

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

Selection Chart for Orifices

Series	R 134a		R 22		R 404A/R 507		R 407C		Orifice
	Type	Nominal Capacity kW	Type	Nominal Capacity kW	Type	Nominal Capacity kW	Type	Nominal Capacity kW	
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		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).

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

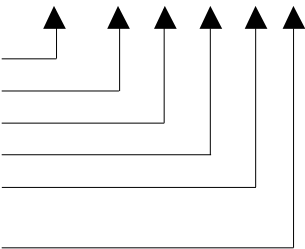
Charge Code

MOP Code

Capillary Tube Length

1=1,5m; 2=3m

External Equalization



Selection Chart for Power Assemblies and Recommended Flanges

	Orifice	Connection Standard-Flange, Angle (see page 86) Solder/ODF		Power Assembly
		mm	inch	
	X 22440-B1B	C 501 - 5 mm 10 x 16	C 501 - 5 3/8 x 5/8	XB1019...1B
	X 22440-B2B			
	X 22440-B3B			
	X 22440-B3,5B			
	X 22440-B4B			
	X 22440-B5B	C 501 - 7 mm 12 x 16	C 501 - 7 1/2 x 5/8	
	X 22440-B6B	A 576 mm 16 x 22 (22 x 28 ODM)	A 576 5/8 x 7/8 (7/8 x 1 1/8 ODM)	
	X 22440-B7B			
	X 22440-B8B			
	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	9153 mm 22 x 22	9153 7/8 x 7/8 (1 1/8 x 1 1/8 ODM)	XC726...2B
	X 9117-B7B			
	X 9117-B8B			
	X 9117-B9B			
	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: C501 , 9761 , 6346 , A576 9148 , 9149, 9152, 9153, 10331 , 10332	Screw ST 32 Screw ST 48	803 573 803 574

Correction Tables for Thermo®-Expansion Valves Series TI, TX3, TX6, T and L

Valve selection for operating conditions
other than nominal conditions:

Alternatively download the Excel based ALCO
Selection Tool from www.emersonclimate.eu.

$$Q_n = Q_o \times K_t \times K_{\Delta p}$$

Q_n : Nominal valve capacity

K_t : Correction factor for evaporating and liquid temperature

Q_o : Required cooling capacity

$K_{\Delta p}$: Correction factor for pressure drop at valve

Liquid Temperature entering Valve °C	Correction Factor K_t R 410A (TX3/6 only) Evaporating Temperature °C															
	+20	+15	+10	+5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45		
+65	1,75	1,76	1,78	1,80	1,83	1,86	1,89	2,18	2,55	3,05	3,69	4,49	5,46	6,62		
+60	1,49	1,50	1,51	1,53	1,54	1,57	1,59	1,83	2,14	2,55	3,08	3,73	4,52	5,45		
+55	1,31	1,32	1,33	1,35	1,36	1,38	1,40	1,61	1,87	2,23	2,68	3,25	3,92	4,72		
+50	1,19	1,20	1,20	1,21	1,23	1,24	1,26	1,44	1,68	2,00	2,40	2,90	3,49	4,20		
+45	1,09	1,09	1,10	1,11	1,12	1,13	1,15	1,32	1,53	1,82	2,18	2,63	3,17	3,80		
+40	1,01	1,01	1,02	1,03	1,04	1,05	1,06	1,21	1,41	1,67	2,01	2,41	2,90	3,48		
+35	0,94	0,94	0,95	0,96	0,97	0,98	0,99	1,13	1,31	1,55	1,86	2,24	2,69	3,21		
+30	0,88	0,89	0,89	0,90	0,91	0,91	0,92	1,06	1,22	1,45	1,74	2,09	2,50	2,99		
+25	0,83	0,84	0,84	0,85	0,85	0,86	0,87	0,99	1,15	1,36	1,63	1,96	2,35	2,80		
+20		0,79	0,80	0,80	0,81	0,81	0,82	0,94	1,09	1,29	1,54	1,84	2,21	2,64		
Correction Factor $K_{\Delta p}$																
Δp (bar)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
$K_{\Delta p}$	3,74	2,65	2,16	1,87	1,67	1,53	1,41	1,32	1,25	1,18	1,13	1,08	1,04	1	0,97	0,94
Δp (bar)	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
$K_{\Delta p}$	0,91	0,88	0,86	0,84	0,82	0,8	0,78	0,76	0,75	0,73	0,72	0,71	0,69	0,68	0,67	0,66

