Thermo™-expansion valves series TX7

TX7 series of Thermo-expansion valves are designed predominantly for air conditioning, heat pumps, close control and industrial process cooling applications. The TX7 is ideal for those applications requiring hermetic / compact size combined with stable and accurate control over wide load and evaporating temperature ranges.

TX7-Z13

Features

- Monoblock, hermetic valve with brazing connections
- 7 sizes up to 180 kW (R410A)
- Maximum allowable pressure: PS 46 bar
- Factory test pressure PT: 50.6 bar
- Bi-Flow application
  - Balanced port in normal and reverse flow directions eliminates disturbance forces resulting from condensing pressure
  - Optimum static superheat in normal and reverse flow
  - Capacities performance in normal and reverse flow correlates to capacity of heat pumps in cooling and heating mode
- Power element with 65 mm diameter enables low partial load (20-25%) performance at stable superheat
- Applicable in systems with digital scroll, step less screw compressors and variable speed compressors
- Floating superheat in reverse flow (heating mode) supports evaporator efficiency during low ambient operating conditions in air cooled reversible chillers
- Laser welded stainless steel power element with a special diaphragm profile provides life expectancy against high pressure during reversed flow via external equalizer.
- Single diaphragm with negligible hysteresis withstands against higher pressure
- Fine tuning by external superheat adjusting mechanism
- Special factory setting upon request. Minimum order quantity 60 pieces

Selection table R410A / R32 / R452B / R454B

Nominal Capacity (kW)								With MOP		Connection	
R410A		R32*		R452B*		R454B*					
Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Type	Part No.	Inlet x Outlet	Equalizer
32.1	31.7	47.7	46.9	36.7	36.3	36.9	36.5	TX7-Z13m	806811	12 mm x 16 mm	6 mm
32.1	31.7	47.7	46.9	36.7	36.3	36.9	36.5	TX7-Z13	806810	1/2″ x 5/8″	1/4″
39.9	39.1	59.3	57.8	45.6	44.7	45.8	44.9	TX7-Z14m	806813	16 mm x 22 mm	6 mm
39.9	39.1	59.3	57.8	45.6	44.7	45.8	44.9	TX7-Z14	806812	5/8″ x 7/8″	1/4″
48.9	47.4	72.7	70.1	55.9	54.2	56.1	54.4	TX7-Z15m	806815	16 mm x 22 mm	6 mm
48.9	47.4	72.7	70.1	55.9	54.2	56.1	54.4	TX7-Z15	806814	5/8″ x 7/8″	1/4″
80.7	67.7	120	100.2	92.2	77.4	92.7	77.9	TX7-Z16m	806817	22 mm x 28 mm	6 mm
80.7	67.7	120	100.2	92.2	77.4	92.7	77.9	TX7-Z16	806816	7/8″ x 1-1/8″	1/4″
99.4	81.5	147.9	120.5	113.7	93.2	114.3	93.7	TX7-Z17m	806819	22 mm x 28 mm	6 mm
99.4	81.5	147.9	120.5	113.7	93.2	114.3	93.7	TX7-Z17	806818	7/8″ x 1-1/8″	1/4″
130.9	113.9	194.7	168.4	149.7	130.2	150.4	130.8	TX7-Z18m	806821	22 mm x 28 mm	6 mm
130.9	113.9	194.7	168.4	149.7	130.2	150.4	130.8	TX7-Z18	806820	7/8″ x 1-1/8″	1/4″
183.4	165.1	272.9	244.1	209.8	188.8	210.8	189.7	TX7-Z19m	806823	22 mm x 28 mm	6 mm
183.4	165.1	272.9	244.1	209.8	188.8	210.8	189.7	TX7-Z19	806822	7/8″ x 1-1/8″	1/4″

Note 1: *) Superheat readjustment required - see Operating Instruction
Note 2: Nominal conditions: Evaporating Temperature +4°C (dew point), Condensing Temperature +38°C (bubble point), Subcooling 1 K

