

# TILE thermo-expansion valves

## *The best selection*

Copeland TILE series of Thermo®-Expansion Valves with interchangeable orifices are designed for refrigeration applications such as display cases in supermarkets, walk-in/reach-in coolers, freezers, soft ice cream/ice maker machines, milk tank coolers, transport refrigeration as well as for air conditioning and heat pump systems. TILE provides flexibility in selection of capacity and is ideal for those applications requiring compact size with stable and accurate control over wide load and evaporating range.

## *Features and benefits*

- 45 bar maximum working pressure allows the use of high pressure refrigerants
- Stainless steel brazed fittings eliminate the need of wet rags during brazing
- Large diaphragm eliminates disturbances to the valve and provides smoother and consistent valve control
- Constant superheat across a wide application range
- Adjustable static superheat
- Eight interchangeable orifice assemblies provide a capacity range from 0.6 to 22,8 kW (R410A)
- Cleanable / exchangeable inlet strainer in orifice assembly
- Inlet brazing adapter

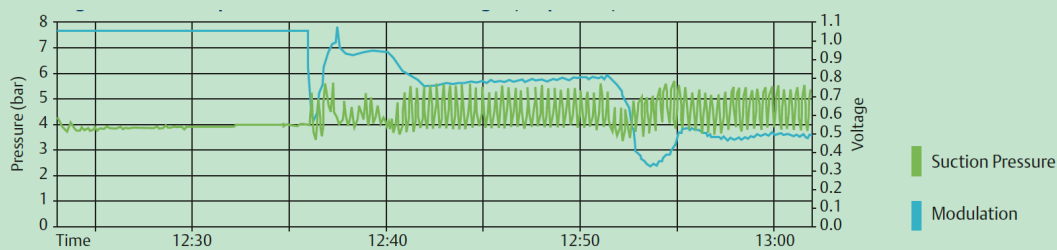


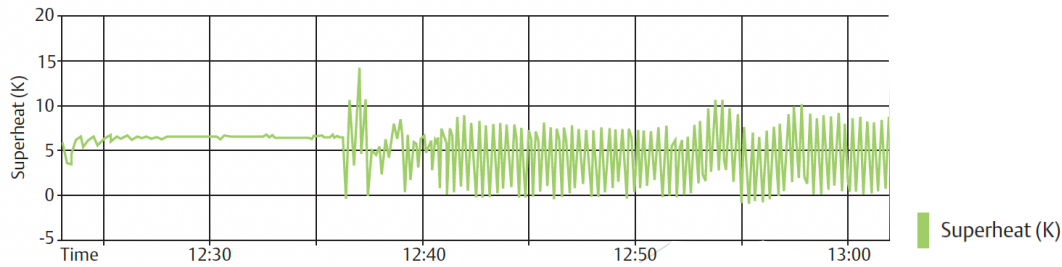
## *Performance*

TILE has been designed and qualified for types of application where robustness, long life expectancy and excellent superheat control under varying operating conditions are required such as:

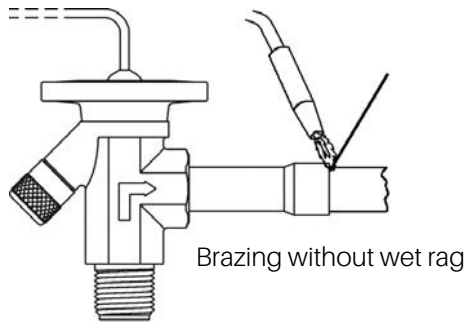
- System with capacity modulation, e.g. units with Digital Scroll™ compressors, having single or multiple evaporators.
- R410A split reversible heat pumps/chillers with two expansion valves (TILE-ZW175) for outdoor and indoor heat exchanger where the external equalizer is alternately exposed to low and high pressure.

## *Digital scroll compressors with plate heat exchanger (evaporator)*





## Valve selection



Refrigerant	Type	PCN
R410A	TILE-ZW (12mm)	802488
	TILE-ZW (1/2")	802489
	TILE-ZW175 (12mm)	802490
	TILE-ZW175 (1/2")	802491
R404A / R507	TILE-SW (12mm)	802465
	TILE-SW (1/2")	802466
R134a	TILE-MW (12mm)	802451
	TILE-MW (1/2")	802452
R407C	TILE-NW (12mm)	802486
	TILE-NW (1/2")	802485
R22	TILE-HW (12mm)	802426
	TILE-HW (1/2")	802427

## Orifice selection (with strainer)

		Nominal Capacity (kW)							
Refrigerant	Orifice type PCN	TIO-00X 800532	TIO-000 800533	TIO-001 800534	TIO-002 800535	TIO-003 800536	TIO-004 800537	TIO-005 800538	TIO-006 800539
	R134a	0,3	0,8	1,9	3,1	5,0	5,0	10,1	11,7
	R22	0,5	1,3	3,2	5,3	8,5	8,5	16,9	19,5
	R404A	0,4	1,0	2,3	3,9	6,2	6,2	12,3	14,2
	R407C	0,5	1,4	3,5	5,7	9,2	9,2	18,3	21,1
	R507	0,4	1,0	2,3	3,9	6,2	6,2	12,3	14,2
	R410A	0,6	1,5	3,7	6,2	9,9	9,9	19,7	22,8

## Technical overview

Maximum working pressure	PS: 45 bar
Burst pressure	225 bar
Medium temperature range	TS: -45 to 75°C
Factory test pressure	PT: 49,5 bar
Directive	RoHS compliant
Seat leakage	≤ 1% nominal capacity

Compatibility	CFC, HCFC, HFC, Mineral, Alkyl benzene and POE lubricants
Connections	Stainless steel ODF
Charges	CFC free
Protection	Salt spray test
Weight	approx. 0.4 kg

For more details, see [copeland.com/en-gb](https://copeland.com/en-gb)

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