

TE 5 – TE 55, Thermostatic expansion valves

TE 5 – TE 55 thermostatic expansion valves regulate the injection of refrigerant liquid into evaporators for medium sized plants. Injection is controlled by the refrigerant superheat. Therefore the valves are especially suitable for liquid injection in “dry” evaporators where the superheat at the evaporator outlet should always be

kept constant. TE 5 – TE 55 valves are supplied as parts programme, built up of three main components - thermostatic element, orifice assembly, and valve body with connections, and have external pressure equalization.

Features TE 5 - TE 55



Laser-welded power element in stainless steel

- longer diaphragm life
- high pressure tolerance and working pressure
- high corrosion resistance

To ensure long operating life, the valve cone and seat are made of a special alloy with particularly good wear qualities

Stainless steel capillary tube and bulb

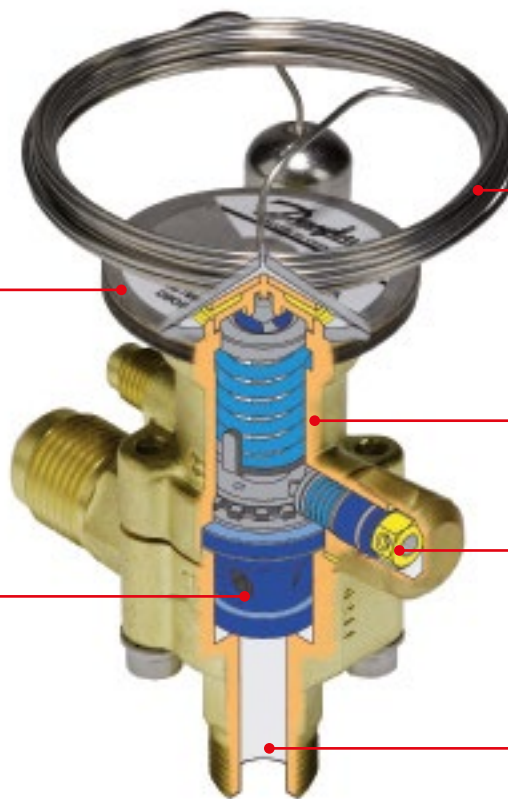
- high corrosion resistance
- high strength and vibration resistance

Large parts programme ensures minimal stocks

Easy adjustment of superheat setting

More connection possibilities

- solder x solder
- flare x flare
- flanges
- straightway or angleway



Facts

Applications:

- Air conditioning system
- Chiller
- Cold room
- Freezer
- Other refrigeration systems

- Applicable to R22, R134a, R404A, R507, R407A, R407F, R407C, R448A, R449A, R452A and R513A

For a fully updated list of approved refrigerants, visit www.products.danfoss.com and search for individual code numbers, where refrigerants are listed as part of product specifications.

- Interchangeable orifice assembly designed for:
 - easy storage
 - easy capacity matching
 - better service

- Wide operating range:
 - 40 – 10 °C / -40 – 50 °F
 - 60 – -25 °C / -75 – -15 °F
- TE 55 has balanced port design
- Available with MOP (Max. Operating Pressure)
- Wide capacity range, rated capacity:
 - R448A / R449A : 9 – 225 kW / 2.5 – 64 TR
 - R407F: 11 – 250 kW / 3 – 71 TR
 - R404A / R507: 7 – 183 kW / 2 – 52 TR
- Maximum Working Pressure PS / MWP: 28 bar / 400 psig

Technical data and ordering



Element for expansion valve + Orifice + Valve body



TE 5 – TE 55, R404A / R507

Element for expansion valve - including bulb strap

Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3342
	-40 – 10	-40 – 50	–	–	–	1/4	Solder ODF	3	118	067B3380
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3238
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3357
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3358
	-40 – -15	-40 – 5	-10	15	–	1/4	Solder ODF	3	118	067B3384
	-60 – -25	-75 – -15	–	–	6	1/4	Flare	3	118	067B3344
	-60 – -25	-75 – -15	–	–	6	–	Solder ODF	3	118	067B3392
TE 12	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3343
	-60 – -25	-75 – -15	-20	-5	–	1/4	Solder ODF	3	118	067B3381
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3347
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3345
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3348
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3349
	-60 – -25	-75 – -15	–	–	6	1/4	Flare	3	118	067B3368
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	5	197	067B3346
TE 20	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	5	197	067B3350
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3352
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3351
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3353
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3354
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	5	197	067B3356
TE 55	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	5	197	067B3355
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067G3302
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067G3303
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067G3304
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067G3305
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	5	197	067G3301
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	5	197	067G3306