Liquid Temperature entering Valve °C	Correction Factor K_t R 134a Evaporating Temperature °C															
	+30	+25	+20	+15	+10	+5	0	-5	-10	-15	-20	-25	-30			
+60	1,22	1,25	1,27	1,30	1,33	1,36	1,40	1,44	1,48	1,75	2,08	2,46	2,94			
+55	1,14	1,16	1,18	1,21	1,23	1,26	1,29	1,33	1,36	1,60	1,90	2,25	2,68			
+50	1,07	1,08	1,10	1,13	1,15	1,17	1,20	1,23	1,26	1,48	1,76	2,07	2,46			
+45	1,00	1,02	1,04	1,06	1,08	1,10	1,12	1,15	1,17	1,38	1,63	1,92	2,28			
+40	0,93	0,96	0,98	0,99	1,01	1,03	1,05	1,08	1,10	1,29	1,52	1,79	2,12			
+35	0,90	0,91	0,92	0,94	0,96	0,97	0,99	1,01	1,03	1,21	1,43	1,68	1,99			
+30	0,85	0,86	0,88	0,89	0,91	0,92	0,94	0,96	0,98	1,14	1,35	1,58	1,87			
+25		0,82	0,83	0,85	0,86	0,87	0,89	0,91	0,92	1,08	1,27	1,49	1,76			
+20			0,80	0,81	0,82	0,83	0,85	0,89	0,88	1,02	1,21	1,41	1,67			
+15				0,77	0,78	0,79	0,81	0,82	0,84	0,97	1,15	1,34	1,58			
+10					0,75	0,76	0,77	0,78	0,80	0,93	1,09	1,28	1,51			
+5						0,73	0,74	0,75	0,76	0,89	1,04	1,22	1,44			
0							0,71	0,72	0,73	0,85	1,00	1,17	1,37			
-5								0,69	0,70	0,82	0,96	1,12	1,31			
-10									0,68	0,79	0,92	1,07	1,26			
Correction Factor $K_{\Delta p}$																
Δp (bar)	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0
$K_{\Delta p}$	3,50	2,48	2,02	1,75	1,57	1,43	1,32	1,24	1,17	1,11	1,06	1,01	0,97	0,94	0,90	0,88
Δp (bar)	8,5	9,0	9,5	10,0	10,5	11,0	11,5	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0
$K_{\Delta p}$	0,85	0,83	0,80	0,78	0,76	0,75	0,73	0,72	0,69	0,66	0,64	0,62	0,60	0,58	0,57	0,55

In cases of subcooling of more than 15K please use additionally
the correction factors on page 60 of this brochure.

Liquid Temperature entering Valve °C	Correction Factor K_t															
	R 22															
	Evaporating Temperature °C															
	+30	+25	+20	+15	+10	+5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
+60	1,22	1,23	1,24	1,25	1,26	1,28	1,30	1,31	1,38	1,58	1,84	2,16	2,56	3,04	3,55	4,23
+55	1,14	1,15	1,16	1,17	1,19	1,20	1,22	1,23	1,29	1,42	1,72	2,02	2,39	2,83	3,30	3,94
+50	1,08	1,09	1,10	1,11	1,12	1,13	1,15	1,16	1,21	1,39	1,62	1,89	2,24	2,66	3,10	3,68
+45	1,02	1,03	1,04	1,05	1,06	1,07	1,08	1,10	1,15	1,31	1,52	1,79	2,11	2,50	2,91	3,46
+40	0,97	0,98	0,99	1,00	1,01	1,02	1,03	1,04	1,09	1,24	1,45	1,69	2,00	2,37	2,75	3,27
+35	0,92	0,93	0,94	0,95	0,96	0,97	0,98	0,99	1,03	1,18	1,37	1,61	1,89	2,24	2,60	3,09
+30	0,88	0,89	0,90	0,91	0,92	0,93	0,94	0,95	0,99	1,13	1,31	1,55	1,83	2,13	2,47	2,93
+25		0,85	0,86	0,87	0,88	0,89	0,89	0,90	0,94	1,08	1,25	1,46	1,72	2,03	2,36	2,80
+20			0,83	0,83	0,84	0,85	0,86	0,87	0,90	1,03	1,19	1,40	1,64	1,94	2,25	2,66
+15				0,80	0,81	0,81	0,82	0,83	0,87	0,99	1,14	1,34	1,57	1,86	2,15	2,55
+10					0,78	0,78	0,79	0,80	0,83	0,95	1,10	1,28	1,51	1,78	2,06	2,44
+5						0,75	0,76	0,77	0,80	0,91	1,06	1,23	1,45	1,71	1,98	2,34
0							0,73	0,74	0,77	0,88	1,02	1,19	1,39	1,65	1,90	2,25
-5								0,71	0,74	0,85	0,98	1,14	1,34	1,58	1,83	2,17
-10									0,72	0,82	0,95	1,10	1,30	1,53	1,77	2,09
Correction Factor $K_{\Delta p}$																
Δp (bar)	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	8,0	9,0
$K_{\Delta p}$	4,25	3,00	2,46	2,13	1,90	1,74	1,61	1,50	1,42	1,35	1,28	1,23	1,18	1,14	1,06	1,00
Δp (bar)	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	25,0
$K_{\Delta p}$	0,95	0,91	0,87	0,83	0,80	0,78	0,75	0,73	0,71	0,69	0,67	0,66	0,64	0,63	0,61	0,60

