier.

STF’s main products include solenoid valves, thermostatic expansion valves, sight glasses, filter dryers, pressure switches, pressure difference switches, temperature controls, check valves and ball valves etc. UL and CE certified products can be offered according to the demands.Products are designed for freezing, refrigeration, air-conditioning, precision AC etc. and widely used by Carrier, York, Trane, Dunhambush, McQuay, Gree, Midea etc. The products are being exported to America, Europe, Australia, Africa, Korea, Hongkong, Taiwan, and Philippine etc.

STF focuses on specialization and always gives the best solution of localization. Driven by continuous innovation in technology, STF is pursuing to be a leading enterprise in our area.

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上海恒温控制器厂有限公司

概述

FDF型电磁阀用于氟化物液体管路、吸气管路、热蒸汽管路，能广泛适用于冷藏、冷冻、空调装置。

特点

- 电磁阀可分为直动式和先导式（伺服式）结构。
- 可提供常闭型（NC）和常开型（NO）。
- 有多种交流电压和直流电压线圈供选择。
- 适用于HCFC、HFC制冷剂和相容的润滑油(R717除外)。
- 先导式（主阀口≥5mm）工作压差范围：
  交流：0.05-21bar
  直流：0.05-17bar
  直动式(阀口≤3mm)工作压差范围：
  交流：0-21bar
  直流：0-17bar
- 最高工作压力：30bar。
- 使用工质温度为：-25℃～105℃。
- FDF25M以上电磁阀也可提供法兰安装型式。
- 可提供UL/CUL认证。

工作原理

FDF-B型系列为直接动作式电磁阀。

常闭型（NC）电磁阀工作原理：当线圈通电后，线圈产生磁场，阀芯被磁场力吸起，阀打开。当线圈断电时，磁场消失，阀芯在自重和复位弹簧力的作用下降下，阀关闭。

FDF-M型系列为伺服式电磁阀。

常闭型（NC）工作原理：当线圈通电时，产生磁场吸起导阀的阀芯，打开导阀阀门，导阀相通，在阀的主阀膜片上下形成压差，推动主阀被打开。当主阀开启后，由于介质流体流动，主阀的膜片将保持打开。当线圈断电时，阀芯由于自重和弹簧力的作用关闭导阀，介质通过节流孔进入膜片上部，膜片上下的压力平衡，从而主阀膜片下降，关闭主阀。

常开型（NO）电磁阀工作原理：与常闭型相反。

General

FDF is a direct acting or pilot operated solenoid valve for liquid , suction , and hot gas lines with fluorinated refrigerants.

Characteristics

- Complete range of solenoid valves for refrigeration, freezing and air conditioning plant.
- Supplied both normally closed (NC) and normally open (NO) with coils.
- Wide choice of coils for A.C. and D .C
- Suitable for all fluorinated refrigerants.
- Opening pressure diff.:

Pilot type
AC：0.05-21bar
DC：0.05-17bar

Direct-acting type
AC：0-21bar
DC：0-17bar

- Max working pressure: 30bar.
- Temperature of medium ： -25℃～105℃.
- FDF is available in flare, solder and flange connection versions.
- Versions with UL and CUL approval can be supplied acting to order.

Operating principle

FDF-B is direct acting.
The normally closed (NC) valves open directly for full flow when the armature moves up into the magnetic field of the coil. This means that the valves operate with a min. differential pressure of 0 bar. The valve plate is fitted directly on the armature . Inlet pressure acts from above on the armature and the valve plate. Thus, inlet pressure and spring force act to close the valve when the coil is currentless.
FDF-M is pilot operated with a "floating" diaphragm.
The normally closed (NC) pilot valve plate is fitted directly to the armature . When the coil is de-energized, the main orifice and pilot orifice are closed. The pilot orifice and main orifice are held closed by the spring force and the differential pressure between inlet and outlet sides. When current is applied to the coil the armature is drawn up into the magnetic field and opens the pilot orifice. This relieves the pressure above the diaphragm, i.e. the space above the diaphragm becomes connected to the outlet side of the valve. The differential pressure between inlet and outlet sides then presses the diaphragm away from the main orifice and opens it for full flow. Therefore a certain minimum differential pressure is necessary to open the valve and keep it open. For FDF-M valves this differential pressure is 0.05 bar.
When current is switched off, the pilot orifice closes. Via the equalization holes in the diaphragm, the pressure above the diaphragm then rises to the same value as the inlet pressure and the diaphragm closes the main orifice.
Nomal Open valves (NO) have the opposite function to Nomal Close valves (NC), i.e. it is open with de-energized coil.

型号与参数Technical data

型号 Model	接管外径 Connect tube OD		连接方式 Form of connect	开阀压差(bar) Opening diff. pressure	流量（水） Flow rate Kv(m^3/h)	工作介质 Available medium	介质温度℃ Temperature of medium	电源种类 Rated power		外型尺寸 Dimensions (mm)					
										常闭（NC）			常开（NO）		
	In	mm						AC(V)	DC(V)	长	宽	高	长	宽	高
FDF3BJ	1/4	6	焊接 ODF Solder ODF	常闭（NC） 交流(AC)：0—21 直流(DC)：0—17	0.18	HCFC HFC 空气 清洁水 及粘度≤4°E机油 Air Water and≤4°E viscosity machine oil	-25—105	24 36 110 220	12 24	117	31	76			
	5/16	8													
	3/8	10													
FDF6MJ	5/16	8		常闭(NC) 交流(AC)：0.05—21 直流(DC)：0.05—17 常开(NO) 交流(AC)：0.05—18 直流(DC)：0.05—15	0.40					127	45	88	127	45	93
FDF8MJ	3/8	10			0.80										
	1/2	12			0.80										
FDF10MJ	1/2	12			1.90					151	45	86	151	45	91
	5/8	16			1.90										
FDF13MJ	5/8	16			3.00					174	52	98	174	52	115
	3/4	19			3.00										
	7/8	22			3.00										
FDF16M1	3/4	19			4.50					190	58	98	190	58	115
FDF19M1	7/8	22			4.50										
FDF19M2	7/8	22			5.00					230	72	108	230	72	125
FDF19M3	11/8	35			6.00					250	72	108	250	72	125
FDF19M4	9/8	28			6.00										
FDF25MJ	9/8	28			9.80					236	72	116	236	72	133
	11/8	35			9.80					254			254		
FDF32MJ	11/8	35			15.00					281	86	130	281	86	147
	13/8	42			15.00										
FDF40M	13/8	42		常闭(NC) 交流(AC)：0.3—21 直流(DC)：0.3—17 常开(NO) 交流(AC)：0.3—18 直流(DC)：0.3—15	25.00					312	126	158	312	126	171
	17/8	54													
FDF25MA		33	法兰 Flange	常闭(NC) 交流(AC)：0.05—21 直流(DC)：0.05—17 常开(NO) 交流(AC)：0.05—18 直流(DC)：0.05—15	9.80					152	112	165	152	112	182
FDF25MF		33			9.80					162	86	175	162	86	192
FDF32MA		38.8			15.00					162	112	175	162	112	192
FDF32MF		38.8			15.00					156	86	178	156	86	195
FDF3B	1/4	6	公制或英制螺纹 SAE	常闭（NC） 交流(AC)：0—21 直流(DC)：0—17	0.18					60	31	76			
FDF6MB	5/16	8		常闭(NC) 交流(AC)：0.05—21 直流(DC)：0.05—17 常开(NO) 交流(AC)：0.05—18 直流(DC)：0.05—15	0.40					85	45	85	85	45	90
FDF8MB	3/8	10			0.80										
FDF10MB	1/2	12			1.90					112	58	98	112	58	105
FDF13MB	5/8	16			3.00					112	58	98	112	58	105
FDF16MB	3/4	19			4.50					144	72	108	144	72	115
FDF19MB	7/8	22			6.00					144	72	108	144	72	115
FDF10MBJ	1/2	12			1.90					87	45	85	87	45	90
FDF13MBJ	5/8	16			3.00					107	52	98	107	52	115
FDF16MBJ	3/4	19			4.50					128	58	108	128	58	125
FDF19MBJ	7/8	22			6.00					128	58	108	128	58	125

- 注：型号后面带“E”表示手动杆，带“F”表示方法兰，带“A”表示腰法兰，带“J”表示改进型，带“B”表示螺纹连接，带“K”表示常开电磁阀。
- 注：如需其它工作特性和规格产品，请与本公司接洽联系。
- Kv值为阀通过ρ=1000kg/m3, 前后1bar的压降时的水流量。
- Note :If there is “E” after model ,it indicates hand lever; if “F” ,it indicates flange; if “A” ,it indicates oval flange ;if “J” ,it indicates the improved type ;if “B” ,it indicates the form of thread connection ;if “K” ,it indicates nomal open .
- Note :If you have any special requirement ,please contact us.

The Kv value is the water flow in m3/h at a pressure drop across valve of 1 bar，ρ=1000kg/ m3.

型号与参数Technical data

型号 Model	名义制冷量 Nominal Liquid Capacity（KW）											
	液体 Liquid				吸气 Suction				热蒸汽 hotgas			
	R22	R134a	R404A R507	R407c	R22	R134a	R404A R507	R407c	R22	R134a	R404A R507	R407c
FDF2	3.36	2.94	2.20	3.68					1.73	1.38	1.02	0.58
FDF3	6.30	5.75	4.50	6.50					2.50	2.00	2.00	2.60
FDF6M	9.20	8.50	6.60	9.70	0.90	0.65	0.80	0.95	3.70	3.00	3.00	3.90
FDF8M	18.50	17.00	12.80	19.40	1.80	1.30	1.60	1.90	7.40	5.90	6.00	7.70
FDF10M	43.50	40.20	30.10	46.10	4.30	3.10	3.90	4.50	17.10	13.60	14.10	19.00
FDF13M	63.30	55.20	42.10	69.30	6.80	4.90	6.10	7.14	27.70	21.90	22.60	29.00
FDF16M	90.80	83.50	63.30	95.40	10.26	7.30	9.20	10.70	41.60	32.90	33.90	43.60
FDF19M	121.00	111.00	84.30	127.00	11.40	8.10	10.20	12.00	46.20	36.60	37.70	48.50
FDF25M	231.00	213.00	162.00	236.00	22.80	16.30	20.40	23.90	92.30	73.20	75.30	96.60
FDF32M	346.00	320.00	254.00	363.00	34.20	24.40	30.60	35.80	138.00	109.00	113.00	145.00
FDF40M	503.00	464.00	351.00	534.00	57.00	40.80	51.00	59.00	231.00	188.00	183.00	240.00

● 液体和吸气名义制冷量为：

蒸发温度　　te=-4.4˚C

阀前液体温度　　t1=+38˚C

经过电磁阀压力降　R134a　ΔP=0.15bar

R22、R404A、R507、R407c、R410A　ΔP=0.21bar

热气名义制冷量工况条件为：

冷凝温度　　tc=+40˚C

经过阀门压力降　　ΔP=0.8bar

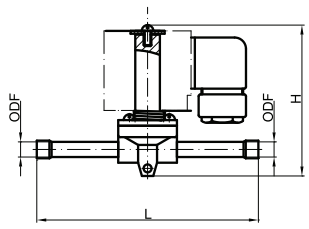
热蒸汽温度　　th=+65˚C

液体制冷剂过冷度　Δtsub=4K

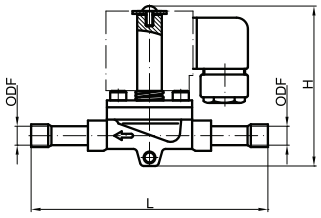
Rated liquid and suction vapour capacity is based on evaporating temperature te=-4.4˚C,liquid temperature ahead of valve t1=+38˚C,and pressure drop in valve △P=0.15 bar.

Rated hot gas capacity is based on condensing temperature tc=+40˚C, pressure drop across valve ΔP=0.8bar,hot gas temperature th=+65˚C, and sub cooling of refrigerant Δtsub=4K

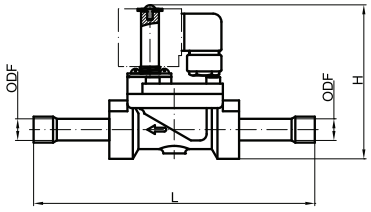
FDF3BJ焊接式



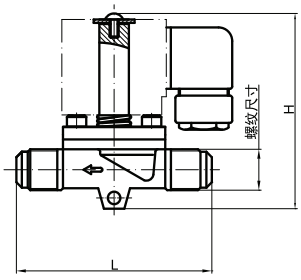
FDF6M~10M焊接式



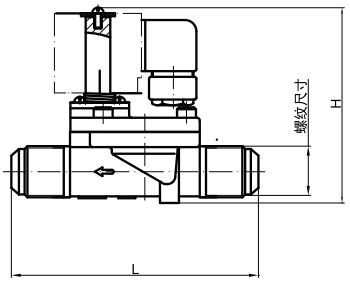
FDF13M~32M焊接式



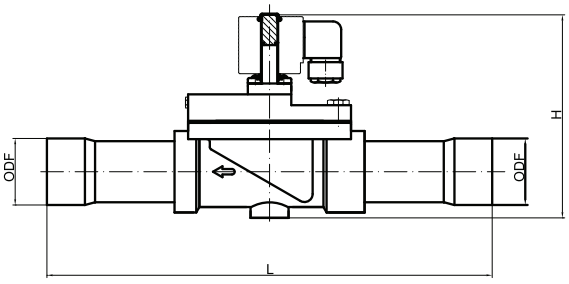
FDF6MB,FDF8MB，10MBJ螺纹连接



FDF10MB~19MB,FDF13MBJ~FDF19MBJ螺纹连接

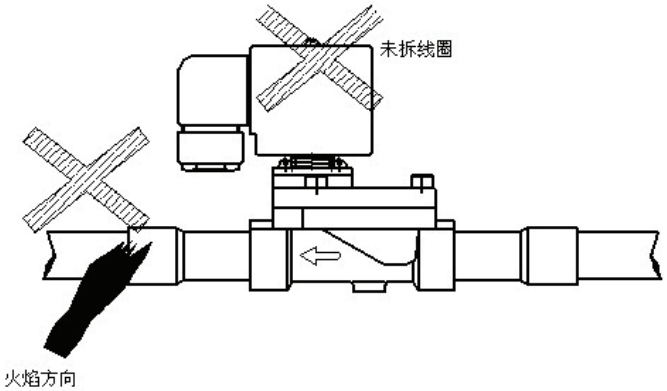


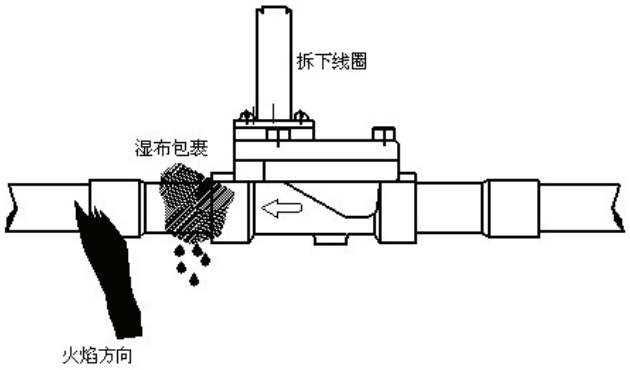
FDF40M焊接式



安 装

- 电磁阀应该垂直安装在水平管道上，介质流动的方向应与电磁阀所示的箭头方向一致。
- 线圈工作输入电压必须与线圈上标明额定电压一致。决不允许在电磁线圈通电时从阀上拆下来，以防烧坏线圈。
- 电磁阀焊管在与系统管道焊接时，必须注意以下几点：
- 从阀上拆下电磁线圈，用湿布或湿棉纱包在阀体上保护阀体，以防在焊接时温度过高烧坏阀内零件。
- 焊接时请注意焊枪火焰方向。
- 最好选用高银焊条焊接。
- 带手动杆的电磁阀，必须先旋转手动杆使阀开启，然后做系统气密性试验，以免损坏膜片。



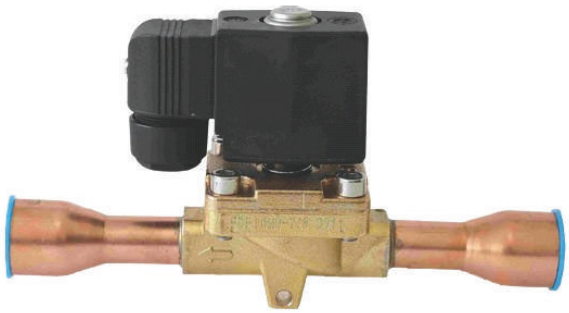


Installation

- The valve should be installed in horizontal pipe line under vertical position. The flow direction must be in the arrow direction.
- The supply voltage must meet the rated input voltage shown on the label of the coil. It is forbidden to take away coils from the valve when the coil is energized.
- When brazing the valve with connect tube in system ,below points are very important.
  - Before brazing, coil must be taken away and cover the valve boby with wet rags to avoid damage.
  - The brazing flame must be avoided facing the valve body.
  - It is better to use low temperature type silver to braze.
  - For the valve with lift stem ,you must turn the stem to open the valve ,then make leakage test to protect diaphragm.

概 述

FDF-MG电磁阀是为R410A制冷剂开发的新型电磁阀，用于液管路、吸气管路和热蒸汽管路，也适用于其他氟化物。



特 点

- FDF-MG型电磁阀为伺服式电磁阀，适用于氟化物制冷剂的液管路、吸气管路和热蒸
- 电磁阀适用于冷藏、冷冻、空调装置。
- 有多种交流电压AC和直流电压DC线圈供选择。
- 适用于R410A及其它HCFC、HFC制冷剂（R717除外）和相容的润滑油。
- 适用工质温度-40℃～+105℃，除霜期间最高温度+130℃。
- 适用环境温度-40℃～+55℃。
- 最高工作压力45bar。
- 耐液压强度≥68bar。
- 可提供UL/CUL认证。

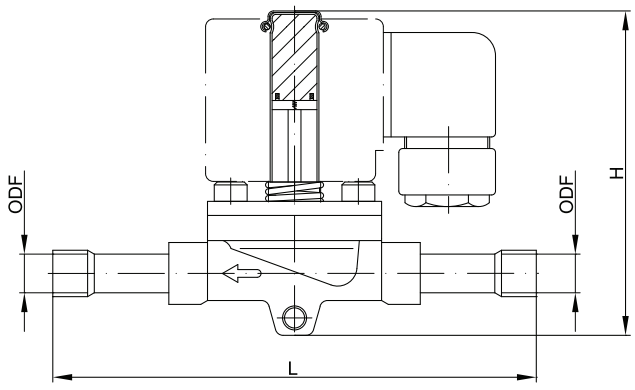
General

FDF-MG series are specially designed for R410A system , can be also used for liquid ,suction , hot gas lines with other flourinated refrigerants.

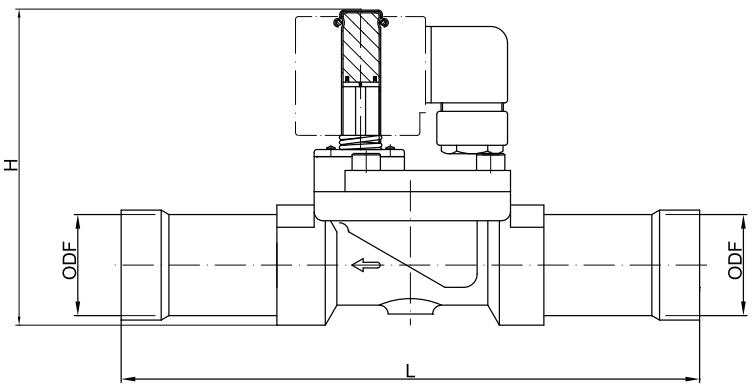
Characteristics

- FDF-MG series are pilot operated solenoid valves for liquid, suction and hot gas application.
- Full range of solenoid valves for refrigeration and air condition application.
- Wide choice of coils for AC and DC.
- Suitable for R410A refrigerant、HFC & HCFC.
- Temperature of medium -40℃～+105℃, Max +130℃ during defrosting.
- Ambient environmental temperature -40℃～+55℃.
- Max. working pressure 45 bar.
- Maximum test pressure ≥68 bar.
- Versions with UL and CUL approval can be supplied according to order.

外形尺寸 Dimensions



FDF6MG-20MG系列



FDF25MG-40MG系列

型号和参数 Technical data

型号 Model	接管方式 Form of Connection	接管外径 Connect tube OD		阀开启压差 Opening diff. pressure(bar)			Kv值 Kv Value m^3/h	最大安全工作压力 Max working pressure (bar)	外形尺寸 Dimensions(mm)			电源种类 Rated power (V)	
		mm ODF	in ODF	最小 Min	最大(水) Max(liquid)				L mm	W mm	H mm	AC (V)	DC (V)
					交流电压 50/60Hz AC	直流电压 DC							
FDF3G	焊接式 ODF	6	1/4	0	28	24	0.18	45	117	31	76	24 36 110 220	12 24
		10	3/8										
FDF6MG		10	3/8	0.05			0.60		127	32	80		
		12	1/2										
FDF8MG		10	3/8				1.00		137	38	88		
		12	1/2						133				
		16	5/8						162				
FDF10MG		12	1/2				1.80		137	45	88		
		16	5/8						166				
FDF15MG		16	5/8				3.00		174	52	96		
		19	3/4										
		22	7/8										
FDF20MG		22	7/8				5.00		190	58	115		
		28	9/8						250				
FDF25MG		28	9/8				9.80		236	72	119		
		35	11/8						254				
FDF32MG		35	11/8				15.00		281	86	133		
		42	13/8										
FDF40MG		42	13/8				25.00		312	126	158		
		54	17/8										

Kv值水在通过电磁阀时的压差为1bar时的流量、单位m3/h、密度ρ=1000 kg/m3
注：如需其它工作特性和规格产品，请与本公司接洽联系。
The Kv value is the water flow in m3/h at a pressure drop across valve of 1 bar,ρ=1000kg/ m3.
Note :If you have special requirement ,please contact STF.

型号和参数 Technical data

名义制冷量 Nominal Liquid Capacity(kw)															
型号 Model	液体 Liquid					吸气 Suction					热蒸汽 hotgas				
	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

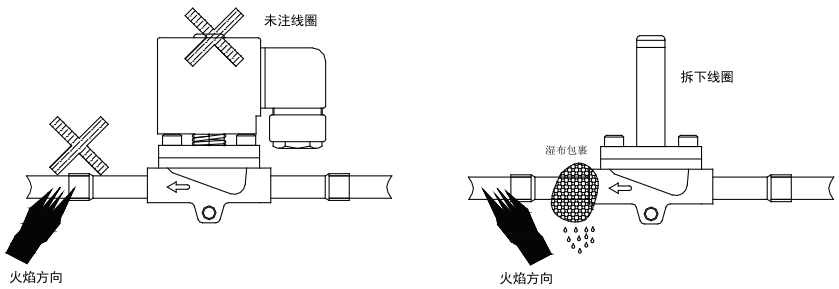
液体和吸气名义制冷量为：
蒸发温度 te=4.4℃
阀前液体温度 t1=38℃
通过电磁阀压力降 R134a ΔP=0.15bar
R22、R404A、R507、R407c、R410A ΔP=0.21bar

热气名义制冷量工况条件为：
冷凝温度 tc=+40℃
经过阀门压力降 ΔP=0.8bar
热蒸汽温度 th=+65℃
液体制冷剂过冷度 Δtsub=4K

Rated liquid and suction vapour capacity is based on evaporating temperature te=4.4℃,liquid temperature ahead of valve t1=38℃,and pressure drop in valve R134a △P=0.15 bar,
R22、R404A、R507、R407c、R410A ΔP=0.21bar.
Rated hot gas capacity is based on condensing temperature tc=+40℃,pressure drop across valveΔP=0.8bar,hot gas temperature th=+65℃,and subcooling of refrigerant Δtsub=4K.

安 装

- 电磁阀应该垂直安装在水平管道上，介质流动的方向应与电磁阀所示的箭头方向一致。
- 线圈工作输入电压必须与线圈上标明额定电压一致。决不允许在电磁线圈通电时从阀上拆下来，以防烧坏线圈。
- 电磁阀焊管在与系统管子焊接时，必须注意以下几点：
- 从阀上拆下电磁线圈，用湿布或湿棉纱包在阀体上保护阀体，以防在焊接时温度过高烧坏阀内零件。
- 焊接时请注意焊枪火焰方向。
- 最好选用高银焊条焊接。
- 带手动杆的电磁阀，必须先旋转手动杆使阀开启，然后做系统气密性试验，以免损坏膜片。

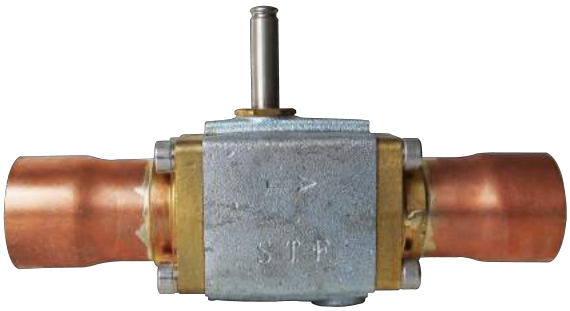


Installation

- The valve should be installed in horizontal pipe line under vertical position. The flow direction must be in the arrow direction.
- The supply voltage must meet the rated input voltage shown on the label of the coil. It is forbidden to take away coils from the valve when the coil is energized.
- When brazing the valve with connect tube in system ,below points are very important.
  - Before brazing, coil must be taken away and cover the valve body with wet rags to avoid damage.
  - The brazing flame must be avoided facing the valve body.
  - It is better to use low temperature type silver to braze.
  - For the valve with lift stem ,you must turn the stem to open the valve ,then make leakage test to protect diaphragm.

概 述

FDF-H电磁阀为活塞式电磁阀，用于液管路、吸气管路和热蒸汽管路，也适用于其他氟化物。



特 点

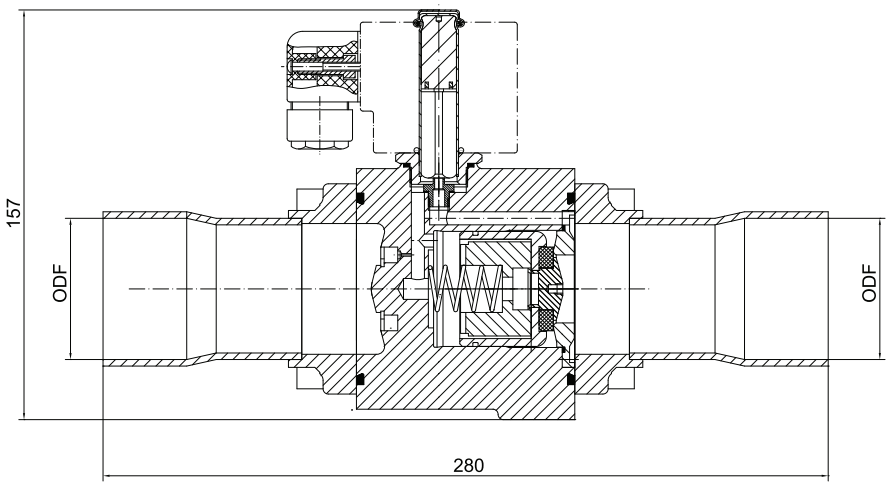
- FDF-H型电磁阀为伺服式活塞电磁阀，适用于氟化物制冷剂的液管路、吸气管路和热蒸汽管路。
- 电磁阀适用于冷藏、冷冻、空调装置。
- 适用于R410A及其它HCFC、HFC制冷剂（R717除外）和相容的润滑油。
- 适用工质温度-40℃～+105℃，除霜期间最高温度+130℃。
- 适用环境温度-40℃～+55℃。

General

FDF-H series are servo solenoid valve with piston, can be also used for liquid, suction, hot gas lines with other flourinated refrigerants.

Characteristics

- FDF-H series are pilot operated solenoid valves for liquid, suction and hot gas application.
- For refrigeration and air condition application.
- Suitable for R410A refrigerant、HFC & HCFC.
- Temperature of medium -40℃～+105℃, Max +130℃ during defrosting.
- Ambient environmental temperature -40℃～+55℃.



技术数据 Datas

型号 Model	接管外径 Connect tube ODF		阀开启压差 Opening diff. pressure(bar)			Kv值 Kv Value m^3/h	最大安全工作压力 Max working pressure (bar)	电源种类 Rated power (V)	
	mm ODF	in ODF	最小 Min	最大（水）Max(liquid) 交流电压 50/60Hz AC	最大（水）Max(liquid) 直流电压 DC			AC (V)	DC (V)
FDF32MH	35	11/8	0.2	25	18	15.00	30	220 110 24	24
	42	13/8							
FDF40MH	42	13/8				25.00			
	54	17/8							

概 述

SDF型系列电磁阀可广泛应用于消防、矿砂堆场防尘喷淋供水系统、农业喷灌及热水、蒸汽输送的自动控制系统的执行机构，也适用于气动、液压及食品加工机械系统的自动控制。

特 点

- 用于空气，清洁水、蒸汽及粘度≤4°E的机油
- 可以根据要求 选择交流或直流线圈
  交流： 24V, 36V, 110V, 220V
  直流： 12V, 24V
- 适用工质温度: -25℃～130℃.
- 最高工作压力:20bar。
- 可提供UL/CUL认证。

安 装

- 电磁阀应该垂直安装在水平管道上，介质流动的方向应与电磁阀所示的箭头方向一致。
- 线圈工作输入电压必须与线圈上标明额定电压一致。决不允许在电磁线圈通电时从阀上拆下来，以防烧坏线圈。

General

SDF can be used as actor of automation system in water supply system, fire control system, water spray system and for pneumatic, hydraulic and food machine application.

Characteristics

- Suitable for air ,clean water ,steam and ≤4°E viscosity machine oil.
- Coil type:
  AC: 24V, 36V, 110V, 220V
  DC: 12V, 24V
- Temperature of medium -25℃ to 130℃.
- Max Working Pressure: 20bar.
- Versions with UL/CUL approval can be supplied to order.

Installation

- The valve should be installed in horizontal pipe line under vertical position. The flow direction must be in the arrow direction.
- The supply voltage must meet rated input voltage shown on the label of the coil. Coils taking away from valve whenenergized in coils is forbidden.

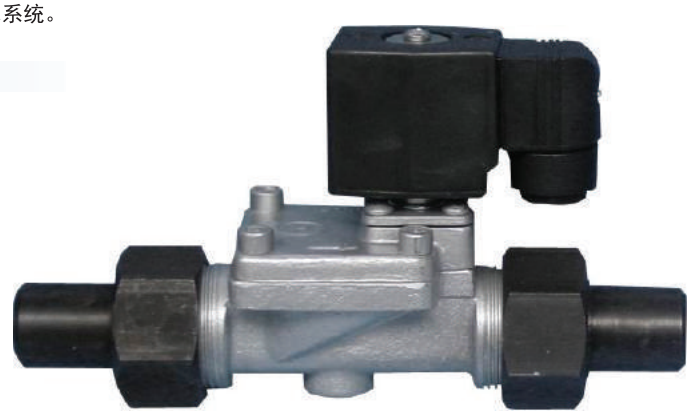
型号与参数 Technical data

型号 Model	接口尺寸 Connection size	开阀压差（bar） Opening diff. pressure	流量(液) Flow rate Kv(m^3/h)	外形尺寸 Dimensions(mm)		
				长L	宽W	高H
SDF2D	Rc1/8	0～21	0.14	31	31	76
SDF3D		0～16	0.21			
SDF4D		0～12	0.37	31	31	85
SDF8M1	Rc1/4	0.3~16	1.00	52	45	89
SDF10M1	Rc3/8,Rc1/2		1.80	68	45	87
SDF15M1	Rc1/2		3.00	79	52	100
SDF20M1	Rc3/4		5.00	88	58	105
SDF25M1	Rc1		9.00	104	72	116
SDF32M1	Rc5/4		14.00	121	86	129
SDF40M	Rc3/2		25.00	152	126	158

- Kv值为阀通过ρ=1000kg/m3, 前后1bar的压降时的水流量。
  The Kv value is the water flow in m3/h at a pressure drop across valve of 1 bar，ρ=1000kg/ m3.

概 述

ADF-M型电磁阀采用全塑封线圈，具有良好的防湿、防振和耐腐蚀性。产品中零部件采用不锈钢材料，它可用于氨、氟利昂制冷系统，也可用于气动、液压、供水系统。



特 点

- 用于氨系统以及HCFC，HFC等制冷剂，清洁水及粘度≤4ºE的机油
- 可以根据要求 选择交流或直流线圈
  交流： 24V, 36V, 110V, 220V
  直流： 12V, 24V
- 开阀压差：
  交流： 0.05 – 21 bar
  直流： 0.05 – 17 bar
- 最高工作压力：30bar
- 适用工质温度： -25℃—105 ℃

General

The coils of ADF-M solenoid valve are hermetic in plastic .It features moisture proof ,shock proof and anti-corrosive .All parts are made by stainless steel .It can be used for ammonia and Freon refrigerating system .Also it can be used for pneumatic, hydraulic and water supply system.

Characteristics

- Suitable for ammonia, HFC, HCFC ,clean water, ≤4°viscosity machine oil
- Coil type:
  AC: 24V, 36V, 110V, 220V
  DC: 12V, 24V
- Opening pressure diff.
  AC: 0.05 – 21 bar
  DC: 0.05 – 17 bar
- Max working pressure:30bar
- Temperature of medium: -25℃ to 105℃

型号与参数 Technical data

型号 Model	通径 Orifice （mm）	接管规格 Connect tube	连接方式 Form of connect	流量Kv Flow rate m^3/h	外形尺寸 Dimensions（mm）		
					长（L）	宽（W）	高（H）
ADF10MB	10	Φ20×5	端面密封螺纹连接 Face seal	1.90	186	58	106
ADF15MB	15	Φ22×3.5		4.50	186	58	106
ADF20MB	20	Φ28×4		5.00	186	58	106
ADF25MA	25	Φ32×3.5	法兰式 Flange-connection	9.50	190	145	115

- Kv值为阀通过ρ=1000kg/m3, 前后1bar的压降时的水流量.
  The Kv value is the water flow in m3/h at a pressure drop across valve of 1 bar，ρ=1000kg/ m3.

概 述

能量调节电磁阀是一种安装在冷媒压缩机上，通过对上下载控制系统的流体进行切断、接通或改变流动方向来调节压缩机的能量输出的控制用电磁阀。

控制方式有二位二通、二位三通、二位四通等形式，本产品也可以用于气动、液压等自动控制系统中。电磁阀的配套线圈采用全塑封，有良好的防水、防潮和耐酸碱特性，能量调节电磁阀对电讯号响应快，工作性能可靠，使用寿命长。本公司根据客户要求，专门设计开发。

General

Unloader solenoid valves are used to unload the capacity of the compressor.
Any special requests ,please contact STF.

技术参数

- 可提供常闭型（NC）和常开型（NO）。
- 有多种交流电压和直流电压线圈供选择。
- 适用于HCFC、HFC制冷剂和相容的润滑油。
- 工作压差：0～21bar。
- 最高工作压力：30bar。
- 适用工质温度为：-25℃～105℃。
- 开闭循环次数：≥250，000
- 可提供UL/CUL认证。

Technical data

- Supply both normally closed (NC) and normally open (NO) with coils.
- Wide choices of coils for AC and DC.
- Suitable for all HCFC、HFC refrigerants and lubricating oil.
- Opening pressure diff.: 0-21bar
- Max. working pressure:30bar
- Temperature of medium -25℃～105℃.
- Life time：≥250，000 cycles
- Versions with UL and CUL can be supplied to special order.

210型

300型

220型

规格型号

- 210型、300型：插头DIN 43650标准或附带接线盒。
- 220型：附带电缆，外加铁罩壳。

技术参数

- 绝缘等级：F级 UL认证产品：H级
- 防护等级：IP65 220型：IP67
- 适用环境温度：-40℃～+55℃
- 允许使用电压波动：(-15%～+10%) 额定电压

Coil model

- Model 210、300: with DIN 43650 plug or terminal box.
- Model 220 with cable and metal shell.

Technical data

- Protection Class :F UL Class：H
- Enclosure: IP65 Model 220#:IP67
- Ambient temperature: -40℃～+55℃
- Permissible voltage variation: -15%～+10%

基本参数 Technical data

型号规格 Model		电压类型 Voltage type	功率 Power	电流 Current
常规	210型 220型	AC220V	16VA	/
		AC110V	16VA	/
		AC36V	16VA	/
		AC24V	18VA	/
		DC24V	13W	/
		DC12V	13W	/
	300型	AC220V	24VA	/
		AC110V	24VA	/
		AC24V	24VA	/
		DC24V	20W	/
		DC12V	20W	/
UL	210型	AC220V	30VA	/
		AC110V	30VA	/
		AC36V	30VA	/
		AC24V	35VA	/
		DC24V	/	0.75A
		DC12V	/	1.1A
	300型	AC220V	30VA	/
		AC110V	30VA	/
		AC24V	30VA	/

- 认证Approvals：
  CE CQC UL/CUL

安装使用

1、线圈必须接地。
2、线圈必须安装在阀体上才能通电，防止线圈发热、烧坏击穿。

1、Coil on ground terminal must be connected.
2、To avoid generating heat and being damaged, coils must be installed on valve body before the coil is energized.

概 述

TCLE/TRFE系列热力膨胀阀是分拆式膨胀阀，适用于空调、商业制冷、运输空调及冷冻等广泛领域。

特 点

- 拼装式结构简单易修，只需旋下固定螺栓，就可更换动力头与阀芯。
- 稳定的过热度；具有双向节流功能。
- 可提供MOP（马达过载保护）功能。
- 可提供各种接管尺寸和形式。
- 适用R22, R134a, R407c, R404A/R507,R410A冷媒等介质。
- 特殊要求请与上恒联系

General

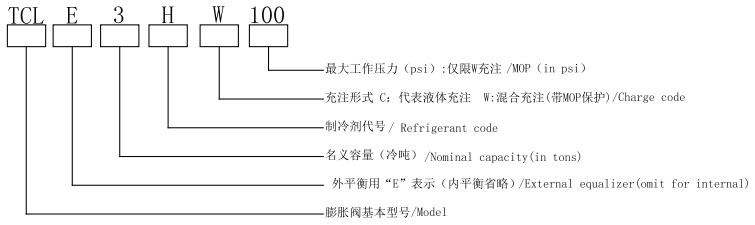
TCLE/TRFE series are take-apart valves applicable to freezing ,refrigeration and air conditioning plant.

