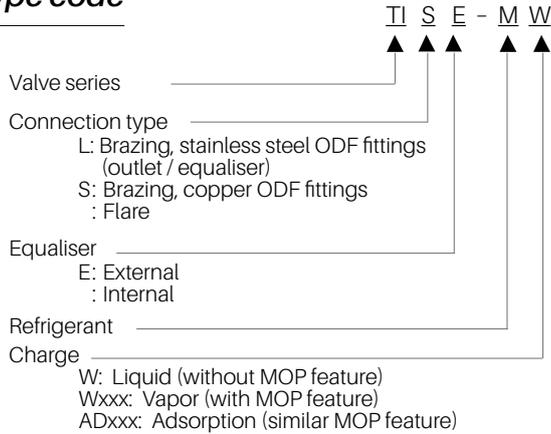


Thermo™ - expansion valves series TI with interchangeable orifices

Features

- Laser-welded diaphragm / power element with large diameter for high reliability and maximum lifetime
- Constant superheat across wide application ranges
- Easy and precise superheat setting by internal fine threads
- Three styles of connections:
 - TILE: Stainless steel brazed fittings eliminate the need of wet rags during brazing
 - TIS(E): Copper brazed fittings (valve requires wet rag during brazing)
 - TI(E): Flare
- With capacities between 0.5kW and 19.4 kW (R448A) ideally suited for service work
- Internal or external equaliser
- Cleanable / exchangeable inlet strainer in orifice assembly
- Inlet brazing adapter
- Capillary tube length 1.5 m
- Max. allowable pressure PS: 45 bar
- Temperature range TS: -45...+75°C
- CE Marking acc. PED not required

Type code



TILE



TIE

Selection table for orifice assembly with strainer for inlet connection

		Nominal Capacity (kW)							
Type		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
A1	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	18.3	21.1
	R410A	0.6	1.5	3.7	6.2	9.9	16.2	19.7	22.8
	R448A	0.5	1.3	3.2	5.3	8.5	13.9	16.9	19.4
	R449A	0.5	1.3	3.1	5.2	8.3	13.5	16.5	19.0
	R513A/R450A	0.3	0.7	1.7	2.8	4.5	7.5	9.1	10.6
A2L	R452A	0.4	1.0	2.4	4.0	6.4	10.5	12.8	14.8
	R1234ze	0.2	0.6	1.5	2.4	3.9	6.5	7.9	9.1
	R455A	0.5	1.2	3.0	5.0	8.1	13.2	16.0	18.5
	R454C	0.4	1.1	2.6	4.3	7.0	11.4	13.8	16.0
	R1234yf	0.2	0.6	1.4	2.2	3.6	6.0	7.3	8.4
	R32	0.9	2.3	5.6	9.2	14.8	24.1	29.3	33.9

Note: Nominal conditions: Evaporating Temperature +4°C (dew point), Condensing Temperature +38°C (bubble point), Subcooling 1 K.
 For selection of other operation conditions, please use Copeland Select software.

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	-	1/4"
TIA-038	802 503	-	3/8"
Gasket Set	803 780	100 pieces	



TI valve bodies without orifice and nut

Refrigerant		Outlet/Equalizer Connection	Type	Part No.	Type	Part No.	MOP (°C)	Evaporating Temperature Range (°C)		
A1	A2L		External Equalizer		Internal Equalizer					
R404A/R507 R452A*		Brazing Stainless Steel Fittings *	TILE-SW (12 mm)	802465			-	-45 ... +20		
			TILE-SW (1/2")	802466			-	-45 ... +20		
		Brazing Copper Fittings **	TISE-SW (12 mm)	802462	TIS-SW (12 mm)	802461	-	-45 ... +20		
			TISE-SW (1/2")	802464	TIS-SW (1/2")	802463	-	-45 ... +20		
			TISE-SAD10 (1/2")	802479	TIS-SAD10 (1/2")	802478	+10	-45 ... 0		
			TISE-SW75 (12 mm)	802471			0	-45 ... -3		
			TISE-SW75 (1/2")	802472			0	-45 ... -3		
			TISE-SAD-20 (12 mm)	802474			-20	-45 ... -27		
		Flare Fittings	TISE-SAD-20 (1/2")	802475			-20	-45 ... -27		
			TIE-SW	802460	TI-SW	802459	-	-45 ... +20		
			TIE-SAD10	802477			+10	-45 ... 0		
			TIE-SW75	802470	TI-SW75	802469	0	-45 ... -3		
		R134a R450A*	R1234ze*	Brazing Stainless Steel Fittings *	TILE-MW (12 mm)	802451			-	-45 ... +20
					TILE-MW (1/2")	802452			-	-45 ... +20
Brazing Copper Fittings **	TISE-MW (12 mm)			802448	TIS-MW (12 mm)	802447	-	-45 ... +20		
	TISE-MW (1/2")			802450	TIS-MW (1/2")	802449	-	-45 ... +20		
	TISE-MW55 (12 mm)			802457			+14	-45 ... +11		
	TISE-MW55 (1/2")			802458			+14	-45 ... +11		
Flare Fittings	TIE-MW			802446	TI-MW	802445	-	-45 ... +20		
	TIE-MW55			802456	TI-MW55	802455	+14	-45 ... +11		
R407C				Brazing Stainless Steel Fittings *	TILE-NW (12 mm)	802486			-	-45 ... +20
					TILE-NW (1/2")	802485			-	-45 ... +20
				Brazing Copper Fittings **	TISE-NW (12 mm)	802438	TIS-NW (12 mm)	802437	-	-45 ... +20
					TISE-NW (1/2")	802440	TIS-NW (1/2")	802439	-	-45 ... +20
				Flare Fittings	TIE-NW	802436	TI-NW	802435	-	-45...+20
R410A	R32*	Brazing Stainless Steel Fittings *	TILE-ZW (12 mm)	802488			-	-35...+20		
			TILE-ZW (1/2")	802489			-	-35...+20		
			TILE-ZW175 (12 mm)	802490			+16.4	-35...+15		
			TILE-ZW175 (1/2")	802491			+16.4	-35...+15		
R448A / R449A		Brazing Stainless Steel Fittings *	TILE-BW (12 mm)	802418			-	-45...+20		
			TILE-BW (1/2")	802419			-	-45...+20		
		Brazing Copper Fittings **	TISE-BW (12 mm)	802416	TIS-BW(12 mm)	802414	-	-45...+20		
			TISE-BW (1/2")	802417	TIS-BW(1/2")	802415	-	-45...+20		
			TISE-BW30 (12 mm)	802494			-15	-45...-18		
			TISE-BW30 (1/2")	802495			-15	-45...-18		
		Flare Fittings	TIE-BW	802413	TI-BW	802412	-	-45...+20		