Liquid Temperature entering Valve °C	Correction Factor K_t															
	R 404A															
	Evaporating Temperature °C															
	+30	+25	+20	+15	+10	+5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
+60	1,56	1,59	1,64	1,69	1,74	1,81	1,88	1,96	2,06	2,43	2,95	3,56	4,37	5,38	6,71	8,47
+55	1,32	1,35	1,38	1,42	1,46	1,50	1,55	1,61	1,68	1,96	2,36	2,83	3,43	4,16	5,12	6,34
+50	1,16	1,18	1,20	1,23	1,26	1,30	1,34	1,38	1,43	1,67	1,99	2,37	2,85	3,43	4,18	5,14
+45	1,04	1,05	1,07	1,10	1,12	1,15	1,18	1,22	1,26	1,46	1,74	2,05	2,46	2,95	3,57	4,35
+40	0,94	0,96	0,97	0,99	1,02	1,04	1,07	1,09	1,13	1,30	1,55	1,82	2,17	2,59	3,13	3,80
+35	0,87	0,88	0,90	0,91	0,93	0,95	0,97	1,00	1,02	1,18	1,40	1,64	1,96	2,33	2,80	3,38
+30	0,81	0,82	0,83	0,84	0,86	0,88	0,90	0,92	0,94	1,08	1,28	1,50	1,78	2,11	2,53	3,05
+25		0,76	0,77	0,79	0,80	0,82	0,83	0,85	0,87	1,00	1,18	1,39	1,64	1,94	2,32	2,79
+20			0,73	0,74	0,75	0,77	0,78	0,80	0,81	0,94	1,10	1,29	1,52	1,80	2,15	2,58
+15				0,70	0,71	0,72	0,73	0,75	0,76	0,88	1,03	1,21	1,42	1,68	2,00	2,40
+10					0,67	0,68	0,69	0,71	0,72	0,83	0,97	1,13	1,34	1,58	1,88	2,25
+5						0,65	0,66	0,67	0,68	0,78	0,92	1,07	1,26	1,49	1,77	2,11
0							0,63	0,64	0,65	0,75	0,88	1,02	1,20	1,41	1,67	2,00
-5								0,61	0,62	0,71	0,83	0,97	1,14	1,34	1,59	1,90
-10									0,60	0,68	0,80	0,93	1,09	1,28	1,52	1,81
Correction Factor $K_{\Delta p}$																
Δp (bar)	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	8,0	9,0
$K_{\Delta p}$	4,55	3,21	2,62	2,27	2,03	1,86	1,72	1,61	1,52	1,44	1,37	1,31	1,26	1,21	1,14	1,07
Δp (bar)	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	25,0
$K_{\Delta p}$	1,02	0,97	0,93	0,89	0,86	0,83	0,80	0,78	0,76	0,74	0,72	0,70	0,69	0,67	0,66	0,64

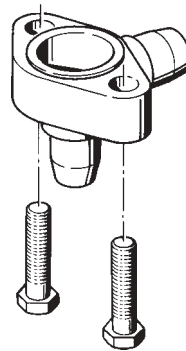
In cases of subcooling of more than 15K please use additionally the correction factors on page 60 of this brochure.