Characteristics

- Interchangeable orifice assembly ,easier stocking ,easy capacity matching ,better service.
- Stable superheat setting with bi-flow function.
- MOP (Max. operating pressure) function is available.
- Various connection type and size can be made according to customer's requirement.
- Suitable for R22, R134a, R407C, R404A/R507,R410A.
- If you have special requirement , please contact STF.

膨胀阀产品命名方式

例：



制冷剂代号（Refrigerant code）：
H（R22） M（R134a）
N（R407c） S（R404A/R507）Z(R410A)

选型表格Technical data

R134a			R22			R407c			R404A/R507			R410A		
型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)
TCLE	1/4M	1.20	TCLE	1/2H	1.76	TCLE	1/2N	1.68	TCLE	1/3S	1.17	TCLE	2/3Z	2.20
TCLE	3/4M	2.29	TCLE	1H	3.52	TCLE	1N	3.49	TCLE	2/3S	2.35	TCLE	1-1/4Z	4.40
TCLE	1-1/2M	4.93	TCLE	2H	7.04	TCLE	2N	7.00	TCLE	1-1/2S	5.28	TCLE	2-1/2Z	8.80
TCLE	2-1/2M	10.91	TCLE	3H	10.55	TCLE	3N	10.23	TCLE	2S	7.04	TCLE	3-1/2Z	12.30
TCLE	3-1/2M	14.08	TCLE	5H	17.60	TCLE	5N	16.80	TCLE	3-1/2S	12.32	TCLE	6Z	21.10
TCLE	5-1/2M	19.36	TCLE	7-1/2H	26.40	TCLE	7-1/2N	25.75	TCLE	5S	17.60	TCLE	9Z	31.60
TCLE	7-1/2M	26.05	TCLE	10H	35.20	TCLE	10N	34.78	TCLE	7S	24.64	TCLE	12Z	42.20
TCLE	9M	30.72	TCLE	12H	42.24	TCLE	12N	41.85	TCLE	8-1/2S	29.92	TCLE	15Z	52.80
TRFE	11M	38.72	TRFE	14H	49.28	TRFE	14N	47.93	TRFE	10S	35.20	TRFE	17Z	60.00
TRFE	13M	45.76	TRFE	18H	63.36	TRFE	18N	61.59	TRFE	12S	42.24	TRFE	22Z	77.40
TRFE	16M	56.32	TRFE	22H	77.44	TRFE	22N	75.88	TRFE	15S	52.80	TRFE	26Z	91.50
TRFE	19M	66.36	TRFE	26H	91.52	TRFE	26N	90.79	TRFE	18S	63.36	TRFE	30Z	105.00
TRFE	25M	84.48	TRFE	35H	123.20	TRFE	35N	121.90	TRFE	25S	88.00	TRFE	42Z	147.80
TRFE	31M	105.60	TRFE	45H	158.40	TRFE	45N	156.78	TRFE	32S	112.64	TRFE	55Z	193.60
TRFE	45M	147.84	TRFE	55H	193.60	TRFE	55N	191.41	TRFE	38S	133.76	TRFE	65Z	228.80
TRFE	55M	193.60	TRFE	75H	264.00	TRFE	75N	262.50	TRFE	52S	183.04	TRFE	90Z	316.80
TRFE	68M	228.80	TRFE	100H	352.00	TRFE	100N	350.17	TRFE	70S	246.40	TRFE	100Z	352.00
TRFE	80M	280.60	TRFE	120H	420.70	TRFE	120N	416.70	TRFE	84S	295.70	TRFE	140Z	492.00

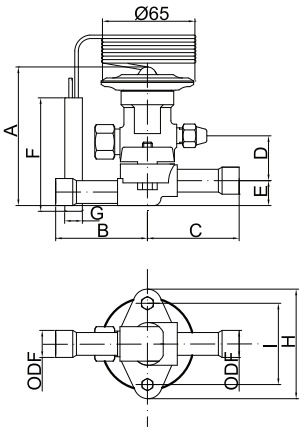
注：名义制冷量是基于蒸发温度te=4.4℃，冷凝温度tc=40℃,阀前制冷剂温度为t1=38℃。
Note: Nominal capacity is based on evaporating temperature te=4.4℃, condensing temperature tc=40℃,and refrigerant temperature ahead of valve t1= 38℃.
注：如需其它工作特性和规格产品，请与本公司接洽联系。
Note :If you have special requirement ,please contact STF.

过热度调节

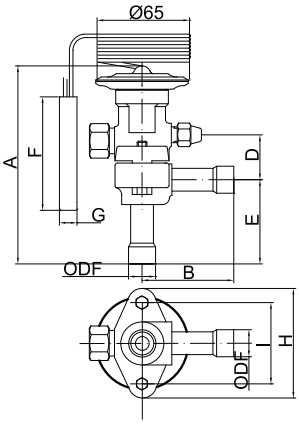
出厂过热度设定为3.5K，静过热度调节范围2～8K。
逆时针转动调节杆一圈，过热度减少0.3K。

Superheat adjusting

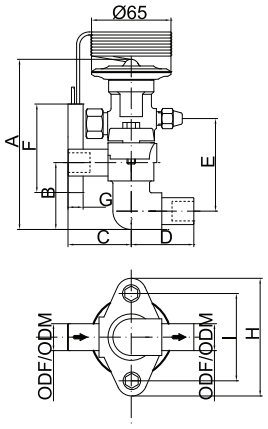
Factory setting :superheat 3.5K, static superheat adjusting range is between 2～8K.
Turn adjusting stem anticlockwise one round ,reduces superheat 0.3K.



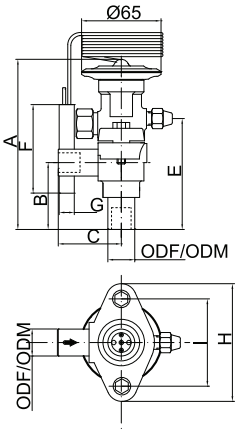
TCLE直通型热力膨胀阀



TCLE直角型热力膨胀阀



TRFE直通型热力膨胀阀



TRFE直角型热力膨胀阀

选型表格Technical data

型号 Model	接管形式 Form of connection	标准接管 Connection size 进口 Inlet	标准接管 Connection size 出口 Outlet	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	毛细管长度 Capillary length
TCLE	直通式 Straight-way	ODF 16 ODF 5/8	ODF 16 ODF 5/8	94	65	65	30.5	17	122	Φ13	62	62	1.5m
	直角式 Angle	ODF16 ODF5/8	ODF16 ODF5/8	138	65	/	30.5	61	122	Φ13	62	62	
TRFE	直通式 Straight-way	ODF22 ODF7/8	ODF22 ODF7/8	138	55	49	44	90	122	Φ13	65	65	1.5m
		ODM28.5 ODF1-1/8	ODM28.5 ODF1-1/8										
	直角式 Angle-way	ODF22 ODF7/8	ODF22 ODF7/8	138	55	49	/	90	122	Φ13	65	65	3m
		ODM28.5 ODF1-1/8	ODM28.5 ODF1-1/8										
	法兰式 Flange	Φ33X3.5	Φ38.5X3.5	123	115	59	57	Φ35	122	Φ13	65	65	

注：毛细管长度有特殊要求可与本公司接洽联系。
Note :If you have special requirement about the length of capillary , please contact STF.

TCLE/TRFE 扩展容量表（KW）
TCLE,TRFE extended capacity tables

R22 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.54	0.72	0.90	1.08	1.26	1.44	0.54	0.72	0.90	1.08	1.26	1.44	0.54	0.72	0.90	1.08	1.26	1.44
TCLE 1/2H	1.58	1.80	2.01	2.18	2.36	2.53	1.52	1.76	1.97	2.15	2.32	2.50	1.48	1.72	1.94	2.11	2.32	2.43
TCLE 1H	2.89	3.34	3.87	4.22	4.58	4.58	2.85	3.31	3.85	4.20	4.22	4.58	2.82	3.24	3.52	2.87	4.22	4.58
TCLE 2H	5.98	7.04	7.74	8.45	9.15	9.86	5.98	6.69	7.74	8.40	9.15	9.50	4.93	6.69	7.39	8.10	9.15	9.50
TCLE 3H	10.91	12.70	14.08	15.49	16.54	17.92	10.90	12.32	14.08	15.14	16.50	17.60	10.55	11.97	13.73	14.78	16.54	17.25
TCLE 5H	15.84	18.60	20.42	22.18	23.94	25.7	15.50	17.95	20.06	22.18	22.94	25.34	15.14	17.60	19.71	21.47	23.94	24.64
TCLE 7-1/2H	22.88	26.40	29.57	32.38	34.85	37.31	22.40	26.05	29.21	32.03	34.50	36.96	21.82	25.34	28.51	30.98	34.50	35.90
TCLE 10H	31.33	36.26	40.48	44.35	48.22	51.40	30.98	35.90	40.10	44.00	47.52	50.69	30.27	34.85	39.07	42.94	47.52	49.63
TCLE 12H	38.02	44.00	48.93	53.86	58.08	61.60	37.66	43.29	48.65	53.15	57.38	61.25	36.31	42.24	47.17	51.74	57.40	59.84
TRFE 14H	45.40	52.10	58.40	64.10	69.00	73.90	44.70	51.70	57.70	63.40	68.60	73.20	43.60	50.30	56.30	62.00	66.90	71.50
TRFE 18H	54.20	62.70	70.40	76.70	83.10	88.70	53.50	62.00	69.30	76.00	82.00	87.60	52.40	60.50	67.60	73.90	79.90	85.50
TRFE 22H	67.50	78.50	87.50	96.10	103.50	110.90	67.20	77.40	86.60	94.70	102.40	109.50	65.50	75.30	84.50	92.60	100.00	109.50
TRFE 26H	80.30	92.60	103.50	113.30	122.50	130.90	79.20	91.50	102.40	112.00	121.10	129.60	77.10	89.10	99.60	109.10	117.90	126.00
TRFE 35H	108.10	124.60	139.40	152.80	164.80	176.40	106.70	123.20	137.60	151.00	163.00	174.20	103.80	120.00	134.10	147.10	158.80	169.70
TRFE 45H	138.70	160.20	179.20	196.40	211.90	226.70	137.30	158.40	177.10	194.00	209.40	223.90	133.80	154.50	172.50	189.00	204.20	218.20
TRFE 55H	169.70	195.70	218.90	240.10	259.10	277.00	167.60	193.60	216.50	244.00	256.30	273.90	163.30	188.70	210.80	230.90	249.60	266.80
TRFE 75H	231.30	267.20	298.50	327.00	353.40	377.70	228.50	264.00	293.50	323.50	349.20	373.50	222.80	257.30	287.60	315.00	340.40	364.00
TRFE 100H	308.40	356.20	398.10	436.10	471.00	503.80	304.80	352.00	393.50	431.20	465.70	497.80	297.10	342.90	383.70	419.90	453.70	485.10
TRFE 120H	368.60	425.90	476.20	521.30	563.20	602.40	364.30	420.70	470.50	515.60	556.80	594.90	354.40	410.10	458.70	501.90	542.80	580.10

R22 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.72	0.90	1.08	1.26	1.44	1.62	0.90	1.08	1.26	1.44	1.62	1.80	0.90	1.08	1.26	1.44	1.62	1.80
TCLE 1/2H	1.41	1.58	1.72	1.87	2.01	2.11	1.09	1.20	1.30	1.37	1.48	1.55	0.77	0.84	0.91	0.99	1.06	1.09
TCLE 1H	2.60	2.92	3.20	3.45	3.87	3.87	2.08	2.29	2.46	2.64	2.78	2.92	1.44	0.88	1.72	1.83	1.94	2.04
TCLE 2H	5.28	5.98	6.69	7.04	7.74	8.10	4.22	4.58	4.93	5.28	5.63	5.98	2.99	3.29	3.52	3.87	4.05	4.22
TCLE 3H	9.86	10.91	11.97	13.02	14.08	14.78	7.74	8.45	9.15	9.86	10.56	10.91	5.63	5.98	6.69	7.04	7.39	7.74
TCLE 5H	14.08	15.84	17.25	18.66	20.06	21.47	11.26	12.32	13.38	14.43	15.14	15.84	8.10	8.80	8.50	9.86	10.56	11.26
TCLE 7-1/2H	20.77	22.88	25.34	27.10	29.22	30.98	16.54	17.95	19.36	20.77	21.82	23.23	11.62	12.62	13.73	14.43	15.49	16.19
TCLE 10H	28.51	32.03	34.85	37.66	40.13	42.59	22.52	24.64	26.75	28.51	30.27	32.03	15.84	17.29	18.66	20.06	21.12	22.53
TCLE 12H	34.14	38.37	41.98	45.41	48.58	51.39	27.10	29.92	32.38	34.49	36.31	38.37	19.09	20.77	22.53	24.29	25.70	27.10
TRFE 14H	40.80	45.80	50.00	54.20	57.70	61.20	32.40	35.60	38.40	41.20	43.60	46.10	23.90	26.00	28.20	30.30	32.00	33.80
TRFE 18H	48.90	54.60	59.80	64.80	69.30	73.40	39.10	42.60	46.10	49.30	52.10	54.90	27.50	29.90	32.40	34.50	36.60	38.40
TRFE 22H	61.30	68.30	75.00	81.00	86.60	91.90	48.60	53.50	57.70	61.60	65.50	67.00	37.30	40.50	43.40	45.80	48.20	50.70
TRFE 26H	72.20	81.00	88.70	95.70	102.10	108.40	57.40	63.00	67.90	72.90	77.10	81.30	44.40	47.90	51.40	54.20	57.00	59.80
TRFE 35H	97.20	108.80	119.30	128.80	137.60	146.10	77.40	84.80	91.50	97.90	103.80	109.50	59.50	64.40	68.60	72.70	76.70	80.60
TRFE 45H	125.00	139.80	153.10	165.40	177.10	187.60	99.60	109.10	117.90	126.00	133.80	140.80	76.40	82.70	88.40	93.60	98.70	103.50
TRFE 55H	153.10	171.10	187.30	202.40	216.10	229.50	121.80	133.40	143.90	153.80	163.30	172.10	93.60	101.00	108.10	114.40	120.70	126.70
TRFE 75H	209.80	233.00	255.60	276.00	295.00	313.00	166.10	182.00	196.40	209.80	222.80	234.80	127.40	137.60	147.10	156.00	164.40	172.50
TRFE 100H	278.10	310.80	340.40	367.80	393.20	417.40	221.40	242.50	261.90	278.90	296.70	312.90	170.00	183.40	196.10	208.00	219.30	230.20
TRFE 120H	332.30	371.40	406.90	439.70	470.30	498.90	264.70	289.70	312.90	333.50	354.40	373.80	200.50	216.60	232.00	246.40	260.00	272.80

TCLE/TRFE 扩展容量表（KW）
TCLE,TRFE extended capacity tables

R134a 型号规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.30	0.40	0.60	0.70	0.80	0.80	0.40	0.60	0.70	0.80	1.00	1.10	0.40	0.60	0.70	0.80	1.00	1.10
TCLE 1/4M	1.10	1.20	1.50	1.60	1.80	1.80	1.20	1.50	1.60	1.70	1.90	2.00	1.10	1.40	1.50	1.60	1.80	1.90
TCLE 3/4M	2.10	2.40	2.90	3.10	3.40	3.40	2.30	2.80	3.00	3.20	3.60	3.80	2.20	2.70	2.90	3.10	3.50	3.60
TCLE 1-1/2M	4.40	5.10	6.30	6.80	7.20	7.20	4.90	6.00	6.50	6.90	7.80	8.10	4.70	5.80	6.30	6.70	7.50	7.80
TCLE 2-1/2M	9.80	11.30	13.80	15.00	16.00	16.00	10.90	13.30	14.40	15.40	17.20	18.00	10.50	12.80	13.80	14.80	16.50	17.30
TCLE 3-1/2M	12.60	14.60	17.90	19.30	20.60	20.60	14.00	17.20	18.60	19.80	22.20	23.30	13.50	16.50	17.90	19.10	21.30	22.40
TCLE 5-1/2M	17.40	20.10	24.60	26.50	28.40	28.40	19.30	23.60	25.50	27.30	30.50	32.00	18.60	22.70	24.60	26.20	29.40	30.80
TCLE 7-1/2M	23.40	27.00	33.10	35.70	38.20	38.20	26.00	31.80	34.40	36.70	41.10	43.10	25.00	30.60	33.00	35.30	39.50	41.40
TCLE 9M	27.50	31.70	38.90	42.00	44.90	44.90	30.50	37.40	40.40	43.20	48.30	50.60	29.40	35.90	38.80	41.50	46.40	48.70
TRFE 11M	33.00	38.90	47.00	51.00	54.00	54.00	37.00	45.00	49.00	52.00	58.00	61.00	35.00	43.00	47.00	50.00	56.00	59.00
TRFE 13M	40.00	46.00	56.00	61.00	66.00	66.00	44.00	54.00	59.00	63.00	70.00	73.20	43.00	52.00	56.00	60.00	67.00	71.00
TRFE 16M	49.00	57.00	70.00	75.00	80.00	80.00	55.00	57.00	72.00	77.00	87.00	91.50	53.00	65.00	70.00	74.00	83.00	87.00
TRFE 19M	57.00	68.00	80.00	87.00	93.00	93.00	63.00	77.00	84.00	89.00	100.00	105.20	61.00	74.00	80.00	86.00	96.90	101.90
TRFE 25M	78.00	87.00	107.00	115.00	123.00	123.00	84.00	103.90	111.00	119.00	133.50	139.60	81.00	99.00	107.00	114.00	128.00	134.00
TRFE 31M	94.00	109.00	133.00	144.00	154.00	154.00	105.00	128.00	130.00	148.00	155.20	173.50	101.00	123.00	133.00	142.00	159.00	167.00
TRFE 45M	132.00	152.00	187.00	202.00	216.00	216.00	147.00	180.00	194.00	207.00	232.10	243.00	141.00	173.00	187.00	199.00	223.00	234.00
TRFE 55M	170.00	196.00	240.00	259.00	277.00	277.00	188.00	231.00	249.00	266.00	298.70	312.50	181.00	222.00	240.00	256.00	287.00	300.00
TRFE 68M	206.00	238.00	292.00	315.00	337.00	337.00	229.00	281.00	303.00	324.00	362.40	380.10	220.00	270.00	292.00	312.00	349.00	365.00
TRFE 80M	248.00	283.00	347.00	374.00	400.00	400.00	313.00	334.90	360.00	385.00	432.20	452.10	262.00	321.00	347.00	370.00	415.00	434.00

R134a 型号规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.60	0.70	0.80	1.00	1.10	1.20	0.60	0.70	0.80	1.00	1.10	1.20	0.60	0.70	0.80	1.00	1.10	1.20
TCLE 1/4M	1.10	1.20	1.20	1.40	1.50	1.50	0.72	0.78	0.84	0.94	0.98	1.03	0.47	0.50	0.54	0.60	0.63	0.66
TCLE 3/4M	2.10	2.20	2.40	2.70	2.80	2.90	1.40	1.50	1.60	1.80	1.90	2.00	0.89	0.96	1.03	1.15	1.21	1.26
TCLE 1-1/2M	4.40	4.80	6.10	7.70	8.00	8.30	3.00	3.20	3.40	3.90	4.00	4.20	1.90	2.10	2.20	2.50	2.60	2.70
TCLE 2-1/2M	9.80	10.60	11.30	12.70	13.30	13.90	6.60	7.10	7.60	8.50	8.90	9.30	4.30	4.60	4.90	5.50	5.80	6.00
TCLE 3-1/2M	12.70	13.70	14.60	16.40	17.20	17.90	8.50	9.20	9.80	11.10	11.50	12.10	5.50	5.90	6.30	7.10	7.40	7.80
TCLE 5-1/2M	17.40	18.80	20.10	22.50	23.60	24.70	11.70	12.70	13.50	15.10	15.90	16.60	7.60	8.20	8.70	9.80	10.20	10.70
TCLE 7-1/2M	23.50	25.30	27.10	30.30	31.80	33.20	15.80	17.00	18.20	20.40	21.40	22.30	10.20	11.00	11.70	13.10	13.80	14.40
TCLE 9M	27.60	29.80	31.80	35.50	37.30	39.00	18.50	20.00	21.40	24.00	25.10	26.20	11.90	12.90	13.80	15.40	16.20	16.90
TRFE 11M	33.00	36.00	38.10	43.50	45.70	47.20	22.30	24.60	26.50	29.10	30.30	32.50	14.00	16.00	17.00	19.00	20.00	21.00
TRFE 13M	40.00	43.50	46.20	52.30	54.20	57.50	27.50	29.60	31.20	35.40	36.20	38.40	17.00	19.90	20.00	22.00	23.00	25.00
TRFE 16M	50.20	53.60	57.80	64.20	67.50	70.30	33.40	36.50	38.20	43.20	45.30	47.80	21.00	23.00	25.00	28.00	29.00	30.00
TRFE 19M	57.40	62.50	66.80	74.10	77.50	81.40	38.10	42.20	44.70	50.60	52.20	54.30	25.00	27.00	29.00	32.00	34.00	35.00
TRFE 25M	76.50	82.10	88.60	97.90	103.10	107.50	54.20	55.40	59.60	66.30	69.10	72.10	33.00	36.00	38.00	42.00	44.00	46.00
TRFE 31M	96.20	102.10	108.50	122.30	128.50	134.50	54.60	69.50	73.70	82.90	86.50	90.30	41.00	44.00	47.00	53.00	55.00	58.00
TRFE 45M	123.10	143.20	153.50	171.40	179.60	187.20	89.20	96.30	103.10	115.20	121.40	126.70	57.00	62.00	66.00	74.00	78.00	81.00
TRFE55M	170.20	184.50	197.30	220.50	231.90	241.20	115.30	124.70	132.30	148.20	155.00	162.60	74.00	80.00	85.00	95.00	100.00	104.00
TRFE 68M	207.00	224.30	239.50	267.20	280.10	293.60	139.60	150.40	161.40	180.20	189.70	197.60	90.00	97.00	104.00	115.00	121.00	127.00
TRFE 80M	246.70	266.60	285.90	318.40	335.00	348.70	169.50	180.10	191.90	214.50	224.10	234.70	107.00	116.00	123.00	137.00	144.00	150.00

TCLE/TRFE 扩展容量表（KW）
TCLE,TRFE extended capacity tables

R404A/ R507 型号规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.52	0.69	0.86	1.03	1.21	1.38	0.69	0.86	1.03	1.21	1.38	1.55	0.86	1.03	1.21	1.38	1.55	1.72
TCLE 1/3S	1.53	1.69	1.86	2.03	2.25	2.47	1.35	1.62	1.74	1.88	2.03	2.19	1.49	1.60	1.73	1.87	2.02	2.18
TCLE 2/3S	3.07	3.37	3.71	4.07	4.49	4.93	2.69	3.23	3.49	3.76	4.07	4.39	2.97	3.21	3.47	3.75	4.05	4.37
TCLE 1-1/2 S	6.92	7.61	8.38	9.17	10.14	11.13	6.08	7.29	7.86	8.48	9.17	9.89	6.71	7.23	7.82	8.45	9.13	9.85
TCLE 2 S	9.20	10.12	11.14	12.20	13.48	14.80	8.08	9.70	10.46	11.28	12.20	13.16	8.92	9.62	10.40	11.24	12.14	13.10
TCLE 3-1/2 S	16.10	17.71	19.50	21.35	23.59	25.90	14.14	16.98	18.31	19.74	21.35	23.03	15.61	16.84	18.20	19.67	21.25	22.93
TCLE 5 S	23.00	25.30	27.85	30.50	33.70	37.00	20.20	24.25	26.15	28.20	30.50	32.90	22.30	24.05	26.00	28.10	30.35	32.75
TCLE 7 S	32.20	35.42	38.99	42.70	47.18	51.80	28.28	33.95	36.61	39.48	42.70	46.06	31.22	33.67	36.40	39.34	42.49	45.85
TCLE 8-1/2 S	39.10	43.01	47.35	51.85	57.29	62.90	34.34	41.23	44.46	47.94	51.85	55.93	37.91	40.89	44.20	47.77	51.60	55.68
TRFE 10 S	46.00	50.60	55.70	61.00	67.40	74.00	40.40	48.50	52.30	56.40	61.00	65.80	44.60	48.10	52.00	56.20	60.70	65.50
TRFE 12 S	55.20	60.72	66.84	73.20	80.88	88.80	48.48	58.20	62.76	67.68	73.20	78.96	53.52	57.72	62.40	67.44	72.84	78.60
TRFE 15S	69.00	75.90	83.55	91.50	101.10	111.00	60.60	72.75	78.45	84.60	91.50	98.70	66.90	72.15	78.00	84.30	91.05	98.25
TRFE 18 S	82.80	91.08	100.26	109.80	121.32	133.20	72.72	87.30	94.14	101.52	109.80	118.44	80.28	86.58	93.60	101.16	109.26	117.90
TRFE 25 S	115.09	126.60	139.36	152.62	168.63	185.15	101.08	121.35	130.85	141.11	152.62	164.63	111.59	120.35	130.10	140.61	151.87	163.88
TRFE 32 S	159.98	175.98	193.71	212.14	234.40	257.36	140.50	168.67	181.89	196.15	212.14	228.84	155.11	167.28	180.84	195.45	211.10	227.79
TRFE 38 S	190.37	209.41	230.52	252.45	278.94	306.25	167.20	200.72	216.45	233.41	252.45	272.32	184.58	199.06	215.21	232.59	251.21	271.08
TRFE 52 S	260.81	286.89	315.81	345.86	382.15	419.57	229.06	274.99	296.53	319.78	345.86	373.07	252.87	272.72	294.83	318.64	344.16	371.37
TRFE 70 S	352.10	387.31	426.34	466.91	515.90	566.42	309.23	371.23	400.32	431.70	466.91	503.65	341.38	368.17	398.02	430.17	464.61	501.35
TRFE 84 S	420.79	462.90	509.50	558.00	616.60	676.90	369.60	443.70	478.40	515.90	558.00	601.90	408.00	440.00	475.70	514.10	555.30	599.20
R404A/ R507 型号规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	1.03	1.21	1.38	1.55	1.72	1.90	1.21	1.38	1.55	1.72	1.90	2.07	1.38	1.55	1.72	1.90	2.07	2.24
TCLE 1/3S	1.34	1.47	1.59	1.68	1.79	1.89	1.03	1.08	1.13	1.19	1.25	1.31	0.91	0.96	1.01	1.06	1.11	1.17
TCLE 2/3S	2.69	2.94	3.17	3.37	3.57	3.79	2.05	2.15	2.27	2.38	2.50	2.62	1.83	1.92	2.02	2.11	2.22	2.33
TCLE 1-1/2 S	6.06	6.63	7.16	7.59	8.06	8.54	4.63	4.86	5.11	5.37	5.64	5.91	4.12	4.33	4.56	4.77	5.01	5.26
TCLE 2 S	8.06	8.82	9.52	10.10	10.72	11.36	6.16	6.46	6.80	7.14	7.50	7.86	5.48	5.76	6.06	6.34	6.66	7.00
TCLE 3-1/2 S	14.11	15.44	16.66	17.68	18.76	19.88	10.78	11.31	11.90	12.50	13.13	13.76	9.59	10.08	10.61	11.10	11.66	12.25
TCLE 5 S	20.15	22.05	23.80	25.25	26.80	28.40	15.40	16.15	17.00	17.85	18.75	19.65	13.70	14.40	15.15	15.85	16.65	17.50
TCLE 7 S	28.21	30.87	33.32	35.35	37.52	39.76	21.56	22.61	23.80	24.99	26.25	27.51	19.18	20.16	21.21	22.19	23.31	24.50
TCLE 8-1/2 S	34.26	37.49	40.46	42.93	45.56	48.28	26.18	27.46	28.90	30.35	31.88	33.41	23.29	24.48	25.76	26.95	28.31	29.75
TRFE 10 S	40.30	44.10	47.60	50.50	53.60	56.80	30.80	32.30	34.00	35.70	37.50	39.30	27.40	28.80	30.30	31.70	33.30	35.00
TRFE 12 S	48.36	52.92	57.12	60.60	64.32	68.16	36.96	38.76	40.80	42.84	45.00	47.16	32.88	34.56	36.36	38.04	39.96	42.00
TRFE 15S	60.45	66.15	71.40	75.75	80.40	85.20	46.20	48.45	51.00	53.55	56.25	58.95	41.10	43.20	45.45	47.55	49.95	52.50
TRFE 18 S	72.54	79.38	85.68	90.90	96.48	102.24	55.44	58.14	61.20	64.26	67.50	70.74	49.32	51.84	54.54	57.06	59.94	63.00
TRFE 25 S	100.83	110.34	119.10	126.35	134.11	142.11	77.06	80.81	85.07	89.32	93.83	98.33	68.55	72.06	75.81	79.31	83.32	87.57
TRFE 32 S	129.06	141.23	152.44	161.73	171.66	181.91	98.64	103.44	108.89	114.33	120.10	125.86	87.75	92.23	97.04	101.52	106.65	112.09
TRFE 38 S	153.59	168.07	181.41	192.46	204.27	216.47	117.38	123.10	129.58	136.05	142.91	149.77	104.42	109.76	115.47	120.81	126.91	133.39
TRFE 52 S	210.41	230.25	248.53	263.67	279.85	296.56	160.81	168.64	177.52	186.39	195.79	205.19	143.06	150.37	158.20	165.51	173.86	182.74
TRFE 70 S	284.06	310.84	335.51	355.95	377.80	400.36	217.09	227.67	239.65	251.63	264.32	277.01	193.13	203.00	213.57	223.44	234.72	246.70
TRFE 84 S	339.50	371.50	401.00	425.40	451.50	478.50	259.50	272.10	286.40	300.70	315.90	331.05	230.80	242.40	255.2	267.00	280.50	294.80

TCLE/TRFE 扩展容量表（KW）
TCLE,TRFE extended capacity tables

R407c 型号规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.54	0.72	0.90	1.08	1.26	1.44	0.54	0.72	0.90	1.08	1.26	1.44	0.54	0.72	0.90	1.08	1.26	1.44
TCLE 1/2N	1.39	1.60	1.86	2.03	2.20	2.33	1.37	1.59	1.85	2.02	2.12	2.20	1.35	1.56	1.69	1.86	2.03	2.20
TCLE 1N	2.77	3.20	3.72	4.05	4.40	4.66	2.74	3.18	3.70	4.03	4.24	4.40	2.70	3.11	3.38	3.71	4.05	4.39
TCLE 2N	5.54	6.40	7.44	8.10	8.80	9.32	5.48	6.36	7.40	8.06	8.48	8.80	5.40	6.22	6.76	7.42	8.10	8.78
TCLE 3N	8.31	9.60	11.16	12.15	13.20	13.98	8.22	9.54	11.10	12.09	12.72	13.20	8.10	9.33	10.14	11.13	12.15	13.17
TCLE 5N	13.85	16.00	18.60	20.25	22.00	23.30	13.70	15.90	18.50	20.15	21.20	22.00	13.50	15.55	16.90	18.55	20.25	21.95
TCLE 7-1/2N	20.78	24.00	27.90	30.38	33.00	34.95	20.55	23.85	27.75	30.23	31.80	33.00	20.25	23.33	25.35	27.83	30.38	32.93
TCLE 10N	27.70	32.00	37.20	40.50	44.00	46.60	27.40	31.80	37.00	40.30	42.40	44.00	27.00	31.10	33.80	37.10	40.50	43.90
TCLE 12N	33.24	38.40	44.64	48.60	52.80	55.92	32.88	38.16	44.40	48.36	50.88	52.80	32.40	37.32	40.56	44.52	48.60	52.68
TRFE 14N	38.78	44.80	52.08	56.70	61.60	65.24	38.36	44.52	51.80	56.42	59.36	61.60	37.80	43.54	47.32	51.94	56.70	61.46
TRFE 18N	49.86	57.60	66.96	72.90	79.20	83.88	49.32	57.24	66.60	72.54	76.32	79.20	48.60	55.98	60.84	66.78	72.90	79.02
TRFE 22N	60.94	70.40	81.84	89.10	96.80	102.52	60.28	69.96	81.40	88.66	93.28	96.80	59.40	68.42	74.36	81.62	89.10	96.58
TRFE 26N	72.02	83.20	96.72	105.30	114.40	121.16	71.24	82.68	96.20	104.78	110.24	114.40	70.20	80.86	87.88	96.46	105.30	114.14
TRFE 35N	96.95	112.00	130.20	141.75	154.00	163.10	95.90	111.30	129.50	141.05	148.40	154.00	94.50	108.85	118.30	129.85	141.75	153.65
TRFE 45N	124.65	144.00	167.40	182.25	198.00	209.70	123.30	143.10	166.50	181.35	190.80	198.00	121.50	139.95	152.10	166.95	182.25	197.55
TRFE 55N	152.35	176.00	204.60	222.75	242.00	256.30	150.70	174.90	203.50	221.65	233.20	242.00	148.50	171.05	185.90	204.05	222.75	241.45
TRFE 75N	207.75	240.00	279.00	303.75	330.00	349.50	205.50	238.50	277.50	302.25	318.00	330.00	202.50	233.25	253.50	278.25	303.75	329.25
TRFE 100N	277.00	320.00	372.00	405.00	440.00	466.00	274.00	318.00	370.00	403.00	424.00	440.00	270.00	311.00	338.00	371.00	405.00	439.00
TRFE 120N	332.40	384.00	446.40	486.00	528.00	559.20	328.80	381.60	444.00	483.60	508.80	528.00	324.00	373.20	405.60	445.20	486.00	526.80

R407c 型号规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.72	0.90	1.08	1.26	1.44	1.62	0.90	1.08	1.26	1.44	1.62	1.80	0.90	1.08	1.26	1.44	1.62	1.80
TCLE 1/2N	1.25	1.40	1.54	1.66	1.86	1.91	1.00	1.10	1.18	1.27	1.33	1.40	0.69	0.80	0.83	0.88	0.93	0.98
TCLE 1N	2.50	2.80	3.07	3.31	3.71	3.81	2.00	2.20	2.36	2.53	2.66	2.80	1.38	1.60	1.65	1.75	1.86	1.95
TCLE 2N	5.00	5.60	6.14	6.62	7.42	7.62	4.00	4.40	4.72	5.06	5.32	5.60	2.76	3.20	3.30	3.50	3.72	3.90
TCLE 3N	7.50	8.40	9.21	9.93	11.13	11.43	6.00	6.60	7.08	7.59	7.98	8.40	4.14	4.80	4.95	5.25	5.58	5.85
TCLE 5N	12.50	14.00	15.35	16.55	18.55	19.05	10.00	11.00	11.80	12.65	13.30	14.00	6.90	8.00	8.25	8.75	9.30	9.75
TCLE 7-1/2N	18.75	21.00	23.03	24.83	27.83	28.58	15.00	16.50	17.70	18.98	19.95	21.00	10.35	12.00	12.38	13.13	13.95	14.63
TCLE 10N	25.00	28.00	30.70	33.10	37.10	38.10	20.00	22.00	23.60	25.30	26.60	28.00	13.80	16.00	16.50	17.50	18.60	19.50
TCLE 12N	30.00	33.60	36.84	39.72	44.52	45.72	24.00	26.40	28.32	30.36	31.92	33.60	16.56	19.20	19.80	21.00	22.32	23.40
TRFE 14N	35.00	39.20	42.98	46.34	51.94	53.34	28.00	30.80	33.04	35.42	37.24	39.20	19.32	22.40	23.10	24.50	26.04	27.30
TRFE 18N	45.00	50.40	55.26	59.58	66.78	68.58	36.00	39.60	42.48	45.54	47.88	50.40	24.84	28.80	29.70	31.50	33.48	35.10
TRFE 22N	55.00	61.60	67.54	72.82	81.62	83.82	44.00	48.40	51.92	55.66	58.52	61.60	30.36	35.20	36.30	38.50	40.92	42.90
TRFE 26N	65.00	72.80	79.82	86.06	96.46	99.06	52.00	57.20	61.36	65.78	69.16	72.80	35.88	41.60	42.90	45.50	48.36	50.70
TRFE 35N	87.50	98.00	107.45	115.85	129.85	133.35	70.00	77.00	82.60	88.55	93.10	98.00	48.30	56.00	57.75	61.25	65.10	68.25
TRFE 45N	112.50	126.00	138.15	148.95	166.95	171.45	90.00	99.00	106.20	113.85	119.70	126.00	62.10	72.00	74.25	78.75	83.70	87.75
TRFE 55N	137.50	154.00	168.85	182.05	204.05	209.55	110.00	121.00	129.80	139.15	146.30	154.00	75.90	88.00	90.75	96.25	102.30	107.25
TRFE 75N	187.50	210.00	230.25	248.25	278.25	285.75	150.00	165.00	177.00	189.75	199.50	210.00	103.50	120.00	123.75	131.25	139.50	146.25
TRFE 100N	250.00	280.00	307.00	331.00	371.00	381.00	200.00	220.00	236.00	253.00	266.00	280.00	138.00	160.00	165.00	175.00	186.00	195.00
TRFE 120N	300.00	336.00	368.40	397.20	445.20	457.20	240.00	264.00	283.20	303.60	319.20	336.00	165.60	192.00	198.00	210.00	223.20	234.00

上海恒温控制器厂有限公司

概 述

CRT(E)/CRF(E)系列热力膨胀阀适用于空调、商业制冷、运输空调及冷冻等广泛领域。

特 点

- 可提供MOP（马达过载保护）功能。
- 适用R22, R134a, R407c, R404A/R507,R410A,R290冷媒等介质。
- CRT/CRF为内平衡式；CRTE/CRFE为外平衡式。
- 特殊要求请与上恒联系。

过热度调节

出厂过热度设定为3.5K，静过热度调节范围1～8K。逆时针转动调节杆一圈，过热度减少1K

CRT(E) 系列

General

CRT(E)/CRF(E) thermo-expansion valves are used for refrigeration and air conditioning plant.

Characteristics

- MOP (Max. operating pressure) function is available.
- Suitable for R22, R134a, R407C, R404A/R507,R410A,R290.
- CRT/CRF is internal equalization; CRTE/CRFE is external equalization。
- If you have special requirement , please contact STF.