Technical data and ordering



TE 5 – TE 55, R22 / R407C

Element for expansion valve - including bulb strap

Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3250
	-40 – 10	-40 – 50	-	-	-	1/4	Solder ODF	3	118	067B3420
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3267
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3249
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3253
	-60 – -25	-75 – -15	-	-	6	1/4	Flare	3	118	067B3263
TE 12	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3251
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3210
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3227
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3207
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3213
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3211
TE 20	-60 – -25	-75 – -15	-	-	6	1/4	Flare	3	118	067B3225
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067B3209
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	5	197	067B3212
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3274
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3286
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3273
TE 55	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3275
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3276
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067B3290
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	5	197	067B3287
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067G3205
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067G3220
TE 55	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067G3206
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067G3207
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067G3209
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	5	197	067G3217

For R407C plants, please select elements from the dedicated R407C program



TE 5 – TE 55, R134a

Element for expansion valve - including bulb strap

Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3297
	-40 – 10	-40 – 50	-	-	-	1/4	Solder ODF	3	118	067B3430
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3298
TE 12	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3232
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3233
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067B3363
TE 20	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3292
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3293
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067B3370
TE 55	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067G3222
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067G3223
	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067G3230



TE 5 – TE 55, R407C

Element for expansion valve - including bulb strap

Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3278
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3277
TE 12	-40 – 10	-40 – 50	-	-	6	1/4	Flare	3	118	067B3366
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	3	118	067B3367
TE 20	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067B3371
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	5	197	067B3372
TE 55	-40 – 10	-40 – 50	-	-	6	1/4	Flare	5	197	067G3240
	-40 – 10	-40 – 50	15	60	6	1/4	Flare	5	197	067G3241

Technical data and ordering

TE 5 – TE 55, R407F / R407A

Element for expansion valve - including bulb strap



Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3501
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3502
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3503
	-40 – 10	-40 – 50	–	–	–	1/4	Solder ODF	3	118	067B3504
TE 12	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3532
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3531
	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3533
TE 20	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3561
	-40 – -5	-40 – 25	0	32	6	1/4	Flare	3	118	067B3560
TE 55	-40 – -15	-40 – 5	-10	15	6	1/4	Flare	3	118	067B3562
	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067G3500

On systems charged with R407A, static superheat(SS) will differ from standard 4K / 7.2 °F.

For range -40 – 10 °C / -40 – 50 °F, SS = 2.7 K / 4.9 °F.

For range -40 – -5 °C / -40 – 25 °F and range -40 – -15 °C / -40 – 5 °F, SS = 2.8K / 5.0 °F.

TE 5 – TE 55, R448A / R449A

Element for expansion valve - including bulb strap



Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3252
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3600
TE 12	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B2512
TE 20	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3294
TE 55	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067G3219

On systems charged with R449A, static superheat(SS) will be 2.7 K / 4.9 °F

TE 5 – TE 55, R452A

Element for expansion valve - including bulb strap



Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3601
	-60 – -25	-75 – -15	-20	-5	6	1/4	Flare	3	118	067B3602
TE 12	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3652
TE 20	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3680
TE 55	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067G3600

TE 5 – TE 55, R513A

Element for expansion valve - including bulb strap



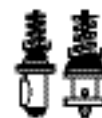
Type	Range		MOP		Pressure equalization			Capillary tube		Code no. Multi pack
	[°C]	[°F]	[°C]	[°F]	[mm]	[in]	Type	[m]	[in]	
TE 5	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3603
TE 12	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3651
TE 20	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067B3681
TE 55	-40 – 10	-40 – 50	–	–	6	1/4	Flare	3	118	067G3601

Bulb strap supplied separately as spare part



Max. diameter of suction line		Quantity / box	Code no. Industrial pack
[mm]	[in]		
53	2 1/8	40 pcs	067N0557
78	3 1/8	40 pcs	067N0559

Technical data and ordering



TE 5 – TE 55

Orifice assembly - Rated capacity

Type	Orifice	R407F		R407A		R448A/R449A		R452A		R404A/R507		R22		R513A		R134a		R407C		Code no. Multi pack
		[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	[kW]	[TR]	
TE 5	0.5	11	3	9	2.5	9	2.5	7	2	7	2	9	2.5	5	1.5	5	1.5	11	3	067B2788
	01	18	5	18	5	18	5	14	4	14	4	16	4.5	11	3	11	3	18	5	067B2789
	02	28	8	25	7	25	7	21	6	19	5.5	25	7	14	4	16	4.5	25	7	067B2790
	03	35	10	32	9	32	9	28	8	25	7	32	9	18	5	21	6	32	9	067B2791
	04	46	13	42	12	46	13	39	11	35	10	42	12	25	7	28	8	46	13	067B2792
TE 12	05	70	20	56	16	53	15	46	13	49	14	56	16	30	8.5	35	10	53	15	067B2708
	06	95	27	74	21	70	20	63	18	63	18	74	21	39	11	49	14	74	21	067B2709
	07	113	32	95	27	91	26	81	23	81	23	95	27	53	15	63	18	91	26	067B2710
TE20	08	141	40	127	36	123	35	84	24	84	24	127	36	74	21	77	22	116	33	067B2771 ¹⁾
	09	158	45	148	42	141	40	98	28	102	29	148	42	81	23	91	26	134	38	067B2773 ¹⁾
TE 55	9B	123	35	109	31	113	32	84	24	84	24	113	32	70	20	74	21	109	31	067G2705 ¹⁾
	10	172	49	165	47	155	44	116	33	127	36	169	48	98	28	109	31	162	46	067G2701
	11	186	53	183	52	169	48	127	36	137	39	183	52	106	30	120	34	176	50	067G2704
	12	208	59	200	57	186	53	141	40	151	43	200	57	116	33	134	38	190	54	067G2707
	13	250	71	243	69	225	64	172	49	183	52	246	70	144	41	165	47	232	66	067G2710

