Capacities

Valve type/ Orifice	Cond. temp.[3] [°C]	R22 Capacity in [kW] Evaporating temp. [°C]					R134a Capacity in [kW] Evaporating temp. [°C]					R404A/R507 Capacity in [kW] Evaporating temp. [°C]					R407C Capacity in [kW] Evaporating temp. [°C]				
		-35	-30	-10	0	5	-30	-10	-5	0	5	-40	-35	-30	-10	0	-10	-5	0	5	10
T2 / 0X	25	0.49	0.51	0.55	0.54	0.51	0.35	0.40	0.41	0.41	0.40	0.33	0.35	0.37	0.42	0.41	0.59	0.59	0.59	0.58	0.55
T2 / 00		0.95	1.00	1.1	1.1	1.1	0.61	0.73	0.75	0.77	0.77	0.61	0.66	0.70	0.85	0.88	1.2	1.2	1.3	1.3	1.2
T2 / 01		1.6	1.7	2.4	2.7	2.7	0.88	1.3	1.5	1.6	1.6	0.96	1.1	1.2	1.8	2.1	2.5	2.7	2.9	3.1	3.2
T2 / 02		2.2	2.5	3.5	3.9	3.9	1.2	1.9	2.0	2.1	2.2	1.3	1.5	1.7	2.6	3.0	3.7	4.0	4.3	4.5	4.6
T2 / 03		3.9	4.3	6.2	6.9	7.0	2.2	3.3	3.6	3.8	4.0	2.4	2.7	3.1	4.7	5.4	6.6	7.1	7.6	8.1	8.3
T2 / 04		5.7	6.4	9.1	10.2	10.5	3.2	4.8	5.2	5.6	5.9	3.5	4.0	4.6	7.0	8.0	9.8	10.6	11.4	12.0	12.5
T2 / 05		7.3	8.0	11.6	13.0	13.3	4.0	6.1	6.6	7.1	7.5	4.5	5.1	5.8	8.9	10.2	12.4	13.4	14.4	15.2	15.7
T2 / 06		8.9	9.8	14.1	15.9	16.3	4.9	7.5	8.2	8.7	9.1	5.5	6.2	7.1	10.8	12.4	15.1	16.4	17.6	18.6	19.2
T2 / 0X	35	0.53	0.55	0.60	0.61	0.60	0.37	0.44	0.45	0.45	0.46	0.32	0.34	0.36	0.42	0.43	0.61	0.62	0.63	0.63	0.62
T2 / 00		1.0	1.1	1.2	1.3	1.3	0.64	0.79	0.83	0.86	0.88	0.59	0.64	0.69	0.86	0.92	1.3	1.3	1.3	1.4	1.4
T2 / 01		1.7	1.8	2.6	3.0	3.2	0.93	1.4	1.6	1.7	1.9	0.92	1.1	1.2	1.8	2.2	2.7	2.9	3.1	3.3	3.5
T2 / 02		2.3	2.6	3.8	4.4	4.7	1.3	2.0	2.2	2.4	2.6	1.2	1.4	1.7	2.7	3.2	3.9	4.3	4.6	5.0	5.3
T2 / 03		4.1	4.6	6.8	7.9	8.4	2.3	3.6	4.0	4.4	4.7	2.2	2.6	3.0	4.8	5.7	7.0	7.6	8.3	8.9	9.4
T2 / 04		6.1	6.8	10.1	11.8	12.5	3.4	5.3	5.8	6.4	6.9	3.3	3.9	4.5	7.1	8.5	10.3	11.3	12.3	13.3	14.2