Superheat adjusting

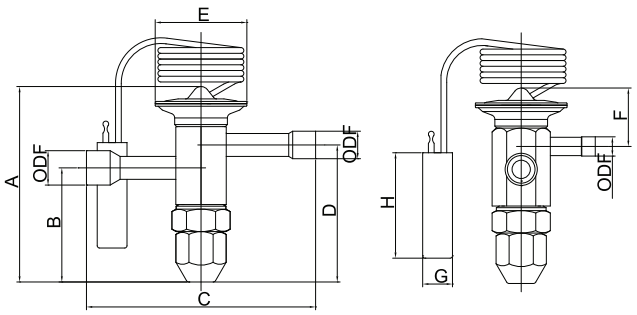
Factory setting :superheat 3.5K, static superheat adjusting range is between 1～8K. Turn adjusting stem anticlockwise one round ,reduces superheat 1K.

CRF(E) 系列

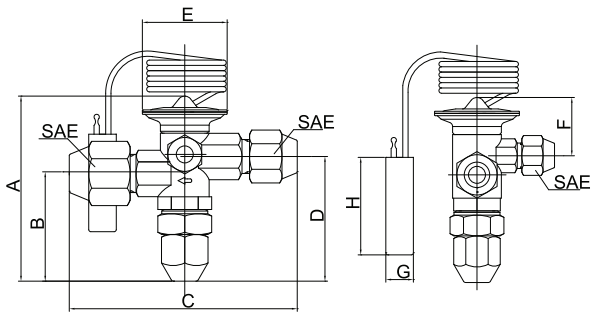
选型表格 Technical data

R22			R407c			R134a			R404A/R507			R410A			R290		
型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)
CRT(E)/CRF(E)	1/8H	0.44	CRT(E)/CRF(E)	1/8N	0.42	CRT(E)/CRF(E)	1/16M	0.24	CRT(E)/CRF(E)	1/10S	0.35	CRT(E)/CRF(E)	3/20Z	0.53	CRT(E)/CRF(E)	1/14L	0.26
CRT(E)/CRF(E)	1/4H	0.88	CRT(E)/CRF(E)	1/4n	0.85	CRT(E)/CRF(E)	1/8M	0.48	CRT(E)/CRF(E)	1/5S	0.70	CRT(E)/CRF(E)	3/10Z	1.06	CRT(E)/CRF(E)	1/7L	0.52
CRT(E)/CRF(E)	1/2H	1.77	CRT(E)/CRF(E)	1/2N	1.70	CRT(E)/CRF(E)	1/4M	0.97	CRT(E)/CRF(E)	2/5S	1.40	CRT(E)/CRF(E)	3/5Z	2.11	CRT(E)/CRF(E)	1/4L	1.04
CRT(E)/CRF(E)	2/3H	2.36	CRT(E)/CRF(E)	2/3N	2.26	CRT(E)/CRF(E)	1/3M	1.30	CRT(E)/CRF(E)	1/2S	1.70	CRT(E)/CRF(E)	4/5Z	2.82	CRT(E)/CRF(E)	1/3L	1.42
CRT(E)/CRF(E)	1H	3.52	CRT(E)/CRF(E)	1N	3.40	CRT(E)/CRF(E)	1/2M	1.94	CRT(E)/CRF(E)	4/5S	2.80	CRT(E)/CRF(E)	1-1/5Z	4.20	CRT(E)/CRF(E)	2/3L	2.11
CRT(E)/CRF(E)	1-1/2H	5.31	CRT(E)/CRF(E)	1-1/2N	4.10	CRT(E)/CRF(E)	3/4M	2.90	CRT(E)/CRF(E)	1-1/5S	4.20	CRT(E)/CRF(E)	1-4/5Z	6.34	CRT(E)/CRF(E)	3/4L	3.18
CRT(E)/CRF(E)	2H	7.08	CRT(E)/CRF(E)	2N	6.80	CRT(E)/CRF(E)	1M	3.65	CRT(E)/CRF(E)	1-3/5S	5.60	CRT(E)/CRF(E)	2-2/5Z	8.45	CRT(E)/CRF(E)	1-1/5L	4.25
CRT(E)/CRF(E)	3H	10.6	CRT(E)/CRF(E)	3N	10.20	CRT(E)/CRF(E)	1-1/2M	5.83	CRT(E)/CRF(E)	2-2/5S	8.45	CRT(E)/CRF(E)	3-3/5Z	12.70	CRT(E)/CRF(E)	1-4/5L	6.36
CRT(E)/CRF(E)	4H	14.1	CRT(E)/CRF(E)	4N	13.60	CRT(E)/CRF(E)	2M	7.75	CRT(E)/CRF(E)	3-1/5S	11.20	CRT(E)/CRF(E)	4-4/5Z	16.90	CRT(E)/CRF(E)	2-2/5L	8.46
CRT(E)/CRF(E)	5H	17.7	CRT(E)/CRF(E)	5N	17.00	CRT(E)/CRF(E)	2-1/2M	9.73	CRT(E)/CRF(E)	4S	14.10	CRT(E)/CRF(E)	6Z	21.10	CRT(E)/CRF(E)	3L	10.62
CRT(E)/CRF(E)	6H	21.2	CRT(E)/CRF(E)	6N	20.40	CRT(E)/CRF(E)	3-1/2M	11.66	CRT(E)/CRF(E)	4-4/5S	16.90	CRT(E)/CRF(E)	7-1/5Z	25.30	CRT(E)/CRF(E)	3-1/2L	12.72
CRT(E)/CRF(E)	7-1/2H	26.5	CRT(E)/CRF(E)	7-1/2N	25.50	CRT(E)/CRF(E)	4M	14.6	CRT(E)/CRF(E)	6S	21.10	CRT(E)/CRF(E)	9Z	31.70	CRT(E)/CRF(E)	4-1/2L	15.90

注：名义制冷量是基于蒸发温度te=4.4℃，冷凝温度tc=40℃,阀前制冷剂温度为t1=38℃。
Note: Nominal capacity is based on evaporating temperature te=4.4℃, condensing temperature tc=40℃,and refrigerant temperature ahead of valve t1= 38℃.
注：如需其它工作特性和规格产品，请与本公司接洽联系。
Note :If you have special requirement ,please contact STF.



CRT(E) 系列膨胀阀



CRF(E)系列膨胀阀

外形尺寸 Dimensions

型号 Model	接管尺寸 Connection size 进口 Inlet	出口 Outlet	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	外平衡接口尺寸 External equalizer connection size	毛细管长度 Capillary length
CRT(E)1/2H	Φ10 3/8 ODF	Φ10 3/8 ODF	87	50	100	60	Φ40	28	Φ13	53	Φ6 1/4 ODF	1m 1.5m
CRT(E)3/4H			87	50	100	60	Φ40	28	Φ13	53		
CRT(E)1H			87	50	100	60	Φ40	28	Φ13	53		
CRT(E)1-1/2H		Φ12 1/2 ODF	87	50	100	60	Φ40	28	Φ13	53		
CRT(E)2H			87	50	100	60	Φ40	28	Φ13	53		
CRT(E)3H			87	50	100	60	Φ40	28	Φ13	53		
CRT(E)4H	Φ12 1/2 ODF	Φ12 Φ16 1/2 5/8 ODF	87	50	100	60	Φ40	28	Φ13	53		
CRT(E)5H			87	50	100	60	Φ40	28	Φ13	53		
CRT(E)6H			87	50	100	60	Φ40	28	Φ13	53		
CRT(E)7-1/2H			87	50	100	60	Φ40	28	Φ13	53		
CRF(E)1/2H	Φ10 3/8 SAE	Φ10 3/8 SAE	87	51	100	60	Φ40	28	Φ13	53	Φ6 1/4 SAE	1m 1.5m
CRF(E)3/4H			87	51	102	59	Φ40	28	Φ13	53		
CRF(E)1H			87	51	102	59	Φ40	28	Φ13	53		
CRF(E)1-1/2H		Φ12 1/2 SAE	87	51	102	59	Φ40	28	Φ13	53		
CRF(E)2H			87	51	102	59	Φ40	28	Φ13	53		
CRF(E)3H			87	51	102	59	Φ40	28	Φ13	53		
CRF(E)4H	Φ12 1/2 SAE	Φ12 1/2 SAE	87	51	102	59	Φ40	28	Φ13	53		
CRF(E)5H			87	51	102	59	Φ40	28	Φ13	53		
CRF(E)6H			87	51	102	59	Φ40	28	Φ13	53		
CRF(E)7-1/2H			87	51	102	59	Φ40	28	Φ13	53		

注：毛细管长度或进出口接管尺寸有特殊要求可与本公司接洽联系。
Note :If you have special requirement on the length of capillary tube and inlet and outlet connection size ,please contact STF.

过冷度修正系数 Super-cooling degree correction coefficient

过冷度△tsub		4K	10K	15K	20K	25K	30K	35K	40K	45K	50K
CRT/CRF-H	R22	1	0.95	0.91	0.88	0.84	0.80	0.78	0.76	0.74	0.71
CRT/CRF-N	R407C	1	0.95	0.91	0.88	0.84	0.80	0.78	0.76	0.74	0.71
CRT/CRF-M	R134a	1	0.92	0.89	0.86	0.82	0.78	0.75	0.73	0.70	0.68
CRT/CRF-S	R404A/507	1	0.92	0.87	0.82	0.78	0.73	0.70	0.67	0.64	0.61
CRT/CRF-Z	R410A	1	0.92	0.89	0.84	0.80	0.77	0.74	0.71	0.69	0.66
CRT/CRF-L	R290	1	0.94	0.90	0.85	0.80	0.76	0.72	0.67	0.63	0.59

注：如果过冷度太低，会形成闪发气体。
Note：keep the enough subcooling to avoid flash gas.
注：当过冷度偏离4k时，选用膨胀阀的制冷量必须修正，膨胀阀修正制冷量为所需制冷量乘以上表中的修正系数，然后根据修正后的制冷量从表中选用发的型号。
Note: when the subcooling isn't 4K, the cooling capacity must be modified. The correction cooling capacity is the required cooling capacity multiply the correction factor from the above list.

TCLE/TRFE 扩展容量表（KW）
TCLE,TRFE extended capacity tables

制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.44	0.29	0.38	0.44	0.48	0.50	0.52	0.53	0.53	0.28	0.37	0.43	0.48	0.49	0.51	0.52	0.51
CRT(E)/CRF(E)1/4H	0.88	0.58	0.76	0.89	0.97	1.00	1.04	1.06	1.05	0.57	0.74	0.87	0.97	0.98	1.01	1.03	1.03
CRT(E)/CRF(E)1/2H	1.77	1.16	1.51	1.78	1.94	2.01	2.08	2.11	2.10	1.13	1.48	1.74	1.94	1.96	2.03	2.06	2.05
CRT(E)/CRF(E)2/3H	2.36	1.55	2.01	2.37	2.58	2.67	2.77	2.81	2.80	1.51	1.97	2.31	2.58	2.61	2.70	2.75	2.73
CRT(E)/CRF(E)1H	3.52	2.32	3.02	3.55	3.87	4.01	4.15	4.22	4.20	2.26	2.95	3.47	3.87	3.92	4.05	4.12	4.10
CRT(E)/CRF(E)1-1/2H	5.31	3.48	4.53	5.33	5.81	6.02	6.23	6.33	6.30	3.39	4.43	5.21	5.81	5.88	6.08	6.18	6.15
CRT(E)/CRF(E)2H	7.08	4.64	6.04	7.10	7.74	8.02	8.30	8.44	8.40	4.52	5.90	6.94	7.74	7.84	8.10	8.24	8.20
CRT(E)/CRF(E)3H	10.60	6.96	9.06	10.65	11.61	12.03	12.45	12.66	12.60	6.78	8.85	10.41	11.61	11.76	12.15	12.36	12.30
CRT(E)/CRF(E)4H	14.10	9.28	12.08	14.20	15.48	16.04	16.60	16.88	16.80	9.04	11.80	13.88	15.48	15.68	16.20	16.48	16.40
CRT(E)/CRF(E)5H	17.70	11.60	15.10	17.75	19.35	20.05	20.75	21.10	21.00	11.30	14.75	17.35	19.35	19.60	20.25	20.60	20.50
CRT(E)/CRF(E)6H	21.20	13.92	18.12	21.30	23.22	24.06	24.90	25.32	25.20	13.56	17.70	20.82	23.22	23.52	24.30	24.72	24.60
CRT(E)/CRF(E)7-1/2H	26.50	17.40	22.65	26.63	29.03	30.08	31.13	31.65	31.50	16.95	22.13	26.03	29.03	29.40	30.38	30.90	30.75
制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 0℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.44	0.27	0.36	0.42	0.46	0.47	0.49	0.50	0.49	0.26	0.33	0.39	0.43	0.44	0.46	0.47	0.46
CRT(E)/CRF(E)1/4H	0.88	0.54	0.71	0.84	0.91	0.94	0.98	0.99	0.99	0.51	0.67	0.78	0.86	0.89	0.92	0.93	0.93
CRT(E)/CRF(E)1/2H	1.77	1.09	1.42	1.67	1.82	1.89	1.95	1.99	1.98	1.03	1.33	1.57	1.71	1.77	1.84	1.87	1.86
CRT(E)/CRF(E)2/3H	2.36	1.45	1.89	2.23	2.43	2.51	2.60	2.65	2.63	1.36	1.77	2.09	2.28	2.36	2.45	2.49	2.47
CRT(E)/CRF(E)1H	3.52	2.18	2.84	3.34	3.64	3.77	3.90	3.97	3.95	2.04	2.66	3.13	3.42	3.54	3.67	3.73	3.71
CRT(E)/CRF(E)1-1/2H	5.31	3.27	4.26	5.01	5.46	5.66	5.85	5.96	5.93	3.06	3.99	4.70	5.13	5.31	5.51	5.60	5.57
CRT(E)/CRF(E)2H	7.08	4.36	5.68	6.68	7.28	7.54	7.80	7.94	7.90	4.10	5.32	6.26	6.84	7.08	7.34	7.46	7.42
CRT(E)/CRF(E)3H	10.60	6.54	8.52	10.02	10.92	11.31	11.70	11.91	11.85	6.12	7.98	9.39	10.26	10.62	11.01	11.19	11.13
CRT(E)/CRF(E)4H	14.10	8.72	11.36	13.36	14.56	15.08	15.60	15.88	15.80	8.16	10.64	12.52	13.68	14.16	14.68	14.92	14.84
CRT(E)/CRF(E)5H	17.70	10.90	14.20	16.70	18.20	18.85	19.50	19.85	19.75	10.20	13.30	15.65	17.10	17.70	18.35	18.65	18.55
CRT(E)/CRF(E)6H	21.20	13.08	17.04	20.04	21.84	22.62	23.40	23.82	23.70	12.24	15.96	18.78	20.52	21.24	22.02	22.38	22.26
CRT(E)/CRF(E)7-1/2H	26.50	16.35	21.30	25.28	27.30	28.28	29.25	29.78	29.63	15.30	19.95	23.48	25.65	26.55	27.53	27.98	27.83
制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature-5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.44	0.24	0.32	0.37	0.40	0.42	0.43	0.44	0.44	0.22	0.28	0.33	0.36	0.38	0.39	0.40	0.40
CRT(E)/CRF(E)1/4H	0.88	0.49	0.63	0.74	0.81	0.84	0.87	0.88	0.88	0.44	0.57	0.67	0.73	0.75	0.78	0.79	0.79
CRT(E)/CRF(E)1/2H	1.77	0.97	1.26	1.49	1.62	1.68	1.74	1.77	1.76	0.87	1.14	1.34	1.46	1.51	1.56	1.59	1.58
CRT(E)/CRF(E)2/3H	2.36	1.29	1.68	1.98	2.15	2.23	2.31	2.35	2.34	1.16	1.51	1.78	1.94	2.00	2.08	2.11	2.11
CRT(E)/CRF(E)1H	3.52	1.94	2.52	2.97	3.23	3.35	3.47	3.53	3.51	1.74	2.27	2.67	2.91	3.01	3.12	3.17	3.16
CRT(E)/CRF(E)1-1/2H	5.31	2.91	3.78	4.46	4.85	5.03	5.21	5.30	5.27	2.61	3.41	4.01	4.37	4.52	4.68	4.76	4.74
CRT(E)/CRF(E)2H	7.08	3.88	5.04	5.94	6.46	6.70	6.94	7.06	7.02	3.48	4.54	5.34	5.82	6.02	6.24	6.34	6.32
CRT(E)/CRF(E)3H	10.60	5.82	7.56	8.91	9.69	10.05	10.41	10.59	10.53	5.22	6.81	8.01	8.73	9.03	9.36	9.51	9.48
CRT(E)/CRF(E)4H	14.10	7.76	10.08	11.88	12.92	13.40	13.88	14.12	14.04	6.96	9.08	10.68	11.64	12.04	12.48	12.68	12.64
CRT(E)/CRF(E)5H	17.70	9.70	12.60	14.85	16.15	16.75	17.35	17.65	17.55	8.70	11.35	13.35	14.55	15.05	15.60	15.85	15.80
CRT(E)/CRF(E)6H	21.20	11.64	15.12	17.82	19.38	20.10	20.82	21.18	21.06	10.44	13.62	16.02	17.46	18.06	18.72	19.02	18.96
CRT(E)/CRF(E)7-1/2H	26.50	14.55	18.90	22.28	24.23	25.13	26.03	26.48	26.33	13.05	17.03	20.03	21.83	22.58	23.40	23.78	23.70
制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -20℃ ℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.44	0.20	0.26	0.31	0.34	0.35	0.36	0.37	0.37	0.18	0.24	0.28	0.30	0.32	0.33	0.33	0.33
CRT(E)/CRF(E)1/4H	0.88	0.40	0.53	0.62	0.68	0.70	0.72	0.73	0.73	0.37	0.48	0.56	0.61	0.63	0.65	0.66	0.66
CRT(E)/CRF(E)1/2H	1.77	0.81	1.05	1.24	1.35	1.39	1.44	1.47	1.46	0.73	0.95	1.12	1.22	1.26	1.31	1.33	1.32
CRT(E)/CRF(E)2/3H	2.36	1.07	1.40	1.65	1.80	1.85	1.92	1.95	1.95	0.97	1.27	1.49	1.62	1.68	1.74	1.77	1.76
CRT(E)/CRF(E)1H	3.52	1.61	2.10	2.47	2.70	2.78	2.88	2.93	2.92	1.46	1.90	2.23	2.43	2.52	2.61	2.65	2.64
CRT(E)/CRF(E)1-1/2H	5.31	2.42	3.15	3.71	4.05	4.17	4.32	4.40	4.38	2.19	2.85	3.35	3.65	3.78	3.92	3.98	3.96
CRT(E)/CRF(E)2H	7.08	3.22	4.20	4.94	5.40	5.56	5.76	5.86	5.84	2.92	3.80	4.46	4.86	5.04	5.22	5.30	5.28
CRT(E)/CRF(E)3H	10.60	4.83	6.30	7.41	8.10	8.34	8.64	8.79	8.76	4.38	5.70	6.69	7.29	7.56	7.83	7.95	7.92
CRT(E)/CRF(E)4H	14.10	6.44	8.40	9.88	10.80	11.12	11.52	11.72	11.68	5.84	7.60	8.92	9.72	10.08	10.44	10.60	10.56
CRT(E)/CRF(E)5H	17.70	8.05	10.50	12.35	13.50	13.90	14.40	14.65	14.60	7.30	9.50	11.15	12.15	12.60	13.05	13.25	13.20
CRT(E)/CRF(E)6H	21.20	9.66	12.60	14.82	16.20	16.68	17.28	17.58	17.52	8.76	11.40	13.38	14.58	15.12	15.66	15.90	15.84
CRT(E)/CRF(E)7-1/2H	26.50	12.08	15.75	18.53	20.25	20.85	21.60	27.98	21.90	10.95	14.25	16.73	18.23	18.90	19.58	19.88	19.80

CRT(E)、CRF(E) 热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -25℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -30℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.44	0.24	0.16	0.21	0.24	0.26	0.27	0.28	0.29	0.29	0.14	0.28	0.22	0.24	0.25	0.26	0.26
CRT(E)/CRF(E)1/4H	0.88	0.49	0.32	0.41	0.48	0.53	0.55	0.55	0.58	0.57	0.29	0.38	0.44	0.48	0.50	0.52	0.53
CRT(E)/CRF(E)1/2H	1.77	0.97	0.63	0.82	0.97	1.06	1.09	1.13	1.15	1.15	0.58	0.75	0.89	0.96	1.00	1.03	1.05
CRT(E)/CRF(E)2/3H	2.36	1.29	0.84	1.09	1.29	1.41	1.45	1.51	1.53	1.53	0.77	1.00	1.18	1.28	1.33	1.37	1.40
CRT(E)/CRF(E)1H	3.52	1.94	1.26	1.64	1.93	2.11	2.18	2.26	2.30	2.29	1.15	1.50	1.77	1.92	2.00	2.06	2.10
CRT(E)/CRF(E)1-1/2H	5.31	2.91	1.89	2.46	2.90	3.17	3.27	3.39	3.45	3.44	1.73	2.25	2.66	2.88	3.00	3.09	3.15
CRT(E)/CRF(E)2H	7.08	3.88	2.52	3.28	3.86	4.22	4.36	4.52	4.60	4.58	2.30	3.00	3.54	3.84	4.00	4.12	4.20
CRT(E)/CRF(E)3H	10.60	5.82	3.78	4.92	5.79	6.33	6.54	6.78	6.90	6.87	3.45	4.50	5.31	5.76	6.00	6.18	6.30
CRT(E)/CRF(E)4H	14.10	7.76	5.04	6.56	7.72	8.44	8.72	9.04	9.20	9.16	4.60	6.00	7.08	7.68	8.00	8.24	8.40
CRT(E)/CRF(E)5H	17.70	9.70	6.30	8.20	9.65	10.55	10.90	11.30	11.50	11.45	5.75	7.50	8.85	9.60	10.00	10.30	10.50
CRT(E)/CRF(E)6H	21.20	11.64	7.56	9.84	11.58	12.66	13.08	13.56	13.80	13.74	6.90	9.00	10.62	11.52	12.00	12.36	12.60
CRT(E)/CRF(E)7-1/2H	26.50	14.55	9.45	12.30	14.48	15.83	16.35	16.95	17.25	17.18	8.63	11.25	13.28	14.40	15.00	15.45	15.75
制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -35℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -40℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.44	0.13	0.16	0.19	0.21	0.22	0.22	0.23	0.23	0.11	0.14	0.16	0.18	0.18	0.19	0.19	0.19
CRT(E)/CRF(E)1/4H	0.88	0.25	0.33	0.38	0.42	0.43	0.45	0.46	0.45	0.21	0.28	0.33	0.35	0.37	0.38	0.39	0.39
CRT(E)/CRF(E)1/2H	1.77	0.50	0.65	0.77	0.84	0.87	0.90	0.91	0.91	0.43	0.55	0.65	0.71	0.74	0.76	0.77	0.77
CRT(E)/CRF(E)2/3H	2.36	0.67	0.87	1.02	1.11	1.15	1.19	1.21	1.21	0.57	0.73	0.87	0.94	0.98	1.01	1.03	1.03
CRT(E)/CRF(E)1H	3.52	1.50	1.95	2.30	2.51	2.60	2.69	2.73	2.72	1.28	1.65	1.95	2.12	2.21	2.28	2.31	2.31
CRT(E)/CRF(E)1-1/2H	5.31	1.00	1.30	1.53	1.67	1.73	1.79	1.82	1.81	0.85	1.10	1.30	1.41	1.47	1.52	1.54	1.54
CRT(E)/CRF(E)2H	7.08	2.00	2.60	3.06	3.34	3.46	3.58	3.64	3.62	1.70	2.20	2.60	2.82	2.94	3.04	3.08	3.08
CRT(E)/CRF(E)3H	10.60	3.00	3.90	4.59	5.01	5.19	5.37	5.46	5.43	2.55	3.30	3.90	4.23	4.41	4.56	4.62	4.62
CRT(E)/CRF(E)4H	14.10	4.00	5.20	6.12	6.68	6.92	7.16	7.28	7.24	3.40	4.40	5.20	5.64	5.88	6.08	6.16	6.16
CRT(E)/CRF(E)5H	17.70	5.00	6.50	7.65	8.35	8.65	8.95	9.10	9.05	4.25	5.50	6.50	7.05	7.35	7.60	7.70	7.70
CRT(E)/CRF(E)6H	21.20	6.00	7.80	9.18	10.02	10.38	10.74	10.92	10.86	5.10	6.60	7.80	8.46	8.82	9.12	9.24	9.24
CRT(E)/CRF(E)7-1/2H	26.50	7.50	9.75	11.48	12.53	12.98	13.43	13.65	13.58	6.38	8.25	9.75	10.58	11.03	11.40	11.55	11.55
制冷剂：R407C 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	16	4	6	8	10	10	14	16
CRT(E)/CRF(E)1/8H	0.42	0.30	0.35	0.40	0.44	0.48	0.48	0.48	0.44	0.44	0.33	0.38	0.42	0.45	0.45	0.45	0.42
CRT(E)/CRF(E)1/4H	0.85	0.59	0.70	0.80	0.81	0.95	0.95	0.95	0.89	0.89	0.67	0.77	0.83	0.91	0.91	0.91	0.85
CRT(E)/CRF(E)1/2H	1.70	1.19	1.40	1.61	1.75	1.90	1.90	1.90	1.78	1.78	1.34	1.54	1.67	1.82	1.82	1.82	1.70
CRT(E)/CRF(E)2/3H	2.26	1.58	1.87	2.14	2.33	2.53	2.53	2.53	2.37	2.37	1.78	2.05	2.22	2.42	2.42	2.42	2.26
CRT(E)/CRF(E)1H	3.40	2.37	2.80	3.21	3.49	3.80	3.80	3.80	3.55	3.55	2.6 7	3.07	3.33	3.63	3.63	3.63	3.39
CRT(E)/CRF(E)1-1/2H	5.10	3.56	4.20	4.82	5.24	5.70	5.70	5.70	5.33	5.33	4.00	4.61	5.00	5.45	5.45	5.45	5.09
CRT(E)/CRF(E)2H	6.80	4.74	5.60	6.42	6.98	7.60	7.60	7.60	7.10	7.10	5.34	6.14	6.66	7.26	7.26	7.26	6.78
CRT(E)/CRF(E)3H	10.20	7.11	8.40	9.63	10.47	11.40	11.40	11.40	10.65	10.65	8.01	9.21	9.99	10.89	10.89	10.89	10.17
CRT(E)/CRF(E)4H	13.60	9.48	11.20	12.84	13.96	15.20	15.20	15.20	14.20	14.20	10.68	12.28	13.32	14.52	14.52	14.52	13.56
CRT(E)/CRF(E)5H	17.00	11.85	14.00	16.05	17.45	19.00	19.00	19.00	17.75	17.75	13.35	15.35	16.65	18.15	18.15	18.15	16.95
CRT(E)/CRF(E)6H	20.40	14.22	16.80	19.26	20.94	22.80	22.80	22.80	21.30	21.30	16.02	18.42	19.88	21.78	21.78	21.78	20.34
CRT(E)/CRF(E)7-1/2H	25.50	17.78	21.00	24.08	26.18	28.50	28.50	28.50	26.63	26.63	20.03	23.03	24.98	27.23	27.23	27.23	25.43
制冷剂：R407C 型号 Model	名义制冷量 Kw	蒸蒸发温度 Evaporating temperature 5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 0℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8H	0.42	0.27	0.31	0.36	0.39	0.43	0.43	0.43	0.40	0.24	0.29	0.33	0.36	0.39	0.39	0.39	0.37
CRT(E)/CRF(E)1/4H	0.85	0.53	0.63	0.72	0.78	0.85	0.85	0.85	0.79	0.49	0.58	0.66	0.72	0.78	0.78	0.78	0.73
CRT(E)/CRF(E)1/2H	1.70	1.06	1.25	1.44	1.56	1.70	1.71	1.70	1.59	0.98	1.15	1.32	1.45	1.56	1.57	1.57	1.46
CRT(E)/CRF(E)2/3H	2.26	1.41	1.67	1.91	2.08	2.67	2.27	2.27	2.11	1.30	1.53	1.76	1.93	2.08	2.09	2.09	1.95
CRT(E)/CRF(E)1H	3.40	2.12	2.50	2.87	3.12	3.40	3.41	3.40	3.17	1.95	2.30	2.64	2.89	3.12	3.13	3.13	2.92
CRT(E)/CRF(E)1-1/2H	5.10	3.18	3.75	4.31	4.68	3.10	5.12	5.10	4.76	2.93	3.45	3.96	4.34	4.68	4.70	4.70	4.38
CRT(E)/CRF(E)2H	6.80	4.24	5.00	5.56	6.24	6.80	6.82	6.80	6.34	3.90	4.60	5.28	5.78	6.24	6.26	6.26	5.84
CRT(E)/CRF(E)3H	10.20	6.36	7.50	8.61	9.36	10.20	10.23	10.20	9.51	5.85	6.90	7.92	8.67	9.36	9.39	9.39	8.76
CRT(E)/CRF(E)4H	13.60	8.48	10.00	11.48	12.48	13.60	13.64	13.60	12.68	7.80	9.20	10.56	11.56	12.48	12.52	12.52	11.68
CRT(E)/CRF(E)5H	17.00	10.60	12.50	14.35	15.60	17.00	17.05	17.00	15.85	9.75	11.50	13.20	14.45	15.60	15.65	15.65	14.60
CRT(E)/CRF(E)6H	20.40	12.72	15.00	17.22	18.72	20.40	20.46	20.40	19.02	11.70	13.80	15.84	17.34	18.72	18.78	18.78	17.52
CRT(E)/CRF(E)7-1/2H	25.50	15.90	18.75	21.53	23.40	25.50	25.58	25.50	23.78	14.63	17.25	19.80	21.68	23.40	23.48	23.48	21.90

CRT(E)、CRF(E) 热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂：R407C 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature-5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8N	0.42	0.23	0.27	0.31	0.33	0.36	0.36	0.36	0.34	0.19	0.23	0.26	0.28	0.31	0.31	0.31	0.29
CRT(E)/CRF(E)1/4N	0.85	0.45	0.53	0.61	0.66	0.72	0.72	0.72	0.67	0.39	0.46	0.52	0.57	0.62	0.62	0.62	0.58
CRT(E)/CRF(E)1/2N	1.70	0.90	1.07	1.22	1.33	1.45	1.45	1.45	1.35	0.77	0.92	1.05	1.17	1.24	1.24	1.24	1.16
CRT(E)/CRF(E)2/3N	2.26	1.20	1.42	1.63	1.77	1.93	1.93	1.93	1.79	1.03	1.22	1.39	1.51	1.65	1.65	1.65	1.54
CRT(E)/CRF(E)1N	3.40	1.80	2.13	2.44	2.65	2.89	2.89	2.89	2.69	1.54	1.83	2.09	2.27	2.48	2.48	2.48	2.31
CRT(E)/CRF(E)1-1/2N	5.10	2.70	3.20	3.66	3.98	4.34	4.34	4.34	4.04	2.31	2.75	3.14	3.41	3.72	3.72	3.72	3.47
CRT(E)/CRF(E)2N	6.80	3.60	4.26	4.88	5.30	5.78	5.78	5.78	5.38	3.08	3.66	4.18	4.54	4.96	4.96	4.96	4.62
CRT(E)/CRF(E)3N	10.20	5.40	6.39	7.32	7.95	8.67	8.67	8.67	8.07	4.62	5.49	6.27	6.81	7.44	7.44	7.44	6.93
CRT(E)/CRF(E)4N	13.60	7.20	8.52	9.76	10.60	11.56	11.56	11.56	10.76	6.16	7.32	8.36	9.08	9.92	9.92	9.92	9.24
CRT(E)/CRF(E)5N	17.00	9.00	10.65	12.20	13.20	14.45	14.45	14.45	13.45	7.70	9.15	10.45	11.35	12.40	12.40	12.40	11.55
CRT(E)/CRF(E)6N	20.40	10.80	12.78	14.64	15.90	17.34	17.34	17.34	16.14	9.24	10.98	12.54	13.62	14.88	14.88	14.88	13.86
CRT(E)/CRF(E)7-1/2N	25.50	13.50	15.98	18.30	19.88	21.68	21.68	21.68	20.18	11.55	13.73	15.68	17.03	18.60	18.60	18.60	17.33
制冷剂：R22 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature-2 0℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8N	0.42	0.17	0.20	0.23	0.25	0.28	0.28	0.28	0.26	0.15	0.18	0.20	0.22	0.24	0.24	0.24	0.23
CRT(E)/CRF(E)1/4N	0.85	0.35	0.41	0.47	0.51	0.55	0.55	0.55	0.52	0.30	0.36	0.41	0.45	0.49	0.49	0.49	0.45
CRT(E)/CRF(E)1/2N	1.70	0.69	0.82	0.93	1.01	1.11	1.11	1.11	1.03	0.60	0.71	0.82	0.89	0.97	0.97	0.97	0.90
CRT(E)/CRF(E)2/3N	2.26	0.92	1.08	1.24	1.35	1.47	1.47	1.47	1.37	0.80	0.95	1.09	1.19	1.29	1.29	1.29	1.20
CRT(E)/CRF(E)1N	3.40	1.38	1.63	1.86	2.02	2.21	2.21	2.21	2.06	1.20	1.42	1.63	1.78	1.94	1.94	1.94	1.80
CRT(E)/CRF(E)1-1/2N	5.10	2.07	2.45	2.79	3.03	3.32	3.32	3.32	3.09	1.80	2.13	2.45	2.67	2.91	2.91	2.91	2.70
CRT(E)/CRF(E)2N	6.80	2.76	3.26	3.72	4.04	4.42	4.42	4.42	4.12	2.40	2.84	3.26	3.56	3.88	3.88	3.88	3.60
CRT(E)/CRF(E)3N	10.20	4.14	4.89	5.58	6.06	6.63	6.63	6.63	6.18	3.60	4.26	4.89	5.34	5.82	5.82	5.82	5.40
CRT(E)/CRF(E)4N	13.60	5.52	6.52	7.44	8.08	8.84	8.84	8.84	8.24	4.80	5.68	6.52	7.12	7.76	7.76	7.76	7.20
CRT(E)/CRF(E)5N	17.00	6.90	8.15	9.30	10.10	11.05	11.05	11.05	10.30	6.00	7.10	8.15	8.90	9.70	9.70	9.70	9.00
CRT(E)/CRF(E)6N	20.40	8.28	9.78	11.16	12.12	13.26	13.26	13.26	12.36	7.20	8.52	9.78	10.68	11.64	11.64	11.64	10.80
CRT(E)/CRF(E)7-1/2N	25.50	10.35	12.23	13.95	15.15	16.58	16.58	16.58	15.45	9.00	10.65	12.23	13.35	14.55	14.55	14.55	13.50
制冷剂：R407C 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature-25℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -30℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8N	0.42	0.13	0.16	0.18	0.20	0.21	0.21	0.21	0.20	0.11	0.14	0.15	0.17	0.18	0.18	0.18	0.17
CRT(E)/CRF(E)1/4N	0.85	0.27	0.31	0.36	0.39	0.43	0.43	0.43	0.40	0.23	0.27	0.31	0.34	0.37	0.37	0.37	0.34
CRT(E)/CRF(E)1/2N	1.70	0.53	0.63	0.72	0.78	0.85	0.85	0.85	0.79	0.46	0.54	0.62	0.67	0.73	0.73	0.73	0.68
CRT(E)/CRF(E)2/3N	2.26	0.71	0.83	0.96	1.04	1.13	1.13	1.13	1.05	0.61	0.72	0.82	0.89	0.97	0.97	0.97	0.91
CRT(E)/CRF(E)1N	3.40	1.06	1.25	1.44	1.56	1.70	1.70	1.70	1.58	0.91	1.08	1.23	1.34	1.46	1.46	1.46	1.36
CRT(E)/CRF(E)1-1/2N	5.10	1.59	1.88	2.16	2.34	2.55	2.55	2.55	2.37	1.37	1.62	1.85	2.01	2.19	2.19	2.19	2.04
CRT(E)/CRF(E)2N	6.80	2.12	2.50	2.88	3.12	3.40	3.40	3.40	3.16	1.82	2.16	2.46	2.68	2.92	2.92	2.92	2.72
CRT(E)/CRF(E)3N	10.20	3.18	3.75	4.32	4.68	5.10	5.10	5.10	4.74	2.73	3.24	3.69	4.02	4.38	4.38	4.38	4.08
CRT(E)/CRF(E)4N	13.60	4.24	5.00	5.76	6.24	6.80	6.80	6.80	6.32	3.64	4.32	4.92	5.36	5.84	5.84	5.84	5.44
CRT(E)/CRF(E)5N	17.00	5.30	6.25	7.20	7.80	8.50	8.50	8.50	7.90	4.55	5.40	6.15	6.70	7.30	7.30	7.30	6.80
CRT(E)/CRF(E)6N	20.40	6.36	7.50	8.64	9.36	10.20	10.20	10.20	9.48	5.46	6.48	7.38	8.04	8.76	8.76	8.76	8.16
CRT(E)/CRF(E)7-1/2N	25.50	7.95	9.38	10.80	11.70	12.75	12.75	12.75	11.85	6.82	8.10	9.23	10.05	10.95	10.95	10.95	10.20
制冷剂：R407C 型号 Model	名义制冷量 Kw	蒸蒸发温度 Evaporating temperature 5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 0℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/8N	0.42	0.10	0.11	0.13	0.14	0.15	0.15	0.15	0.14	0.08	0.09	0.11	0.12	0.13	0.13	0.13	0.12
CRT(E)/CRF(E)1/4N	0.85	0.19	0.23	0.26	0.28	0.31	0.31	0.31	0.29	0.16	0.19	0.22	0.24	0.26	0.26	0.26	0.24
CRT(E)/CRF(E)1/2N	1.70	0.38	0.45	0.52	0.56	0.61	0.61	0.61	0.57	0.32	0.38	0.43	0.47	0.51	0.51	0.51	0.48
CRT(E)/CRF(E)2/3N	2.26	0.51	0.60	0.69	0.75	0.81	0.81	0.81	0.76	0.42	0.50	0.57	0.63	0.68	0.68	0.68	0.63
CRT(E)/CRF(E)1N	3.40	0.76	0.90	1.03	1.12	1.22	1.22	1.22	1.14	0.63	0.75	0.86	0.94	1.02	1.02	1.02	0.95
CRT(E)/CRF(E)1-1/2N	5.10	1.14	1.35	1.55	1.68	1.83	1.83	1.83	1.71	0.95	1.13	1.29	1.41	1.53	1.53	1.53	1.43
CRT(E)/CRF(E)2N	6.80	1.52	1.80	2.06	2.24	2.44	2.44	2.44	2.28	1.26	1.50	1.72	1.88	2.04	2.04	2.04	1.90
CRT(E)/CRF(E)3N	10.20	2.28	2.70	3.09	3.36	3.66	3.66	3.66	3.42	1.89	2.25	2.58	2.82	3.06	3.06	3.06	2.85
CRT(E)/CRF(E)4N	13.60	3.04	3.60	4.12	4.48	4.88	4.88	4.88	4.56	2.52	3.00	3.44	3.76	4.08	4.08	4.08	3.80
CRT(E)/CRF(E)5N	17.00	3.80	4.50	5.15	5.60	6.10	6.10	6.10	5.70	3.15	3.75	4.30	4.70	5.10	5.10	5.10	4.75
CRT(E)/CRF(E)6N	20.40	4.56	5.40	6.18	6.72	7.32	7.32	7.32	6.84	3.78	4.50	5.16	5.64	6.12	6.12	6.12	5.70
CRT(E)/CRF(E)7-1/2N	25.50	5.70	6.75	7.73	8.40	9.15	9.15	9.15	8.55	4.73	5.63	6.45	7.05	7.65	7.65	7.65	7.13