The rated capacity is based on:

Evaporating temperature $t_e = 4.4\text{ °C} / 40\text{ °F}$

Condensing temperature $t_c = 38\text{ °C} / 100\text{ °F}$

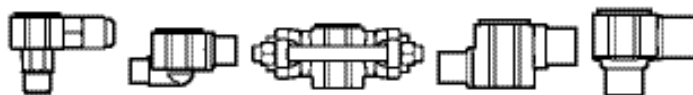
Refrigerant temperature ahead of valve $t_1 = 37\text{ °C} / 98\text{ °F}$

¹⁾ Recommend to use orifice no. 9B as alternative for orifice no. 08 and 09 on TE 55 when selecting the valve to work in range $-60\text{ -- }-25\text{ °C} / -75\text{ -- }-15\text{ °F}$. Please contact Danfoss for more information.

Technical data and ordering

TE 5 - TE 55

Valve body



Type	Connection / Flow direction	Connection Type	Connection inlet x outlet		Code no. Multi pack
			[mm]	[in]	
TE 5	Flare angleway	–	12 × 16	1/2 × 5/8	067B4013
	Solder angleway	ODF × ODF	–	1/2 × 5/8	067B4009
	Solder angleway	ODF × ODF	–	1/2 × 7/8	067B4010
	Solder angleway	ODF × ODF	–	5/8 × 7/8	067B4011
	Solder angleway	ODF × ODM	–	7/8 × 1 1/8	067B4034
	Solder angleway	ODF × ODF	12 × 16	–	067B4004
	Solder angleway	ODF × ODF	12 × 22	–	067B4005
	Solder angleway	ODF × ODF	16 × 22	–	067B4012
	Solder angleway	ODF × ODM	22 × 28	–	067B4037
	Solder straightway	ODF × ODF	–	1/2 × 5/8	067B4007
	Solder straightway	ODF × ODF	–	1/2 × 7/8	067B4008
	Solder straightway	ODF × ODF	–	5/8 × 7/8	067B4032
	Solder straightway	ODF × ODM	–	7/8 × 1 1/8	067B4033
	Solder straightway	ODF × ODF	12 × 16	–	067B4002
	Solder straightway	ODF × ODF	12 × 22	–	067B4003
	Solder straightway	ODF × ODF	16 × 22	–	067B4035
	Solder straightway	ODF × ODM	22 × 28	–	067B4036
TE 12	Solder angleway	ODF × ODF	–	5/8 × 7/8	067B4022
	Solder angleway	ODF × ODM	–	7/8 × 1 1/8	067B4023
	Solder angleway	ODF × ODM	22 × 28	–	067B4017
	Solder straightway	ODF × ODF	–	5/8 × 7/8	067B4020
	Solder straightway	ODF × ODM	–	7/8 × 1 1/8	067B4021
	Solder straightway	ODF × ODM	22 × 28	–	067B4016
	Solder flanges	ODF × ODF	–	5/8 × 7/8	067B4025
	Solder flanges	ODF × ODF	–	7/8 × 1	067B4026
	Solder flanges	ODF × ODF	16 × 22	–	067B4027
Solder flanges	ODF × ODF	22 × 25	–	067B4015	
TE 20	Solder angleway	ODF × ODM	–	7/8 × 1 1/8	067B4023
	Solder angleway	ODF × ODM	22 × 28	–	067B4017
	Solder straightway	ODF × ODM	–	7/8 × 1 1/8	067B4021
	Solder straightway	ODF × ODM	22 × 28	–	067B4016
TE 55	Solder angleway	ODM × ODM	–	1 1/8 × 1 3/8	067G4004
	Solder angleway	ODM × ODM	28 × 35	–	067G4002
	Solder straightway	ODM × ODM	–	1 1/8 × 1 3/8	067G4003
	Solder straightway	ODM × ODM	28 × 35	–	067G4001

ODF = internal diameter
ODM = External diameter

02

03

04

05

06

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