Selection table R134a / R450A / R513A / R1234yf

Nominal Capacity (kW)								with MOP		without MOP		Connection	
R134a		R450A*		R513A*		R1234yf*							
Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Type	Part No.	Type	Part No.	Inlet x Outlet	Equalizer
18.1	17.9	15.9	15.8	16.3	16.1	13.0	12.9	TX7-M13m	806839	TX7-M03m	806825	12 mm x 16 mm	6 mm
18.1	17.9	15.9	15.8	16.3	16.1	13.0	12.9	TX7-M13	806838	TX7-M03	806824	1/2″ x 5/8″	1/4″
22.5	22.0	19.8	19.4	20.3	19.9	16.2	15.9	TX7-M14m	806841	TX7-M04m	806827	16 mm x 22 mm	6 mm
22.5	22.0	19.8	19.4	20.3	19.9	16.2	15.9	TX7-M14	806840	TX7-M04	806826	5/8″ x 7/8″	1/4″
27.5	26.7	24.3	23.5	24.8	24.1	19.8	19.2	TX7-M15m	806843	TX7-M05m	806829	16 mm x 22 mm	6 mm
27.5	26.7	24.3	23.5	24.8	24.1	19.8	19.2	TX7-M15	806842	TX7-M05	806828	5/8″ x 7/8″	1/4″
45.4	38.2	40.1	33.6	41.0	34.4	32.8	27.5	TX7-M16m	806845	TX7-M06m	806831	22 mm x 28 mm	6 mm
45.4	38.2	40.1	33.6	41.0	34.4	32.8	27.5	TX7-M16	806844	TX7-M06	806830	7/8″ x 1-1/8″	1/4″
56.0	45.9	49.4	40.5	50.6	41.5	40.4	33.1	TX7-M17m	806847	TX7-M07m	806833	22 mm x 28 mm	6 mm
56.0	45.9	49.4	40.5	50.6	41.5	40.4	33.1	TX7-M17	806846	TX7-M07	806832	7/8″ x 1-1/8″	1/4″
73.7	64.1	65.0	56.6	66.6	57.9	53.2	46.3	TX7-M18m	806849	TX7-M08m	806835	22 mm x 28 mm	6 mm
73.7	64.1	65.0	56.6	66.6	57.9	53.2	46.3	TX7-M18	806848	TX7-M08	806834	7/8″ x 1-1/8″	1/4″
103.3	93.0	91.1	82.0	93.3	83.9	74.5	67.0	TX7-M19m	806851	TX7-M09m	806837	22 mm x 28 mm	6 mm
103.3	93.0	91.1	82.0	93.3	83.9	74.5	67.0	TX7-M19	806850	TX7-M09	806836	7/8″ x 1-1/8″	1/4″

Selection table R407C / R454C

Nominal Capacity (kW)				with MOP		without MOP		Connection	
R407C		R454C*							
Normal Flow	Reverse Flow	Normal Flow	Reverse Flow	Type	Part No.	Type	Part No.	Inlet x Outlet	Equalizer
28.9	28.6	22.5	22.3	TX7-N13m	806868	TX7-N03m	806853	12 mm x 16 mm	6 mm
28.9	28.6	22.5	22.3	TX7-N13	806867	TX7-N03	806852	1/2″ x 5/8″	1/4″
36.0	35.2	27.9	27.4	TX7-N14m	806870	TX7-N04m	806855	16 mm x 22 mm	6 mm
36.0	35.2	27.9	27.4	TX7-N14	806869	TX7-N04	806854	5/8″ x 7/8″	1/4″
44.1	42.7	34.2	33.2	TX7-N15m	806872	TX7-N05m	806857	16 mm x 22 mm	6 mm
44.1	42.7	34.2	33.2	TX7-N15	806871	TX7-N05	806856	5/8″ x 7/8″	1/4″
72.7	61.1	56.5	47.5	TX7-N16m	806874	TX7-N06m	806859	22 mm x 28 mm	6 mm
72.7	61.1	56.5	47.5	TX7-N16	806873	TX7-N06	806858	7/8″ x 1-1/8″	1/4″
89.7	73.5	69.7	57.1	TX7-N17m	806876	TX7-N07m	806861	22 mm x 28 mm	6 mm
89.7	73.5	69.7	57.1	TX7-N17	806875	TX7-N07	806860	7/8″ x 1-1/8″	1/4″
118.1	102.7	91.8	79.8	TX7-N18m	806878	TX7-N08m	806863	22 mm x 28 mm	6 mm
118.1	102.7	91.8	79.8	TX7-N18	806877	TX7-N08	806862	7/8″ x 1-1/8″	1/4″
165.4	148.9	128.6	115.7	TX7-N19m	806880	TX7-N09m	806865	22 mm x 28 mm	6 mm
165.4	148.9	128.6	115.7	TX7-N19	806879	TX7-N09	806864	7/8″ x 1-1/8″	1/4″

Note 1: *) Superheat readjustment required - see Operating Instruction
Note 2: Nominal conditions: Evaporating Temperature +4°C (dew point), Condensing Temperature +38°C (bubble point), Subcooling 1 K

Charge	Refrigerant	Recommended Evaporating Temperature Range	Maximum Bulb Temperature
M0	R134a, R450A, R513A, R1234yf	-25...+30°C	88°C
N0	R407C, R454C	-25...+20°C	71°C
M1 MOP 3.8 bar	R134a, R450A, R513A, R1234yf	-25...+10°C	120°C
N1 MOP 6.9 bar	R407C, R454C	-25...+14°C	120°C
Z1 MOP 12.1 bar	R410A/ R32, R452B, R454B	-25...+14°C	120°C