CRT(E)、CRF(E)热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂：R134a 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature20℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 15℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/16M	0.24	0.18	0.23	0.26	0.26	0.28	0.27	0.27	0.26	0.18	0.23	0.27	0.27	0.29	0.28	0.28	0.27
CRT(E)/CRF(E)1/8M	0.48	0.35	0.46	0.52	0.52	0.56	0.55	0.55	0.53	0.36	0.47	0.54	0.54	0.57	0.58	0.58	0.54
CRT(E)/CRF(E)1/4M	0.97	0.71	0.91	1.04	1.04	1.11	1.09	1.09	1.05	0.73	0.94	1.07	1.07	1.14	1.12	1.12	1.08
CRT(E)/CRF(E)1/3M	1.30	0.94	1.22	1.39	1.39	1.48	1.45	1.45	1.40	1.00	1.25	1.43	1.43	1.52	1.49	1.49	1.44
CRT(E)/CRF(E)1/2M	1.94	1.42	1.83	2.09	2.09	2.23	2.18	2.18	2.11	1.45	1.88	2.14	2.14	2.89	2.24	2.24	2.17
CRT(E)/CRF(E)3/4M	2.90	2.12	2.74	3.13	3.13	3.34	3.27	3.27	3.16	2.79	2.81	3.21	3.21	3.43	3.36	3.36	3.25
CRT(E)/CRF(E)1M	3.65	2.83	3.65	4.17	4.17	4.45	4.36	4.36	4.21	2.90	3.75	4.28	4.28	4.57	4.48	4.48	4.33
CRT(E)/CRF(E)1-1/2M	5.83	4.25	5.48	6.26	6.26	6.68	6.54	6.54	6.32	4.35	5.63	6.42	6.42	6.86	6.72	6.72	6.50
CRT(E)/CRF(E)2M	7.75	5.66	7.30	8.34	8.34	8.90	8.72	8.72	8.42	5.80	7.50	8.56	8.56	9.14	8.96	8.96	8.66
CRT(E)/CRF(E)2-1/2M	9.73	7.08	9.13	10.43	10.43	11.13	10.90	10.90	10.53	7.25	9.38	10.70	10.70	11.43	11.20	11.20	10.83
CRT(E)/CRF(E)3-1/2M	11.66	9.91	12.78	14.60	14.60	15.58	15.26	15.26	14.74	10.15	13.13	14.98	14.98	16.00	15.68	15.68	15.16
CRT(E)/CRF(E)4M	14.60	11.32	14.60	16.68	16.68	17.80	17.44	17.44	16.84	11.60	15.00	17.12	17.12	18.28	17.92	17.92	17.32
制冷剂：R134a 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 10℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature5℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/16M	0.24	0.17	0.23	0.26	0.26	0.28	0.27	0.27	0.26	0.16	0.21	0.24	0.24	0.26	0.25	0.25	0.24
CRT(E)/CRF(E)1/8M	0.48	0.35	0.45	0.52	0.52	0.55	0.54	0.54	0.53	0.32	0.42	0.48	0.48	0.51	0.50	0.50	0.48
CRT(E)/CRF(E)1/4M	0.97	0.70	0.91	1.04	1.04	1.10	1.08	1.08	1.05	0.65	0.84	0.96	0.96	1.02	1.00	1.00	0.97
CRT(E)/CRF(E)1/3M	1.30	0.93	1.21	1.38	1.38	1.47	1.44	1.44	1.40	0.86	1.12	1.28	1.28	1.36	1.33	1.33	1.29
CRT(E)/CRF(E)1/2M	1.94	1.40	1.81	2.07	2.07	2.20	2.16	2.16	2.10	1.30	1.68	1.92	1.92	2.04	2.00	2.00	1.94
CRT(E)/CRF(E)3/4M	2.90	2.09	2.72	3.11	3.11	3.30	3.24	3.24	3.15	1.94	2.51	2.87	2.87	3.06	3.00	3.00	2.90
CRT(E)/CRF(E)1M	3.65	2.79	3.62	4.14	4.14	4.40	4.32	4.32	4.20	2.59	3.35	3.83	3.83	4.08	4.00	4.00	3.87
CRT(E)/CRF(E)1-1/2M	5.83	4.19	5.43	6.21	6.21	6.60	6.48	6.48	6.30	3.88	5.03	5.75	5.75	6.12	6.00	6.00	5.81
CRT(E)/CRF(E)2M	7.75	5.58	7.24	8.28	8.28	8.80	8.64	8.64	8.40	5.18	6.70	7.66	7.66	8.16	8.00	8.00	7.74
CRT(E)/CRF(E)2-1/2M	9.73	6.98	9.05	10.35	10.35	11.00	10.80	10.80	10.50	6.48	8.38	9.58	9.58	10.20	10.00	10.00	9.68
CRT(E)/CRF(E)3-1/2M	11.66	9.77	12.67	14.49	14.49	15.40	15.12	15.12	14.70	9.07	11.73	13.41	13.41	14.28	13.60	13.60	13.55
CRT(E)/CRF(E)4M	14.60	11.16	14.48	16.56	16.56	17.60	17.28	17.28	16.80	10.36	13.40	15.32	15.32	16.32	16.00	16.00	15.48
制冷剂：R134a 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 0℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -5℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/16M	0.24	0.15	0.20	0.22	0.22	0.23	0.22	0.22	0.22	0.13	0.17	0.19	0.19	0.20	0.20	0.20	0.19
CRT(E)/CRF(E)1/8M	0.48	0.30	0.39	0.44	0.44	0.46	0.45	0.45	0.43	0.26	0.34	0.38	0.38	0.41	0.40	0.40	0.39
CRT(E)/CRF(E)1/4M	0.97	0.61	0.79	0.88	0.88	0.91	0.89	0.89	0.86	0.52	0.67	0.77	0.77	0.82	0.80	0.80	0.78
CRT(E)/CRF(E)1/3M	1.30	0.81	1.05	1.17	1.17	1.21	1.19	1.19	1.15	0.69	0.90	1.02	1.02	1.09	1.07	1.07	1.03
CRT(E)/CRF(E)1/2M	1.94	1.22	1.58	1.58	1.58	1.82	1.79	1.79	1.73	1.04	1.34	1.53	1.53	1.63	1.60	1.60	1.55
CRT(E)/CRF(E)3/4M	2.90	1.82	2.36	2.63	2.63	2.73	2.68	2.68	2.59	1.55	2.01	2.30	2.30	2.45	2.40	2.40	2.33
CRT(E)/CRF(E)1M	3.65	2.43	3.15	3.51	3.51	3.64	3.57	3.57	3.45	2.07	2.68	3.06	3.06	3.26	3.20	3.20	3.10
CRT(E)/CRF(E)1-1/2M	5.83	3.66	4.73	5.27	5.27	5.46	5.36	5.36	5.18	3.11	4.02	4.59	4.59	4.89	4.80	4.80	4.65
CRT(E)/CRF(E)2M	7.75	4.86	6.30	7.02	7.02	7.28	7.14	7.14	6.90	4.14	5.36	6.12	6.12	6.52	6.40	6.40	6.20
CRT(E)/CRF(E)2-1/2M	9.73	6.08	7.88	8.78	8.78	9.10	8.93	8.93	7.59	5.18	6.70	7.65	7.65	8.15	8.00	8.00	7.75
CRT(E)/CRF(E)3-1/2M	11.66	8.51	11.03	12.29	12.29	12.74	12.50	12.50	12.07	7.25	9.38	10.71	10.71	11.41	11.20	11.20	10.85
CRT(E)/CRF(E)4M	14.60	9.72	12.30	14.04	14.04	14.56	14.28	14.28	13.80	8.28	10.72	12.24	12.24	13.04	12.80	12.80	12.40
制冷剂：R134a 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -10℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature-15℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	
CRT(E)/CRF(E)1/16M	0.24	0.11	0.15	0.17	0.17	0.18	0.18	0.18	0.17	0.10	0.13	0.15	0.15	0.16	0.16	0.16	0.16
CRT(E)/CRF(E)1/8M	0.48	0.23	0.30	0.34	0.34	0.36	0.36	0.36	0.34	0.20	0.26	0.30	0.30	0.32	0.31	0.31	0.31
CRT(E)/CRF(E)1/4M	0.97	0.46	0.59	0.68	0.68	0.73	0.71	0.71	0.69	0.40	0.52	0.59	0.59	0.63	0.62	0.62	0.62
CRT(E)/CRF(E)1/3M	1.30	0.61	0.79	0.90	0.90	0.97	0.95	0.95	0.91	0.53	0.69	0.79	0.79	0.84	0.83	0.83	0.83
CRT(E)/CRF(E)1/2M	1.94	0.92	1.19	1.36	1.36	1.45	1.42	1.42	1.37	0.80	1.04	1.19	1.19	1.26	1.24	1.24	1.24
CRT(E)/CRF(E)3/4M	2.90	1.37	1.78	2.03	2.03	2.18	2.13	2.13	2.06	1.20	1.56	1.78	1.78	1.89	1.86	1.86	1.86
CRT(E)/CRF(E)1M	3.65	1.83	2.37	2.71	2.71	2.90	2.84	2.84	2.74	1.60	2.08	2.37	2.37	2.52	2.48	2.48	2.48
CRT(E)/CRF(E)1-1/2M	5.83	2.75	3.56	4.07	4.07	4.35	4.26	4.26	4.11	2.40	3.12	3.56	3.56	3.78	3.72	3.72	3.72
CRT(E)/CRF(E)2M	7.75	3.66	4.74	5.42	5.42	5.80	5.68	5.68	5.48	3.20	4.16	4.74	4.74	5.04	4.96	4.96	4.96
CRT(E)/CRF(E)2-1/2M	9.73	4.58	5.93	6.78	6.78	7.25	7.10	7.10	6.85	4.00	5.20	5.93	5.93	6.30	6.20	6.20	6.20
CRT(E)/CRF(E)3-1/2M	11.66	6.41	8.30	9.49	9.49	10.15	9.94	9.94	9.59	5.60	7.28	8.30	8.30	8.82	8.68	8.68	8.68
CRT(E)/CRF(E)4M	14.60	7.32	9.48	10.84	10.84	11.60	11.36	11.36	10.96	6.40	8.20	9.48	9.48	10.08	9.92	9.92	9.92

CRT(E)、CRF(E)热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂：R134a 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature-20℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature-25℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/16M	0.24	0.08	0.11	0.13	0.13	0.12	0.13	0.13	0.13	0.07	0.09	0.11	0.11	0.11	0.12	0.12	0.11
CRT(E)/CRF(E)1/8M	0.48	0.17	0.22	0.25	0.25	0.27	0.26	0.26	0.25	0.14	0.18	0.21	0.21	0.23	0.24	0.24	0.21
CRT(E)/CRF(E)1/4M	0.97	0.34	0.44	0.50	0.50	0.53	0.52	0.52	0.50	0.29	0.37	0.25	0.25	0.45	0.48	0.48	0.43
CRT(E)/CRF(E)1/3M	1.30	0.45	0.58	0.67	0.67	0.71	0.69	0.69	0.67	0.38	0.49	0.56	0.56	0.60	0.63	0.63	0.57
CRT(E)/CRF(E)1/2M	1.94	0.67	0.87	1.00	1.00	1.06	1.04	1.04	1.01	0.57	0.74	0.84	0.84	0.90	0.95	0.95	0.85
CRT(E)/CRF(E)3/4M	2.90	1.01	1.31	1.50	1.50	1.59	1.56	1.56	1.51	0.86	1.10	1.26	1.26	1.35	1.43	1.43	1.28
CRT(E)/CRF(E)1M	3.65	1.34	1.74	2.00	2.00	2.12	2.08	2.08	2.01	1.14	1.47	1.68	1.68	1.80	1.90	1.90	1.70
CRT(E)/CRF(E)1-1/2M	5.83	2.01	2.61	3.00	3.00	3.18	3.12	3.12	3.02	1.71	2.21	2.52	2.52	2.70	2.85	2.85	2.55
CRT(E)/CRF(E)2M	7.75	2.68	3.48	4.00	4.00	4.24	4.16	4.16	4.02	2.28	2.94	3.36	3.36	3.60	3.80	3.80	3.40
CRT(E)/CRF(E)2-1/2M	9.73	3.35	4.35	5.00	5.00	5.30	5.20	5.20	5.03	2.85	3.68	4.20	4.20	4.50	4.75	4.75	4.25
CRT(E)/CRF(E)3-1/2M	11.66	4.69	6.09	7.00	7.00	7.42	7.28	7.28	7.04	3.99	5.15	5.88	5.88	6.30	6.65	6.65	5.95
CRT(E)/CRF(E)4M	14.60	5.36	6.96	8.00	8.00	8.48	8.32	8.32	8.04	4.56	5.88	6.72	6.72	7.20	7.60	7.60	6.80
制冷剂:R404A/R507 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/10S	0.35	0.23	0.30	0.42	0.35	0.36	0.35	0.34	0.30	0.22	0.29	0.40	0.33	0.35	0.34	0.33	0.29
CRT(E)/CRF(E)1/5S	0.70	0.46	0.60	0.84	0.69	0.72	0.70	0.68	0.60	0.45	0.58	0.80	0.67	0.69	0.67	0.65	0.57
CRT(E)/CRF(E)2/5S	1.40	0.92	1.20	1.67	1.38	1.44	1.39	1.36	1.19	0.89	1.16	1.61	1.33	1.38	1.34	1.31	1.15
CRT(E)/CRF(E)1/2S	1.70	1.16	1.50	2.09	1.73	1.80	1.74	1.70	1.49	1.12	1.45	2.01	1.66	1.73	1.68	1.64	1.44
CRT(E)/CRF(E)4/5S	2.80	1.85	2.40	3.34	2.77	2.87	2.78	2.72	2.38	1.78	2.31	3.22	2.66	2.77	2.69	2.62	2.30
CRT(E)/CRF(E)1-1/5S	4.20	2.77	3.60	5.02	4.15	4.31	4.18	4.08	3.58	2.68	3.47	4.82	4.00	4.15	4.03	3.92	3.44
CRT(E)/CRF(E)1-3/5S	5.60	3.70	1.80	6.69	5.54	5.74	5.57	5.44	4.77	3.57	4.62	6.43	5.33	5.54	5.38	5.23	4.59
CRT(E)/CRF(E)2-2/5S	8.45	5.54	7.20	10.03	8.30	8.62	8.35	8.16	7.15	5.35	6.94	9.65	7.99	8.30	8.06	7.85	6.89
CRT(E)/CRF(E)3-1/5S	11.20	7.39	9.60	13.38	11.07	11.49	11.14	10.88	9 54	7.14	9.25	12.86	10.66	11.07	10.75	10.46	9.18
CRT(E)/CRF(E)4S	14.10	9.24	12.00	16.72	13.84	14.36	13.92	13.60	11.92	8.92	11.56	16.08	13.32	13.84	13.44	13.08	11.48
CRT(E)/CRF(E)4-4/5S	16.90	11.09	14.40	20.06	16.61	17.23	16.70	16.32	14.30	10.04	13.87	19.30	15.98	16.61	16.13	15.70	13.78
CRT(E)/CRF(E)6S	21.10	13.86	18.00	25.08	20.76	21.54	20.88	20.40	17.88	13.38	17.34	24.12	19.98	20.76	20.16	19.62	17.22
制冷剂:R404A/R507 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature0℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/10S	0.35	0.21	0.27	0.38	0.32	0.33	0.32	0.31	0.27	0.19	0.25	0.35	0.29	0.30	0.29	0.28	0.25
CRT(E)/CRF(E)1/5S	0.70	0.42	0.55	0.76	0.63	0.65	0.63	0.62	0.54	0.39	0.50	0.70	0.58	0.60	0.58	0.57	0.50
CRT(E)/CRF(E)2/5S	1.40	0.84	1.09	1.52	1.26	1.31	1.27	1.24	1.08	0.77	1.00	1.40	1.16	1.20	1.16	1.14	1.00
CRT(E)/CRF(E)1/2S	1.70	1.05	1.37	1.90	1.58	1.64	1.59	1.55	1.36	0.97	1.26	1.75	1.45	1.50	1.46	1.42	1.25
CRT(E)/CRF(E)4/5S	2.80	1.68	2.18	3.04	2.52	2.62	2.54	2.47	2.17	1.54	2.01	2.79	2.32	2.40	2.33	2.27	1.99
CRT(E)/CRF(E)1-1/5S	4.20	2.52	3.28	4.56	3.78	3.92	3.80	3.71	3.25	2.32	3.01	4.19	3.48	3.60	3.49	3.41	2.99
CRT(E)/CRF(E)1-3/5S	5.60	3.36	4.37	6.08	5.04	5.23	5.07	4.94	4.34	3.09	4.02	5.58	4.64	4.80	4.66	4.54	3.98
CRT(E)/CRF(E)2-2/5S	8.45	5.04	6.55	9.12	7.56	7.85	7.61	7.42	6.50	4.63	6.02	8.38	6.96	7.20	6.98	6.82	5.98
CRT(E)/CRF(E)3-1/5S	11.20	6.72	8.74	12.16	10.08	10.46	10.14	9.89	8.67	6.18	8.03	11.17	9.28	9.60	9.31	9.09	7.97
CRT(E)/CRF(E)4S	14.10	8.40	10.92	15.20	12.60	13.08	12.68	12.36	10.84	7.72	10.04	13.96	11.60	12.00	11.64	11.36	9.96
CRT(E)/CRF(E)4-4/5S	16.90	10.08	13.10	18.24	15.12	15.70	15.22	14.83	13.01	9.26	12.05	16.75	13.92	14.40	13.97	13.63	11.95
CRT(E)/CRF(E)6S	21.10	12.60	16.38	22.80	18.90	19.62	19.02	18.54	16.26	11.58	15.06	20.94	17.40	18.00	17.46	17.04	14.94
制冷剂:R404A/R507 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/10S	0.35	0.18	0.23	0.32	0.26	0.27	0.27	0.26	0.26	0.16	0.21	0.29	0.24	0.25	0.24	0.24	0.21
CRT(E)/CRF(E)1/5S	0.70	0.35	0.46	0.64	0.52	0.54	0.53	0.52	0.52	0.32	0.42	0.58	0.49	0.50	0.49	0.48	0.42
CRT(E)/CRF(E)2/5S	1.40	0.70	0.92	1.28	1.04	1.08	1.06	1.04	1.04	0.65	0.84	1.16	0.97	1.01	0.98	0.95	0.84
CRT(E)/CRF(E)1/2S	1.70	0.88	1.15	1.60	1.30	1.35	1.33	1.30	1.30	0.81	1.05	1.45	1.22	1.26	1.22	1.19	1.05
CRT(E)/CRF(E)4/5S	2.80	1.41	1.84	2.56	2.08	2.16	2.13	2.08	2.08	1.30	1.68	2.32	1.94	2.02	1.95	1.90	1.67
CRT(E)/CRF(E)1-1/5S	4.20	2.11	2.76	3.84	3.12	3.24	3.19	3.12	3.12	1.94	2.52	3.48	2.92	3.02	2.93	2.86	2.51
CRT(E)/CRF(E)1-3/5S	5.60	2.82	3.68	5.12	4.16	4.32	4.26	4.16	4.16	2.59	3.36	4.64	3.89	4.03	3.90	3.81	3.34
CRT(E)/CRF(E)2-2/5S	8.45	4.22	5.52	7.68	6.24	6.48	6.38	6.24	6.24	3.89	5.04	6.96	5.83	6.05	5.86	5.71	5.02
CRT(E)/CRF(E)3-1/5S	11.20	5.63	7.36	10.24	8.32	8.64	8.51	8.32	8.32	5.18	6.72	9.28	7.78	8.06	7.81	7.62	6.69
CRT(E)/CRF(E)4S	14.10	7.04	9.20	12.80	10.40	10.80	10.64	10.40	10.40	6.48	8.40	11.60	9.72	10.08	9.76	9.52	8.36
CRT(E)/CRF(E)4-4/5S	16.90	8.45	11.04	15.36	12.48	12.96	10.77	12.48	12.48	7.78	10.08	13.92	11.66	12.10	11.71	11.42	10.03
CRT(E)/CRF(E)6S	21.10	10.56	13.80	19.20	15.60	16.20	15.96	15.60	15.60	9.72	12.60	17.40	14.58	15.12	14.64	14.28	15.54

CRT(E)、CRF(E) 热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂:R404A/R507 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -20℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/10S	0.35	0.15	0.19	0.26	0.22	0.23	0.22	0.21	0.19	0.13	0.16	0.23	0.18	0.20	0.19	0.19	0.16
CRT(E)/CRF(E)1/5S	0.70	0.29	0.38	0.52	0.43	0.45	0.43	0.43	0.37	0.25	0.33	0.46	0.37	0.39	0.38	0.37	0.32
CRT(E)/CRF(E)2/5S	1.40	0.58	0.75	1.05	0.87	0.90	0.87	0.85	0.74	0.50	0.66	0.91	0.74	0.78	0.76	0.74	0.65
CRT(E)/CRF(E)1/2S	1.70	0.73	0.94	1.31	1.09	1.13	1.09	1.07	0.93	0.63	0.82	1.14	0.92	0.98	0.95	0.93	0.81
CRT(E)/CRF(E)4/5S	2.80	1.16	1.50	2.10	1.74	1.80	1.74	1.70	1.49	1.01	1.31	1.82	1.47	1.57	1.52	1.48	1.30
CRT(E)/CRF(E)1-1/5S	4.20	1.74	2.26	3.14	2.60	2.70	2.62	2.56	2.23	1.51	1.97	2.74	2.21	2.35	2.29	2.22	1.94
CRT(E)/CRF(E)1-3/5S	5.60	2.32	3.01	4.19	3.47	3.60	3.49	3.41	2.98	2.02	2.62	3.65	2.94	3.14	3.04	2.96	2.59
CRT(E)/CRF(E)2-2/5S	8.45	3.48	4.51	6.29	5.21	5.40	5.23	5.11	4.46	3.02	3.94	5.47	4.42	4.70	4.56	4.44	3.89
CRT(E)/CRF(E)3-1/5S	11.20	4.64	6.02	8.38	6.94	7.20	6.98	6.82	5.95	4.03	5.25	7.30	5.89	6.27	6.08	5.92	5.18
CRT(E)/CRF(E)4S	14.10	5.80	7.52	10.48	8.68	9.00	8.72	8.52	7.44	5.04	6.56	9.12	7.36	7.84	7.60	7.40	6.48
CRT(E)/CRF(E)4-4/5S	16.90	6.96	9.02	12.58	10.41	10.80	10.46	10.22	8.93	6.25	7.87	10.94	8.83	9.41	9.12	8.88	7.78
CRT(E)/CRF(E)6S	21.10	8.70	11.28	15.72	13.02	13.50	13.08	12.78	11.16	7.56	9.84	13.68	11.04	11.76	11.40	11.10	9.72
制冷剂:R404A/R507 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -25℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -30℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/10S	0.35	0.11	0.14	0.20	0.16	0.17	0.17	0.16	0.14	0.10	0.12	0.17	0.14	0.15	0.14	0.14	0.14
CRT(E)/CRF(E)1/5S	0.70	0.22	0.28	0.40	0.33	0.34	0.33	0.32	0.28	0.19	0.24	0.34	0.28	0.29	0.28	0.28	0.27
CRT(E)/CRF(E)2/5S	1.40	0.44	0.57	0.79	0.66	0.68	0.66	0.64	0.56	0.35	0.49	0.68	0.57	0.59	0.57	0.56	0.54
CRT(E)/CRF(E)1/2S	1.70	0.55	0.71	0.99	0.82	0.85	0.83	0.80	0.70	0.48	0.74	0.86	0.71	0.74	0.71	0.70	0.68
CRT(E)/CRF(E)4/5S	2.80	0.87	1.14	1.58	1.31	1.36	1.32	1.28	1.12	0.76	0.98	1.37	1.14	1.18	1.14	1.11	1.08
CRT(E)/CRF(E)1-1/5S	4.20	1.31	1.70	2.38	1.97	2.04	1.98	1.92	1.68	1.14	1.46	2.05	1.70	1.76	1.70	1.67	1.62
CRT(E)/CRF(E)1-3/5S	5.60	1.74	2.27	3.17	2.62	2.72	2.64	2.56	2.24	1.52	1.95	2.74	2.27	2.35	2.27	2.22	2.16
CRT(E)/CRF(E)2-2/5S	8.45	2.62	3.41	4.75	3.94	4.08	3.96	3.84	3.36	2.28	2.93	4.10	3.41	3.53	3.41	3.36	3.24
CRT(E)/CRF(E)3-1/5S	11.20	3.49	4.54	6.34	5.25	5.44	5.28	5.12	4.48	3.04	3.90	5.47	4.54	4.70	4.54	4.45	4.32
CRT(E)/CRF(E)4S	14.10	4.36	5.68	7.92	6.56	6.80	6.60	6.40	5.60	3.80	4.88	6.84	5.68	5.88	5.68	5.56	5.40
CRT(E)/CRF(E)4-4/5S	16.90	5.23	6.82	9.50	7.87	8.16	7.92	7.68	6.72	4.56	5.86	8.21	6.82	7.06	6.82	6.67	6.48
CRT(E)/CRF(E)6S	21.10	6.54	8.52	11.88	9.84	10.20	9.90	9.60	8.40	5.70	7.32	10.26	8.52	8.82	8.52	8.34	8.10
制冷剂:R404A/R507 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -35℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -40℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E)1/10S	0.35	0.08	0.10	0.14	0.12	0.12	0.12	0.11	0.10	0.06	0.08	0.11	0.10	0.10	0.10	0.09	0.08
CRT(E)/CRF(E)1/5S	0.70	0.16	0.20	0.28	0.23	0.24	0.23	0.23	0.20	0.13	0.16	0.23	0.19	0.20	0.19	0.19	0.16
CRT(E)/CRF(E)2/5S	1.40	0.31	0.40	0.56	0.46	0.48	0.47	0.46	0.40	0.25	0.33	0.46	0.38	0.39	0.38	0.37	0.32
CRT(E)/CRF(E)1/2S	1.70	0.39	0.51	0.70	0.58	0.60	0.59	0.57	0.50	0.32	0.41	0.57	0.48	0.49	0.48	0.47	0.41
CRT(E)/CRF(E)4/5S	2.80	0.62	0.81	1.12	0.93	0.96	0.94	0.91	0.80	0.50	0.66	0.91	0.76	0.78	0.76	0.74	0.65
CRT(E)/CRF(E)1-1/5S	4.20	0.94	1.21	1.68	1.39	1.44	1.40	1.37	1.20	0.76	0.98	1.37	1.17	1.18	1.14	1.12	0.97
CRT(E)/CRF(E)1-3/5S	5.60	1.25	1.62	2.24	1.86	1.92	1.87	1.82	1.60	1.01	1.31	1.82	1.52	1.57	1.52	1.49	1.30
CRT(E)/CRF(E)2-2/5S	8.45	1.87	2.42	3.36	2.78	2.88	2.81	2.74	2.40	1.51	1.97	2.74	2.28	2.35	2.28	2.23	1.94
CRT(E)/CRF(E)3-1/5S	11.20	2.50	3.23	4.48	3.71	3.84	3.74	3.65	3.20	2.02	2.62	3.65	3.04	3.14	3.04	2.98	2.59
CRT(E)/CRF(E)4S	14.10	3.12	4.04	5.60	4.64	4.80	4.68	4.56	4.00	2.52	3.28	4.56	3.80	3.92	3.80	3.72	3.24
CRT(E)/CRF(E)4-4/5S	16.90	3.74	4.85	6.72	5.57	5.76	5.62	5.47	4.80	3.02	3.94	5.47	4.56	4.70	4.56	4.46	3.89
CRT(E)/CRF(E)6S	21.10	4.68	6.06	8.40	6.96	7.20	7.02	6.84	6.00	3.78	4.92	6.84	5.70	5.88	5.70	5.58	4.86
制冷剂:R410A 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 10℃ 通过阀的压降 Pressure drop across valve (bar)							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
CRT(E)/CRF(E)3/20Z	0.53	0.38	0.41	0.56	0.60	0.64	0.68	0.66	0.66	0.34	0.37	0.50	0.53	0.57	0.60	0.60	0.54
CRT(E)/CRF(E)3/10Z	1.06	0.77	0.83	1.13	1.20	1.27	1.35	1.32	1.32	0.68	0.74	1.01	1.07	1.13	1.20	1.20	1.08
CRT(E)/CRF(E)3/5Z	2.11	1.53	1.66	2.27	2.40	2.54	2.70	2.64	2.64	1.35	1.47	2.01	2.14	2.26	2.40	2.40	2.16
CRT(E)/CRF(E)4/5Z	2.82	2.04	2.21	3.02	3.20	3.39	3.60	3.52	3.52	1.80	1.96	2.68	2.85	3.02	3.20	3.20	2.88
CRT(E)/CRF(E)1-1/5Z	4.20	3.06	3.32	4.53	4.81	5.09	5.40	5.33	5.33	2.71	2.94	4.02	4.27	4.52	4.79	4.73	4.33
CRT(E)/CRF(E)1-4/5Z	6.34	4.59	4.97	6.80	7.20	7.63	8.10	7.92	7.92	4.05	4.41	6.03	6.41	6.79	7.20	7.20	6.48
CRT(E)/CRF(E)2-2/5Z	8.45	6.12	6.62	9.07	9.60	10.18	10.80	10.56	10.56	5.40	5.88	8.04	8.54	9.05	9.60	9.60	8.64
CRT(E)/CRF(E)3-3/5Z	12.70	9.18	9.94	13.61	14.40	15.26	16.20	15.84	15.84	8.10	8.82	12.06	12.82	13.57	14.40	14.40	12.96
CRT(E)/CRF(E)4-4/5Z	16.90	12.24	13.25	18.14	19.20	20.35	21.60	21.12	21.12	10.80	11.76	16.08	17.09	18.10	19.20	19.20	17.28
CRT(E)/CRF(E)6Z	21.10	15.30	16.56	22.68	24.00	25.44	27.00	26.40	26.40	13.50	14.70	20.10	21.36	22.62	24.00	24.00	31.60
CRT(E)/CRF(E)7-1/5Z	25.30	18.36	19.87	27.22	28.80	30.53	32.40	31.68	31.68	16.20	17.64	24.12	25.63	27.14	28.80	28.80	25.92
CRT(E)/CRF(E)9Z	31.70	22.95	24.84	34.02	36.00	38.16	40.50	39.60	39.60	20.25	22.05	30.15	32.04	33.93	36.00	36.00	32.40

CRT(E)、CRF(E) 热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂:R410A 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -20℃ 通过阀的压降 Pressure drop across valve (bar)							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
CRT(E)/CRF(E)3/20Z	0.53	0.33	0.36	0.49	0.52	0.55	0.58	0.57	0.53	0.32	0.34	0.45	0.50	0.52	0.56	0.55	0.50
CRT(E)/CRF(E)3/10Z	1.06	0.66	0.71	0.98	1.04	1.10	1.16	1.15	1.05	0.63	0.68	0.89	0.99	1.05	1.11	1.10	1.00
CRT(E)/CRF(E)3/5Z	2.11	1.32	1.43	1.95	2.07	2.19	2.33	2.30	2.10	1.26	1.36	1.78	1.98	2.09	2.22	2.19	2.00
CRT(E)/CRF(E)4/5Z	2.82	1.76	1.90	2.60	2.76	2.92	3.10	3.06	2.80	1.68	1.82	2.38	2.64	2.79	2.96	2.92	2.67
CRT(E)/CRF(E)1-1/5Z	4.20	2.64	2.86	3.91	4.15	4.39	4.66	4.60	4.20	2.52	2.73	3.57	3.96	4.19	4.45	4.39	4.01
CRT(E)/CRF(E)1-4/5Z	6.34	3.96	4.28	5.85	6.21	6.57	6.98	6.89	6.30	3.78	4.09	5.35	5.94	6.28	6.66	6.57	6.01
CRT(E)/CRF(E)2-2/5Z	8.45	5.28	5.71	7.80	8.28	8.76	9.31	9.19	8.40	5.04	5.48	7.13	7.92	8.38	8.88	8.76	8.02
CRT(E)/CRF(E)3-3/5Z	12.70	7.92	8.57	11.70	12.42	13.14	13.97	13.79	12.60	7.56	8.17	10.69	11.88	12.56	13.32	13.14	12.02
CRT(E)/CRF(E)4-4/5Z	16.90	10.56	11.42	15.60	16.56	17.52	18.62	18.38	16.80	10.08	10.90	14.26	15.84	16.75	17.76	17.52	16.03
CRT(E)/CRF(E)6Z	21.10	13.20	14.28	19.50	20.70	21.90	23.28	22.98	21.00	12.60	13.62	17.82	19.80	20.94	22.20	21.90	20.04
CRT(E)/CRF(E)7-1/5Z	25.30	15.84	17.14	23.40	24.84	26.28	27.94	27.58	25.20	15.12	16.34	21.38	23.76	25.13	26.64	26.28	24.05
CRT(E)/CRF(E)9Z	31.70	19.80	21.42	29.25	31.05	32.85	34.92	34.47	31.50	18.90	20.43	26.73	29.70	31.41	33.30	32.85	30.06
制冷剂:R410A 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -10℃ 通过阀的压降 Pressure drop across valve (bar)							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
CRT(E)/CRF(E)3/20Z	0.53	0.29	0.31	0.42	0.45	0.48	0.50	0.50	0.45	0.26	0.27	0.38	0.40	0.43	0.45	0.45	0.45
CRT(E)/CRF(E)3/10Z	1.06	0.57	0.62	0.84	0.90	0.95	1.01	0.99	0.91	0.51	0.56	0.76	0.81	0.85	0.91	0.89	0.89
CRT(E)/CRF(E)3/5Z	2.11	1.14	1.23	1.69	1.79	1.90	2.02	1.99	1.81	1.02	1.11	1.52	1.61	1.70	1.81	1.79	1.79
CRT(E)/CRF(E)4/5Z	2.82	1.52	1.64	2.25	2.39	2.54	2.69	2.65	2.42	1.36	1.48	2.02	2.15	2.27	2.42	2.38	2.38
CRT(E)/CRF(E)1-1/5Z	4.20	2.28	2.47	3.38	3.59	3.80	4.03	3.98	3.63	2.05	2.23	3.04	3.23	3.41	3.63	3.58	3.58
CRT(E)/CRF(E)1-4/5Z	6.34	3.42	3.69	5.06	5.38	5.71	6.05	5.96	5.44	3.06	3.33	4.55	4.84	5.11	5.44	5.36	5.36
CRT(E)/CRF(E)2-2/5Z	8.45	4.56	4.92	6.74	7.18	7.61	9.06	7.94	7.25	4.08	4.44	6.07	6.46	6.82	7.25	7.15	7.15
CRT(E)/CRF(E)3-3/5Z	12.70	6.84	7.38	10.12	10.76	11.41	12.10	11.92	10.87	6.12	6.66	9.11	9.68	10.22	10.87	10.73	10.73
CRT(E)/CRF(E)4-4/5Z	16.90	9.12	9.84	13.49	14.38	15.22	16.13	15.89	14.50	8.16	8.88	12.14	12.91	13.63	14.50	14.30	14.30
CRT(E)/CRF(E)6Z	21.10	11.40	12.30	16.86	17.94	19.02	20.16	19.86	18.12	10.20	11.10	15.18	16.14	17.04	18.12	17.88	17.88
CRT(E)/CRF(E)7-1/5Z	25.30	13.68	14.76	20.23	21.53	21.82	24.19	23.83	21.74	12.24	13.32	18.22	19.37	20.45	21.74	21.46	21.46
CRT(E)/CRF(E)9Z	31.70	17.10	18.45	25.29	36.91	28.53	30.24	29.79	27.18	16.30	16.65	22.77	24.21	25.56	27.18	26.82	26.82
制冷剂:R410A 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -20℃ 通过阀的压降 Pressure drop across valve (bar)							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
CRT(E)/CRF(E)3/20Z	0.53	0.23	0.24	0.33	0.35	0.37	0.39	0.39	0.35	0.20	0.22	0.30	0.32	0.32	0.35	0.35	0.32
CRT(E)/CRF(E)3/10Z	1.06	0.45	0.48	0.66	0.71	0.74	0.79	0.78	0.70	0.40	0.44	0.59	0.63	0.65	0.71	0.70	0.64
CRT(E)/CRF(E)3/5Z	2.11	0.90	0.97	1.32	1.41	1.49	1.58	1.56	1.40	0.80	0.87	1.19	1.26	1.30	1.42	1.40	1.28
CRT(E)/CRF(E)4/5Z	2.82	0.75	1.29	1.76	1.88	1.98	2.10	2.08	1.86	1.07	1.16	1.58	1.68	1.73	1.89	1.86	1.70
CRT(E)/CRF(E)1-1/5Z	4.20	1.80	1.94	2.65	2.82	2.98	3.16	3.12	2.80	1.61	1.74	2.38	2.53	2.67	2.84	2.80	2.56
CRT(E)/CRF(E)1-4/5Z	6.34	2.70	2.90	3.96	4.23	4.46	4.73	4.68	4.19	2.41	2.61	3.56	3.78	3.89	4.25	4.19	3.83
CRT(E)/CRF(E)2-2/5Z	8.45	3.60	3.86	5.28	5.64	5.95	6.31	6.24	5.59	3.22	3.48	4.75	5.04	5.18	5.66	5.59	5.11
CRT(E)/CRF(E)3-3/5Z	12.70	5.40	5.80	7.92	8.46	8.93	9.47	9.36	8.39	4.82	5.22	7.13	7.56	7.78	8.50	8.39	7.67
CRT(E)/CRF(E)4-4/5Z	16.90	7.20	7.73	10.56	11.28	11.90	12.62	12.48	11.18	6.43	6.96	9.50	10.08	10.37	11.33	11.18	10.22
CRT(E)/CRF(E)6Z	21.10	9.00	9.66	13.20	14.10	14.88	15.78	15.60	13.98	8.04	8.70	11.88	12.60	12.96	14.16	13.98	12.78
CRT(E)/CRF(E)7-1/5Z	25.30	10.80	11.59	15.84	16.92	17.86	18.94	18.72	16.78	9.65	10.44	14.26	15.12	15.55	16.99	16.78	15.34
CRT(E)/CRF(E)9Z	31.70	13.50	14.49	19.80	21.15	22.32	23.67	23.40	20.97	12.06	13.05	17.82	18.90	19.44	21.24	20.97	19.17
制冷剂:R410A 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -25℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -30℃ 通过阀的压降 Pressure drop across valve (bar)							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
CRT(E)/CRF(E)3/20Z	0.53	0.18	0.19	0.26	0.28	0.30	0.31	0.31	0.42	0.15	0.17	0.23	0.24	0.26	0.36	0.27	0.25
CRT(E)/CRF(E)3/10Z	1.06	0.35	0.38	0.53	0.56	0.59	0.63	0.62	0.83	0.31	0.34	0.46	0.49	0.52	0.73	0.54	0.50
CRT(E)/CRF(E)3/5Z	2.11	0.71	0.77	1.05	1.12	1.18	1.25	1.24	1.67	0.62	0.67	0.91	0.97	1.03	1.45	1.08	0.99
CRT(E)/CRF(E)4/5Z	2.82	0.94	1.02	1.40	1.49	1.58	1. 67	1.65	2.22	0.82	0.90	1.22	1.30	1.38	1.94	1.44	1.32
CRT(E)/CRF(E)1-1/5Z	4.20	1.42	1.54	2.10	2.23	2.36	2.51	2.47	3.34	1.24	1.34	1.82	1.94	2.06	2.90	2.16	1.98
CRT(E)/CRF(E)1-4/5Z	6.34	1.42	1.54	2.11	2.24	2.37	2.51	2.48	3.34	1.24	1.34	1.83	1.95	2.06	2.91	2.16	2.97
CRT(E)/CRF(E)2-2/5Z	8.45	2.83	3.07	4.20	4.4 6	4.73	5.02	4.94	6.67	2.47	2.69	3.65	3.89	4.13	5.81	4.32	3.96
CRT(E)/CRF(E)3-3/5Z	12.70	4.25	4.61	6.30	6.70	7.09	7.52	7.42	10.01	3.71	4.03	5.47	5.83	6.19	8.71	6.48	5.94
CRT(E)/CRF(E)4-4/5Z	16.90	5.66	6.14	8.40	8.93	9.46	10.03	9.89	13.34	4.94	5.38	7.30	7.78	8.26	11.62	8.64	7.92
CRT(E)/CRF(E)6Z	21.10	7.08	7.68	10.50	11.16	11.82	12.54	12.36	16.68	6.18	6.72	9.12	9.72	10.32	14.52	10.80	9.90
CRT(E)/CRF(E)7-1/5Z	25.30	8.50	9.22	12.60	13.39	14.18	15.05	14.83	20.02	7.42	8.06	10.94	11.66	12.38	17.42	12.96	11.88
CRT(E)/CRF(E)9Z	31.70	10.62	11.52	15.75	16.74	17.73	18.81	18.54	25.02	9.27	10.08	13.68	14.58	15.48	21.78	16.20	14.85

