

Thermo™ -Expansion Valves Series TI

Exchangeable orifices

Features

- Laser-welded diaphragm with large diameter for high reliability and maximum lifetime
- Constant superheat across wide application ranges Easy and precise superheat setting by modified threads
- TIE with stainless steel fittings allow brazing without wet rags
- With capacities between 0.4 kW and 14.2 kW (R404A) ideally suited for service work
- Internal or external equaliser
- Brazing and flare connections available
- Capillary tube length 1.5 m
- PS: 45 bar. TS: -45 ... +75°C
- No CE marking according art. 3.3 PED 97/23 EC

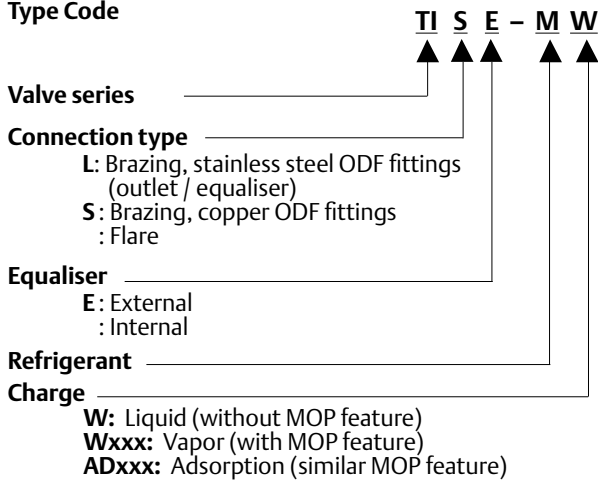


TILE



TIE

Type Code



Orifice Assembly with strainer for inlet connection

Type	Nominal Capacity* (kW)							
	TIO-00X	TIO-000	TIO-001	TIO-002	TIO-003	TIO-004	TIO-005	TIO-006
Part No.	800 532	800 533	800 534	800 535	800 536	800 537	800 538	800 539
R134a	0.3	0.8	1.9	3.1	5.0	8.3	10.1	11.7
R22	0.5	1.3	3.2	5.3	8.5	13.9	16.9	19.5
R404A / R507	0.4	1.0	2.3	3.9	6.2	10.1	12.3	14.2
R407C	0.5	1.4	3.5	5.7	9.2	15.0	18.3	21.1
R410A	0.6	1.5	3.7	6.2	9.9	16.2	19.7	22.8
R407A	0.5	1.3	3.2	5.2	8.4	13.7	16.6	19.2
R407F	0.6	1.5	3.6	5.9	9.5	15.5	18.9	21.8
R448A	0.5	1.3	3.19	5.28	8.48	13.86	16.85	19.44
R449A	0.49	1.27	3.12	5.16	8.28	13.54	16.46	19
R450A	0.2	0.55	1.3	2.11	3.41	5.66	6.89	7.98
R513A	0.21	0.56	1.33	2.16	3.49	5.79	7.05	8.17
R1234ze	0.23	0.63	1.49	2.42	3.91	6.49	7.9	9.15

Brazing Adapter for TILE and TIS(E)

Type	Part No.	Connection, ODF	
		mm	inch
TIA-M06	802 500	6.0	-
TIA-M10	802 501	10.0	-
TIA-014	802 502	-	¼"
TIA-038	802 503	-	⅜"
Gasket Set	803 780	100 pieces	



*Nominal capacity is based on the following conditions:

Refrigerant	Evaporating temperature	Condensing temperature	Sub-cooling
R407C, R407F	+4°C dew point	+38°C bubble p. +43°C dew point	1K
R22, R134a, R404A, R410A, R507	+4°C	+38°C	
R513A, R1234ze	+4°C dew point	+38°C bubble/ +38°C dew point	
R450A		+38°C bubble/ +38.6°C dew point	
R448A, R449A		+38°C bubble/ +42.6°C dew point	

Valve selection for other operating conditions see "Correction Tables for Thermo-Expansion Valves Series TI, TX3, TX6, T and L", quick selection tables on next pages or the "Controls Navigator" selection tool which can be downloaded from www.emersonclimate.eu.