T2 / 05		7.7	8.6	12.8	14.9	15.8	4.2	6.7	7.4	8.1	8.8	4.3	4.9	5.6	9.0	10.7	13.0	14.3	15.6	16.7	17.8
T2 / 06		9.5	10.5	15.6	18.2	19.3	5.2	8.2	9.1	9.9	10.7	5.2	6.0	6.9	11.0	13.1	15.9	17.4	19.0	20	22
T2 / 0X	45	0.55	0.57	0.64	0.65	0.64	0.38	0.45	0.47	0.48	0.49	0.29	0.31	0.33	0.40	0.42	0.62	0.63	0.64	0.64	0.64
T2 / 00		1.0	1.1	1.3	1.4	1.4	0.65	0.82	0.86	0.90	0.94	0.55	0.60	0.64	0.83	0.90	1.3	1.3	1.3	1.4	1.4
T2 / 01		1.7	1.9	2.8	3.2	3.4	0.96	1.5	1.7	1.8	2.0	0.85	0.98	1.1	1.8	2.1	2.7	2.9	3.2	3.4	3.7
T2 / 02		2.4	2.7	4.0	4.8	5.1	1.3	2.1	2.4	2.6	2.8	1.1	1.3	1.5	2.6	3.2	3.9	4.3	4.7	5.2	5.6
T2 / 03		4.3	4.8	7.2	8.5	9.2	2.3	3.8	4.2	4.7	5.1	1.9	2.3	2.7	4.6	5.7	7.0	7.7	8.5	9.2	9.9
T2 / 04		6.3	7.1	10.7	12.7	13.7	3.4	5.6	6.2	6.9	7.6	3.0	3.5	4.1	6.9	8.4	10.4	11.5	12.6	13.8	14.9
T2 / 05		8.0	9.0	13.6	16.1	17.3	4.3	7.0	7.8	8.7	9.6	3.8	4.4	5.2	8.7	10.6	13.2	14.5	15.9	17.3	18.7
T2 / 06		9.8	11.0	16.6	19.6	21	5.3	8.6	9.6	10.7	11.7	4.7	5.5	6.4	10.6	12.9	16.0	17.7	19.4	21	23
T2 / 0X	55	0.56	0.58	0.65	0.67	0.67	0.38	0.45	0.47	0.49	0.50	0.26	0.28	0.30	0.37	0.39	0.60	0.61	0.62	0.63	0.63
T2 / 00		1.1	1.1	1.3	1.4	1.4	0.63	0.81	0.86	0.90	0.95	0.48	0.53	0.57	0.75	0.82	1.2	1.2	1.3	1.3	1.3
T2 / 01		1.7	1.9	2.8	3.3	3.6	0.95	1.5	1.7	1.9	2.0	0.74	0.86	1.0	1.7	2.0	2.6	2.9	3.1	3.4	3.6
T2 / 02		2.3	2.6	4.1	5.0	5.4	1.2	2.1	2.4	2.7	2.9	0.82	1.0	1.3	2.4	2.9	3.8	4.2	4.7	5.1	5.6
T2 / 03		4.3	4.8	7.4	8.9	9.6	2.2	3.8	4.3	4.8	5.3	1.5	1.8	2.2	4.2	5.3	6.8	7.5	8.3	9.1	9.9
T2 / 04		6.4	7.2	11.0	13.3	14.4	3.4	5.7	6.4	7.2	7.9	2.4	2.9	3.5	6.3	7.8	10.1	11.3	12.4	13.7	14.9
T2 / 05		8.1	9.1	14.0	16.7	18.1	4.2	7.0	8.0	9.0	10.0	3.0	3.7	4.4	7.9	9.9	12.8	14.2	15.7	17.2	18.7
T2 / 06		9.9	11.1	17.0	20	22	5.2	8.7	9.8	11.0	12.1	3.8	4.6	5.4	9.7	12.1	15.6	17.3	19.1	21	23