Liquid Temperature entering Valve °C	Correction Factor K _t Evaporating Temperature															
	+30	+25	+20	+15	+10	+5	0	-5	-10	-15	-20	-25				
+55	1,20	1,21	1,23	1,26	1,28	1,31	1,34	1,37	1,40	1,63	1,98	2,42				
+50	1,10	1,11	1,13	1,15	1,17	1,19	1,22	1,24	1,27	1,48	1,79	2,18				
+45	1,02	1,03	1,05	1,06	1,08	1,10	1,12	1,14	1,17	1,35	1,64	2,00				
+40	0,95	0,96	0,98	0,99	1,01	1,02	1,04	1,06	1,08	1,25	1,52	1,84				
+35	0,89	0,90	0,92	0,93	0,94	0,96	0,98	0,99	1,01	1,17	1,41	1,71				
+30	0,85	0,85	0,87	0,88	0,89	0,90	0,92	0,93	0,95	1,10	1,32	1,60				
+25		0,81	0,82	0,83	0,84	0,85	0,87	0,88	0,90	1,03	1,25	1,51				
+20			0,78	0,79	0,80	0,81	0,82	0,84	0,85	0,98	1,18	1,43				
+15				0,75	0,76	0,77	0,78	0,80	0,81	0,93	1,12	1,35				
+10					0,73	0,74	0,75	0,76	0,77	0,89	1,07	1,29				
+5						0,71	0,72	0,73	0,74	0,85	1,02	1,23				
0							0,69	0,70	0,71	0,81	0,98	1,18				
-5								0,67	0,68	0,78	0,94	1,13				
-10									0,65	0,75	0,90	1,08				
Correction Factor K _{Δp}																
Δp (bar)	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	8,0	9,0
K _{Δp}	4,78	3,33	2,72	2,36	2,11	1,92	1,78	1,67	1,57	1,49	1,42	1,36	1,31	1,26	1,18	1,11
Δp (bar)	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	25,0
K _{Δp}	1,05	1,01	0,96	0,92	0,89	0,86	0,83	0,81	0,79	0,76	0,75	0,73	0,71	0,70	0,68	0,67

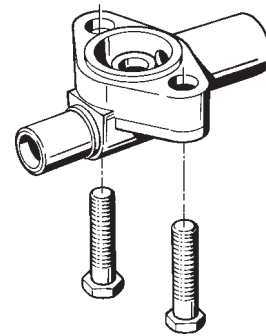
Liquid Temperature entering Valve °C	Correction Factor K _t Evaporating Temperature															
	+30	+25	+20	+15	+10	+5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
+60	1,54	1,57	1,61	1,65	1,71	1,76	1,83	1,90	1,98	2,36	2,84	3,44	4,23	5,25	6,61	8,45
+55	1,30	1,33	1,36	1,39	1,43	1,47	1,52	1,57	1,62	1,92	2,29	2,75	3,35	4,11	5,11	6,44
+50	1,15	1,17	1,19	1,22	1,24	1,28	1,31	1,35	1,40	1,64	1,95	2,33	2,81	3,43	4,23	5,29
+45	1,03	1,05	1,07	1,09	1,11	1,14	1,17	1,20	1,23	1,45	1,71	2,04	2,45	2,97	3,64	4,53
+40	0,94	0,96	0,97	0,99	1,01	1,03	1,06	1,08	1,11	1,30	1,53	1,82	2,18	2,63	3,22	3,98
+35	0,87	0,88	0,90	0,91	0,93	0,95	0,97	0,99	1,01	1,18	1,39	1,65	1,97	2,37	2,89	3,56
+30	0,81	0,82	0,83	0,85	0,86	0,88	0,89	0,91	0,93	1,09	1,28	1,51	1,80	2,17	2,63	3,23
+25		0,77	0,78	0,79	0,80	0,82	0,83	0,85	0,87	1,01	1,18	1,40	1,66	1,99	2,42	2,97
+20			0,73	0,74	0,75	0,77	0,78	0,79	0,81	0,94	1,10	1,30	1,54	1,85	2,24	2,74
+15				0,70	0,71	0,72	0,73	0,75	0,76	0,88	1,03	1,21	1,44	1,73	2,09	2,55
+10					0,67	0,68	0,69	0,70	0,72	0,83	0,97	1,14	1,35	1,62	1,95	2,38
+5						0,64	0,65	0,67	0,68	0,78	0,92	1,07	1,27	1,52	1,83	2,23
0							0,62	0,63	0,64	0,74	0,87	1,02	1,20	1,43	1,73	2,10
-5								0,60	0,61	0,70	0,82	0,96	1,14	1,35	1,63	1,98
-10									0,58	0,67	0,78	0,91	1,08	1,28	1,54	1,87
Correction Faktor K _{Δp}																
Δp (bar)	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0	6,5	7,0	8,0	9,0
K _{Δp}	4,63	3,27	2,67	2,31	2,07	1,89	1,75	1,64	1,54	1,46	1,40	1,34	1,28	1,24	1,16	1,09
Δp (bar)	10,0	11,0	12,0	13,0	14,0	15,0	16,0	17,0	18,0	19,0	20,0	21,0	22,0	23,0	24,0	25,0
K _{Δp}	1,03	0,99	0,94	0,91	0,87	0,85	0,82	0,79	0,77	0,75	0,73	0,71	0,70	0,68	0,67	0,65