Note: *) TILE Brazing without wet rag

**) TISE Brazing with wet rag

***) Superheat readjustment required - see Operating Instruction

TI valve bodies without orifice and nut

Refrigerant		Outlet/Equalizer Connection	Type	Part No.	Type	Part No.	MOP (°C)	Evaporating Temperature Range (°C)
A1	A2L		External Equalizer		Internal Equalizer			
R513A		Brazing Stainless Steel Fittings**	TILE-CW (12 mm)	802166			-	-30...+20°C
			TILE-CW (1/2")	802167			-	-30...+20°C
		Brazing Copper Fittings***	TISE-CW (12 mm)	802168	TIS-CW (12 mm)	802170	-	-30...+20°C
			TISE-CW (1/2")	802169	TIS-CW (1/2")	802171	-	-30...+20°C
		Flare Fittings	TIE-CW	802172	TI-CW	802173	-	-30...+20°C
	R454C	Brazing Stainless Steel Fittings**	TILE-LW (12 mm)	802150			-	-35...+20°C
			TILE-LW (1/2")	802151			-	-35...+20°C
		Brazing Copper Fittings***	TISE-LW (12 mm)	802152	TIS-LW (12 mm)	802154	-	-35...+20°C
			TISE-LW (1/2")	802153	TIS-LW (1/2")	802155	-	-35...+20°C
		Flare Fittings	TIE-LW	802156	TI-LW	802157	-	-35...+20°C
	R455A	Brazing Stainless Steel Fittings**	TILE-KW (12 mm)	802158			-	-35...+20°C
			TILE-KW (1/2")	802159			-	-35...+20°C
		Brazing Copper Fittings***	TISE-KW (12 mm)	802160	TIS-KW (12 mm)	802162	-	-35...+20°C
			TISE-KW (1/2")	802161	TIS-KW (1/2")	802163	-	-35...+20°C
		Flare Fittings	TIE-KW	802164	TI-KW	802165	-	-35...+20°C
	R1234yf	Brazing Stainless Steel Fittings**	TILE-FW (12 mm)	802174			-	-35...+20°C
			TILE-FW (1/2")	802175			-	-35...+20°C
		Brazing Copper Fittings***	TISE-FW (12 mm)	802176	TIS-FW (12 mm)	802178	-	-35...+20°C
			TISE-FW (1/2")	802177	TIS-FW (1/2")	802179	-	-35...+20°C
		Flare Fittings	TIE-FW	802180	TI-FW	802181	-	-35...+20°C

Note: *) TILE Brazing without wet rag

**) TISE Brazing with wet rag

***) Superheat readjustment required - see Operating Instruction

Connections

Body	Inlet Connection		Outlet	External Equalizer*
	Brazing with Adapter	Flare		
TI(E) Flare connections	-	5/8"-18 UNF Flare suitable for 6 mm, 8 mm, 10 mm, 1/4", 5/16", 3/8" tubes	3/4" - 16 UNF Flare: for 12 mm, 1/2" tubes	7/16" - 20 UNF Flare: for 6 mm, 1/4" tubes
TIS(E) / TILE Braze connections	TIA - M06 (6 mm ODF) TIA - M10 (10 mm ODF)		12 mm ODF	6 mm ODF
	TIA - 014 (1/4" ODF) TIA - 038 (3/8" ODF)		1/2 ODF	1/4" ODF

Note: *) TIE, TISE and TILE