[3] Condensing temperature at bubble point.

Correction factor

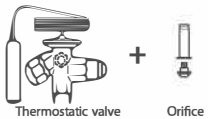
Refrigerant	Subcooling [K] 2	4	10	15	20	25	30	35	40	45	50
R22	0.98	1	1.06	1.11	1.15	1.20	1.25	1.30	1.35	1.39	1.44
R134a	0.98	1	1.08	1.13	1.19	1.25	1.31	1.37	1.42	1.48	1.54
R404A/R507	0.96	1	1.10	1.20	1.29	1.37	1.46	1.54	1.63	1.70	1.78
R407C	0.97	1	1.08	1.14	1.21	1.27	1.33	1.39	1.45	1.51	1.57

When the subcooling ≠ 4 K then:
1. Table value x Factor = Plant capacity
2. Plant capacity / Factor = Table value

Example:
Refrigerant = R407C
Q_{nom} = 10 kW
t_e = 0°C
t_c = 55°C
Δt_{sub} = 25 K

Selection:
1. T2, Orifice 04 = 12.4 kW x 1.27 = 15.75 kW → Valve too large

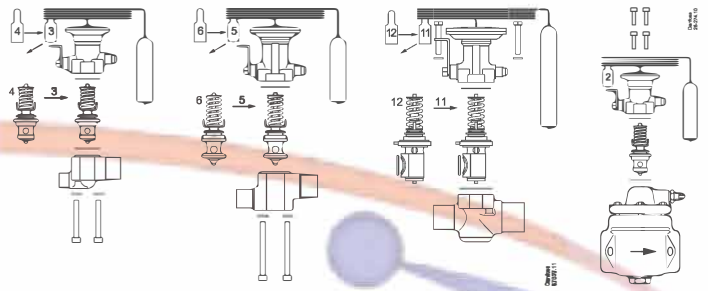
Right selection:
2. 10 kW / 1.27 = 7.9 kW → T2, Orifice 03



Instructions

067R9609

Orifice for TE 5 → 55 and PHT

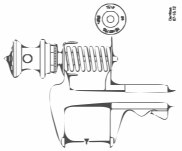


Old orifice Type	Orifice No.	Old code	New orifice Type	New Code	Orifice no.	Nominal capacity TR	kW	TR	kW	TR	kW	TR	kW	Factory settings Y-value
						R134a		R404A/507		R407C		R22		
			TE5	067B2788	0.5	1.91	6.68	2.33	8.17	3.06	10.70	2.97	10.40	26
TE5	1	067B2089		067B2789	1	3.49	12.20	4.26	14.90	5.60	19.60	5.46	19.10	26
	2	067B2090		067B2790	2	4.86	17.00	5.86	20.50	7.77	27.20	7.51	26.30	26
	3	067B2091		067B2791	3	6.23	21.80	7.51	26.30	9.94	34.80	9.66	33.80	26
	4	067B2092		067B2792	4	8.49	29.70	10.20	35.70	13.50	47.40	13.10	46.00	26
	1	067B2005[1]		067B2789[1]	2	4.86	17.00	5.86	20.50	7.77	27.20	7.51	26.30	26
	2	067B2006[1]		067B2791[1]	3	6.23	21.80	7.51	26.30	9.94	34.80	9.66	33.80	26
	3	067B2007[1]		067B2792[1]	4	8.49	29.70	10.20	35.70	13.50	47.40	13.10	46.00	26
	4	067B2008	TE12	067B2708	5	10.80	37.70	14.50	50.70	15.90	55.80	16.30	57.20	37
				067B2709	6	14.30	50.10	18.30	64.00	21.10	73.90	21.80	76.30	37
				067B2710	7	18.80	65.70	23.20	81.30	26.90	94.30	27.90	97.80	37
TE20	1	067B2172	TE20	067B2771	8	22.20	77.80	24.90	87.10	33.70	118.00	36.60	128.00	34
	1	067B2170		067B2771	8	22.20	77.80	24.90	87.10	33.70	118.00	36.60	128.00	34
	1	067B2175		067B2771	8	22.20	77.80	24.90	87.10	33.70	118.00	36.60	128.00	34
				067B2773	9	26.40	93.30	29.10	102.00	38.90	136.00	42.90	150.00	34
				067G2705	9B	For specifications, please contact Danfoss								
				067G2701	10	31.70	111.00	36.60	128.00	46.00	161.00	48.30	169.00	32,5
	1	067G2005		067G2704	11	34.90	122.00	39.40	138.00	50.00	175.00	52.60	184.00	32,5
	1	067G2001		067G2704	11	34.90	122.00	39.40	138.00	50.00	175.00	52.60	184.00	32,5
TE55	1	067G2011	TE55	067G2704	11	34.90	122.00	39.40	138.00	50.00	175.00	52.60	184.00	32,5
				067G2707	12	38.30	134.00	43.40	152.00	54.60	191.00	57.70	202.00	32,5
	2	067G2006		067G2710	13	47.40	166.00	52.00	182.00	66.30	232.00	70.00	245.00	32,5
	2	067G2002		067G2710	13	47.40	166.00	52.00	182.00	66.30	232.00	70.00	245.00	32,5
	2	067G2012		067G2710	13	47.40	166.00	52.00	182.00	66.30	232.00	70.00	245.00	32,5