CRT(E)、CRF(E) 热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂:R410A 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -35℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -40℃ 通过阀的压降 Pressure drop across valve (bar)							
		3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
CRT(E)/CRF(E)3/20Z	0.53	0.14	0.15	0.20	0.22	0.23	0.24	0.24	0.24	0.12	0.13	0.18	0.19	0.20	0.21	0.21	0.19
CRT(E)/CRF(E)3/10Z	1.06	0.27	0.30	0.41	0.44	0.46	0.49	0.49	0.49	0.24	0.26	0.36	0.38	0.41	0.43	0.43	0.39
CRT(E)/CRF(E)3/5Z	2.11	0.55	0.60	0.82	0.87	0.92	0.98	0.97	0.97	0.48	0.53	0.72	0.77	0.81	0.86	0.86	0.77
CRT(E /CRF(E)4/5Z	2.82	0.73	0.80	1.08	1.16	1.22	1.30	1.30	1.30	0.64	0.70	0.96	1.02	1.08	1.14	1.14	1.03
CRT(E /CRF(E)1-1/5Z	4.20	1.10	1.20	1.64	1.74	1.84	1.96	1.93	1.93	0.97	1.05	1.44	1.53	1.62	1.72	1.72	1.55
CRT(E /CRF(E)1-4/5Z	6.34	1.64	1.80	2.45	2.61	2.75	2.93	2.92	2.92	1.44	1.58	2.16	2.30	2.43	2.57	2.57	2.32
CRT(E /CRF(E)2-2/5Z	8.45	2.18	2.40	3.26	3.48	3.67	3.91	3.89	3.89	1.92	2.11	2.88	3.07	3.24	3.43	3.43	3.10
CRT(E /CRF(E)3-3/5Z	12.70	3.28	3.60	4.90	5.22	5.51	5.87	5.83	5.83	2.88	3.17	4.32	4.61	4.86	5.15	5.15	4.64
CRT(E /CRF(E)4-4/5Z	16.90	4.37	4.80	6.53	6.96	7.34	7.82	7.78	7.78	3.84	4.22	5.76	6.14	6.48	6.86	6.86	6.19
CRT(E /CRF(E)6Z	21.10	5.46	6.00	8.16	8.70	9.18	9.78	9.72	9.72	4.80	5.28	7.20	7.68	8.10	8.58	8.58	7.74
CRT(E /CRF(E)7-1/5Z	25.30	6.55	7.20	9.79	10.44	11.02	11.74	11.74	11.74	5.76	6.34	8.64	9.22	9.72	10.30	10.30	9.29
CRT(E /CRF(E)9Z	31.70	8.19	9.00	12.24	13.05	13.77	14.67	14.58	14.58	7.20	7.92	10.80	11.52	12.15	12.87	12.87	11.61
制冷剂:R290 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E) 1/14L	0.26	0.18	0.24	0.23	0.27	0.28	0.29	0.27	0.27	0.17	0.23	0.24	0.26	0.27	0.28	0.26	0.26
CRT(E)/CRF(E) 1/7L	0.52	0.36	0.49	0.51	0.54	0.56	0.58	0.55	0.54	0.35	0.47	0.49	0.52	0.53	0.56	0.52	0.52
CRT(E)/CRF(E) 1/4L	1.04	0.48	0.65	0.68	0.73	0.74	0.78	0.73	0.72	0.46	0.62	0.65	0.69	0.71	0.74	0.70	0.69
CRT(E)/CRF (E)1/3L	1.42	0.80	1.07	1.13	1.20	1.22	1.28	1.21	1.19	0.76	1.02	1.07	1.15	1.17	1.22	1.15	1.14
CRT(E)/CRF (E)2/3L	2.11	1.46	1.94	2.05	2.18	2.22	2.33	2.20	2.17	1.39	1.86	1.95	2.08	2.12	2.23	2.09	2.07
CRT(E)/CRF (E)3/4L	3.18	1.94	2.59	2.73	2.91	2.96	3.11	2.93	2.89	1.85	2.48	2.60	2.78	2.83	2.97	2.79	2.76
CRT(E)/CRF(E) 1-1/5L	4.25	2.91	3.89	4.09	4.37	4.44	4.67	4.39	4.33	2.77	3.72	3.90	4.16	4.25	4.45	4.19	4.14
CRT(E)/CRF(E) 1-4/5L	6.36	4.37	5.83	6.14	6.55	6.66	7.00	6.59	6.50	4.16	5.58	5.85	6.25	6.37	6.68	6.28	6.21
CRT(E)/CRF(E) 2-2/5L	8.46	5.83	7.78	8.18	8.74	8.88	9.34	8.78	8.66	5.54	7.44	7.80	8.33	8.50	8.90	8.38	8.28
CRT(E)/CRF (E)3L	10.62	7.29	9.72	10.23	10.92	11.10	11.67	10.98	10.83	6.93	6.30	9.75	10.41	10.62	11.13	10.47	10.35
CRT(E)/CRF(E) 3-1/2L	12.72	8.26	11.34	11.94	12.74	12.95	13.62	12.81	12.64	8.09	10.85	11.38	12.15	12.39	12.99	12.22	12.08
CRT(E)/CRF(E) 4-1/2L	15.90	10.94	14.58	15.35	16.38	16.65	17.51	16.47	16.25	10.40	13.95	14.63	15.62	15.93	16.70	15.71	15.53
制冷剂:R290 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature 5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature 0℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E) 1/14L	0.35	0.17	0.22	0.23	0.25	0.26	0.27	0.25	0.25	0.14	0.21	0.22	0.23	0.24	0.25	0.23	0.23
CRT(E)/CRF(E) 1/7L	0.26	0.33	0.45	0.47	0.50	0.51	0.54	0.50	0.50	0.29	0.42	0.44	0.47	0.47	0.50	0.47	0.46
CRT(E)/CRF(E) 1/4L	0.52	0.45	0.60	0.63	0.68	0.68	0.71	0.67	0.66	0.39	0.55	0.58	0.62	0.63	0.66	0.62	0.62
CRT(E)/CRF (E)1/3L	1.04	0.74	0.98	1.03	1.10	1.12	1.18	1.11	1.10	0.64	0.91	0.96	1.02	1.04	1.10	1.03	1.02
CRT(E)/CRF (E)2/3L	1.42	1.34	1.79	1.88	2.00	2.04	2.14	2.02	1.99	1.16	1.66	1.75	1.86	1.90	1.99	1.87	1.85
CRT(E)/CRF (E)3/4L	2.11	1.78	2.38	2.50	2.67	2.72	2.86	2.69	2.66	1.54	2.22	2.33	2.48	2.53	2.66	2.50	2.46
CRT(E)/CRF(E) 1-1/5L	3.52	2.68	3.58	3.76	4.01	4.08	4.28	4.03	3.98	2.32	3.32	3.49	3.72	3.79	3.98	3.74	3.70
CRT(E)/CRF(E) 1-4/5L	4.25	4.01	5.36	5.63	6.01	6.12	6.43	6.05	5.98	3.47	4.99	5.24	5.58	5.69	5.98	5.62	5.54
CRT(E)/CRF(E) 2-2/5L	6.36	5.35	7.15	7.51	8.02	8.16	8.57	8.06	8.02	4.63	6.65	6.98	7.44	7.58	7.97	7.49	7.39
CRT(E)/CRF (E)3L	8.46	6.69	8.94	9.39	10.02	10.20	10.71	10.08	9.96	5.79	8.31	8.73	9.30	9.48	9.96	9.36	9.24
CRT(E)/CRF(E) 3-1/2L	10.62	7.81	10.43	10.96	11.69	11.90	12.50	11.76	11.62	6.76	9.70	10.19	10.85	11.06	11.62	10.92	10.78
CRT(E)/CRF(E) 4-1/2L	12.72	10.04	13.41	14.09	15.03	15.30	16.07	15.12	14.94	8.69	12.47	13.10	13.95	14.22	14.94	14.04	13.86
制冷剂:R290 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -5℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature- 10℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E) 1/14L	0.26	0.14	0.19	0.20	0.21	0.21	0.23	0.21	0.21	0.13	0.17	0.18	0.19	0.19	0.20	0.19	0.19
CRT(E)/CRF(E) 1/7L	0.52	0.28	0.38	0.39	0.42	0.43	0.45	0.42	0.42	0.25	0.33	0.35	0.38	0.38	0.40	0.38	0.37
CRT(E)/CRF(E) 1/4L	1.04	0.37	0.50	0.52	0.56	0.57	0.60	0.56	0.56	0.33	0.45	0.47	0.50	0.51	0.53	0.50	0.50
CRT(E)/CRF (E)1/3L	1.42	0.62	0.83	0.86	0.92	0.94	0.99	0.93	0.92	0.55	0.74	0.78	0.83	0.84	0.88	0.83	0.82
CRT(E)/CRF (E)2/3L	2.11	1.12	1.50	1.57	1.68	1.71	1.80	1.69	1.67	1.00	1.34	1.41	1.50	1.53	1.60	1.51	1.49
CRT(E)/CRF (E)3/4L	3.18	1.50	2.00	2.10	2.24	2.28	2.40	2.26	2.23	1.34	1.78	1.88	2.00	2.04	2.14	2.02	1.99
CRT(E)/CRF(E) 1-1/5L	4.25	2.24	3.00	3.14	3.36	3.42	3.60	3.38	3.35	2.00	2.68	2.82	3.00	3.06	3.20	3.02	2.99
CRT(E)/CRF(E) 1-4/5L	6.36	3.37	4.50	4.72	5.04	5.13	5.40	5.08	5.02	3.01	4.01	4.23	4.50	4.59	4.81	4.54	4.48
CRT(E)/CRF(E) 2-2/5L	8.46	4.49	6.00	6.29	6.72	6.84	7.20	6.77	6.70	4.01	5.35	5.64	6.00	6.12	6.41	6.05	5.98
CRT(E)/CRF (E)3L	10.62	5.61	7.50	7.86	8.40	8.55	9.00	8.46	8.37	5.01	6.69	7.05	7.50	7.65	8.01	7.54	7.47
CRT(E)/CRF(E) 3-1/2L	12.72	6.55	8.75	9.17	9.80	9.98	10.50	9.87	9.77	5.85	7.81	8.23	8.75	8.93	9.35	8.82	8.72
CRT(E)/CRF(E) 4-1/2L	15.90	8.42	11.25	11.79	12.60	12.83	13.50	12.69	12.56	7.52	10.04	10.58	11.25	11.48	12.01	11.34	11.21

CRT(E)、CRF(E) 热力膨胀阀扩展容量表（KW）
CRT(E)、CRF(E) extended capacity tables

制冷剂:R290 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -15℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -20℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E) 1/14L	0.35	0.11	0.14	0.15	0.16	0.17	0.17	0.16	0.16	0.10	0.13	0.13	0.14	0.15	0.15	0.14	0.14
CRT(E)/CRF(E) 1/7L	0.26	0.22	0.29	0.30	0.33	0.33	0.35	0.33	0.32	0.19	0.26	0.27	0.29	0.29	0.31	0.29	0.28
CRT(E)/CRF(E) 1/4L	0.52	0.29	0.39	0.41	0.43	0.44	0.46	0.44	0.43	0.25	0.34	0.36	0.38	0.39	0.41	0.38	0.38
CRT(E)/CRF (E)1/3L	1.04	0.48	0.64	0.67	0.72	0.73	0.27	0.72	0.71	0.42	0.56	0.59	0.63	0.64	0.67	0.63	0.62
CRT(E)/CRF (E)2/3L	1.42	0.87	1.16	1.22	1.30	1.33	1.39	1.31	1.29	0.76	1.02	1.07	1.14	1.16	1.22	1.15	1.13
CRT(E)/CRF (E)3/4L	2.11	1.16	1.54	1.62	1.74	1.77	1.86	1.74	1.72	1.02	1.36	1.42	1.52	1.55	1.63	1.54	1.51
CRT(E)/CRF(E) 1-1/5L	3.52	1.74	2.32	2.44	2.60	2.65	2.78	2.62	2.58	1.52	2.04	2.14	2.28	2.33	2.45	2.30	2.27
CRT(E)/CRF(E) 1-4/5L	4.25	2.61	3.47	6.65	3.91	3.98	4.18	3.92	3.87	2.29	3.06	3.20	3.42	3.49	3.67	3.46	3.40
CRT(E)/CRF(E) 2-2/5L	6.36	3.48	4.63	4.87	5.21	5.30	5.57	5.23	5.16	3.05	4.08	4.27	4.56	4.66	4.90	4.61	4.54
CRT(E)/CRF (E)3L	8.46	4.35	5.79	6.09	6.51	6.63	6.96	6.54	6.45	3.81	5.10	5.34	5.70	5.82	6.12	5.76	5.67
CRT(E)/CRF(E) 3-1/2L	10.62	5.08	6.76	7.11	7.60	7.74	8.12	7.63	7.53	4.45	5.95	6.23	6.65	6.79	7.14	6.72	6.62
CRT(E)/CRF(E) 4-1/2L	12.72	6.53	8.69	9.14	9.77	9.95	10.44	9.81	9.68	5.72	7.65	8.01	8.55	8.73	9.18	8.64	8.51
制冷剂:R290 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -25℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature- 30℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E) 1/14L	0.26	0.08	0.11	0.12	0.13	0.13	0.13	0.13	0.12	0.07	0.10	0.10	0.11	0.11	0.11	0.11	0.11
CRT(E)/CRF(E) 1/7L	0.52	0.17	0.23	0.23	0.25	0.26	0.27	0.25	0.25	0.14	0.19	0.20	0.21	0.22	0.23	0.22	0.21
CRT(E)/CRF(E) 1/4L	1.04	0.22	0.30	0.31	0.33	0.34	0.36	0.34	0.33	0.19	0.26	0.27	0.29	0.29	0.31	0.29	0.28
CRT(E)/CRF (E)1/3L	1.42	0.37	0.50	0.51	0.55	0.56	0.59	0.55	0.55	0.31	0.42	0.44	0.47	0.48	0.50	0.48	0.47
CRT(E)/CRF (E)2/3L	2.11	0.67	0.90	0.94	1.00	1.02	1.07	1.01	1.00	0.57	0.77	0.80	0.86	0.88	0.92	0.87	0.85
CRT(E)/CRF (E)3/4L	3.18	0.89	1.20	1.25	1.34	1.36	1.42	1.34	1.33	0.76	1.02	1.07	1.14	1.17	1.22	1.16	1.14
CRT(E)/CRF(E) 1-1/5L	4.25	1.33	1.80	1.87	2.00	2.04	2.14	2.02	1.99	1.14	1.54	1.61	1.72	1.75	1.84	1.74	1.70
CRT(E)/CRF(E) 1-4/5L	6.36	2.00	2.70	2.81	3.01	3.06	3.20	3.02	2.99	1.71	2.30	2.41	2.57	2.63	2.75	2.61	2.56
CRT(E)/CRF(E) 2-2/5L	8.46	2.66	3.60	3.74	3.96	4.08	4.27	4.03	3.98	2.28	3.07	3.22	3.43	3.50	3.67	3.48	3.41
CRT(E)/CRF (E)3L	10.62	3.33	4.50	4.68	5.01	5.10	5.34	5.04	4.98	2.85	3.84	4.02	4.29	4.38	4.59	4.35	4.26
CRT(E)/CRF(E) 3-1/2L	12.72	3.89	5.25	5.46	5.85	5.95	6.23	5.88	5.81	3.33	4.48	4.69	5.01	5.11	5.36	5.08	4.97
CRT(E)/CRF(E) 4-1/2L	15.90	5.00	6.75	7.02	7.52	7.65	8.01	7.56	7.47	4.28	5.76	6.03	6.44	6.57	3.89	6.53	6.39
制冷剂:R290 型号 Model	名义制冷量 Kw	蒸发温度 Evaporating temperature -35℃ 通过阀的压降 Pressure drop across valve (bar)								蒸发温度 Evaporating temperature -40℃ 通过阀的压降 Pressure drop across valve (bar)							
		2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
CRT(E)/CRF(E) 1/14L	0.35	0.06	0.08	0.08	0.09	0.09	0.10	0.09	0.09	0.05	0.07	0.07	0.08	0.08	0.08	0.08	0.08
CRT(E)/CRF(E) 1/7L	0.26	0.12	0.16	0.17	0.18	0.18	0.19	0.18	0.18	0.10	0.14	0.14	0.15	0.15	0.16	0.16	0.15
CRT(E)/CRF(E) 1/4L	0.52	0.16	0.21	0.22	0.24	0.24	0.26	0.24	0.24	0.13	0.18	0.19	0.20	0.20	0.21	0.21	0.20
CRT(E)/CRF (E)1/3L	1.04	0.26	0.35	0.37	0.40	0.40	0.42	0.40	0.40	0.22	0.30	0.31	0.33	0.34	0.35	0.35	0.33
CRT(E)/CRF (E)2/3L	1.42	0.48	0.64	0.67	0.72	0.73	0.77	0.72	0.72	0.40	0.54	0.56	0.60	0.61	0.64	0.64	0.60
CRT(E)/CRF (E)3/4L	2.11	0.64	0.86	0.90	0.96	0.98	1.02	0.96	0.96	0.54	0.72	0.75	0.80	0.82	0.86	0.86	0.80
CRT(E)/CRF(E) 1-1/5L	3.52	0.96	1.28	1.34	1.44	1.46	1.54	1.44	1.44	0.80	1.08	1.13	1.20	1.22	1.28	1.28	1.20
CRT(E)/CRF(E) 1-4/5L	4.25	1.44	1.93	2.02	2.16	2.20	2.30	2.16	2.16	1.21	1.62	1.69	1.80	1.84	1.93	1.93	1.80
CRT(E)/CRF(E) 2-2/5L	6.36	1.92	2.57	2.69	2.88	2.93	3.07	2.88	2.88	1.61	2.16	2.26	2.40	2.45	2.57	2.57	2.40
CRT(E)/CRF (E)3L	8.46	2.40	3.21	3.36	3.60	3.66	3.84	3.60	3.60	2.01	2.70	2.82	3.00	3.06	3.21	3.21	3.00
CRT(E)/CRF(E) 3-1/2L	10.62	2.80	3.75	3.92	4.20	4.27	4.48	4.20	4.20	2.35	3.15	3.29	3.50	3.57	3.75	3.75	3.50
CRT(E)/CRF(E) 4-1/2L	12.72	3.60	4.82	5.04	5.40	5.49	5.76	5.40	5.40	3.02	4.05	4.23	4.50	4.59	4.82	4.82	4.50

概 述

NRF(E)/RT(E)系列热力膨胀阀是一体式膨胀阀，适用于空调、冷冻、冷藏等领域。

特 点

- 稳定的过热度。
- 蒸发温度范围： -40℃～+10℃。
- 可提供MOP（马达过载保护）功能。
- 适用R22, R134a, R407c, R404A/R507冷媒等介质。

过热度调节

出厂过热度设定为3. 5K，静过热度调节范围2～8K。
旋下密封螺帽，旋转调节杆，顺时针转动调节杆一圈，过热度增加1. 5K，
逆时针转动调节杆一圈，过热度减少1. 5K。

General

NRF(E)/RT(E) thermo-expansion valves are integrated valves for freezing , air conditionning, refrigeration.

Characteristics

- Stable superheat setting.
- Evaporating temperature range: -40℃～+10℃.
- MOP (Max. operating pressure) function is available.
- Changeable inlet filter net.
- Suitable for R22, R134a, R407c, R404A/R507.

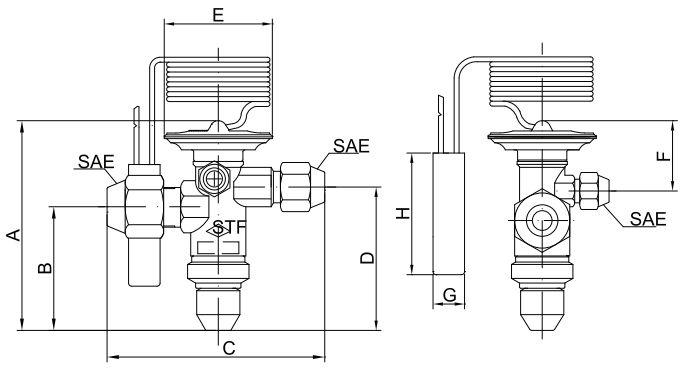
Superheat adjusting

Factory setting :superheat 3.5K,static superheat adjusting range is between 2～8K. Take off cap and turn adjusting stem .Turn adjusting stem anticlockwise one round, reduces superheat 1.5K.

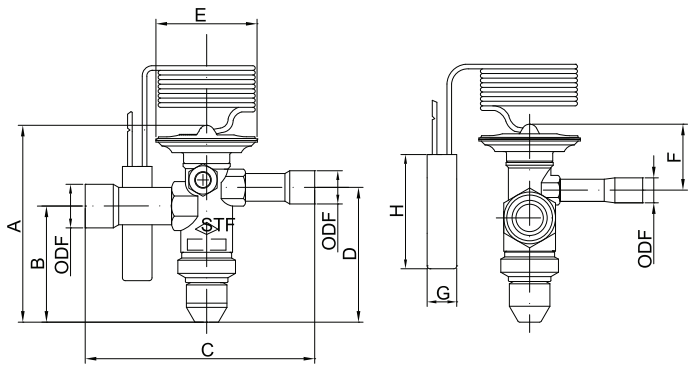
选型表格 Technical data

R134a			R22			R407c			R404A/R507		
型号 (Model)		名义容量 Nominal capacity (KW)	型号 (Model)		名义容量 Nominal capacity (KW)	型号 (Model)		名义容量 Nominal capacity (KW)	型号 (Model)		名义容量 Nominal capacity (KW)
NRF(E) RT(E)	1/4M	0.88	NRF(E) RT(E)	1/2H	1.76	NRF(E) RT(E)	1/2N	1.76	NRF(E) RT(E)	1/3S	1.17
NRF(E) RT(E)	1/2M	1.76	NRF(E) RT(E)	1H	3.52	NRF(E) RT(E)	1N	3.52	NRF(E) RT(E)	2/3S	2.35
NRF(E) RT(E)	1M	3.52	NRF(E) RT(E)	1-1/2H	5.28	NRF(E) RT(E)	1-1/2N	5.28	NRF(E) RT(E)	1S	3.52
NRF(E) RT(E)	1-1/2M	5.28	NRF(E) RT(E)	2H	7.04	NRF(E) RT(E)	2N	7.04	NRF(E) RT(E)	1-1/2S	5.28
NRF(E) RT(E)	2M	7.04	NRF(E) RT(E)	3H	10.56	NRF(E) RT(E)	3N	10.56	NRF(E) RT(E)	2S	7.04
NRF(E) RT(E)	2-1/2M	8.80	NRF(E) RT(E)	4H	14.08	NRF(E) RT(E)	4N	14.08	NRF(E) RT(E)	3S	10.56
NRF(E) RT(E)	3M	10.56	NRF(E) RT(E)	5H	17.60	NRF(E) RT(E)	5N	17.60	NRF(E) RT(E)	3-1/2S	12.32
NRF(E) RT(E)	4M	12.32	NRF(E) RT(E)	6H	21.12	NRF(E) RT(E)	6N	21.12	NRF(E) RT(E)	4S	14.08
NRF(E) RT(E)	5-1/2M	19.36	NRF(E) RT(E)	7-1/2H	26.40	NRF(E) RT(E)	7-1/2N	26.40	NRF(E) RT(E)	5S	17.60
NRF(E) RT(E)	7-1/2M	26.40	NRF(E) RT(E)	10H	35.20	NRF(E) RT(E)	10N	35.20	NRF(E) RT(E)	7S	24.64
NRF(E) RT(E)	9M	31.68	NRF(E) RT(E)	12H	42.24	NRF(E) RT(E)	12N	42.24	NRF(E) RT(E)	8-1/2S	29.92

注：名义制冷量是基于蒸发温度te=4.4℃，冷凝温度tc=40℃,阀前制冷剂温度为t1=38℃。
Note :Nominal capacity is based on evaporating temperature te=4.4℃, condensing temperature tc=40℃,and refrigerant temperature ahead of valve t1= 38℃



NRF(E)系列膨胀阀



RT(E)系列膨胀阀

外形尺寸 Dimensions

型号 Model	接管尺寸 Connection size 进口 Inlet	出口 Outlet	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	外平衡接口尺寸 External equalizer connection size	毛细管长度 Capillary length
NRF(E) 1/2H	Φ10	Φ12	102	61	115	71	Φ55	26	Φ13	89	Φ6×1喇叭口 1/4SAE	1.5m
NRF(E) 1H	3/8	1/2	102	61	115	71	Φ55	26	Φ13	89		
NRF(E)1-1/2H	SAE	SAE	102	61	115	71	Φ55	26	Φ13	89		
NRF(E) 2H,3H,4H			102	61	115	71	Φ55	26	Φ13	89		
NRF(E) 5H	Φ10 3/8 SAE	Φ16 5/8 SAE	102	61	115	71	Φ55	26	Φ13	89		
NRF(E)6H，7-1/2H	Φ12 1/2 SAE	Φ16 5/8 SAE	102	61	115	71	Φ55	26	Φ13	89		
NRF(E) 10H			102	61	115	71	Φ55	26	Φ13	89		
NRF(E) 12H			102	61	115	71	Φ55	26	Φ13	89		
RT(E) 1/2H	Φ10 3/8 ODF	Φ12 1/2 ODF	107	61	100	71	Φ55	31	Φ13	89	Φ6×1喇叭口 1/4SAE 1/4ODF	1.5m
RT (E) 1H			107	61	100	71	Φ55	31	Φ13	89		
RT (E)1-1/2H			107	61	100	71	Φ55	31	Φ13	89		
RT (E) 2H,3H,4H			107	61	100	71	Φ55	31	Φ13	89		
RT (E) 5H	Φ10 3/8 ODF	Φ16 5/8 ODF	107	61	100	71	Φ55	31	Φ13	89		
RT (E)6H，7-1/2H	Φ12 1/2 ODF	Φ16 5/8 ODF	107	61	100/110	71	Φ55	31	Φ13	89		
RT (E) 10H	Φ16 5/8 ODF	Φ22 7/8 ODF	107	61	100/110	71	Φ55	31	Φ13	89		
RT (E) 12H			107	61	100/110	71	Φ55	31	Φ13	89		

概 述

RTB系列膨胀阀具有双向节流功能，被广泛运用在热泵、空调、冷冻、冷藏系统。

特 点

- 稳定的过热度。
- 可提供MOP（马达过载保护）功能。
- 可提供各种接管尺寸和形式。
- 适用R22、R134a、R407c、R404A/R507、R410A冷媒等介质。
- RTB（T）1H-12H为单阀口型，RTB（T）12H-26H为双阀口型。
- 特殊要求请与上恒联系

General

RTB series are bi-flow expansion valves，applicable to hot pump，freezing , refrigeration and air conditioning plant.

Characteristics

- Constant superheat adjusting performance.
- MOP function is available (Max operating pressure).
- Various Inlet and outlet type and size can be made according to customer's requirement.
- Suitable for R22、R134a、R407c、R404A/R507、R410A.
- If you have special requirement , please contact STF.

过热度调节

出厂过热度设定为3.5K，静过热度调节范围2～8K。
逆时针转动调节杆一圈，过热度减少1.5K。

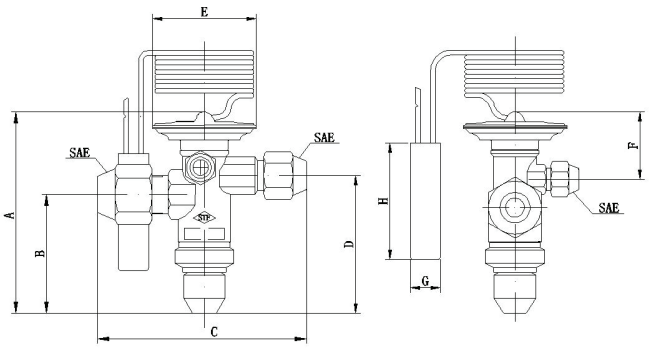
Superheat adjusting

Factory setting :superheat 3.5K, static superheat adjusting range is between 2～8K.
Turn adjusting stem anticlockwise one round ,reduces superheat 1.5K.

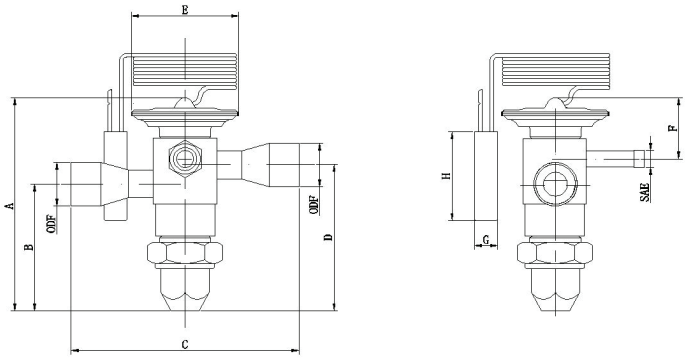
选型表格 Technical data

R134a			R22			R407c			R404A/R507			R410a		
型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)	型号（Model）		名义容量 Nominal capacity (KW)
RTB(T)	1/2M	1.93	RTB(T)	1H	3.52	RTB(T)	1N	3.70	RTB(T)	2/3S	2.60	RTB(T)	1-1/4Z	4.20
RTB(T)	1M	3.85	RTB(T)	2H	7.00	RTB(T)	2N	7.24	RTB(T)	1-1/2S	5.25	RTB(T)	2-1/2Z	8.40
RTB(T)	1-2/3M	5.77	RTB(T)	3H	10.50	RTB(T)	3N	11.00	RTB(T)	2S	7.80	RTB(T)	3-1/2Z	12.60
RTB(T)	2M	7.70	RTB(T)	4H	14.00	RTB(T)	4N	14.50	RTB(T)	3S	10.50	RTB(T)	4-1/2Z	16.80
RTB(T)	2-3/4M	9.70	RTB(T)	5H	17.60	RTB(T)	5N	18.00	RTB(T)	3-2/3S	13.20	RTB(T)	6Z	21.10
RTB(T)	3-1/3M	11.60	RTB(T)	6H	21.10	RTB(T)	6N	21.50	RTB(T)	4-1/2S	15.80	RTB(T)	7-1/2Z	25.30
RTB(T)	4M	14.50	RTB(T)	7-1/2H	26.40	RTB(T)	7-1/2N	27.00	RTB(T)	5-1/2S	19.80	RTB(T)	9Z	31.70
RTB(T)	5-1/2M	19.36	RTB(T)	10H	35.20	RTB(T)	10N	35.60	RTB(T)	7-1/2S	26.40	RTB(T)	12Z	42.20
RTB(T)	6-1/2M	23.20	RTB(T)	12H	42.20	RTB(T)	12N	42.60	RTB(T)	8-1/2S	31.70	RTB(T)	14Z	50.60
RTBM(T)	6-1/2M	23.20	RTBM(T)	12H	42.20	RTBM(T)	12N	42.60	RTBM(T)	8-1/2S	31.70	RTBM(T)	14Z	50.60
RTBM(T)	7-3/4M	27.10	RTBM(T)	14H	49.30	RTBM(T)	14N	49.30	RTBM(T)	10S	37.00	RTBM(T)	17Z	59.20
RTBM(T)	10M	34.80	RTBM(T)	18H	63.40	RTBM(T)	18N	63.30	RTBM(T)	13S	47.50	RTBM(T)	22Z	76.10
RTBM(T)	12M	42.50	RTBM(T)	22H	77.40	RTBM(T)	22N	77.40	RTBM(T)	16S	58.10	RTBM(T)	26Z	92.90
RTBM(T)	14M	50.30	RTBM(T)	26H	91.50	RTBM(T)	26N	91.50	RTBM(T)	19S	68.60	RTBM(T)	31Z	109.80

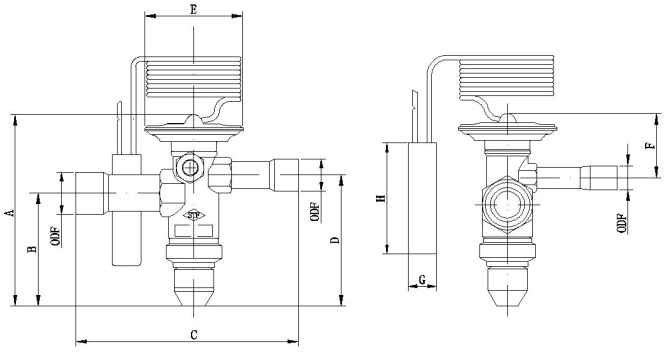
注：名义制冷量是基于蒸发温度te=5℃，冷凝温度tc=40℃,进入膨胀阀液体制冷剂温度34℃，静止过热度4K。
Note: Nominal capacity is based on evaporating temperature te=5℃, condensing temperature tc=40℃,and refrigerant temperature ahead of valve34℃，static superheat：4K.
注：如需其它工作特性和规格产品，请与本公司接洽联系。
Note :If you have special requirement ,please contact STF.



RTB1H-12H



RTBM（T）/RTBG(T)12H-26H



RTBT 1H-12H

外形尺寸 Dimensions

型号 Model	接管尺寸 Connection size		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	外平衡接口尺寸 External equalizer connection size	毛细管长度 Capillary length
	进口 Inlet	出口 Outlet										
RTB(T)1H	3/8ODF 3/8SAE	1/2ODF 1/2SAE	102	61	100	71	Φ55	26	Φ13	89	1/4SAE 1/4ODF	1.5m
RTB(T)2H			102	61	100	71	Φ55	26	Φ13	89		
RTB(T)3H			102	61	100	71	Φ55	26	Φ13	89		1.5m
RTB(T)4H			102	61	100	71	Φ55	26	Φ13	89		
RTB(T)5H	3/8ODF 3/8SAE	5/8ODF 5/8SAE	102	61	100	71	Φ55	26	Φ13	89		
RTB(T)6H	1/2ODF 1/2SAE	5/8ODF 5/8SAE	102	61	100	71	Φ55	26	Φ13	89		
RTB(T)7-1/2H			102	61	100	71	Φ55	26	Φ13	89		
RTB(T)10H			102	61	100	71	Φ55	26	Φ13	89		
RTB(T)12H			102	61	100	71	Φ55	26	Φ13	89		
RTBM(T)12H	5/8ODF	7/8ODF	108	66	110	73	Φ55	29	Φ13	89		
RTBM(T)14H			108	66	110	73	Φ55	29	Φ13	89		1.5m 3m
RTBM(T)18H			108	66	110	73	Φ55	29	Φ13	89		
RTBM(T)22H			108	66	110	73	Φ55	29	Φ13	89		
RTBM(T)26H			108	66	110	73	Φ55	29	Φ13	89		

注：毛细管长度有特殊要求可与本公司接洽联系。
Note :If you have special requirement ,please contact STF.