TI Valve Bodies without cage and nut

Refrigerant	Outlet/Equalizer Connection	Type	Part No.	Type	Part No.	MOP °C	Evaporating temperature range °C
		external Equalizer		internal Equalizer			
R404A / R507	Brazing stainless steel	TILE-SW (12mm)	802465			-	-45 ... +20
		TILE-SW (½")	802466			-	-45 ... +20
	Brazing copper	TISE-SW (12mm)	802462	TIS-SW (12mm)	802461	-	-45 ... +20
		TISE-SW (½")	802464	TIS-SW (½")	802463	-	-45 ... +20
		TISE-SAD10 (½")	802479	TIS-SAD10 (½")	802478	+10	-45 ... 0
		TISE-SW75 (12mm)	802471			0	-45 ... -3
		TISE-SW75 (½")	802472			0	-45 ... -3
		TISE-SAD-20 (12mm)	802474			-20	-45 ... -27
		TISE-SAD-20 (½")	802475			-20	-45 ... -27
	Flare	TIE-SW	802460	TI-SW	802459	-	-45 ... +20
		TIE-SAD10	802477	TI-SAD10	802476	+10	-45 ... 0
		TIE-SW75	802470	TI-SW75	802469	0	-45 ... -3
		TIE-SAD-20	802473			-20	-45 ... -27
	R134a	Brazing stainless steel	TILE-MW (12mm)	802451			-
TILE-MW (½")			802452			-	-45 ... +20
Brazing copper		TISE-MW (12 mm)	802448	TIS-MW (12 mm)	802447	-	-45 ... +20
		TISE-MW (½")	802450	TIS-MW (½")	802449	-	-45 ... +20
		TISE-MW55 (12mm)	802457			+14	-45 ... +11
Flare		TISE-MW55 (½")	802458			+14	-45 ... +11
		TIE-MW	802446	TI-MW	802445	-	-45 ... +20
TIE-MW55		802456	TI-MW55	802455	+14	-45 ... +11	
R407C	Brazing stainless steel	TILE-NW (12mm)	802486			-	-45 ... +20
		TILE-NW (½")	802485			-	-45 ... +20
	Brazing copper	TISE-NW (12mm)	802438	TIS-NW (12mm)	802437	-	-45 ... +20
		TISE-NW (½")	802440	TIS-NW (½")	802439	-	-45 ... +20
	Flare	TIE-NW	802436	TI-NW	802435	-	-45 ... +20
R407A/R407F	Brazing stainless steel	TILE-NW (12mm)	802486			-	-45 ... 0
		TILE-NW (1/2")	802485			-	-45 ... 0
	Brazing copper	TISE-NW (12mm)	802438	TIS-NW (12mm)	802437	-	-45 ... 0
		TISE-NW (1/2")	802440	TIS-NW (1/2")	802439	-	-45 ... 0
	Flare	TIE-NW	802436	TI-NW	802435	-	-45 ... 0
	Brazing Copper	TISE-SAD-20 (12mm)	802474			-20	-45 ... -27
		TISE-SAD-20 (1/2")	802475			-20	-45 ... -27
R22	Brazing stainless steel	TILE-HW (12mm)	802426			-	-45 ... +20
		TILE-HW (½")	802427			-	-45 ... +20
	Brazing copper	TISE-HW (12mm)	802423	TIS-HW (12mm)	802422	-	-45 ... +20
		TISE-HW (½")	802425	TIS-HW (½")	802424	-	-45 ... +20
		TISE-HW100 (12mm)	802431			+15	-45 ... +13
		TISE-HW100 (½")	802432			+15	-45 ... +13
	Flare	TIE-HW	802421	TI-HW	802420	-	-45 ... +20
R410A	Brazing stainless steel	TILE-ZW (12mm)	802488			-	-35 ... +20
		TILE-ZW (½")	802489			-	-35 ... +20
		TILE-ZW175 (12mm)	802490			+16.4	-35 ... +15
		TILE-ZW175(½")	802491			+16.4	-35 ... +15

Inlet: Flare ⅝"-18UNF for 6mm, 8mm., 10mm, ¼", ⅜" and ⅝" tubes
 Outlet: Flare ¾"-16UNF for 12mm and ½" tubes.
 Solder metric: ODF for 12mm tubes. Solder inch: ODF for ½" tubes
 Ext. Equalizer: Flare ⅝"-20UNF for 6mm and ¼" tubes.
 Solder metric: ODF for 6mm tubes. Solder inch: ODF for ¼" tubes

