

Thermo™ -Expansion Valve Series T

Exchangeable Power Assemblies and Orifices

Features

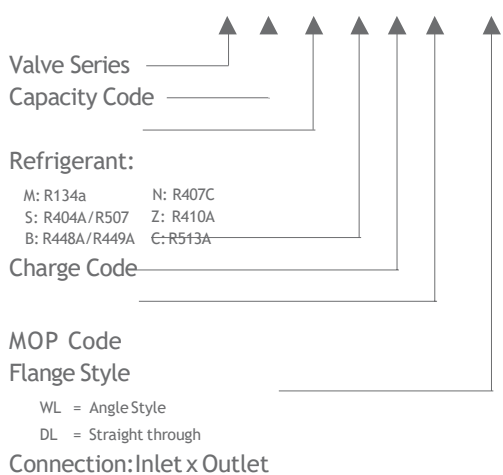
- Modular design for economical logistics and easy assembly and servicing
- Very good stability due to large diaphragm diameter
- Constant superheat across a wide application range
- Superior partial load performance due to double seat orifice design (TJRE, TERE, TIRE & THRE)
- Bi-flow capability for applications in heat pumps
- Capillary tube length 1.5 m (TCLE, TJRE) and 3m (TERE, TIRE & THRE)
- Max. allowable pressure PS:
 - 46 bar with XB power assembly
 - 31 bar with XC power assembly
- Medium Temperature range TS: -45...+75 ° C
- Flanges: brazing ODF/ODM connection



TCLE

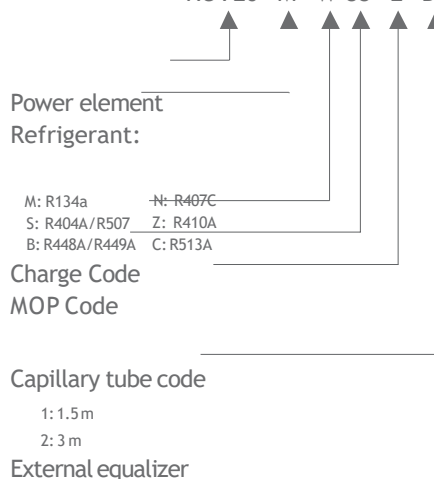
Type Code Valve

TCLE-25 M W 55 WL 10x16



Type Code Power Element

XC 726 - M W 55 2 B



Nominal Capacities for Orifices

Valve Serie	Type	Nominal Capacity (kW)					Type	Nominal Capacity (kW)		Orifice Type	Power Element Type
		R134a	R513A*	R450A*	R1234yf*	R1234ze*		R404A/R507	R452A*		
TCLE-	25MW	1.5	1.3	1.3	1.1	1.1	25SW	1.3	1.4	X22440-B1B	XB1019...1B
	75MW	2.9	2.6	2.5	2.1	2.2	75SW	2.6	2.8	X22440-B2B	
	150MW	6.1	5.5	5.4	4.4	4.8	150SW	5.6	6.0	X22440-B3B	
	200MW	9.3	8.3	8.1	6.6	7.2	200SW	8.4	9.0	X22440-B3,5B	
	250MW	13.5	12.1	11.8	9.6	10.5	250SW	12.2	13.1	X22440-B4B	
	350MW	17.3	15.5	15.1	12.4	13.4	400SW	15.7	16.8	X22440-B5B	
	550MW	23.6	21.2	20.7	17.0	18.4	600SW	21.5	23.0	X22440-B6B	
	750MW	32	28.7	28	22.9	24.8	850SW	29	31.1	X22440-B7B	
	900MW	37.2	33.4	32.6	26.7	28.9	1000SW	33.8	36.2	X22440-B8B	
TJRE-	11MW	45	40.5	39.6	32.3	35.1	12SW	40	43.9	X11873-B4B	XC726...2B
	13MW	57	51.7	50.5	41.3	44.7	14SW	51	56.0	X11873-B5B	
TERE-	16MW	71	63.5	62.1	50.7	55	18SW	63	68.9	X9117-B6B	
	19MW	81	72.6	70.9	58.0	62.9	20SW	72	78.7	X9117-B7B	
	25MW	112	99.8	97.5	79.7	86.4	27SW	99	108.3	X9117-B8B	
	31MW	135	121.5	118.7	97.0	105.2	34SW	120	131.7	X9117-B9B	
TIRE-	45MW	174	155.7	152.1	124.3	134.8	47SW	154	168.8	X9166-B10B	
THRE-	55MW	197	176.6	172.5	141.1	152.9	61SW	174	191.5	X9144-B11B	
	68MW	236	210.8	205.9	168.4	182.5	77SW	209	228.6	X9144-B13B	