NRF(E)、 RT(E)、RTB、RTBT 扩展容量表（KW）
NRF(E)、 RT(E)、RTB、RTBT extended capacity tables

R22 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.57	0.72	0.90	1.08	1.26	1.44	0.57	0.72	0.90	1.08	1.26	1.44	0.57	0.72	0.90	1.08	1.26	1.44
1/2H	1.58	1.80	2.01	2.18	2.36	2.53	1.51	1.76	1.97	2.14	2.32	2.50	1.37	1.58	1.79	1.97	2.11	2.25
1H	3.16	3.60	4.02	4.36	4.72	4.92	3.06	3.52	3.87	4.22	4.57	4.92	2.47	3.20	3.52	3.87	4.22	4.57
1-1/2H	4.74	5.40	6.03	6.54	7.08	7.38	4.57	5.27	5.98	6.33	7.03	7.38	4.22	4.92	5.27	5.98	6.33	6.68
2H	6.32	7.20	8.04	8.72	9.44	9.85	5.98	7.03	7.74	8.79	9.14	9.85	5.62	6.33	7.03	7.74	8.44	9.14
3H	10.91	12.70	14.08	15.49	16.54	17.92	9.14	10.55	11.96	13.01	14.07	14.77	8.44	9.49	10.55	11.61	12.66	13.36
4H	14.55	16.89	18.73	18.59	22.00	23.83	12.19	14.06	15.95	17.35	18.76	19.69	11.25	12.65	14.06	15.48	16.88	17.81
5H	15.84	18.60	20.42	22.18	23.94	25.70	15.12	17.58	19.69	21.45	23.21	24.97	13.72	15.82	17.94	19.69	21.10	22.50
6H	19.01	22.32	24.50	26.62	28.73	30.84	18.14	21.10	23.63	25.74	27.85	29.96	16.46	18.62	21.53	23.63	25.32	27.00
7-1/2H	22.88	26.40	29.57	32.38	34.85	37.31	22.58	26.25	29.40	32.00	34.50	36.75	20.32	23.63	26.46	28.80	31.05	33.08
10H	31.33	36.26	40.48	44.35	48.22	51.40	30.10	35.00	39.20	42.56	46.50	49.00	27.01	31.50	35.28	38.30	41.85	44.10
12H	38.02	44.00	48.93	53.86	58.08	61.60	36.12	42.00	47.04	51.15	55.38	58.80	32.51	37.80	42.34	46.40	49.84	52.92
14H	45.40	52.10	58.40	64.10	69.00	73.90	44.70	51.70	57.70	63.40	68.60	73.20	43.60	50.30	56.30	62.00	66.90	71.50
18H	54.20	62.70	70.40	76.70	83.10	88.70	53.50	62.00	69.30	76.00	82.00	87.60	52.40	60.50	67.60	73.90	79.90	85.50
22H	67.50	78.50	87.50	96.10	103.50	110.90	67.20	77.40	86.60	94.70	102.40	109.50	65.50	75.30	84.50	92.60	100.00	109.50
26H	80.30	92.60	103.50	113.30	122.50	130.90	79.20	91.50	102.40	112.00	121.10	129.60	77.10	89.10	99.60	109.10	117.90	126.00
R22 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.72	0.90	1.08	1.26	1.44	1.62	0.90	1.08	1.26	1.44	1.62	1.80	1.08	1.26	1.44	1.62	1.80	1.98
1/2H	1.29	1.44	1.58	1.69	1.83	1.93	1.12	1.23	1.38	1.41	1.51	1.58	0.91	0.98	1.05	1.12	1.19	1.23
1H	2.55	2.85	3.13	3.38	3.52	3.87	2.25	2.46	2.64	2.87	2.99	3.16	1.83	1.97	2.11	2.25	2.36	2.46
1-1/2H	3.73	4.17	4.57	4.92	5.27	5.63	3.34	3.52	3.87	4.22	4.57	4.87	2.74	2.95	3.16	3.38	3.52	3.87
2H	5.17	5.78	6.33	6.68	7.38	7.44	4.57	4.92	5.27	5.63	5.98	6.33	3.52	3.67	3.80	4.27	4.57	4.92
3H	7.72	8.66	9.49	10.20	10.90	11.61	6.68	7.38	8.09	8.44	9.14	9.49	5.63	5.98	4.22	6.68	7.03	7.38
4H	10.29	11.55	12.65	13.60	14.53	15.34	8.91	9.84	10.78	11.25	12.19	12.56	7.51	7.93	5.63	8.91	9.37	9.84
5H	12.90	14.42	15.80	16.88	28.29	19.34	11.25	12.31	13.36	14.07	15.12	15.83	9.14	9.84	10.55	11.25	11.96	12.31
6H	15.48	17.30	18.96	20.27	33.95	23.20	13.50	14.77	16.03	16.88	18.14	19.00	10.97	11.81	12.66	13.50	14.35	14.77
7-1/2H	19.24	21.55	23.45	25.29	26.94	28.34	16.73	18.21	19.63	20.91	22.37	23.42	13.6	14.66	15.62	16.71	17.70	18.28
10H	25.66	28.73	31.19	34.08	35.92	37.97	22.31	24.22	26.46	27.88	29.83	31.23	18.09	19.76	20.83	22.29	23.6	24.37
12H	30.79	34.45	37.50	40.59	43.10	45.34	24.19	29.10	31.51	33.46	35.8	37.48	21.73	23.54	25.00	26.75	28.33	29.25
14H	40.80	45.80	50.00	54.20	57.70	61.20	32.40	35.60	38.40	41.20	43.60	46.10	23.90	26.00	28.20	30.30	32.00	33.80
18H	48.90	54.60	59.80	64.80	69.30	73.40	39.10	42.60	46.10	49.30	52.10	54.90	27.50	29.90	32.40	34.50	36.60	38.40
22H	61.30	68.30	75.00	81.00	86.60	91.90	48.60	53.50	57.70	61.60	65.50	67.00	37.30	40.50	43.40	45.80	48.20	50.70
26H	72.20	81.00	88.70	95.70	102.10	108.40	57.40	63.00	67.90	72.90	77.10	81.30	44.40	47.90	51.40	54.20	57.00	59.80

NRF(E)、 RT(E)、RTB、RTBT 展容量表（KW）
NRF(E)、 RT(E)、RTB、RTBT extended capacity tables

R134a 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.30	0.42	0.57	0.72	0.90	1.08	0.30	0.42	0.57	0.72	0.90	1.08	0.42	0.57	0.72	0.90	1.08	1.26
1/4M	1.10	1.20	1.50	1.60	1.80	2.00	0.90	1.10	1.25	1.40	1.60	1.75	0.90	1.05	1.20	1.30	1.45	1.57
1/2M	2.20	2.40	3.00	3.20	3.60	4.00	1.80	2.20	2.50	2.80	3.20	3.50	1.80	2.10	2.40	2.60	2.90	3.10
1M	3.05	3.52	4.32	4.67	5.28	5.89	3.60	4.40	5.00	5.60	6.40	7.00	3.70	4.20	4.80	5.30	5.70	6.20
1-1/2M	4.40	5.10	6.30	6.80	7.20	8.10	5.60	6.60	7.50	8.40	9.70	10.60	5.70	6.10	7.00	7.90	8.80	9.20
2M	6.10	7.04	8.64	9.34	10.56	11.78	7.40	8.80	11.40	12.60	14.00	14.90	7.50	8.40	9.70	10.60	11.40	12.80
2-1/2M	9.80	11.30	13.50	15.10	17.00	18.70	9.25	11.00	14.25	15.75	17.50	18.60	9.38	10.50	12.13	13.25	14.25	16.00
3M	9.15	10.56	12.96	14.01	15.84	17.67	11.20	13.20	17.20	19.00	20.60	22.20	10.90	12.60	14.10	15.90	17.60	18.70
4M	12.20	14.08	17.28	18.68	21.12	23.56	14.93	17.60	22.93	25.33	27.47	29.60	14.53	16.80	18.80	21.20	23.47	24.93
5M	15.25	17.60	21.60	23.35	26.40	29.45	15.75	19.25	21.87	24.51	28.01	30.61	16.17	17.89	20.05	22.91	25.04	26.17
7-1/2M	22.88	26.40	32.40	35.03	39.60	44.18	21.48	26.15	29.82	33.42	38.20	41.74	22.05	24.40	27.34	31.25	34.15	35.69
9M	24.40	28.16	34.56	37.36	42.24	47.12	22.98	27.98	31.91	35.76	40.87	44.66	23.59	26.11	29.25	33.44	36.54	38.19
10M	33.00	38.90	47.00	51.00	54.00	61.00	37.00	45.00	49.00	52.00	58.00	61.00	35.00	43.00	47.00	50.00	56.00	59.00
12M	40.00	46.00	56.00	61.00	66.00	73.00	44.00	54.00	59.00	63.00	70.00	73.20	43.00	52.00	56.00	60.00	67.00	71.00
14M	49.00	57.00	70.00	75.00	80.00	90.00	55.00	57.00	72.00	77.00	87.00	91.50	53.00	65.00	70.00	74.00	83.00	87.00
R134a 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.42	0.57	0.72	0.90	1.08	1.26	0.57	0.72	0.90	1.08	1.26	1.44	0.57	0.72	0.90	1.08	1.26	1.44
1/4M	0.70	0.84	0.93	1.00	1.10	1.20	0.60	0.69	0.74	0.83	0.92	0.95	0.43	0.48	0.51	0.57	0.60	0.65
1/2M	1.40	1.70	1.90	2.00	2.20	2.40	1.20	1.40	1.50	1.70	1.80	1.90	0.90	1.00	1.05	1.10	1.20	1.30
1M	2.80	3.30	3.70	4.10	4.40	4.80	2.40	2.70	3.00	3.30	3.60	3.80	1.60	1.90	2.10	2.30	2.50	2.60
1-1/2M	4.20	4.60	5.20	6.10	6.50	7.00	3.60	4.10	4.40	4.80	5.20	5.70	2.50	2.80	3.10	3.40	3.80	3.90
2M	5.70	6.50	7.40	8.30	8.70	9.60	4.80	5.20	6.10	6.50	7.00	7.80	3.40	3.70	4.20	4.80	5.10	5.20
2-1/2M	7.13	8.13	9.25	10.38	10.88	12.00	6.00	6.50	7.63	8.13	8.75	9.75	4.25	4.63	5.25	6.00	6.38	6.50
3M	8.30	9.60	10.90	12.20	13.10	14.40	7.40	8.30	9.20	10.00	10.90	11.40	5.20	5.70	6.10	6.90	7.40	7.80
4M	11.06	12.80	14.53	16.27	17.47	19.20	9.87	11.07	12.27	13.33	14.53	15.20	6.93	7.60	8.13	9.20	9.87	10.40
5M	12.25	13.92	15.60	17.82	19.48	21.23	10.23	11.46	13.09	14.31	15.67	16.56	7.06	7.91	9.03	9.87	10.81	11.43
7-1/2M	16.65	18.97	21.26	24.31	26.56	28.95	13.94	15.63	17.86	19.52	21.37	22.58	9.62	10.78	12.32	13.47	14.74	15.58
9M	17.82	20.30	22.75	26.01	28.42	30.98	16.73	18.71	21.43	23.38	25.6	27.06	11.56	12.91	14.79	16.13	17.66	18.67
10M	33.00	36.00	38.10	43.50	45.70	47.20	22.30	24.60	26.50	29.10	30.30	32.50	14.00	16.00	17.00	19.00	20.00	21.00
12M	40.00	43.50	46.20	52.30	54.20	57.50	27.50	29.60	31.20	35.40	36.20	38.40	17.00	19.90	20.00	22.00	23.00	25.00
14M	50.20	53.60	57.80	64.20	67.50	70.30	33.40	36.50	38.20	43.20	45.30	47.80	21.00	23.00	25.00	28.00	29.00	30.00

NRF(E)、 RT(E)、RTB、RTBT 展容量表（KW）
NRF(E)、 RT(E)、RTB、RTBT extended capacity tables

R404A/ R507 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.52	0.69	0.86	01.03	1.21	1.38	0.69	0.86	1.03	1.21	1.38	1.55	0.86	1.03	1.21	1.38	1.55	1.72
1/3S	1.14	1.22	1.26	1.43	1.57	1.67	1.12	1.27	1.41	1.55	1.66	1.78	1.18	1.28	1.41	1.53	1.66	1.78
2/3S	2.30	2.48	2.57	2.87	3.14	3.34	2.25	2.53	2.82	3.09	3.31	3.57	2.35	2.57	2.81	3.07	3.31	3.56
1 S	3.44	3.70	3.83	4.30	4.71	5.01	3.37	3.80	4.23	4.64	4.97	5.35	3.53	3.85	4.22	4.60	4.97	5.34
1-1/2 S	5.16	5.55	5.75	6.45	7.07	7.52	5.06	5.70	6.35	6.96	7.46	8.03	5.30	5.78	6.33	6.90	7.46	8.01
2 S	6.88	7.38	7.65	8.60	9.42	10.02	6.74	7.60	8.46	9.28	9.94	10.70	7.06	7.70	8.44	9.20	9.94	10.68
3 S	10.32	11.07	11.48	12.90	14.13	15.03	10.11	11.40	12.69	13.92	14.91	16.05	10.59	11.55	12.66	13.80	14.91	16.02
3-1/2S	12.04	12.95	13.32	15.09	16.53	17.59	11.83	13.34	14.85	16.29	17.44	18.78	12.39	13.51	14.81	16.15	17.44	18.74
4S	13.73	14.76	15.18	17.20	18.84	20.05	13.45	15.21	16.93	18.57	19.88	21.41	14.12	15.40	16.88	18.41	19.88	21.36
5 S	17.16	18.45	18.98	21.50	23.55	25.06	16.85	19.00	21.15	23.20	24.85	26.75	17.65	19.25	21.10	23.00	24.85	26.70
7 S	24.02	25.83	26.57	30.10	32.97	35.08	23.59	26.60	29.61	32.48	34.79	37.45	24.71	26.95	29.54	32.20	34.79	37.38
8-1/2 S	29.06	31.25	32.15	36.42	39.89	42.45	28.65	32.30	35.96	39.44	42.25	45.48	30.01	32.73	35.87	39.10	42.25	45.39
10 S	46.00	50.60	55.70	61.00	67.40	74.00	40.40	48.50	52.30	56.40	61.00	65.80	44.60	48.10	52.00	56.20	60.70	65.50
13S	55.20	60.72	66.84	73.20	80.88	88.80	48.48	58.20	62.76	67.68	73.20	78.96	53.52	57.72	62.40	67.44	72.84	78.60
16S	69.00	75.90	83.55	91.50	101.10	111.00	60.60	72.75	78.45	84.60	91.50	98.70	66.90	72.15	78.00	84.30	91.05	98.25
19 S	82.80	91.08	100.26	109.80	121.32	133.20	72.72	87.30	94.14	101.52	109.80	118.44	80.28	86.58	93.60	101.16	109.26	117.90
R404A/ R507 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	1.03	1.21	1.38	1.55	1.72	1.90	1.21	1.38	1.55	1.72	1.90	2.07	1.38	1.55	1.72	1.90	2.07	2.24
1/3S	1.02	1.10	1.18	1.24	1.28	1.40	0.80	0.85	0.90	0.95	1.00	1.04	0.91	0.96	1.01	1.06	1.11	1.17
2/3S	2.03	2.21	2.36	2.47	2.55	2.80	1.60	1.70	1.80	1.90	2.00	2.07	1.83	1.92	2.02	2.11	2.22	2.33
1 S	3.05	3.31	3.54	3.71	3.83	4.20	2.40	2.55	2.70	2.85	3.00	3.11	2.74	2.88	3.03	3.17	3.33	3.50
1-1/2 S	4.58	4.97	5.31	5.57	5.75	6.30	3.60	3.83	4.05	4.28	4.50	4.67	4.12	4.33	4.56	4.77	5.01	5.26
2 S	6.10	6.62	7.08	7.42	7.66	8.40	4.80	5.10	5.40	5.70	6.00	6.22	5.48	5.76	6.06	6.34	6.66	7.00
3 S	9.15	9.93	10.62	11.13	11.49	12.60	7.20	7.65	8.10	8.55	9.00	9.33	8.22	8.64	9.09	9.51	9.99	10.50
3-1/2S	10.68	11.59	12.39	12.99	13.41	14.70	8.40	8.93	9.45	9.98	10.50	10.89	9.59	10.08	10.61	11.10	11.66	12.25
4S	12.18	13.21	14.12	14.81	15.29	16.77	9.58	10.18	10.77	11.38	11.97	12.52	10.96	11.52	13.64	14.27	14.99	15.75
5 S	15.25	16.55	17.70	18.55	19.15	21.00	12.00	12.75	13.50	14.25	15.00	15.55	13.70	14.40	15.15	15.85	16.65	17.50
7 S	21.35	23.17	24.78	25.97	26.81	29.40	16.80	17.85	18.90	19.95	21.00	21.77	19.18	20.16	21.21	22.19	23.31	24.50
8-1/2 S	25.93	28.14	30.09	31.54	32.56	35.70	20.40	21.68	22.95	24.23	25.50	26.44	27.40	28.80	30.30	31.70	33.30	35.00
10 S	40.30	44.10	47.60	50.50	53.60	56.80	30.80	32.30	34.00	35.70	37.50	39.30	27.40	28.80	30.30	31.70	33.30	35.00
13S	48.36	52.92	57.12	60.60	64.32	68.16	36.96	38.76	40.80	42.84	45.00	47.16	32.88	34.56	36.36	38.04	39.96	42.00
16S	60.45	66.15	71.40	75.75	80.40	85.20	46.20	48.45	51.00	53.55	56.25	58.95	41.10	43.20	45.45	47.55	49.95	52.50
19 S	72.54	79.38	85.68	90.90	96.48	102.24	55.44	58.14	61.20	64.26	67.50	70.74	49.32	51.84	54.54	57.06	59.94	63.00

NRF(E)、 RT(E)、RTB、RTBT 扩展容量表（KW）
NRF(E)、 RT(E)、RTB、RTBT extended capacity tables

R407c 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	+10℃						+4.4℃						-6.7℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.54	0.72	0.90	1.08	1.26	1.44	0.54	0.72	0.90	1.08	1.26	1.44	0.54	0.72	0.90	1.08	1.26	1.44
1/2 N	1.48	1.70	1.95	2.13	2.30	2.43	1.47	1.69	1.86	2.03	2.20	2.36	1.19	1.54	1.69	1.86	2.03	2.19
1 N	2.96	3.40	3.90	4.25	4.60	4.86	2.94	3.37	3.71	4.05	4.39	4.72	2.37	3.07	3.37	3.71	4.05	4.38
1-1/2 N	4.44	5.10	5.85	6.38	6.90	7.29	4.41	5.06	5.57	6.08	6.59	7.08	3.56	4.61	5.06	5.57	6.08	6.57
2 N	5.92	6.80	7.80	8.50	9.20	9.72	5.88	6.74	7.42	8.10	8.78	9.44	4.74	6.14	6.74	7.42	8.10	8.76
3 N	8.88	10.20	11.70	12.75	13.80	14.58	8.82	10.11	11.13	12.15	13.17	14.16	7.11	9.21	10.11	11.13	12.15	13.14
4N	11.81	13.57	15.56	16.96	18.35	19.39	11.73	13.45	14.80	16.16	17.52	18.82	9.46	12.25	13.45	14.80	16.16	17.48
5 N	14.80	17.00	19.50	21.25	23.00	24.30	14.70	16.85	18.55	20.25	21.95	23.60	11.85	15.35	16.85	18.55	20.25	21.90
6N	17.76	20.40	23.40	25.50	27.60	29.16	17.64	20.32	22.26	24.30	26.34	28.32	14.22	18.42	20.32	22.26	24.30	26.28
7-1/2 N	22.20	25.50	29.25	31.88	34.50	36.45	22.05	25.28	27.83	30.38	32.93	35.40	17.78	23.03	25.28	27.83	30.38	32.85
10 N	29.60	34.00	39.00	42.50	46.00	48.60	29.40	33.70	37.10	40.50	43.90	47.20	23.70	30.70	33.70	37.10	40.50	43.80
12 N	35.52	40.80	46.80	51.00	55.20	58.32	35.28	40.44	44.52	48.60	52.68	56.64	28.44	36.84	40.44	44.52	48.60	52.56
14N	38.78	44.80	52.08	56.70	61.60	65.24	38.36	44.52	51.80	56.42	59.36	61.60	37.80	43.54	47.32	51.94	56.70	61.46
18N	49.86	57.60	66.96	72.90	79.20	83.88	49.32	57.24	66.60	72.54	76.32	79.20	48.60	55.98	60.84	66.78	72.90	79.02
22N	60.94	70.40	81.84	89.10	96.80	102.52	60.28	69.96	81.40	88.66	93.28	96.80	59.40	68.42	74.36	81.62	89.10	96.58
26N	72.02	83.20	96.72	105.30	114.40	121.16	71.24	82.68	96.20	104.78	110.24	114.40	70.20	80.86	87.88	96.46	105.30	114.14
R407c 型号 规格	蒸发温度（℃） Evaporating temperature （℃）																	
	-17.8℃						-29℃						-40℃					
	通过阀的压降 Pressure drop across valve (MPa)																	
	0.72	0.90	1.08	1.26	1.44	1.62	0.90	1.08	1.26	1.44	1.62	1.80	0.90	1.08	1.26	1.44	1.62	1.80
1/2 N	1.23	1.37	1.50	1.62	1.69	1.86	1.08	1.18	1.27	1.38	1.44	1.52	0.88	0.95	1.00	1.08	1.13	1.18
1 N	2.45	2.74	3.00	3.24	3.37	3.71	2.16	2.36	2.53	2.75	2.87	3.03	1.75	1.89	2.00	2.16	2.26	2.36
1-1/2 N	3.68	4.11	4.50	4.86	5.06	5.57	3.24	3.54	3.80	4.13	4.31	4.55	2.63	2.84	3.00	3.24	3.39	3.54
2 N	4.90	5.48	6.00	6.48	6.74	7.42	4.32	4.72	5.06	5.50	5.74	6.06	3.50	3.78	4.00	4.32	4.52	4.72
3 N	7.35	8.22	9.00	9.72	10.11	11.13	6.48	7.08	7.59	8.25	8.61	9.09	5.25	5.67	6.00	6.48	6.78	7.08
4N	9.80	10.93	11.97	12.93	13.45	14.80	8.62	9.42	10.09	10.97	11.45	12.09	6.98	7.54	7.98	8.62	9.02	9.42
5 N	12.25	13.70	15.00	16.20	16.85	18.55	10.80	11.80	12.65	13.75	14.35	15.15	8.75	9.45	10.00	10.80	11.30	11.80
6N	14.70	16.44	18.00	19.44	20.22	22.26	12.96	14.16	15.18	16.50	17.22	18.18	10.50	11.34	12.00	12.96	13.56	14.16
7-1/2 N	18.38	20.55	22.50	24.30	25.28	27.83	16.20	17.70	18.98	20.63	21.53	22.73	13.13	14.18	15.00	16.20	16.95	17.70
10 N	24.50	27.40	30.00	32.40	33.70	37.10	21.60	23.60	25.30	27.50	28.70	30.30	17.50	18.90	20.00	21.60	22.60	23.60
12 N	29.40	32.88	36.00	38.88	40.44	44.52	25.92	28.32	30.36	33.00	34.44	36.36	21.00	22.68	24.00	25.92	27.12	28.32
14N	35.00	39.20	42.98	46.34	51.94	53.34	28.00	30.80	33.04	35.42	37.24	39.20	19.32	22.40	23.10	24.50	26.04	27.30
18N	45.00	50.40	55.26	59.58	66.78	68.58	36.00	39.60	42.48	45.54	47.88	50.40	24.84	28.80	29.70	31.50	33.48	35.10
22N	55.00	61.60	67.54	72.82	81.62	83.82	44.00	48.40	51.92	55.66	58.52	61.60	30.36	35.20	36.30	38.50	40.92	42.90
26N	65.00	72.80	79.82	86.06	96.46	99.06	52.00	57.20	61.36	65.78	69.16	72.80	35.88	41.60	42.90	45.50	48.36	50.70

概 述

NRF(E)、RT(E)专用于 R410A系列热力膨胀阀是一体式膨胀阀，适用于空调、商业制冷、运输空调及冷冻等领域。

特 点

- 适用制冷剂： R410A
- 最高工作压力： 45bar
- 蒸发温度范围 ： - 40℃— +15℃
- 静过热度调节范围： 1K—8K
- 最大开启过热度： 8K
- 可提供MOP（马达过载保护）功能，最大保护压力170psi。

过热度调节

出厂设定静过热度为4K，可调节范围1K—8K。调节方法：旋下底部密封螺帽，顺时针旋转调节杆一圈（关小），静过热度增加1. 5K，逆时针旋转调节杆一圈（开大）静过热度减小1. 5K。

General

NRF(E) and RT(E) for R410A are integrated thermo-expansion valves for freezing, air conditioning, refrigeration.

Characteristics

- Refrigerant:R410A
- MWP:45bar
- Evaporating temperature: - 40℃— +15℃
- Static Superheat adjusting range: 1K—8K
- Maximum opening superheat:8K
- Can be supplied with MOP(MAX. operating pressure 170psi).

Superheat adjusting

Factory setting: superheat 4K, static superheat adjusting range is between 1~8K.
Take off cap and turn adjusting stem.
Turn adjusting stem anticlockwise one round, reduces superheat 1.5K .

- 压力平衡型式：型号后带“E”字母为外平衡形式，型号后不带“E”字母为内平衡形式。

Note: if there is “E” after model, it indicates external equalization

名义制冷量与外形尺寸（外形尺寸见第21页）Nominal capacity and Dimensions（Dimensions for Page 21）

型号 Model	名义制冷量 Nominal capacity KW	接管尺寸 Connection size 进口 Inlet	接管尺寸 Connection size 出口 Outlet	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	外平衡接口尺寸 External equalizer connection size	毛细管长度 Capillary length
NRF(E) 1Z RT(E)	3.52	Φ10 3/8 SAE Φ10 3/8 ODF	Φ12 1/2 SAE Φ12 1/2 ODF	102/ 107	61	115/ 100	71	Φ55	26	Φ13	89	Φ6×1 喇叭口 1/4SAE 1/4ODF	1.5m
NRF(E) 1-1/2Z RT(E)	5.28												
NRF(E) 2Z RT(E)	7.04												
NRF(E) 2-1/2Z RT(E)	8.80												
NRF(E) 3Z RT(E)	10.56												
NRF(E) 4Z RT(E)	14.08												
NRF(E) 5Z RT(E)	17.60												
NRF(E) 6-1/2Z RT(E)	22.88												
NRF(E) 7-1/2Z RT(E)	26.40												
NRF(E) 9Z RT(E)	31.68	Φ10 3/8 SAE Φ10 3/8 ODF	Φ16 5/8 SAE Φ16 5/8 ODF										
NRF(E) 10Z RT(E)	35.20	Φ12 1/2 SAE Φ12 1/2 ODF Φ16 5/8 ODF	Φ16 5/8 SAE Φ16 5/8 ODF Φ22 7/8 ODF	102/ 107	61	115/ 110/ 100	71	Φ55	26	Φ13	89		
NRF(E) 12Z RT(E)	42.24												
NRF(E) 14Z RT(E)	49.28												
NRF(E) 16Z RT(E)	56.32												
NRF(E) 18Z RT(E)	63.36												
NRF(E) 20Z RT(E)	69.70												

- 名义制冷量基于以下工况参数：冷凝温度：Tc=38℃；蒸发温度：Te=4℃； 进入阀门液态制冷剂：TL=37℃； 过冷度：Tsub=1k；出厂静过热度调定：ss=4K；
- Nominal capacity is based on: Condensing temperature: Tc=38℃; Evaporating temperature: Te=4℃; Refrigerant temperature ahead of valve: TL=37℃; Subcooling: Tsub=1k; Factory set superheat: ss=4K;

RT(E)、NRF(E) R410A 扩展容量表（Kw）
RT(E)、NRF(E) For R410A extended capacity tables

R410A 型号规格		蒸发温度 Evaporating temperature																	
		15℃						10℃						5℃					
		通过阀的压降 Pressure drop across valve(bar)																	
		2.45	5.40	8.50	12.50	18.00	20.00	4.20	7.00	10.0	14.50	19.00	21.50	5.50	8.50	12.00	16.00	20.00	23.00
NRF(E) RT(E)	1Z	2.30	3.30	3.80	4.20	4.70	4.60	2.70	3.30	3.70	4.10	4.40	4.20	2.40	3.00	3.60	3.80	4.00	3.80
NRF(E) RT(E)	1-1/2Z	3.50	4.90	5.70	6.40	7.10	6.80	4.10	5.00	5.60	6.20	6.50	6.30	3.70	4.50	5.40	5.70	5.90	5.80
NRF(E) RT(E)	2Z	4.60	6.50	7.70	8.50	9.40	9.10	5.40	6.70	7.40	8.20	8.70	8.40	4.90	6.00	7.20	7.60	7.90	7.70
NRF(E) RT(E)	2-1/2Z	5.80	8.20	9.60	10.60	11.80	11.40	6.80	8.30	9.30	10.30	10.90	10.50	6.10	7.60	9.00	9.50	9.80	9.60
NRF(E) RT(E)	3Z	7.00	9.80	11.50	12.70	14.10	13.70	8.20	10.00	11.20	12.40	13.10	12.60	7.30	9.10	10.80	11.40	11.90	11.50
NRF(E) RT(E)	4Z	9.30	13.10	15.30	16.90	18.80	18.20	10.90	13.30	14.90	16.50	17.50	16.80	9.70	12.10	14.40	15.20	15.80	15.40
NRF(E) RT(E)	5Z	11.60	16.30	19.20	21.20	23.50	22.80	13.60	16.60	18.60	20.60	21.80	21.00	12.20	15.10	18.00	19.00	19.70	19.20
NRF(E) RT(E)	6-1/2Z	15.10	21.20	24.90	27.50	30.60	29.60	17.70	21.60	24.20	26.80	28.40	27.40	15.80	19.70	23.40	24.70	25.70	25.00
NRF(E) RT(E)	7-1/2Z	17.40	24.50	28.70	31.80	35.30	34.10	20.40	25.00	27.88	30.90	32.70	31.60	18.30	22.70	27.00	28.50	29.60	28.80
NRF(E) RT(E)	9Z	20.90	29.40	34.50	38.10	42.30	41.00	24.70	30.00	33.50	37.10	39.30	37.90	21.90	27.30	32.40	34.20	35.60	34.50
NRF(E) RT(E)	10Z	23.20	32.60	38.30	42.40	47.00	45.50	27.20	33.30	37.20	41.20	43.60	42.10	24.40	30.30	36.00	38.00	40.00	38.40
NRF(E) RT(E)	12Z	27.80	39.20	46.00	50.80	56.40	54.60	32.60	40.00	44.60	49.50	52.40	50.50	29.20	36.40	43.20	45.60	47.40	46.10
NRF(E) RT(E)	14Z	32.50	45.70	53.70	59.30	65.80	63.70	38.10	46.60	52.00	57.70	61.10	58.90	34.10	42.40	50.40	53.20	55.30	53.70
NRF(E) RT(E)	16Z	37.10	52.20	61.30	67.80	75.20	72.80	43.50	52.70	59.50	66.00	69.80	67.40	39.00	48.50	57.60	60.80	63.20	61.40
NRF(E) RT(E)	18Z	42.40	58.80	69.00	76.30	84.60	81.90	48.90	59.90	66.90	74.20	78.50	75.80	43.70	54.50	64.80	68.40	71.10	69.10
NRF(E) RT(E)	20Z	46.60	64.70	76.00	83.90	93.00	90.00	53.80	65.90	73.60	81.60	86.40	83.40	48.40	60.00	71.30	75.20	78.20	76.00
R410A 型号规格		蒸发温度 Evaporating temperature																	
		0℃						-5℃						-10℃					
		通过阀的压降 Pressure drop across valve(bar)																	
		7.00	10.00	13.00	17.00	21.50	24.50	8.20	11.00	14.50	18.50	23.00	24.50	6.80	9.00	12.00	15.50	20.00	24.50
NRF(E) RT(E)	1Z	2.70	3.10	3.40	3.50	3.60	3.50	2.60	2.90	3.10	3.20	3.30	3.10	2.20	2.40	2.60	2.80	2.90	3.00
NRF(E) RT(E)	1-1/2Z	4.10	4.70	5.10	5.20	5.40	5.30	3.90	4.30	4.60	4.80	4.90	4.60	3.30	3.60	3.90	4.20	4.30	4.40
NRF(E) RT(E)	2Z	5.48	6.20	6.80	6.90	7.20	7.10	5.20	5.70	6.20	6.40	6.60	6.10	4.40	4.80	5.20	5.60	5.80	5.90
NRF(E) RT(E)	2-1/2Z	6.90	7.80	8.50	8.70	9.00	8.80	6.50	7.20	7.70	8.00	8.20	7.70	5.50	6.00	6.50	7.00	7.20	7.40
NRF(E) RT(E)	3Z	8.20	9.30	10.20	10.40	10.80	10.60	7.80	8.60	9.20	9.60	9.90	9.20	6.70	7.20	7.80	8.40	8.70	8.90
NRF(E) RT(E)	4Z	10.90	12.40	13.60	13.90	14.40	14.10	10.50	11.50	12.30	12.80	13.10	12.30	8.90	9.60	10.50	11.20	11.60	11.80
NRF(E) RT(E)	5Z	13.70	15.50	17.00	17.40	18.00	17.60	13.10	14.40	15.40	16.00	16.40	15.30	11.10	12.00	13.10	14.00	14.50	14.70
NRF(E) RT(E)	6-1/2Z	17.80	20.20	22.10	22.50	23.40	22.90	17.00	18.70	20.00	20.80	21.30	19.90	14.40	15.60	17.00	18.20	18.80	19.20
NRF(E) RT(E)	7-1/2Z	20.60	23.30	25.50	26.00	27.00	26.40	19.70	21.60	23.10	24.00	24.60	23.00	16.60	18.00	19.70	21.00	21.70	22.10
NRF(E) RT(E)	9Z	24.70	27.90	30.60	31.20	32.40	31.70	23.60	25.90	27.70	28.70	29.60	27.60	20.00	21.60	23.60	25.20	26.10	26.60
NRF(E) RT(E)	10Z	27.40	31.00	34.00	34.70	36.00	35.30	26.20	28.70	30.80	32.00	32.80	30.60	22.20	24.00	26.20	28.10	29.00	29.50
NRF(E) RT(E)	12Z	32.90	37.20	40.80	41.60	43.20	42.30	36.50	34.50	40.00	38.30	39.40	36.80	26.60	28.80	31.40	33.70	34.70	35.40
NRF(E) RT(E)	14Z	38.40	43.30	47.60	48.60	50.40	49.40	36.70	40.10	43.10	44.70	46.00	42.90	31.10	33.60	36.70	39.00	40.50	41.30
NRF(E) RT(E)	16Z	43.80	49.60	54.40	55.50	57.60	56.40	42.00	45.80	49.30	51.10	52.60	49.00	35.50	38.40	41.90	44.90	46.30	47.20
NRF(E) RT(E)	18Z	49.30	55.80	61.20	62.50	64.80	63.50	47.20	51.70	55.40	57.50	59.10	55.10	40.00	43.20	47.20	50.50	52.10	53.10
NRF(E) RT(E)	20Z	54.20	61.40	67.30	68.80	71.30	69.90	51.90	56.90	60.90	63.30	65.00	60.60	44.00	47.30	51.90	55.60	57.30	58.40