Note: See "Controls Navigator" for guideline on selection and adjustment

TI Valve Bodies without orifice and nuts in single packaging

Refrigerant	Connection	Valves with factory setting and/or new charges					Valve for field setting		
		Type	Part No.	Equalizer	Charge	MOP	Type	Part No.	
R448A/ R449A	Braze stainless steel fittings *	TILE-BW (12mm)		External	Liquid	No	TILE-SW (12 mm)	802 465	
		TILE-BW (1/2")			Liquid	No	TILE-SW (1/2")	802 466	
	Braze copper fittings **	TISE-BW (12 mm)			Liquid	No	TISE-SW (12 mm)	802 462	
		TISE-BW (1/2")			Liquid	No	TISE-SW (1/2")	802 464	
		TISE-BW30 (1/2")			Vapor	Yes		-	
		TISE-BW70 (1/2")			Vapor	Yes	TISE-SW75 (1/2")	802 472	
		TIS-BW (12 mm)		Internal	Liquid	No	TIS-SW (12 mm)	802 461	
		TIS-BW (1/2")			Liquid	No	TIS-SW (1/2")	802 463	
	Flare fittings	TIE-BW		External	Liquid	No	TIE-SW	802 460	
		TIE-BW70			Vapor	Yes	TIE-SW75	802 470	
		TI-BW		Internal	Liquid	No	TI-SW	802 459	
	R450A	Braze stainless steel fittings *	TILE-DW (12 mm)		External	Liquid	No	TILE-MW (12 mm)	802 451
TILE-DW (1/2")				Liquid		No	TILE-MW (1/2")	802 452	
Braze copper fittings **		TISE-DW (12 mm)		Liquid		No	TISE-MW (12 mm)	802 448	
		TISE-DW (1/2")		Liquid		No	TISE-MW (1/2")	802 450	
		TISE-DW55 (12 mm)		Vapor		Yes	TISE-MW55 (12 mm)	802 457	
		TISE-DW55 (1/2")		Vapor		Yes	TISE-MW55 (1/2")	802 458	
		TIS-DW (12 mm)		Internal	Liquid	No	TIS-MW (12 mm)	802 447	
		TIS-DW (1/2")			Liquid	No	TIS-MW (1/2")	802 449	
Flare fittings		TIE-DW		External	Liquid	No	TIE-MW	802 446	
		TI-DW		Internal	Liquid	No	TI-MW	802 445	
R513A		Braze stainless steel fittings *	TILE-CW (12 mm)		External	Liquid	No	TILE-MW (12 mm)	802 451
			TILE-CW (1/2")			Liquid	No	TILE-MW (1/2")	802 452
	Braze copper fittings **	TISE-CW (12 mm)		Liquid		No	TISE-MW (12 mm)	802 448	
		TISE-CW (1/2")		Liquid		No	TISE-MW (1/2")	802 450	
		TISE-CW55 (12 mm)		Vapor		Yes	TISE-MW55 (12 mm)	802 457	
		TISE-CW55 (1/2")		Vapor		Yes	TISE-MW55 (1/2")	802 458	
		TIS-CW (12 mm)		Internal	Liquid	No	TIS-MW (12 mm)	802 447	
		TIS-CW (1/2")			Liquid	No	TIS-MW (1/2")	802 449	
	Flare fittings	TIE-CW		External	Liquid	No	TIE-MW	802 446	
		TI-CW		Internal	Liquid	No	TI-MW	802 445	
	R1234ze	Braze copper fittings **	TISE-EW (12 mm)		External	Liquid	No	TISE-MW (12 mm)	802 448
			TISE-EW (1/2")			Liquid	No	TISE-MW (1/2")	802 450
TISE-EW55 (12 mm)				Vapor		Yes	TISE-MW55 (12 mm)	802 457	
TISE-EW55 (1/2")				Vapor		Yes	TISE-MW55 (1/2")	802 458	
TIS-EW (12 mm)				Liquid		No	TIS-MW (12 mm)	802 447	
TIS-EW (1/2")				Liquid		No	TIS-MW (1/2")	802 449	
Flare fittings		TIE-EW		Internal	Liquid	No	TIE-MW	802 446	
		TI-EW			Liquid	No	TI-MW	802 445	

Note: See "Controls Navigator" for guideline on selection and adjustment