1) change to TE5 valve body and element

Factory setting

SS = 4°C (7°F)



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فرع دمشق باب مصلى هاتف : 118811178 فاكس 11888925 صندوق بريد 14447
فرع حلب قاضي عسكر 213261555 موبايل المقسم 0954802555 / حلب الجديدة 215223204 موبايل المقسم 094802555

Alco Controls

Thermo®-Expansion Valve Series T

Exchangeable Power Assemblies and Orifices

Features

- Modular design for economical logistics and easy assembly and servicing
- Very good stability is attained because of the large forces generated by the large diaphragm diameter
- High quality materials and processes for high reliability and long lifetime
- Superior partial load performance due to double seat orifice design (TJRE, TERE, TIRE & THRE)
- Biflow capability for applications in heat pumps
- Capillary tube length 1.5 m (TCLE, TJRE) and 3m (TERE, TIRE & THRE)
- PS: 31 bar, TS: -45 ... +65°C
- No CE marking according art. 3.3 PED 97/23 EC



Type Code TCL E 100 H W 100 WL 10x16

- Valve Series
- External Equalizer
- Capacity Code
- Refrigerant Code
- Charge Code
- MOP Code
- Flange Style
  - WL= Angle Style
  - DL = Straight through
- Connection

Available upon special request:

- Power assembly with solder connection for external pressure equalization
- Non-standard MOPs
- Non-standard charges
- Non-standard connection sizes, see page 86

Type Code XB 1019 H W 100 - 1 B

- Power Assembly
- Refrigerant Code
- Charge Code
- MOP Code
- Capillary Tube Length
  1=1,5m; 2=3m
- External Equalization

Selection Chart for Orifices

Series	R 134a Type	R 134a Nominal Capacity kW	R 22 Type	R 22 Nominal Capacity kW	R 404A/R 507 Type	R 404A/R 507 Nominal Capacity kW	R 407C Type	R 407C Nominal Capacity kW	Orifice
TCLE	25 MW	1,5	50 HW	1,9	25 SW	1,3	50 NW	2,1	X 22440-B1B
	75 MW	2,9	100 HW	3,7	75 SW	2,6	100 NW	4,0	X 22440-B2B
	150 MW	6,1	200 HW	7,9	150 SW	5,6	200 NW	8,5	X 22440-B3B
	200 MW	9,3	250 HW	11,9	200 SW	8,4	300 NW	12,9	X 22440-B3,5B
	250 MW	13,5	300 HW	17,3	250 SW	12,2	400 NW	18,7	X 22440-B4B
	350 MW	17,3	500 HW	22,2	400 SW	15,7	550 NW	24,0	X 22440-B5B
	550 MW	23,6	750 HW	30,4	600 SW	21,5	750 NW	32,9	X 22440-B6B
	750 MW	32,0	1000 HW	41,1	850 SW	29,0	1000 NW	44,4	X 22440-B7B
	900 MW	37,2	1200 HW	47,8	1000 SW	33,8	1150 NW	51,7	X 22440-B8B
TJRE	11 MW	45	14 HW	58	12 SW	40	14 NW	62	X 11873-B4B
	13 MW	57	18 HW	74	14 SW	51	17 NW	80	X 11873-B5B
TERE	16 MW	71	22 HW	91	18 SW	63	21 NW	99	X 9117-B6B
	19 MW	81	26 HW	104	20 SW	72	25 NW	112	X 9117-B7B
	25 MW	112	35 HW	143	27 SW	99	33 NW	155	X 9117-B8B
	31 MW	135	45 HW	174	34 SW	120	42 NW	188	X 9117-B9B
TIRE	45 MW	174	55 HW	223	47 SW	154	52 NW	241	X 9166-B10B
THRE	55 MW	197	75 HW	253	61 SW	174	71 NW	273	X 9144-B11B
	68 MW	236	100 HW	302	77 SW	209	94 NW	327	X 9144-B13B