RT(E)、NRF(E) R410A 扩展容量表（Kw）
RT(E)、NRF(E) For R410A extended capacity tables

R410A 型号规格		蒸发温度 Evaporating temperature																	
		-15℃						-20℃						-25℃					
		通过阀的压降 Pressure drop across valve(bar)																	
		7.70	10.00	13.00	16.00	20.00	24.50	8.50	11.00	14.00	17.00	21.00	24.50	9.80	12.50	15.00	18.50	22.50	24.50
NRF(E) RT(E)	1Z	2.10	2.20	2.40	2.50	2.50	2.60	1.90	2.00	2.10	2.20	2.20	2.20	1.80	1.90	1.90	2.00	2.00	2.00
NRF(E) RT(E)	1-1/2Z	3.10	3.30	3.60	3.80	3.80	3.90	2.80	3.00	3.20	3.30	3.40	3.30	2.60	2.80	2.90	3.00	3.10	2.90
NRF(E) RT(E)	2Z	4.10	4.40	4.70	5.10	5.10	5.20	3.70	4.00	4.20	4.30	4.50	4.40	3.50	3.70	3.90	4.00	4.10	3.90
NRF(E) RT(E)	2-1/2Z	5.20	5.60	5.90	6.30	6.30	6.50	4.60	5.00	5.30	5.40	5.60	5.50	4.40	4.70	4.80	5.00	5.10	4.90
NRF(E) RT(E)	3Z	6.20	6.70	7.10	7.60	7.60	7.70	5.60	6.00	6.40	6.50	6.70	6.70	5.30	5.60	5.80	6.00	6.10	5.90
NRF(E) RT(E)	4Z	8.30	8.90	9.50	10.10	10.10	10.30	7.50	8.00	8.50	8.70	8.90	8.90	7.10	7.50	7.70	8.00	8.10	7.80
NRF(E) RT(E)	5Z	10.40	11.10	11.80	12.60	12.70	12.90	9.30	9.00	10.60	10.90	11.20	11.10	8.80	9.30	9.70	10.00	10.20	9.80
NRF(E) RT(E)	6-1/2Z	13.50	14.40	15.40	16.40	16.50	16.80	12.10	13.00	13.80	14.10	14.50	14.40	11.50	12.20	12.60	13.00	13.20	12.70
NRF(E) RT(E)	7-1/2Z	15.60	16.70	17.80	18.90	19.00	19.4	14.00	15.00	15.90	16.30	16.80	16.70	13.20	14.00	14.50	15.00	15.30	14.60
NRF(E) RT(E)	9Z	18.70	20.00	21.30	22.70	22.80	23.20	16.80	18.00	19.10	19.60	20.10	20.00	15.80	16.80	17.40	18.00	18.30	17.60
NRF(E) RT(E)	10Z	20.70	22.20	23.60	25.30	25.40	25.80	18.60	20.00	21.20	21.70	22.40	22.20	17.60	18.70	19.30	20.00	20.30	19.50
NRF(E) RT(E)	12Z	24.90	26.70	28.40	30.30	30.40	31.00	21.90	23.90	25.40	26.10	26.8	26.70	21.30	22.40	23.20	23.90	24.40	23.40
NRF(E) RT(E)	14Z	29.00	31.10	33.20	35.40	35.50	36.20	26.10	27.90	29.70	30.40	31.30	31.30	24.70	26.20	27.20	27.90	28.50	27.30
NRF(E) RT(E)	16Z	33.20	35.50	37.90	40.40	40.60	41.30	29.40	31.90	33.90	34.80	35.80	35.60	28.20	30.00	30.90	31.90	32.60	31.20
NRF(E) RT(E)	18Z	37.30	40.00	42.30	45.50	45.60	46.50	33.60	35.80	38.20	39.10	40.30	40.00	31.80	33.70	34.80	35.90	36.60	35.10
NRF(E) RT(E)	20Z	40.00	44.00	46.50	50.00	50.10	51.10	37.00	39.40	42.00	43.00	44.30	44.00	35.00	37.10	38.30	39.50	40.30	38.60
R410A 型号规格		蒸发温度 Evaporating temperature																	
		-30℃						-35℃						-40℃					
		通过阀的压降 Pressure drop across valve(bar)																	
		9.80	12.51	15.00	18.50	22.50	24.50	10.30	113.00	15.00	19.00	23.00	24.50	10.80	13.50	16.00	19.50	23.50	24.50
NRF(E) RT(E)	1Z	1.49	1.60	1.60	1.70	1.70	1.60	1.30	1.40	1.40	1.40	1.48	1.40	1.10	1.20	1.20	1.20	1.20	1.20
NRF(E) RT(E)	1-1/2Z	2.20	2.40	2.50	2.50	2.60	2.50	1.90	2.00	2.00	2.10	2.20	2.10	1.60	1.70	1.80	1.80	1.80	1.70
NRF(E) RT(E)	2Z	3.00	3.20	3.30	3.40	3.40	3.30	2.50	2.70	2.70	2.90	3.00	2.70	2.20	2.30	2.40	2.50	2.40	2.30
NRF(E) RT(E)	2-1/2Z	3.70	4.00	4.10	4.20	4.30	4.10	3.20	3.40	3.40	3.60	3.70	3.40	2.80	2.90	3.00	3.10	3.10	2.90
NRF(E) RT(E)	3Z	4.50	4.70	4.90	5.10	5.20	4.90	3.80	4.10	4.10	4.30	4.40	4.10	3.40	3.50	3.60	3.70	3.70	3.50
NRF(E) RT(E)	4Z	6.00	6.30	6.50	6.70	6.90	6.60	5.10	5.40	5.50	5.70	5.90	5.50	4.70	4.70	4.80	4.90	4.90	4.60
NRF(E) RT(E)	5Z	7.50	7.90	8.20	8.40	8.60	8.20	6.40	6.80	6.80	7.10	7.40	6.80	5.60	5.80	6.00	6.10	6.10	5.80
NRF(E) RT(E)	6-1/2Z	9.70	10.30	10.60	11.00	11.20	10.70	8.30	8.80	8.90	9.30	9.60	8.90	7.30	7.50	7.80	8.00	8.00	7.50
NRF(E) RT(E)	7-1/2Z	11.20	11.90	12.30	12.60	12.90	12.30	9.60	10.10	10.20	10.70	11.10	10.30	8.40	8.70	9.00	9.20	9.10	8.70
NRF(E) RT(E)	9Z	13.40	14.20	14.70	15.20	15.50	14.80	11.60	12.20	12.30	12.80	13.30	12.30	10.10	10.40	10.80	11.00	11.00	10.40
NRF(E) RT(E)	10Z	14.90	15.80	16.30	16.90	17.20	16.50	12.80	13.50	13.70	14.30	14.80	13.70	11.20	11.60	12.00	12.30	12.20	11.60
NRF(E) RT(E)	12Z	17.90	18.60	19.20	20.20	20.60	19.70	15.40	16.20	16.40	17.10	17.80	16.40	13.40	13.60	14.40	14.40	14.40	13.60
NRF(E) RT(E)	14Z	20.90	22.10	22.90	23.60	24.10	23.00	18.00	18.90	19.10	20.00	20.80	19.10	15.60	16.20	16.80	17.20	17.10	16.20
NRF(E) RT(E)	16Z	23.90	25.30	26.10	27.00	27.50	26.30	20.50	21.60	21.90	22.80	23.70	21.90	17.90	18.50	19.20	19.60	19.60	18.50
NRF(E) RT(E)	18Z	26.90	28.50	29.40	30.30	30.90	29.60	23.10	24.30	24.60	25.70	26.70	24.60	20.10	20.80	21.50	22.00	22.00	20.80
NRF(E) RT(E)	20Z	29.60	31.40	32.30	33.30	34.00	32.60	25.40	26.70	27.10	28.30	29.40	27.10	22.10	22.90	23.70	24.20	24.20	22.90

概 述

SM(E)系列是新一代可换阀芯的热力膨胀阀，它是制冷空调系统中一个重要部件，安装于储液器与蒸发器之间，使高温高压液态制冷通过节流成为低压湿蒸汽，由于低压湿蒸汽的蒸发吸热使制冷系统达到降温目的。

SM(E)系列热力膨胀阀，采用多种充注形式，能满足空调、冷藏柜、冰箱、除湿机等各种系统需求。

特 点

- 过热度调节稳定, 可提供MOP功能
- 不锈钢波纹膜片, 可更换阀芯
- 阀进口装有过滤器
- 适用R22、R134a、R407c、R404A/R507
- 安全工作压力3.0MPa
- 温包最高温度75℃

过热度调节

旋下密封螺帽，旋转调节杆，顺时针旋转过热度增加(关小)，逆时针旋转过热度减小（开大），每旋转90°(1/4圈)，过热度增加或减少大约为1K，（每旋转一圈过热度增加或减小大约4K），每次旋转90°(1/4圈)，后应让机组运行20分钟观察系统是否符合设定工况再作第二次调整。

安装使用

- 可以任何位置安装，但必须靠近分配器或蒸发器进口处。
- 系统中制冷剂的流动方向与阀体上箭头指向方向一致。
- 感温包的安装应保证感温包充分感受蒸发器出口温度，外平衡管安装在感温包附近，并从回气管顶部引出。

General

SM(E)series thermostatic expansion valve is a new design. It is an essential part in the refrigeration and air-condition system. It is equipped between the liquid receiver and the evaporator.By its throttling ,the liquid refrigerant under high temperature and pressure changes to the low pressure moist vapor ,in the meantime ,during the evaporation of low pressure moist vapor in the refrigerating system ,heat is absorbed from the surrounding and there temperature is lowered.
It supplies many kinds of charge types and suits for air-condition ,refrigerated cabinets freezer ,dehumidifier etc.

Characteristics

- Constant superheat adjusting performance, MOP(Max .operating pressure) function is available.
- Stainless steel diaphragm
- Interchangeable orifice assembly.
- Inlet filter assembly
- Suitable for refrigerants R22、R134a、R407c and R404A/ R507
- Maximum working pressure is 3.0 Mpa
- Maximum bulb temperature is 75℃

Superheat adjusting

After removal of the seal cap ,the adjusting stem can be turned .If it is turned clockwise, superheat will increase. If it is turned anticlockwise , superheat will decrease .The superheat will increase or decrease 1K for each 90°turnning of the adjusting stem ,the superheat will increase or decrease by about 4K for each round. Waiting 20 minutes then check the status after each 90°adjustment.

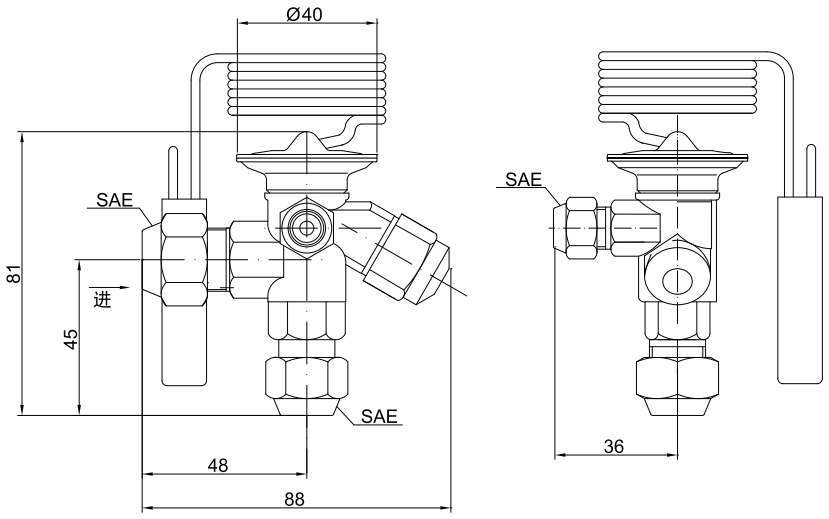
Installation

Valves can be installed in any position ,but should be located as close as possible to the distributor or evapor inlet.
Be sure that the flow direction of the system refrigerant corresponds to the flow arrow stamped on the valve boby.
Fitting should ensure sensor bulb can sense output temperature of evaporation .External equalization tube connects to the top of the suction tube near the bulb accordingly

选型表格 Technical data

阀芯编号 Orifice	型号 Model	制冷剂 Refrigerant								接管尺寸 Connection size			毛细管长度 Capillary length
		R22		R134a		R407c		R404A/R507					
		规格 Type	额定容量 (KW) Nominal capacity (KW)	规格 Type	额定容量 (KW) Nominal capacity (KW)	规格 Type	额定容量 (KW) Nominal capacity (KW)	规格 Type	额定容量 (KW) Nominal capacity (KW)	进口 Inlet	出口 Outlet	外平衡 External equalizer	
0	SM(E)	1/3H	1.12	1/5M	0.65	1/3N	1.07	1/4S	0.83	3/8 Φ10 SAE	1/2 Φ12 SAE	1/4 Φ6 SAE	1m
1		3/4H	2.53	2/5M	1.50	3/4N	2.68	1/2S	1.94				
2		1H	3.37	1/2M	2.50	1N	3.35	1S	3.30				
3		1-1/2H	5.06	1-1/3M	4.00	1-1/2N	5.28	1-1/2S	5.28				
4		2-1/2H	8.43	2M	6.20	2-1/2N	8.80	2-1/3S	8.40				
5		4H	13.49	2.5M	8.20	4N	14.10	3S	10.60				
6		5H	16.87	3M	9.50	5N	16.40	3-1/2S	12.16				

外形尺寸 Dimensions



SM(E)型热力膨胀阀

注:名义制冷量是基于蒸发温度te=4.4℃，冷凝温度tc=40℃,阀前制冷剂温度为t1=38℃。
Note :Nominal capacity is based on evaporating temperature te=4.4℃, condensing temperature tc=40℃,and refrigerant temperature ahead of valve t1= 38℃.
R134a:ΔP=0.46MPa,R22：ΔP=0.69 MPa,R404A:ΔP=0.72MPa,R407C:ΔP=0.69MPa.
注：如需焊管结构，请与本公司洽谈。
Note : Please contact STF if soldering connection is requested.

SM(E) 膨胀阀扩展容量表（KW）
SM(E) extended capacity tables

R22		蒸发温度（℃） Evaporating temperature （℃）																	
		+10℃						+4.4℃						-6.7℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.52	0.69	0.86	1.03	1.21	1.38	0.52	0.69	0.86	1.03	1.21	1.38	0.52	0.69	0.86	1.03	1.21	1.38
SM(E)	1/3H	0.96	1.15	1.28	1.39	1.51	1.57	0.93	1.12	1.23	1.34	1.46	1.57	0.75	1.02	1.12	1.23	1.35	1.46
	3/4H	2.16	2.59	2.88	3.12	3.40	3.54	2.09	2.53	2.77	3.02	3.29	3.54	1.69	2.30	2.52	2.77	3.04	3.28
	1H	2.88	3.45	3.84	4.16	4.53	4.72	2.79	3.37	3.70	4.02	4.39	4.72	2.25	3.07	3.36	3.69	4.05	4.38
	1-1/2H	4.32	5.18	5.76	6.24	6.80	7.07	4.19	5.06	5.55	6.04	6.58	7.07	3.38	4.60	5.05	5.54	6.08	6.57
	2-1/2H	7.21	8.63	9.60	10.40	11.33	11.79	6.98	8.43	9.25	10.06	10.97	11.79	5.63	7.67	8.41	9.23	10.13	10.95
	4H	11.53	13.80	15.37	16.63	18.13	18.86	11.17	13.49	14.79	16.10	17.55	18.86	9.01	12.27	13.45	14.76	16.21	17.52
	5H	14.41	17.25	19.21	20.79	22.66	23.58	13.96	16.87	18.49	20.12	21.94	23.58	11.27	15.33	16.82	18.45	20.26	21.90

R22		蒸发温度（℃） Evaporating temperature （℃）																	
		-17.8℃						-29℃						-40℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.69	0.86	1.03	1.21	1.38	1.55	0.86	1.03	1.21	1.38	1.55	1.72	1.03	1.21	1.38	1.55	1.72	1.90
SM(E)	1/3H	0.81	0.91	1.00	1.08	1.12	1.23	0.72	0.78	0.85	0.92	0.95	1.01	0.58	0.63	0.67	0.72	0.75	0.79
	3/4H	1.83	2.04	2.24	2.43	2.53	2.78	1.61	1.76	1.90	2.06	2.15	2.26	1.31	1.42	1.52	1.61	1.69	1.77
	1H	2.44	2.72	2.99	3.25	3.37	3.70	2.15	2.35	2.54	2.75	2.86	3.02	1.75	1.89	2.02	2.15	2.26	2.36
	1-1/2H	3.67	4.09	4.48	4.87	5.06	5.55	3.23	3.52	3.80	4.13	4.29	4.53	2.62	2.84	3.03	3.23	3.38	3.54
	2-1/2H	6.11	6.81	7.46	8.11	8.43	9.26	5.38	5.87	6.34	6.88	7.15	7.55	4.36	4.73	5.06	5.38	5.64	5.90
	4H	9.78	10.89	11.94	12.98	13.49	14.81	8.60	9.38	10.14	11.00	11.44	12.08	6.98	7.57	8.09	8.61	9.02	9.44
	5H	12.22	13.62	14.93	16.23	16.87	18.51	10.75	11.73	12.68	13.75	14.30	15.10	8.73	9.46	10.11	10.76	11.28	11.80

R134a		蒸发温度（℃） Evaporating temperature （℃）																	
		+10℃						+4.4℃						-6.7℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.30	0.41	0.55	0.69	0.86	1.03	0.30	0.41	0.55	0.69	0.86	1.03	0.41	0.55	0.69	0.86	1.03	1.21
SM(E)	1/5M	0.70	0.85	0.96	1.07	1.21	1.32	0.53	0.65	0.74	0.83	0.95	1.04	0.55	0.63	0.72	0.79	0.88	0.95
	2/5M	1.41	1.70	1.92	2.14	2.42	2.63	1.23	1.50	1.70	1.90	2.17	2.37	1.26	1.45	1.65	1.82	2.02	2.18
	1/2M	1.76	2.13	2.40	2.68	3.03	3.29	2.05	2.50	2.84	3.18	3.63	3.96	2.10	2.42	2.76	3.04	3.37	3.64
	1M	3.52	4.25	4.80	5.35	6.06	6.58	3.27	4.0	4.55	5.10	5.81	6.33	3.36	3.86	4.40	4.84	5.37	5.80
	2M	7.04	8.50	9.60	10.70	12.12	13.16	5.68	6.70	7.61	8.52	9.71	10.58	5.63	6.47	7.38	8.12	9.01	9.73
	2-1/2M	8.80	10.63	12.00	13.38	15.15	16.45	6.90	8.20	9.35	10.47	11.94	13.01	6.89	7.92	9.03	9.93	11.02	11.90
	3M	10.56	12.75	14.40	16.05	18.18	19.74	8.06	9.50	10.83	12.13	13.83	15.07	7.98	9.18	10.47	11.52	12.79	13.81

SM(E) 膨胀阀扩展容量表（KW）
SM(E) extended capacity tables

R134a		蒸发温度（℃） Evaporating temperature （℃）																	
		-17.8℃						-29℃						-40℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.41	0.55	0.69	0.86	1.03	1.21	0.55	0.69	0.86	1.03	1.21	1.38	0.55	0.69	0.86	1.03	1.21	1.38
SM(E)	1/5M	0.42	0.48	0.54	0.61	0.66	0.72	0.35	0.40	0.44	0.49	0.54	0.59	0.25	0.28	0.31	0.35	0.38	0.39
	2/5M	0.97	1.12	1.25	1.40	1.53	1.67	0.82	0.93	1.02	1.13	1.24	1.35	0.59	0.66	0.73	0.84	0.91	0.95
	1/2M	1.62	1.86	2.08	2.33	2.54	2.77	1.36	1.55	1.71	1.90	2.09	2.28	0.98	1.09	1.21	1.39	1.50	1.58
	1M	2.59	2.98	3.37	3.77	4.11	4.48	2.18	2.49	2.74	3.04	3.34	3.64	1.57	1.76	1.95	2.24	2.42	2.52
	2M	4.39	5.05	5.66	6.34	6.91	7.53	3.69	4.21	4.63	5.14	5.65	6.16	2.66	2.98	3.31	3.81	4.11	4.32
	2-1/2M	5.31	6.11	6.84	7.66	8.35	9.10	4.46	5.08	5.59	6.20	6.82	7.43	3.21	3.60	3.40	3.91	4.22	4.43
	3M	6.14	7.06	7.91	8.86	9.66	10.53	5.16	5.88	6.47	7.18	7.90	8.61	3.72	4.17	4.63	5.32	5.75	6.04

R407c		蒸发温度（℃） Evaporating temperature （℃）																	
		+10℃						+4.4℃						-6.7℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.52	0.69	0.86	1.03	1.21	1.38	0.52	0.69	0.86	1.03	1.21	1.38	0.52	0.69	0.86	1.03	1.21	1.38
SM(E)	1/3N	0.87	1.01	1.13	1.21	1.35	1.43	1.05	1.22	1.37	1.49	1.59	1.71	1.00	1.18	1.29	1.41	1.57	1.67
	3/4N	1.74	2.02	2.26	2.41	2.71	2.86	2.62	3.05	3.33	3.64	3.71	4.08	2.46	2.90	3.23	3.52	3.71	4.08
	1N	2.18	2.52	2.83	3.02	3.39	3.58	4.26	4.95	5.57	5.94	6.68	7.06	4.08	4.83	5.19	5.94	6.30	6.68
	1-1/2N	4.35	5.04	5.66	6.03	6.77	7.15	6.86	7.98	8.91	9.65	10.49	11.13	6.68	7.79	8.55	9.28	10.02	10.77
	2-1/2N	8.70	10.08	11.32	12.06	13.54	14.30	11.45	13.31	14.47	15.96	17.23	18.19	10.77	12.62	14.11	15.58	16.71	17.83
	4N	10.88	12.60	14.15	15.08	16.93	17.88	13.73	15.96	17.44	19.48	20.97	22.57	13.36	15.36	17.08	18.73	20.33	21.73
	5N	13.05	15.12	16.98	18.09	20.31	21.45	16.02	18.63	20.40	22.57	24.35	25.85	15.36	17.99	19.91	21.73	23.60	25.09

R407c		蒸发温度（℃） Evaporating temperature （℃）																	
		-17.8℃						-29℃						-40℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.69	0.86	1.03	1.21	1.38	1.55	0.86	1.03	1.21	1.38	1.55	1.72	1.03	1.21	1.38	1.55	1.72	1.90
SM(E)	1/3N	0.93	1.01	1.15	1.26	1.34	1.41	0.78	0.85	0.93	1.01	1.04	1.12	0.71	0.74	0.77	0.85	0.88	0.93
	3/4N	2.34	2.59	2.85	3.07	3.27	3.49	1.93	2.12	2.30	2.44	2.65	2.74	1.71	1.85	1.98	2.08	2.20	2.30
	1-1/2N	3.71	4.45	4.83	5.19	5.57	5.94	3.17	3.52	3.71	4.08	4.45	4.83	2.83	3.05	3.27	3.45	3.64	3.71
	2-1/2N	6.30	7.06	7.43	8.16	8.91	9.28	5.19	5.57	5.94	6.30	7.16	7.43	4.45	4.83	5.19	5.57	5.94	6.30
	3N	10.02	11.13	12.25	13.36	14.47	15.22	8.55	9.28	10.02	10.77	11.23	11.88	7.43	8.16	8.55	8.91	9.65	10.02
	4N	12.36	13.85	15.36	16.49	17.60	18.73	10.49	11.23	12.36	13.10	13.85	14.60	8.91	9.73	10.49	11.23	11.60	11.98
	5N	14.24	16.11	17.60	19.10	20.23	21.73	11.98	13.10	14.23	14.98	16.11	16.86	10.40	11.23	12.36	12.73	13.48	14.24

SM(E) 膨胀阀扩展容量表（KW）
SM(E) extended capacity tables

R404A/R507		蒸发温度（℃） Evaporating temperature （℃）																	
		+10℃						+4.4℃						-6.7℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		0.52	0.69	0.86	1.03	1.21	1.38	0.69	0.86	1.03	1.21	1.38	1.55	0.86	1.03	1.21	1.38	1.55	1.72
SM(E)	1/4S	0.68	0.77	0.85	0.93	1.00	1.08	0.83	0.91	0.98	1.10	1.17	1.24	0.87	0.94	1.02	1.09	1.17	1.24
	1/2S	1.70	1.92	2.12	2.33	2.50	2.69	1.94	2.17	2.35	2.55	2.71	2.87	2.03	2.23	2.41	2.57	2.75	2.90
	1S	3.40	3.83	4.24	4.66	5.00	5.18	3.30	3.73	4.14	4.56	4.90	5.28	3.50	3.77	4.14	4.52	4.90	5.28
	1-1/2S	5.15	5.51	5.67	6.40	6.58	7.32	5.32	6.08	6.39	6.78	7.60	7.91	5.65	6.02	6.39	7.16	7.53	3.63
	2-1/3S	6.80	7.66	8.48	9.32	10.00	11.76	8.75	9.50	10.64	11.41	12.16	12.93	9.13	9.88	10.65	11.41	12.16	12.92
	3S	10.20	11.49	12.62	13.49	14.53	15.26	10.60	11.78	12.81	13.68	14.83	15.58	11.03	12.16	13.31	14.06	14.83	15.96
	3-1/2S	12.01	12.23	13.32	15.09	16.49	17.57	12.16	13.68	14.83	15.96	17.11	18.25	12.93	14.06	15.21	16.35	17.49	18.25

R404A/R507		蒸发温度（℃） Evaporating temperature （℃）																	
		-17.8℃						-29℃						-40℃					
型号 Model	规格 Type	通过阀的压降 Pressure drop across valve (MPa)																	
		1.03	1.21	1.38	1.55	1.72	1.90	1.21	1.38	1.55	1.72	1.90	2.07	1.38	1.55	1.72	1.90	2.07	2.24
SM(E)	1/4S	0.75	0.79	0.87	0.90	0.94	1.02	0.56	0.60	0.64	0.67	0.72	0.75	0.45	0.49	0.54	0.57	0.60	0.64
	1/2S	1.73	1.88	1.99	2.08	2.26	2.33	1.36	1.47	1.54	1.62	1.69	1.77	1.09	1.13	1.21	1.24	1.32	1.39
	1S	2.97	3.24	3.47	3.65	3.77	4.14	2.33	2.48	2.63	2.78	2.94	3.05	1.84	1.96	2.08	2.18	2.26	2.38
	1-1/2S	4.52	4.91	5.28	5.70	6.02	6.40	3.69	3.77	4.14	4.52	4.90	5.28	2.94	3.12	3.27	3.47	3.62	3.77
	2-1/3S	7.53	8.36	9.13	9.50	9.88	10.65	6.08	6.46	6.85	7.23	7.60	7.98	4.95	5.32	5.70	6.08	6.46	6.85
	3S	9.50	10.26	11.03	11.78	12.16	12.93	7.60	7.98	8.36	8.75	9.13	9.88	5.70	6.08	6.46	6.85	7.23	7.60
	3-1/2S	11.03	11.78	12.55	13.30	14.07	14.83	8.75	9.13	9.88	10.26	10.65	11.41	6.85	7.23	7.60	7.98	8.36	8.75

概 述

- TB型热力膨胀阀是一种静过热度不可调的热力膨胀阀，用于小型的制冷压缩机组实现系统节流控制。
- TB型热力膨胀阀整体结构紧凑，ODF铜管焊接接口。
- 安全工作压力为2.8MPa。

Characteristics

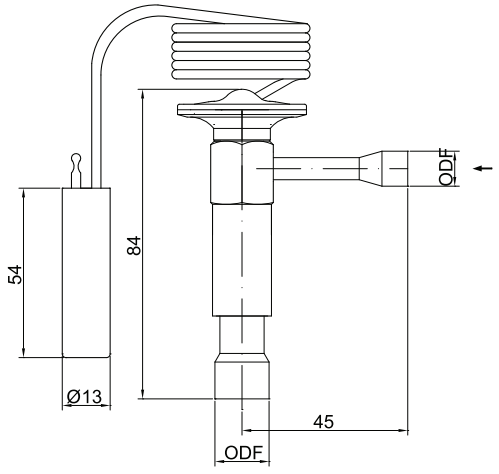
- The TB thermostatic expansion valve is a kind of thermostatic expansion valve with fixed static superheat temperature, which is suitable for small capacity refrigeration system.
- ODF copper tube connections.
- Maximum working pressure: 2.8 MPa.

外形尺寸 Dimensions

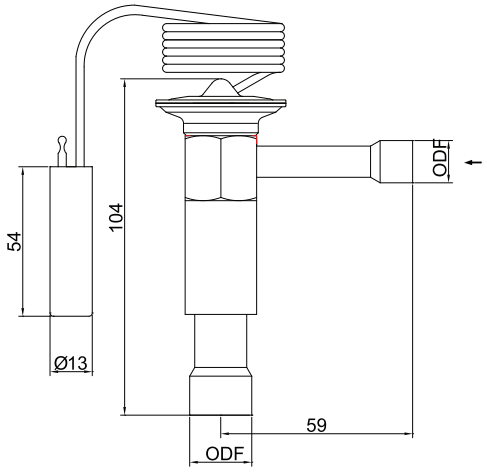
型 号 Model	名义制冷量 Nominal capacity (kw)		平衡形式 Type of equalization	接管尺寸 Connection size	毛细管长度 Capillary Length
	R134a	R22			
TB-1	0.50	0.70	内平衡 Internal equalizated	焊接铜管ODF 进口Inlet:1/4 出口Outlet:1/2	1m 1.5m
TB-2	0.80	1.10			
TB-3	1.00	1.40			
TB-4	1.20	1.70			
TB-5	1.60	2.80			
TB-6	2.10	3.00			
TB-7	3.10	4.40			
TB-8	3.70	5.30			
TB-11	4.90	7.00			
TB-12	6.20	8.80			
TB-13	7.20	10.20			
TB-14	9.00	12.80			
TB-15	9.50	14.00			
TB-16	11.70	16.60			
TB6-01	12.40	17.60	内平衡 Internal equalizated	焊接铜管ODF 进口Inlet:1/2 出口outlet:5/8	1m 1.5m
TB6-02	14.90	21.12			
TB6-03	18.80	26.64			
TB6-04	19.80	28.16			

注：冷凝温度为+38℃，蒸发温度为+5℃；R134a:ΔP=0.46Mpa， R22：ΔP=0.69MPa。
Note: Condensing temperature +38℃, evaporating temperature +5℃; R134a: △P=0.46MPa, R22:△P=0.69MPa.

外形尺寸 Dimensions



TB



TB6

概 述

- CBX型旁通阀用于不具备能量卸载机构的制冷压缩机组实现系统能量调节。
- CBX型旁通阀是一种阀门利用出口压力变化来改变流量的机械式膨胀阀，保持稳定的蒸发温度。
- CBX型旁通阀可防止制冷压缩机组的吸气压力不低于其最低极限值。
- 具有ODF铜管接口的焊接。
- 适用介质：各种HFC和HCFC。
- 安全工作压力为28bar。

功能介绍

CBX型旁通阀主要功能是当阀的出口压力发生变化时，阀门会自动调节性的关闭或开启，保持出口压力恒定在设定值上，且不受进口压力大小（一定范围）的影响。

CBX型旁通阀作为定压式自动膨胀阀的功能

如果此旁通阀的进口接至冷凝压力，阀的出口接至蒸发器的入口,即通常热力膨胀阀的安装位置，在这样的安装调整情况下，在未开机时，由于蒸发压力较高，此时该旁通阀呈关闭状态，当开机后，随着压缩机的运行，蒸发压力渐渐减小，当减小到低于调定值后，此旁通阀自动开启，制冷剂流体通过阀门的节流作用进入蒸发器，在蒸发器吸热后，蒸发压力升高会使阀门趋于关闭，此时由于压缩机的运行至使蒸发压力又被降低，阀门呈开启形态，在整个运行过程中，阀门处于动态平衡，保持蒸发压力在调定值左右。其蒸发压力波动的幅度与阀门的容量有关，不受冷凝压力（或环境温度）变化的影响，蒸发压力稳定。

General

- The CBX hot gas-bypass valve is a kind of capacity adjust component for the refrigerating system with a non-adjustable compressor.
- The CBX hot gas-bypass valve can be used as automatic expansion valve under fixed pressure to maintain the fixed evaporation pressure (temperature).
- The CBX hot gas-bypass valve is capable of maintaining the minimum suction pressure.
- ODF copper tube connections.
- Suitable for HFC and HCFC.
- Maximum working pressure: 28bar.

Function

The CBX hot gas-bypass valve can automatically open/close to get the constant outlet pressure on regardless of the change of the inlet pressure (within a certain range).

CBX used as expansion valve under the fixed pressure

If the inlet of the CBX hot gas-bypass valve is connected to the condenser and outlet to the evaporator, that is, on the normal position of thermal expansion valve ,the CBX valve is closed when system turning off due to higher evaporating pressure; and it will open automatically after compressor on due to evaporation pressure decreasing. The refrigerant flows into the evaporator through the throttling hole of CBX. After the evaporator absorbs heat, the increasing evaporating pressure makes the valve closed. Once again, operation of the compressor makes evaporating pressure decreased and the valve turns to open status. During the operation, the valve always keeps the dynamic balance, maintaining the evaporating pressure constant approximately at the setting point. The variation situation of the evaporating pressure is related to the volume of the valve, regardless of the condensation pressure (or ambient temperature).

技术参数 Technical data

型号 Model	名义制冷量 Nominal capacity (kw)					连接形式尺寸 Connection size
	R134a	R22	R407c	R404A/507	R410A	
CBX-01	0.97	1.77	1.82	1.38	2.12	焊接铜管 进口Inlet:Φ8 ODF 出口Outlet:Φ12 ODM
CBX-02	1.30	2.36	2.43	1.84	2.83	
CBX-03	1.95	3.54	3.65	2.76	4.25	
CBX-04	2.92	5.31	5.47	4.14	6.37	
CBX-05	3.89	7.08	7.29	5.52	8.50	
CBX-06	5.83	10.60	10.90	8.27	12.70	
CBX-07	7.76	14.10	14.50	11.00	16.90	
CBX-08	9.74	17.70	18.20	13.80	21.20	
CBX-09	11.66	21.20	21.80	16.50	25.40	
CBX6-01	13.60	24.70	25.40	19.30	29.60	焊接铜管 进口Inlet:1/2 ODF 出口Outlet:5/8 ODF
CBX6-02	15.60	28.30	29.20	22.10	33.90	
CBX6-03	17.50	31.80	32.80	24.80	38.20	
CBX6-04	19.50	35.40	36.50	27.60	42.50	

名义制冷量基于：蒸发温度为Te=3℃；冷凝温度为Tc=38℃， 进入阀门液态制冷剂TL=37℃；过冷度Tsub=1K.
Note: Condensing temperature Te=3℃, evaporating temperature Tc=38℃; Refrigerant temperature ahead of valve: TL=37℃; Subcooling: Tsub=1k;

CBX型旁通阀作为能量调节阀的功能

如果我们把此旁通阀的进口接至排气端，阀的出口接至蒸发器的出口端或者压缩机的进口端（相当于吸气压力端），在这样的安装调整情况下，当蒸发器负荷较大时，也就是需要压缩机的能量较大时，则此旁通阀处于关闭状态。在运行一段时间后，蒸发器的负荷减少，即不需要压缩机较大的能量，由于此时膨胀阀已渐渐关小，此时的蒸发压力也渐渐变小，当变小到低于调定值后，此旁通阀自动开启，把一部分压缩机的排气压力短路至蒸发器的出口或压缩机的进口。实际上这样也达到了能量调节的目的。

CBX型旁通阀作为节能的功能

上述能量调节过程中，在机组运行至蒸发器负荷减小后，其低于4bar 的蒸发压力由于旁通阀作用提高至4bar ，使过大的吸排气的压力差减小，从而也减轻了压缩机的负荷，达到节能的效果，并可保护蒸发压力不至于过低。

CBX型旁通阀作为定压式自动膨胀阀的功能

制冷剂 Refrigerant	压力可调节范围 Adjustable Vage	设定压力 Setting Pressure
R134a、R22、R407c、R404A/507	1-7 bar	4bar
R410A	1-12 bar	7.5bar

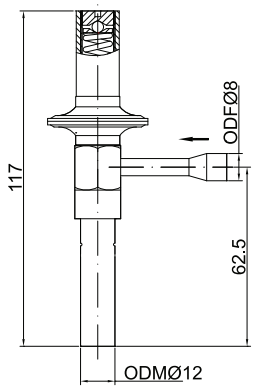
安装建议

- 将热气旁通回流至蒸发器进口，以提高蒸发器出口过热度，增大供液量，降低吸气温度。
- 或者加装喷液调节阀，节流降压一部分制冷剂液体进入吸气管中蒸发吸热，使排气温度下降。

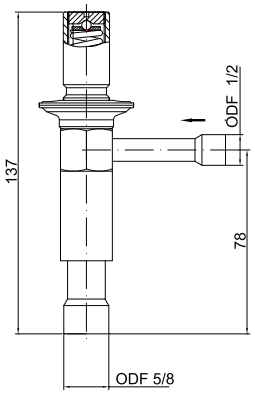
订货须知

- 出厂时按图示接管连接的形式尺寸和压力设定值交货。
- 如有特殊要求, 请与我们联系。

外形尺寸 Dimensions



CBX



CBX6

CBX used as hot gas bypass valve to regulate capacity

The inlet of the CBX hot gas-bypass valve is connected to the discharge pressure, and the outlet to the evaporator (equal to the suction pressure). The CBX is closed when evaporator on high loading. When the evaporation pressure decreased, the expansion valve throttle turns to smaller. When the pressure is lower than the set value, CBX will be opened automatically. Some portion of refrigerant from the compressor are by-passed to the evaporator. So the outlet of the evaporator or the inlet of the compressor is unloaded.

CBX functioned as saving energy

In the process of compressor capacity regulation described as above, in case that the compressor operates on lower evaporator load, the evaporating pressure (less than 4bar) is increased to 4bar. The pressure difference between the discharge and suction sides is reduced so as to reduce the compressor energy consumption.

Installation

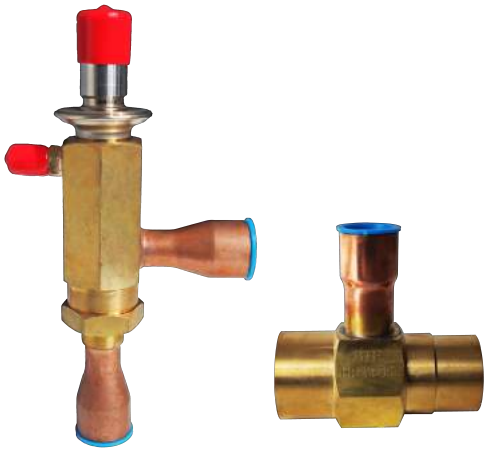
- Bypass the hot gas to the evaporator inlet so as to increase superheat and increase the refrigerant feed and reduce the suction temperature.
- Or add the injection valve to inject the refrigerant to the suction line to reduce the discharge temperature.

Ordering information

- According the table to order standard connecting size and factory set parameters.
- If you have special requirement, please contact STF.

概 述

NTF能量调节阀使压缩机的冷量与实际的蒸发器负载相匹配，确保压缩机工作的稳定性。
NTF能量调节阀是通过将压缩机排出的热蒸汽旁通到蒸发器来实现能量调节功能的。
旁通的热蒸汽必须通过包装内所附的气液混合接头进入系统。



特 点

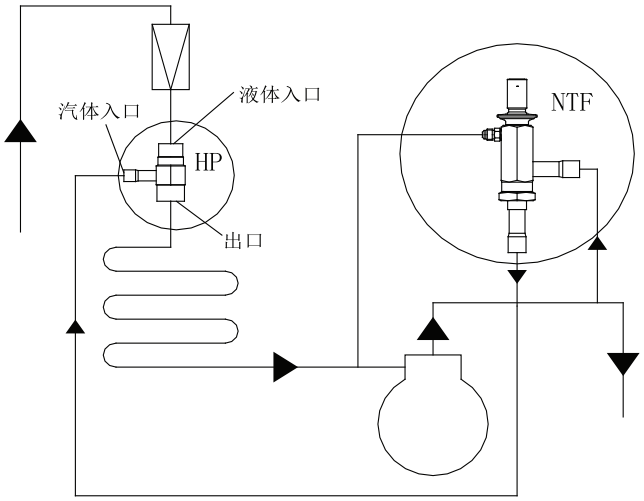
- 控制精度高。
- 直接由吸气端压力控制，不受蒸发器压力降影响。
- 调节阀增加了蒸发器中蒸汽流速，从而改善了压缩机的回油。
- 防止过低的蒸发温度，如用于防止蒸发器结冰等。
- 适用于HFC & HCFC制冷剂
- 适用工质温度-50℃～+140℃。
- 适用环境温度-40℃～+55℃。
- 最高工作压力36bar。
- 调整范围 0-8bar， 出厂设置0.4bar
- 特殊要求请与上恒联系

General

NTF capacity regulators adapt compressor capacity to actual evaporator load.
NTF was installed in a bypass line between the low and high pressure sides of the refrigeration system, for hot gas injection between the evaporator and thermostatic expansion valve.
Injection should be arranged to occur through a liquid-gas mixer packed together.