Valve Serie	Type	Nominal Capacity (kW)			Type	Nominal Capacity (kW)		Type	Nominal Capacity (kW)		Orifice Type	Power Element Type
		R448A	R449A	R454A*		R407C	R454C		R410A	R32		
TCLE-	55BW	1.9	1.9	1.8	50NW	2.1	1.6	50ZW	2.2	3.3	X22440-B1B	XB1019...1B
	100BW	3.7	3.6	3.5	100NW	4	3.0	100ZW	4.3	6.4	X22440-B2B	
	250BW	7.9	7.8	7.5	200NW	8.5	6.5	250ZW	9.2	13.7	X22440-B3B	
	350BW	11.9	11.7	11.3	300NW	12.9	9.7	400ZW	13.9	20.7	X22440-B3,5B	
	500BW	17.3	17.0	16.4	400NW	18.7	14.2	600ZW	20.2	30.0	X22440-B4B	
	650BW	22.1	21.8	21.0	550NW	24	18.2	750ZW	25.9	38.5	X22440-B5B	
	850BW	30.3	29.9	28.8	750NW	32.9	24.9	1000ZW	35.5	52.8	X22440-B6B	
	1150BW	41	40.4	38.9	1000NW	44.4	33.6	1400ZW	48	71.4	X22440-B7B	
	1350BW	47.7	47.0	45.3	1150NW	51.7	39.1	1600ZW	55.8	83.0	X22440-B8B	
TJRE-	17BW	57.8	57.0	54.9	14NW	62	47.4	19ZW	67.7	100.7	X11873-B4B	XC726...2B
	21BW	73.8	72.8	70.1	17NW	80	60.5	25ZW	86.4	128.5	X11873-B5B	
TERE-	26BW	90.7	89.5	86.2	21NW	99	74.4	-	-	-	X9117-B6B	
	30BW	103.7	102.3	98.5	25NW	112	85.1	-	-	-	X9117-B7B	
	41BW	142.6	140.6	135.4	33NW	155	117.0	-	-	-	X9117-B8B	
	50BW	173.5	171.1	164.8	42NW	188	142.3	-	-	-	X9117-B9B	
TIRE-	64BW	222.4	219.3	211.2	52NW	241	182.4	-	-	-	X9166-B10B	
THRE-	72BW	252.3	248.8	239.6	71NW	273	207.0	-	-	-	X9144-B11B	
	86BW	301.1	297.0	286.0	94NW	327	247.0	-	-	-	X9144-B13B	

Note 1: Nominal conditions: Evaporating Temperature +4°C (dew point), Condensing Temperature +38°C (bubble point), Subcooling 1 K

Note 2:*) Superheat readjustment required - see Operating Instruction

Note 3: For selection of other operation conditions, please use the "Controls Navigator" selection tool.

Selection Table Power Element and Recommended Flanges

Series	e Type	le Type	ough Type	ection (inlet x Outlet)		r Element Type
				Metric	Imperial	
TCLE	X22440-B1B / B2B / B3B / B3.5B / B4B	C501-5	9761-3	-	3/8"x5/8" ODF	XB1019...1B
		C501-5mm	9761-3mm	10x16 mm ODF	-	
	X22440-B5B / B6B	C501-7	9761-4	-	1/2"x5/8" ODF	
		C501-7mm	9761-4mm	12x16 mm ODF	-	
	X22440-B7B / B8B	-	6346-17	16x22 mm ODF	5/8"x7/8" ODF	
		A576	-	-	5/8"x7/8" ODF 7/8"x1-1/8" ODM	
A576-mm		-	16x22 mm ODF 22x28 mm ODM	-		
TJRE	X11873-B4B / B5B	10331	10332	22x22 mm ODF	7/8"x7/8" ODF 1-1/8"x1-1/8" ODM	XC726...2B
TERE	X9117-B6B / B7B / B8B / B9B	9153 9153-mm	9152 9152-mm	22x22 mm ODF 22x28 mm ODM	7/8"x7/8" ODF 1-1/8"x1-1/8" ODM	
TIRE						
THRE	X9144-B11B / B13B	9149	9148	22x22 mm ODF	7/8"x7/8" ODF 1-1/8"x1-1/8" ODM	

MOPCharges T-Series

MOP		Evaporating Temperature Range				
Code	bar	R134a MW	R404A/ R507 SW	R407C NW	R410A ZW	R448A/ R449A BW
15	1.0	-45... -16 °C				
30	2.1					-45...-18 °C
35	2.4	-45...0 °C				
40	2.8		-45...-18 °C			
55	3.8	-45...+11 °C	-45...-10 °C			
75	5.2		-45...-2 °C			
80	5.5		-45...0 °C			
100	6.9			-45...+14 °C		
175	12.1				-45...+16 °C	

Accessories and Spare Parts

Description	Type	Part No.
Service Tool for T, ZZ, L and 935 Series valves	X 99999	800005
Gasket sets for T, ZZ, L and 935 Series valves	X 13455-1	027579
Steel Screws for flange types: C501, 9761, 6346, A576	Screw ST 32	803573
Steel Screws for flange types: 9148, 9149, 9152, 9153, 10331, 10332	Screw ST 48	803574
Bulb clamp for XB1019	XA 1728-4	803260
Bulb clamp for XC726	XA 1728-5	803261