In cases of subcooling of more than 15K please use additionally the correction factors on page 60 of this brochure.

Flanges for Valves



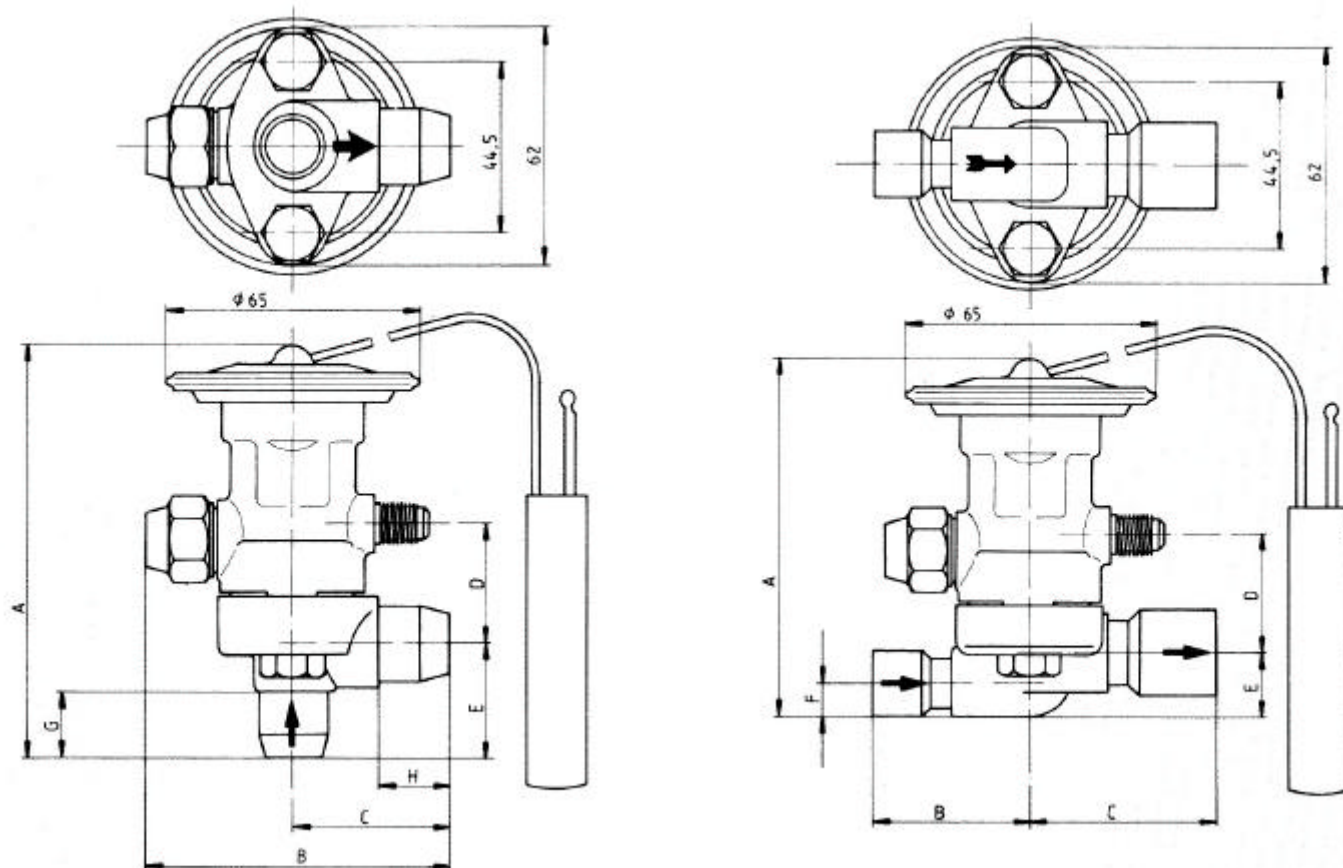
Angle Style Flange



Straight Through Flange

Angle Style		Straight Through		Connections				for Valve Series
Type	Order No.	Type	Order No.	mm		inch		
				Solder ODF	Solder ODM	Solder ODF	Solder ODM	
C 501 - 4	803 230			—	—	3/8 x 1/2	—	TCLE ZZCE LCLE 935 A-G CPHE 1 CPHE 2
C 501 - 4 MM	803 231			10 x 12	—	—	—	
C 501 - 5	803 232	9761 - 3	803 240	—	—	3/8 x 5/8	—	
C 501 - 5 MM	803 233	9761 - 3 MM	803 241	10 x 16	—	—	—	
C 501 - 7	803 234	9761 - 4	803 350	—	—	1/2 x 5/8	—	
C 501 - 7 MM	803 235	9761 - 4 MM	803 243	12 x 16	—	—	—	
—	—	6346 - 17	803 330	16 x 22	—	5/8 x 7/8	—	
A 576	803 238	—	—	—	—	5/8 x 7/8	7/8 x 1-1/8	
A 576 - MM	803 239	—	—	16 x 22	22 x 28	—	—	
10331	803 338	10332	803 324	22 x 22	—	7/8 x 7/8	1-1/8 x 1-1/8	TJRE ZZJRE LJRE 935 K CPHE 3
9153 9153 MM	803 244 803 245	9152 9152 MM	803 286 803 287	— 22 x 22	— 28 x 28	7/8 x 7/8 —	1-1/8 x 1-1/8	TERE TIRE ZZERE ZZIRE LERE LIRE CPHE 3,5 CPHE 4 CPHE 5
9149	803 284	9148	803 283	22 x 22	—	7/8 x 7/8	1-1/8 x 1-1/8	THRE CPHE 6