MOP Code	MOP bar	Evaporating Temperature Range °C R 134a MW	R 22 HW	R 404A SW	R 407C NW	R 507 SW
35	2,4	-45 .. 0	-45 .. -15			
40	2,8			-45 .. -18		-45 .. -18
55	3,8	-45 .. 11		-45 .. -10		-45 .. -10
65	4,5		-45 .. 0			
75	5,2			-45 .. -2		-45 .. -2
80	5,5			-45 .. 0		-45 .. 0
100	6,9		-45 .. 13		-45 .. 14	

Nominal capacity (Qn) is based on the following conditions:

Refrigerant	Evaporating temperature	Condensing temperature	Sub-cooling
R 407C	+4°C dew point	+38°C bubble p. +43°C dew point	1K
R 22, R 134a, R 404A/R 507	+4°C	+38°C	1K

Valve selection for other operating conditions see page 74 or use the Excel based ALCO Selection Tool (download from www.emersonclimate.eu).

Selection Chart for Power Assemblies and Recommended Flanges

Orifice	Connection Standard-Flange, Angle (see page 86) Solder/ODF mm	Connection Standard-Flange, Angle (see page 86) Solder/ODF inch	Power Assembly
X 22440-B1B			
X 22440-B2B	C 501 - 5 mm	C 501 - 5	
X 22440-B3B	10 x 16	3/8 x 5/8	
X 22440-B3,5B			
X 22440-B4B			
X 22440-B5B	C 501 - 7 mm	C 501 - 7	
X 22440-B6B	12 x 16	1/2 x 5/8	XB1019...1B
X 22440-B7B	A 576 mm	A 576	
X 22440-B8B	16 x 22 (22 x 28 ODM)	5/8 x 7/8 (7/8 x 1 1/8 ODM)	
X 11873-B4B	10331	10331	
X 11873-B5B	22 x 22	7/8 x 7/8 (1 1/8 x 1 1/8 ODM)	
X 9117-B6B			
X 9117-B7B	9153 mm	9153	
X 9117-B8B	22 x 22	7/8 x 7/8	
X 9117-B9B		(1 1/8 x 1 1/8 ODM)	XC726...2B
X 9166-B10B			
X 9144-B11B	9149	9149	
X 9144-B13B	22 x 22	7/8 x 7/8 (1 1/8 x 1 1/8 ODM)	

Spare Parts

	Type	Part No.
Gasket Set for T Series Valves	X 13455 -1	027 579
Service Tool for T Series	X 99999	800 005
Steel screws for following flange types:		
C 501 , 9761 , 6346 , A 576	Screw ST 32	803 573
9 148 , 9149, 9152, 9153, 10331 , 10332	Screw ST 48	803 574

فرع دمشق باب مصلى هاتف : 118811178 فاكس 11888925 صندوق بريد 14447
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