Characteristics

- Superior control accuracy
- Direct connection to system suction line regulates hot gas injection independent of evaporator pressure drop.
- The NTF increase evaporator gas velocity, thus ensuring better oil return to compressor.
- Protection against too low an evaporating temperature, i.e. prevents evaporator icing.
- Can be used for HCFC and HFC.
- Temperature of medium -50℃～+140℃.
- Environmental temperature -40℃～+55℃.
- Max. working pressure 36 bar.
- Regulating range 0-8bar, Factory setting 0.4bar.
- Any special requirement, please contact STF.



系统图

型号与参数 Technical data

NTF能量调节阀 Capacity regulator

型号 Type	接管尺寸 Connection size		额定容量 Rated capacity (kw)			
	ODF (mm)	ODF (in)	R22	R134a	R404A/R507	R407C
NTF12	12	1/2	17.2	7.8	16.3	18.9
NTF15	16	5/8	25.8	11.7	24.4	28.1
NTF22	22	7/8	34.1	15.4	32.2	37.4

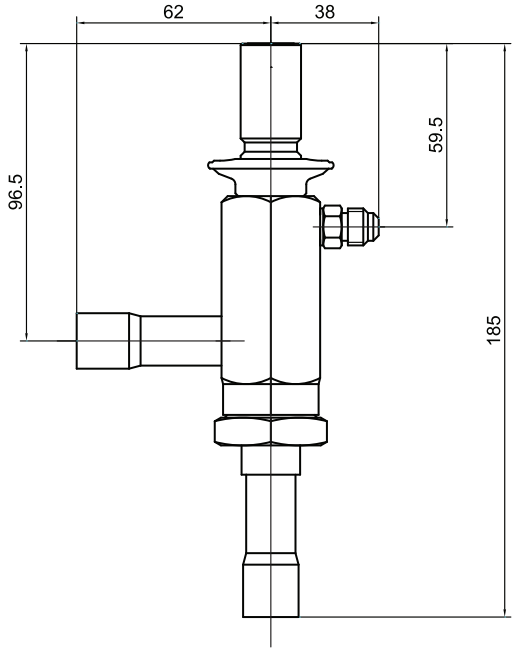
额定容量是基于以下参数的制冷容量：
冷凝温度 tc=30℃
蒸发温度 te=-10℃
吸气温度差或吸气压力降 Δts=4K

The rated capacity is the regulator capacity at
evaporating temperature te= -10℃,
condensing temperature tc= 30℃,
reduction of suction temperature/suction pressure Δts=4K

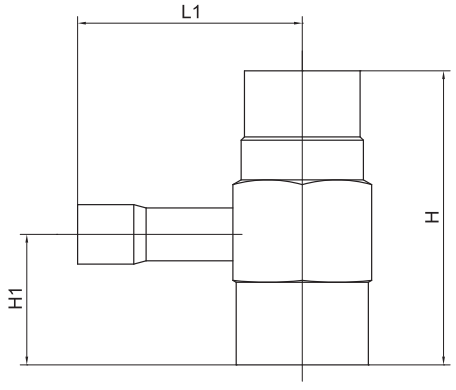
液汽混合器 Liquid-gas mixer

型号 Type	接管尺寸 Connection size					
	出口 Outlet		蒸汽进口 Inlet hot gas		液体进口 Inlet liquid	
	ODM (mm)	ODM (in)	ODF (mm)	ODF (in)	ODF (mm)	ODF (in)
HP12-16	16	5/8	12	1/2	16	5/8
HP12-22	22	7/8	12	1/2	22	7/8
HP16-28	28	1-1/8	16	5/8	28	1-1/8
HP22-35	35	1-3/8	22	7/8	35	1-3/8

外形尺寸 Dimensions



NTF



HP

型号 Type	H	H1	L1
HP12-16	54	22	40
HP12-22	62	26	42
HP16-28	79	35	48
HP22-35	89	40	66

概 述

HCV系列单向阀是用于冷冻氟利昂系统液管路、吸气管路和热气旁通管路等防止氟利昂反向流动的制冷元件

特 点

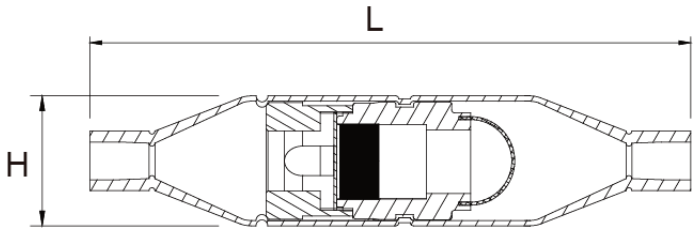
- 全系列1/4"～3-1/8"产品。
- 磁性阀片设计，正向流动保证最小的压力损失；反向接近零泄漏量。
- 适合各种HFC，HCFC冷媒。
- 进口内置30目滤网。
- 流体温度:-40℃～130℃。
- 最高工作压力根据不同型号有所不同

工作特点

HCV系列单向阀采用了不同于传统单向阀的设计。原有的单向阀依靠制冷剂压差来打开阀片，当阀片离开阀座越远时，开阀的所需压力越大，这会造成一定的压力损失。而HCV巧妙的磁片设计，当阀芯离开阀座一定距离时，所需的压差减少。而在 HCV新的制造工艺中，可以避免过热造成的内部元件受损

General

- HCV check valve can be applied in the refrigeration system to prevent the refrigerant flows in opposite direction.
- Full series 1/4" ~ 3-1/8".
- Optimum internal design with small pressure drop and low internal leakage.
- Inlet filter net.
- Temperature of medium: -40℃ ~ 130℃.



型号和参数 Technical data

型号 Model	接管尺寸 Connection size	外形尺寸(mm) Dimensions		最大工作压力（bar） Max. working pressure	流量Kv Flow rate（m^3/h）
		长度L	直径D		
HCV-04	1/4	102	22	55	0.48
HCV-06	3/8	102	22	55	0.99
HCV-08	1/2	127	29	42	2.65
HCV-10	5/8	127	29	42	2.95
HCV-12	3/4	127	29	42	5.56
HCV-14	7/8	178	40	42	7.58
HCV-18	1-1/8	213	55	42	13.00
HCV-22	1-3/8	213	55	42	16.27
HCV-26	1-5/8	267	80	42	27.79
HCV-34	2-1/8	267	80	42	48.30
HCV-42	2-5/8	330	105	38	64.55
HCV-50	3-1/8	330	105	38	89.20

Kv值为阀通过ρ=1000kg/m3, 前后1bar的压降时的水流量
The Kv value is the water flow in m3/h at the pressure drop on valve of 1 bar，ρ=1000kg/ m3.

概 述

HBV系列球阀是用于冷冻氟利昂系统液管路、吸气管路和热气旁通管路等上手动关断管路的制冷元件。

特 点

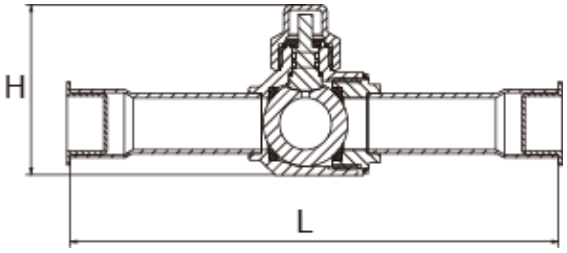
- 全系列1/4"～3-1/8"产品。
- 双向流通，1/4圈从全关到全开的转动。
- 适合各种HFC，HCFC冷媒。
- 内部采用Teflon密封材料，减少泄漏可能，增强了耐磨性能。
- 流体温度:-40℃～150℃。

工作原理

HBV系列球阀可以用于需要手动关断管路的系统中。球阀在全开的位置能够保证最大的流通能力和最小的压降。通过将顶部阀杆和内部球体同时转动1/4圈来关闭的。伸入阀体内的阀杆可以防止在运行或维修时承压状态下泄漏。阀杆上的定位销可以限制阀杆误转动

General

- HBV ball valve is suitable for shut off the refrigeration circuit in the system.
- Full series 1/4"～3-1/8".
- Special Teflon “O” ring inside ,suitable for HFC、HFC.
- Temperature of medium:-40℃～150 ℃.



型号和参数 Technical data

型号 Model	接管尺寸 Connection size	外形尺寸(mm) Dimensions		流量Kv Flow rate（m^3/h）	最大工作压力（bar） Max. working pressure
		长度L	直径D		
HBV-02	1/4	150	60	1.8	48bar
HBV-03	3/8	150	60	3.2	
HBV-04	1/2	152	60	5.8	
HBV-05	5/8	162	60	9.8	
HBV-06	3/4	162	60	16.0	
HBV-07	7/8	183	76	27.0	
HBV-09	1-1/8	203	84	50.0	
HBV-11	1-3/8	218	99	89.0	
HBV-13	1-5/8	244	118	190	
HBV-17	2-1/8	274	135	227	
HBV-21	2-5/8	294	150	290	
HBV-25	3-1/8	322	150	320	

Kv值为阀通过ρ=1000kg/m3, 前后1bar的压降时的水流量
The Kv value is the water flow in m3/h at the pressure drop on valve of 1 bar，ρ=1000kg/ m3.

概 述

- YK系列压力控制器产品用作压力控制和压力保护，当系统压力到调定值时，开关自动切断（或接通）电路。
- 除自动复位型外，还备有高压手动复位型，高低压手动复位型。
- 具有刻度指示的压力和压差调节。
- 压力和压差调节的精度高，重复动作点稳定。
- 适用介质为压缩空气、氟里昂、水、油等。
- 接头为标准的喇叭口接口，M12×1.25或7/16"-20UNF螺纹。
- 介质温度：-20℃至+120℃；环境温度：-20℃至+70℃。

General

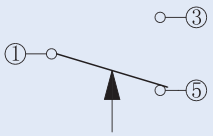
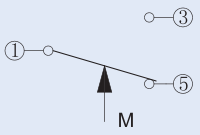
- YK is used for pressure control or pressure protection. When the system reaches the set point, the switch turns on/off automatically.
- Automatic reset, optional high pressure manual reset and low pressure manual reset.
- Adjustable pressure and pressure difference setup with scale instrument.
- Suitable for HFC, HCFC, compressed air , water and oil.
- M12×1.25 or 7/16"-20UNF flare connection
- Temperature of medium: - 20℃～+120℃; Ambient temperature: - 20℃～+70℃.

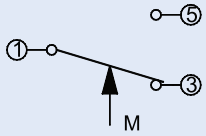
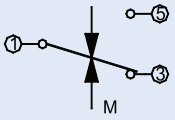
电气指标 Electrical data

额定电压 Rated voltage (V) / 额定电流 Rated current (A)		功率Power COSφ	125V AC	250V AC
非感应电流 Non-induction current		1	15	15
感应电流 Induction current	恒定电流 Constant	0.75	3.5	2.5
	瞬时电流 Transient	0.75	21	15

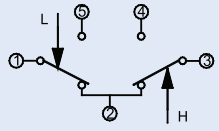
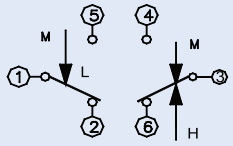
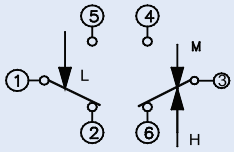
技术参数 Technical data

单压力型 Single pressure

型 号 Model	压力调节范围 Pressure setting range MPa	差动调节 Differential setting 大小 Min.–Max.	差动调节 Differential setting 形式Type	设 定 值 Setting point	接 点 形 式 Contacts Form	说明 Instruction
YK6F(E)	-0.065 – 0.6	0.06–0.4	自动复位 Auto reset	0.2 – 0.3		①：公共触点 ①-③：压力上升时接通 ①-⑤：压力下降时接通 ①：Common contact ①-③：Close on pressure rise ①-⑤：Close on pressure drop
YK10F(E)	0.1 – 1	0.1–0.3		0.4 – 0.6		
YK20F(E)	0.5 –2	0.2–0.5		1.2 – 1.5		
YK30F(E)	0.5 – 3	0.2–0.7		2.0 – 2.5		
YK6FS(E)	-0.065 – 0.6	压力下降时动作并自锁 Act & self lock when pressure decreasing	手动复位 Manual reset	0.2		①：公共触点 ①-③：压力上升时接通 ①-⑤：压力下降时接通 M:手动复位 ①：Common contact ①-③：Close on pressure rise ①-⑤：Close on pressure drop M：Manual reset
YK10FS(E)	0.1 – 1			0.5		
YK20FS(E)	0.5 – 2			1.4		
YK30FS(E)	0.5 – 3			2.0		

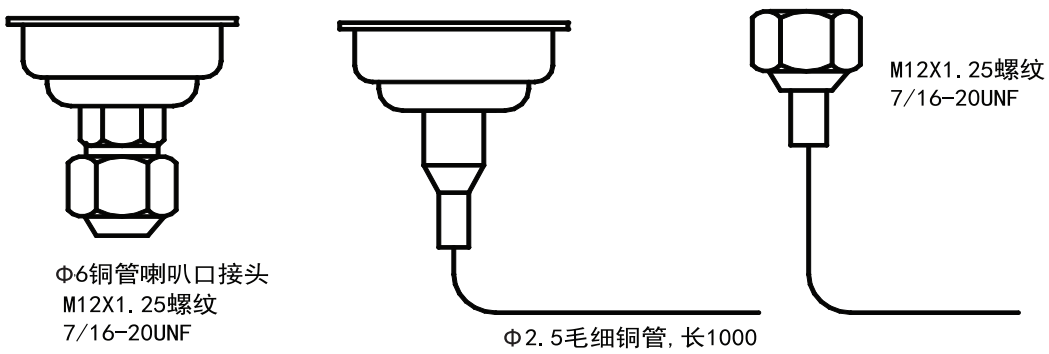
YK130FS(E)	0.8 - 3	压力上升时 动作并自锁 Act & self lock when pressure increasing	手动复位 Manual reset	2		①：公共触点 ①-③：压力下降时接通 ①-⑤：压力上升时接通 M:手动复位 ①：Common contact ①-③：Close on pressure drop ①-⑤：Close on pressure rise M：Manual reset
YK130F(E)	0.8 - 3	约0.4	固定Fixed	1.6 – 2.0		①：公共触点 ①-③：压力下降时接通 ①-⑤：压力上升时接通 M:手动复位 ①：Common contact ①-③：Close on pressure drop ①-⑤：Close on pressure rise M：Manual reset

双压力型 Dual pressure

型 号 Model	压力调节范围 Pressure setting range MPa	差动调节 Differential setting		设 定 值 Setting point	接 点 形 式 Contacts Form	说明 Instrction
		大小 Min.–Max.	形式 Type			
YK306F(E)	低压Low pressure -0.065 – 0.6	0.06 – 0.4	自动复位 Auto reset	0.2–0.3		L：低压端 H：高压端 M:手动复位 ↑：压力上升时动作方向 ↓：压力下降时动作方向 L：Low pressure side H：High pressure side M:Manual reset ↑：Increase of pressure ↓：Decrease of pressure
	高压High pressure 0.8 – 3	0.4	固定 Fixed reset	1.6– 2.0		
YK306FS(E)	低压Low pressure -0.065 – 0.6	0.06 – 0.4	自动复位 Auto reset	0.2–0.3		
	高压High pressure 0.8– 3	压力上升时 动作并自锁 Act & self lock when pressure increasing	手动复位 Manual reset	2.0		
YK306FSS(E)	低压Low pressure -0.065 – 0.6	压力上升时 动作并自锁 Act & self lock when pressure increasing	手动复位 Manual reset	0.2		
	高压High pressure 0.8– 3		手动复位 Manual reset	2.0		

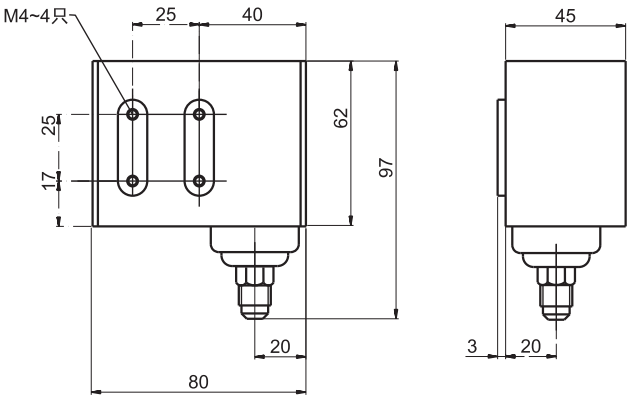
注：E为英制接头；F为铜波纹管，只适用于氟利昂，不适用于氨制冷剂；S为手动复位；SS为高低压手动复位；MG为毛细管连接；
- Inch connection size (7/16"-20UNF),please state letter "E" after the model number.
- "S"stands for Manual reset ； "SS"stands for dual Manual reset."F" :Can Not Use For R717；
- "MG"stands for capillary,standard length is 1000mm,please mark the special length requirement.

接头连接方式 Connection size

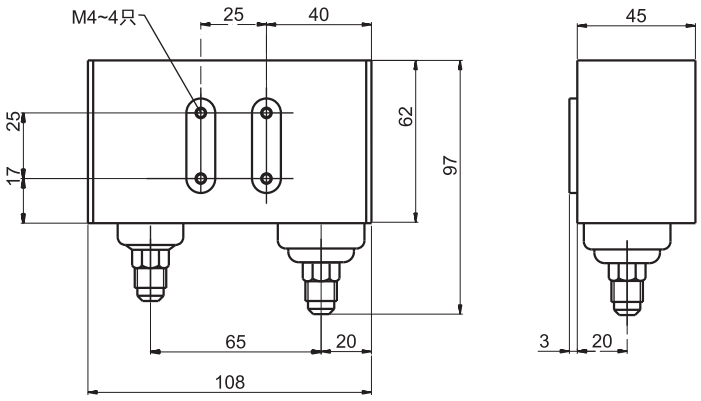


安装尺寸 Dimensions

单压力型 Single pressure



双压力型 Dual pressure



订货须知

- 出厂时按图示接管连接的形式尺寸和较小压力设定值交货。
- 技术参数中的压力供选型时参考。
- 如有特殊要求,请与我们联系。

Ordering information

- Standard parts refer to connection size & minimum pressure set by factory.
- Pressure listed in the technical data is reference for product selection only.
- If you have special requirement, please contact STF .

概 述

JC3.5/YC350压差控制器是一种用于防止制冷压缩机因润滑油的压力不足而损坏压缩机的保护装置。如果制冷压缩机启动后，在60秒内油压建立不起来，则压差控制器动作自动切断电源，确保系统安全运行。

安装说明

须安装在振动较小的位置，两端气箱不要接错，标有“接低压”一端的接管接压缩机的低压端(曲轴箱)，标有“接高压”一端的接管接润滑油泵的排出口。

接上电源后，需按一下“复位按钮”再通电工作。因系统原因动作后，若要重新恢复工作，须等延时机构中的电加热器冷却后约5分钟才能进行。否则无法工作。控制器出厂压差值定在0.1Mpa。

与系统电气线路连接时，必须按线路图连接并注意电源电压，以免损坏系统电器线路和控制器，致使系统不能正常工作。

带延迟的压差控制器在出厂时按380V电源电压接线，若用220V电源，则把L2线连接到220V接线触点即可。

General

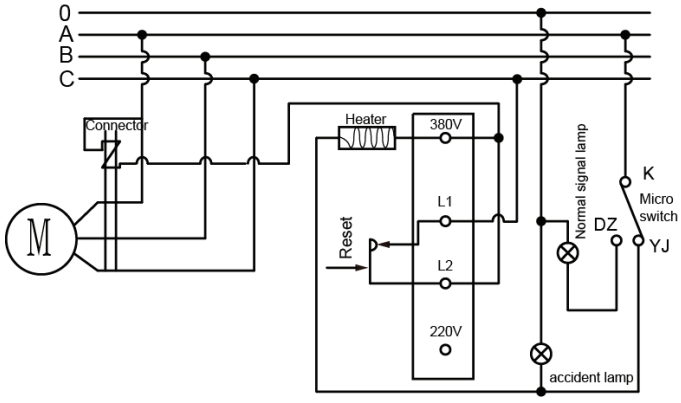
Pressure differential controller is a safety device in order to prevent compressor because of low lubrication oil pressure of compressor. After compressor starts, if it still maintains low lubrication oil pressure in 60 seconds, the pressure difference controller will start to cut off to ensure system safety.

Installation

It must be installed at a small vibration position .The pressure chamber marked "Low pressure" must be connect to low pressure side (crankcase of compressor). Another pressure chamber marked "high pressure" must connect to outlet of lubrication oil pump.
Push reset button first after power supply. To reset because of system that leading to controller cut off, it have to be resetted after 5 minutes. Otherwise ,it won't function .The factory setting point is 0.1Mpa.
When wiring, comply with electric regulation and power supply requirement in order to avoid damages.
Factory setting is under 380V of power supply. If you want to use 220V power supply, you must connects L2 and 220V。

技术参数 Technical data

型号 Model	压力调整范围 Adjusting range	最大工作压力 Max. working pressure	额定工作电压 Rated power	触点容量 Capacity of connector	延时时间 Delay time
JC3.5	0.5 – 3.5bar 出厂设定1bar Factory setting 1 bar	16bar	AC 220V AC 380V	300VA	60 秒 60 seconds
YC350					无 (none)



JC3.5 接线示意图

线路连接操作说明：
1.L2跟380V连接，其引出端连接触器端，另一端连接A线。
2.K端开关连接A线。
3.故障信号灯，连接开关YJ端，另一端连接0线。
4.正常信号灯，连接开关DZ端，另一端连接0线。
5.L1连接C线。

Wiring diagram:
1.L2 connects to 380V and a terminal of connector coil.
The other terminal of connector coil connects to line A.
2.K terminal of Micro Switch connects line A..
3.Accident Lamp connects to YJ terminal of micro Switch and line zero.
4.Normal signal Lamp connects to DZ terminal of micro Switch and line zero.
5.L1 connects to line C.

概 述

WK系列温度控制器是压力式温度控制装置，广泛应用于厨房冰箱、冷库、陈列柜、冰淇淋机等设备。

安装说明

- 温度控制器的感温包应放置在被控制温度的区域内，该处的空气应畅通，并能正确反映被控制区域的空气温度。但需注意，在采用冷风机通风冷却的冷库内，感温包应放置在回风处而不应放置在冷风出口处。
- 感温包和控制器本体间连接的毛细管不应穿过比被控制区域温度低的其他区域，也不应与其他管道接触。
- 安装时，毛细管的弯曲圆弧半径不得少于60mm，并相隔300mm用卡子将毛细管固定。
- 通过旋动主调螺钉的旋钮和差动螺钉（旋转前应先旋下定位片）可分别对照指示值来调节温度、温度差控制值。

General

WK series temperature controller is a pressure responsed temperature controller .The products are widely used for the commercial refrigerator ,refrigerated warehouse ,refrigerated cabinet , icecream machines etc.

Installation

- The sensing bulb of the temperature controller should be installed at the temperature controlled point with good air ventilaton for correct temperature sense .Please note that the sensing bulb should be installed on the air return area instead of the registered area of the refrigerated warehouse.
- The capillary tube between the sensing bulb and the controller should not pass through the region with lower temperature than the controlled point, and should avoid to contact other pipes.
- During installation ,the bending radius of the capillary tube should not be less than 60mm.and the capillary tube should be clamped with straps every300mm.
- By turning the button of main adjusting screw and differential adjusting screw(before turning the locating washer should be turned off),the temperature and differential temperature can be set according to the values indicated on the scale.

技术参数 Technical data

型号 Model	调节范围（℃） Adjusting range		温度差（℃） Temp .difference		开关触头容量 Switch contact capacity		外型尺寸（cm） Outside dimensions		
	最小Min.	最大Max.	最小Min.	最大Max.	电压 Voltage	功率 power	长L	宽W	高H
WK-Ⅰ	-15	15	3	15	DC 24V	250W	14	7.7	4.5
WK-Ⅱ	-30	0			AC 110V AC 220V AC 380V	1000VA			

概 述

NSE型视液镜安装于冷冻、空调设备的管路中，用以显示系统中制冷剂潮气含量及管内制冷剂或润滑油的流动情况，还可以用来指示压缩机曲轴箱的油位，以便随时观测，判断系统的运行状况，及时采取措施，确保设备的安全正常运行。

General

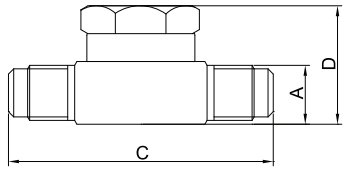
NSE series sight glasses is for the pipe line of freezer or air conditioner system in order to indicate moisture of refrigerant and flow status of refrigerant or lubricating oil.It indicates the oil level of compressor crooked-shaft box, to monitor the system.

技术参数 Technical data

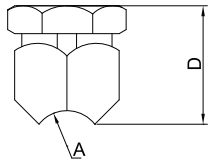
- 含水量Moisture content（ppm）
- 最大工作压力Maximum working pressure: 46bar

工质 Refrigerant	R22			R134a			R407c			R404A/R507			R410A		
液体温度 Liquid temperature	24˚C	38˚C	52˚C	24˚C	38˚C	52˚C	24˚C	38˚C	52˚C	24˚C	38˚C	52˚C	24˚C	38˚C	52˚C
蓝色(干) Blue(dry)	<30	<45	<60	<30	<45	<60	<30	<40	<75	<20	<25	<35	<30	<55	<75
淡天蓝色(警告) Light lue(warning)	30～120	45～180	60～240	30～100	45～160	60～220	30～140	40～180	75～250	20～70	25～85	35～125	30～165	55～290	75～420
粉红色(湿) Pink(moisture)	>120	>180	>240	>100	>160	>220	>140	>180	>250	>70	>85	>125	>165	>290	>420

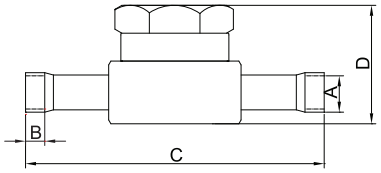
型号 Model	接管外径 Connect tube OD	A mm	B mm	C mm	D mm
NSE-TT	1/4(6)	1/4(6)	5	102	39
	3/8(10)	3/8(10)	8	102	39
	1/2(12)	1/2(12)	8	102	39
	5/8(16)	5/8(16)	12	127	38
	3/4(19)	3/4(19)	19	160	38
	7/8(22)	7/8(22)	21	160	49
	9/8(28)	9/8(28)	25	164	49
NSE-MM	1/4(6)	7/16-20UNF (M12*1.25)	–	76	39
	3/8(10)	5/8-18UNF (M16*1.5)	–	76	39
	1/2(12)	3/4-16UNF (M18*1.5)	–	84	36
	5/8(16)	7/8-14UNF (M22*1.5)	–	86	36
NSE-SS	1/4(6)	1/4(6)	–	60	39
	3/8(10)	3/8(10)	–	60	39
	1/2(12)	1/2(12)	–	67	39
	5/8(16)	5/8(16)	–	67	36
NSE-D	3/8	4.8	–	–	35
	5/8	8	–	–	35
	7/8	11.5	–	–	33
	9/8	14.5	–	–	32
	11/8	17.5	–	–	31
	13/8	20.5	–	–	31
	17/8	27	–	–	30
	21/8	33.5	–	–	30
	3	38	–	–	29
	25/8	40	–	–	29



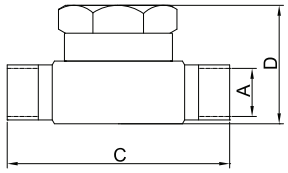
NSE-MM



NSE-D



NSE-TT



NSE-SS

注：如需其它工作特性和规格产品，请与本公司接洽联系。
Note :If you have special requirement ,please contact STF.

概 述

干燥过滤器是空调制冷系统中的一个必不可少的滤清元件，用来吸附系统中剩余含水量和滤除可能引起系统阻塞的污物，保证系统正常运行。

LFDM型干燥过滤器的芯体组是100%分子筛，而LFDC型有80%分子筛和20%活性氧化铝组成。

安装使用

- 有钎焊、喇叭口等连接方式。
- 干燥过滤器进出口端密封盖被拆除后，应立即装入机组，不能长时间暴露在大气中，以免潮气侵入，增加干燥剂预吸附水量，降低干燥剂吸水能力。
- 干燥过滤器上箭头指示方向与系统中液体流动方向保持一致。
- 注意干燥剂与制冷剂的相容性。

General

Filter dryer is a necessary filtering part in refrigerating system .It is used to absorb residual moisture and filter dirts ,so that it can keep the system in a normal running status.

Type LFDM driers have a core composition of 100% molecular sieve while type LFDC contain 80% molecular sieve with 20% activated alumina.

Installation

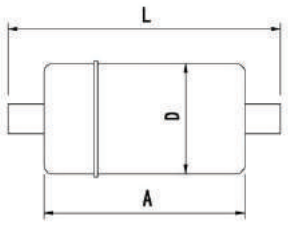
- After taking off the seal cap of inlet and outlet ,it should be installed immediately .It can't be in the air for a long time to prevent the core absorbing the moisture.
- The flow medium direction must be the same as the mark shown on the part.
- Can be installed in any position.
- The desiccants must be compatible with the refrigerants.

注：连接类型按照你的要求（SAE或者ODF）。

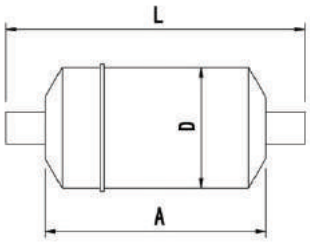
Note: Connect type is as per your requirement(SAE OR ODF).

选型 Specification

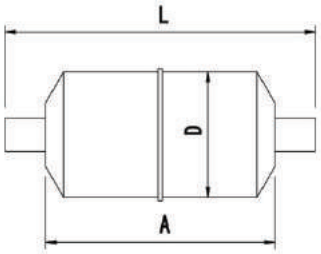
介质类型 Media Type		LFDC	LFDM
制冷剂	HFC	可以使用 Yes	建议使用 recommend
	HCFC	建议使用 recommend	可以使用 Yes
	CFC	建议使用 recommend	不建议使用 Not recommend
油	矿物油或AB mineral oil	建议使用 recommend	可以使用 Yes
	纯净的POE或PAG	可以使用 Yes	建议使用 recommend
	有添加剂的POE或PAG	不建议使用 Not recommend	建议使用 recommend



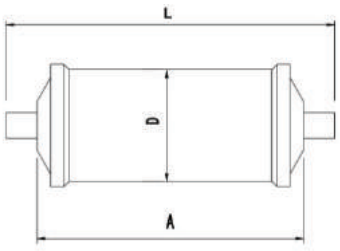
LFD-03系列



LFD-05系列



LFD-08, 16系列



LFD-30, 41系列

型号 Type	连接接头(in) Connections		流体制冷量（KW）Liquid Flow Capacity			外型尺寸（mm) Dimensions			最大工作压力 Max.Operating Pressure (bar)
	焊接口 (ODF)	螺纹口 (SAE)	R134a	R404A/R507	R22/R407C/R410A	A	D	L	
LFDM/C-032		1/4	7	5	7	66	43	113	46
LFDM/C-032S	1/4		7	5	7			110	46
LFDM/C-033		3/8	17	13	19			123	46
LFDM/C-033S	3/8		17	13	19			114	46
LFDM/C-052		1/4	7	5	8	75	54	122	46
LFDM/C-052S	1/4		7	5	8			119	46
LFDM/C-053		3/8	18	14	19			132	46
LFDM/C-053S	3/8		18	14	19			123	46
LFDM/C-082		1/4	7	5	8	101		148	46
LFDM/C-082S	1/4		7	5	8			145	46
LFDM/C-083		3/8	19	14	21			158	46
LFDM/C-083S	3/8		19	14	21			149	46
LFDM/C-084		1/2	26	20	29			166	46
LFDM/C-084S	1/2		26	20	29			151	46
LFDM/C-085		5/8	42	31	46			174	46
LFDM/C-085S	5/8		42	31	46			149	46
LFDM/C-162		1/4	7	5	8	110	76	157	46
LFDM/C-162S	1/4		7	5	8			154	46
LFDM/C-163		3/8	22	16	24			167	46
LFDM/C-163S	3/8		22	16	24			158	46
LFDM/C-164		1/2	30	22	33			175	46
LFDM/C-164S	1/2		30	22	33			160	46
LFDM/C-165		5/8	43	30	47			183	46
LFDM/C-165S	5/8		43	30	47			158	46
LFDM/C-166		3/4	44	31	48			189	35
LFDM/C-166S	3/4		44	31	48			164	35
LFDM/C-167S	7/8		44	31	48			170	35
LFDM/C-303		3/8	21	15	23	186		243	46
LFDM/C-303S	3/8		21	15	23			234	46
LFDM/C-304		1/2	31	22	34			251	46
LFDM/C-304S	1/2		31	22	34			236	46
LFDM/C-305		5/8	45	33	49			259	46
LFDM/C-305S	5/8		45	33	49			234	46
LFDM/C-306		3/4	62	45	68			265	35
LFDM/C-306S	3/4		62	45	68			240	35
LFDM/C-307S	7/8		62	45	68			246	35
LFDM/C-309S	1-1/8		62	45	68			246	30
LFDM/C-413		3/8	25	18	17	187	89	244	46
LFDM/C-414		1/2	32	23	35			252	46
LFDM/C-414S	1/2		32	23	35			237	46
LFDM/C-415		5/8	53	37	58			260	46
LFDM/C-415S	5/8		53	37	58			235	46
LFDM/C-417S	7/8		91	65	99			247	35
LFDM/C-419S	1-1/8		91	65	99			247	30

注：制冷量的给定工况：蒸发温度te=-15˚C，冷凝温度tc=30˚C，压力降ΔP=0.07bar.
Note:Nominal copacity is based on evaporating temperature te=-15˚C，condensing temperature tc=30˚C，pressure dropΔP=0.07bar.

概 述

- F-1用作管道内流体流量的控制或断流保护。当流体流量到达调定值时，开关自动切断（或接通）电路。
- 流量控制值可设定。
- 适用介质为水、油、乙二醇或其它非危害性液体等。
- 接头为标准NPT 1英寸管螺纹及其它特殊规格管螺纹。
- 最大工作压力为10bar。
- 备有5片流向片，配装各种口径的管道。
- 介质温度： 0～+120℃。

General

- F-1 is used for flow switch or cut-off protection. When the flow reaches the setting volume, the switch turns on/off automatically.
- The setting point is adjustable.
- Suitable mediums are water, oil, glycol and other non-hazard liquid.
- Standard 1” NPT or other special connecting.
- Maximum working pressure: 10bar.
- Five paddles to fit with pipes of different diameters.
- Temperature of medium: 0～+120ºC.

技术参数 Technical data

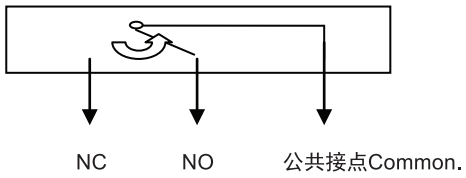
型 号 Model	配管尺寸 Connection size (inch)	开关动作时的流量调节范围 Flow range (Liter / min)			
		最小调节Minimum adjustment		最大调节Maximum adjustment	
		流量减少 Flow decreasing	流量增加 Flow increasing	流量减少 Flow decreasing	流量增加 Flow increasing
F-1	1	18	21	45	50
	1-1/2	30	35	100	105
	2	50	58	150	155
	2-1/2	75	86	187	200
	3	100	115	225	260
	4	110	154	317	337
	5	170	236	462	490
	6	225	308	562	599
	8	707	854	1664	1727

电气指标 Electrical data

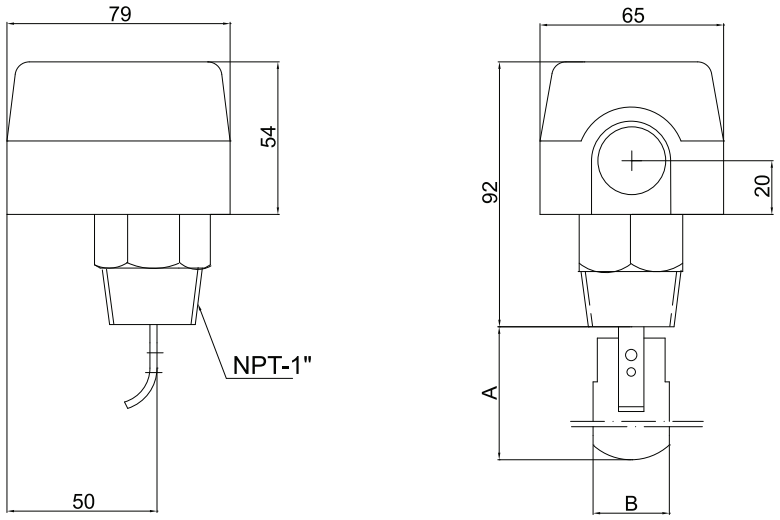
额定电压 Supply voltage(V) / 额定电流 Operating current (A)		功率Power COSφ	125V AC	250V AC
非感应电流Non-induction current (A)		1	1	15
感应电流Induction current (A)	恒定电流 Constant	0.75	0.75	2.5
	瞬时电流 Transient	0.75	0.75	15

开关动作示意图 Switch function

在设定点以上，流量增加时开关动作情况如右图
Above the set point, when flow increasing,
F-1 acts as the right figure.



外形尺寸 Dimensions



Paddle NO.	A (mm)	B(mm)
1	35	27
2	60	27
3	88	27
4	121	27
5	150	27

订货须知

- 出厂时按图示接管连接的形式尺寸和较小流量设定值交货。
- 技术参数中的流量供选型时参考。
- 如有特殊要求，请与我们联系。

Ordering information

- Standard parts refer to connection size & minimum flow set by factory.
- Flow volume listed in the technical data is reference for production selection only.
- If you have special requirement, please contact STF.


CERTIFICATE

质量管理体系认证证书

上海恒温控制器厂有限公司

GB/T 19001-2008/ISO 9001:2008

《质量管理体系 要求》

方圆标志认证集团


产品认证证书

中国质量认证中心

http://www.cqc.com.cn


中华人民共和国

特种设备制造许可证

Manufacture License of Special Equipment

People's Republic of China

（压力管道元件）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