Dimensions TCLE

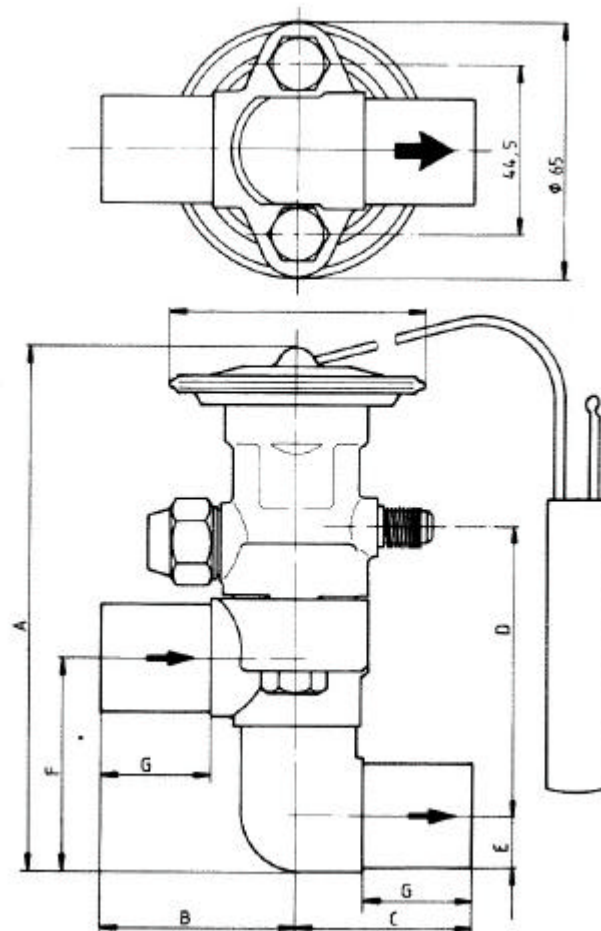
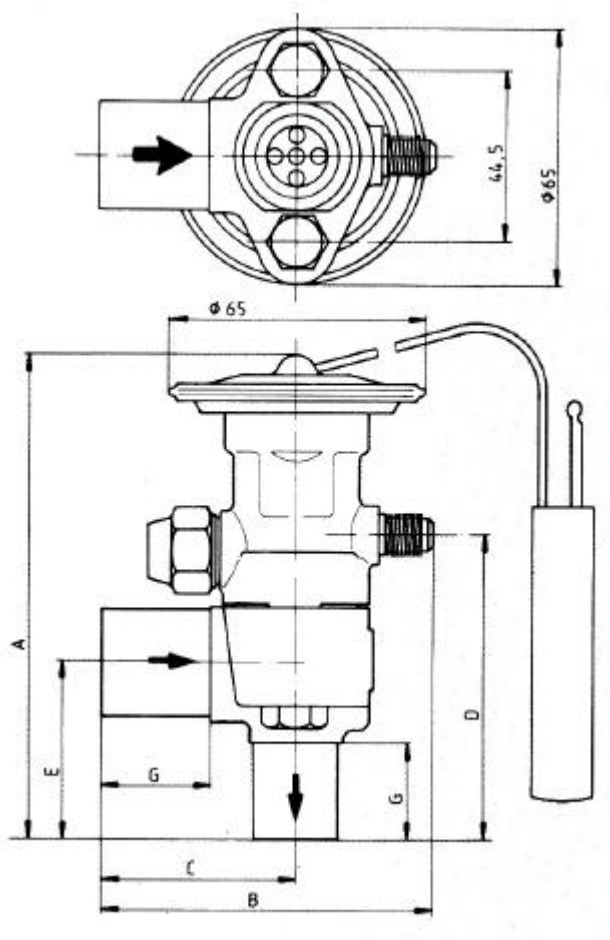


Angle Style Flanges TCLE		Connections		Lay-in length		A	B	C	D	E	F	G	H	Weight kg
		Inlet	Outlet											
3/8	1/2 SAE			106	78	39	30		29	35	27	-	-	1,1
3/8	5/8 SAE			106										
1/2	5/8 SAE			113										
10	12 ODF	14	17	105	77	37								
10	16 ODF	14	21	105	80	40								
12	16 ODF	18	21	108	80	40	34		43	27	29	27	29	1,1
16	22 ODF	21	25	124	90	51								
3/8	1/2 ODF	14	17	105	77	37								
3/8	5/8 ODF	14	21	105	80	40								
1/2	5/8 ODF	18	21	108	80	40								
5/8	7/8 ODF	21	25	124	90	51								1,2

Straight Through Flanges TCLE

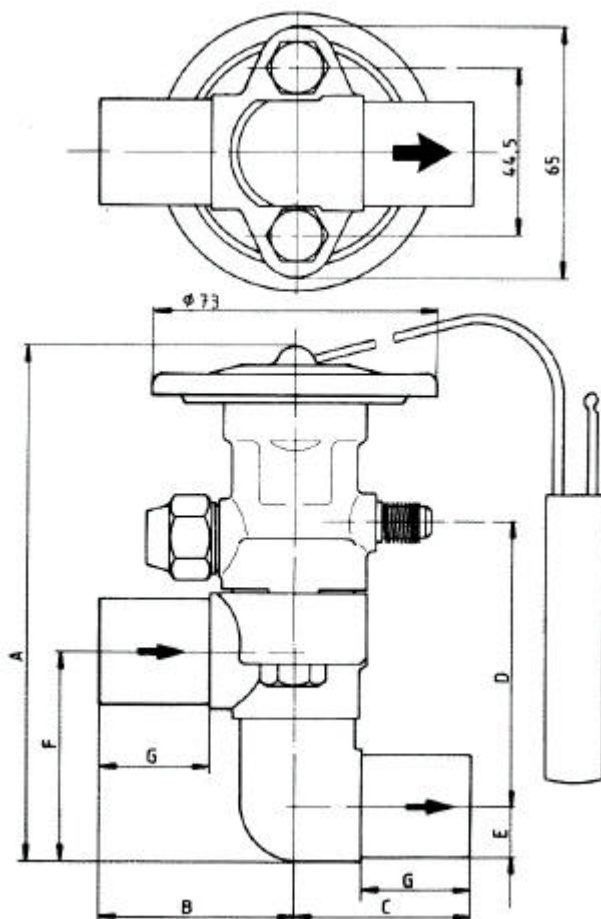
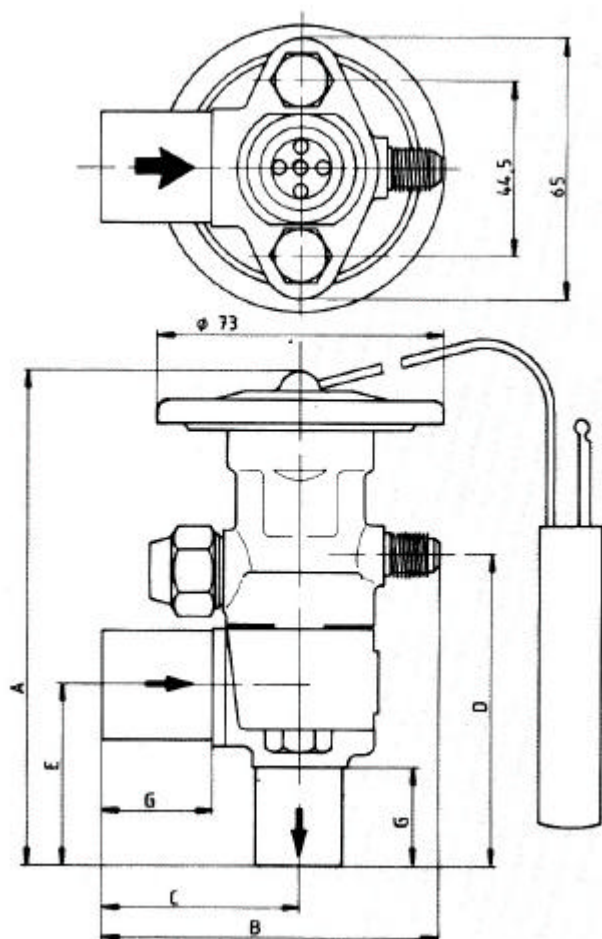
3/8	1/2 SAE			95	45	50	31	17	10	9	1,1
3/8	5/8 SAE				45	55					
1/2	5/8 SAE				50	55					
10	12 ODF	8	10	95	36	40	31	17	10	9	1,1
10	16 ODF	8	13			41					
12	16 ODF	10	13			41					
3/8	1/2 ODF	8	10	95	36	40	31	17	10	9	1,1
3/8	1/2 ODF	8	13			41					
1/2	1/2 ODF		10			40					
1/2	5/8 ODF	10	13	97	36	41	33	17	10	9	1,1
1/2	7/8 ODF	19	13			49					
5/8	5/8 ODF		13	95	41	41	33	17	10	9	1,1
5/8	7/8 ODF	13	19			49					
5/8	1-18 ODF		13			60					
5/8	1-18 ODF	19	13	98	49	60					1,15

Dimensions TJRE



Angle Style Flanges TJRE		Lay-in length		A	B	C	D	E	F	G	Weight kg
Connections		Inlet	Outlet								
22	22 ODF	19	19	140	85	51	93	59		29	1,3
Straight Through Flanges TJRE											
7/8	7/8 ODF	19	19	137	51	45	75	15	56	29	1,4

Dimensions TERE, TIRE, THRE



Angle Style Flanges Type 9153, 9153-MM for TERE, TIRE											Weight kg
Connections		Lay-in length		A	B	C	D	E	F	G	
		Inlet	Outlet								
22	22 ODF	19	19	140	87	51	92	59		23	1,4
7/8	7/8 ODF	19	19	140			92	59		25	1,4
Angle Style Flanges Type 9149 for THRE											
22,2	22,2 ODF	19	19	154			106	73		25	1,45
7/8	7/8 ODF	19	19	154			106	73		25	1,45
Straight Through Flanges Type 9152 for TERE, TIRE											
22,2	22,2 ODF	19	19	139	51	45	74	16,5	58	25	1,5
7/8	7/8 ODF	19	19	139							1,5
Straight Through Flanges Type 9148 for TH											
22,2	22,2 ODF	19	19	139							1,45
7/8	7/8 ODF	19	19	139							1,45

25,4