

The Emerson TX7 Series is a balanced ported valve designed for air conditioning, heat pumps, close control and industrial process cooling applications. The TX7 is ideal for those applications requiring a hermetic compact size, combined with stable and accurate control over wide load and evaporation temperature ranges.



Features

- Hermetic, leak-free construction
- Available for applications up to 50 ton (R-410A)
- Enhanced power element design offers extended valve life
- Laser welded stainless steel power element prevents corrosion and enables low partial load performance maintaining stable superheat
- Bi-Flow capability allows one valve to control the superheat in both cooling and heating modes for close-coupled or packaged heat pump applications
- Balanced port construction compensates for changes in operating pressures due to varying ambients, gas defrost, heat reclaim, or widely varying evaporator loads
- Only available with adjustable superheat
- External equalizer with 1/4" ODF connection
- Applicable in systems with digital scroll, stepless screw compressors and variable speed compressors

Specifications

- Maximum working pressure (MWP): 667 psig
- Refrigerant temperature range TS: -13°F to 158°F
- Storage Temperature: -22°F to 158°F
- Connections: Copper ODF
- UL/CUL file number: SA5312

Temperature Ranges

Refrigerant	Charge	Recommended Evaporating Temperature Range (F°)	Maximum Bulb Temperature (F°)
R-410A/R-32	Z1 MOP 175 psig	-40 to 57	248
R-134a	M0	-13 to 86	190
R-407C	N0	-13 to 68	160

Nomenclature Example: TX7-Z13

TX7	Z	1	3
Series	Refrigerant Code	Charge Code	Orifice
	Z=R-410A/R-32 M=R-134a/R-450A/R-510A N=R-407C/R-22	0=Without MOP ¹ 1=With MOP	

¹ Maximum Operating Pressure

TX7 Series–Nominal* Capacity Table in Tons (kW)

R-410A	R-22	R-32	R-134a	R-407C	R-450A	R-513A
–	7 (24.2)	12 (41.7)	4 (14.7)	6-1/2 (22.6)	4 (13.7)	3-3/4 (13.1)
–	8-1/2 (30.0)	15 (51.9)	5 (18.3)	8 (28.1)	5 (17.0)	4-1/2 (16.2)
–	10-1/2 (36.8)	18 (63.6)	6-1/2 (22.4)	10 (34.4)	6 (20.9)	5-1/2 (19.9)
20 (71.7)	17 (60.8)	30 (105.0)	10-1/2 (37.0)	16 (56.9)	10 (34.5)	9-1/2 (32.9)
25 (88.3)	21 (74.9)	37 (129.4)	13 (45.6)	20 (70.1)	12 (42.5)	11-1/2 (40.5)
33 (116.3)	28 (98.6)	48 (170.4)	17 (60.1)	26 (92.3)	16 (55.9)	15 (53.3)
47 (163.0)	40 (138.2)	68 (238.8)	24 (84.2)	37 (129.3)	22 (78.4)	21 (74.7)

All capacities shown are at 100°F condensing, 40°F evaporator temperature.

*See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750

Ordering Information

Refrigerant	Model	Tons*	Connection Size (in.)	Cap Tube	PCN
R-410A R-32	TX7-Z16	20	7/8 x 1-1/8 ODF	5 FT	806816
	TX7-Z17	25	7/8 x 1-1/8 ODF	5 FT	806818
	TX7-Z18	33	7/8 x 1-1/8 ODF	5 FT	806820
	TX7-Z19	47	7/8 x 1-1/8 ODF	5 FT	806822
R-134a R-450A R-513A	TX7-M03	4	1/2 x 5/8 ODF	5 FT	806824
	TX7-M04	5	5/8 x 7/8 ODF	5 FT	806826
	TX7-M05	6-1/2	5/8 x 7/8 ODF	5 FT	806828
	TX7-M06	10-1/2	7/8 x 1-1/8 ODF	5 FT	806830
	TX7-M07	13	7/8 x 1-1/8 ODF	5 FT	806832
	TX7-M08	17	7/8 x 1-1/8 ODF	5 FT	806834
	TX7-M09	24	7/8 x 1-1/8 ODF	5 FT	806836
R-407C R-22	TX7-N03	6-1/2	1/2 x 5/8 ODF	5 FT	806852
	TX7-N04	8	5/8 x 7/8 ODF	5 FT	806854
	TX7-N05	10	5/8 x 7/8 ODF	5 FT	806856
	TX7-N06	16	7/8 x 1-1/8 ODF	5 FT	806858
	TX7-N07	20	7/8 x 1-1/8 ODF	5 FT	806860
	TX7-N08	26	7/8 x 1-1/8 ODF	5 FT	806862
	TX7-N09	37	7/8 x 1-1/8 ODF	5 FT	806864

* For interchangeable refrigerant charges R-410A/R-32, R-134a/R-450A/R-513A, and R-407C/R-22, the tons of capacity shown in the table are for the first (primary) refrigerant listed. Consult the Nominal Capacity Table for determining the tons of capacity for the secondary refrigerants listed.

Example: A 68 ton R-32 valve is required. What R-410A valve should be selected.

Solution: From the Nominal Capacity Table, a 47 ton R-410A valve is equivalent to a 68 ton R-32 valve.

Dimensional Data (in.)

Remote Bulb Tubing Length 5' Standard

Size/Type	Inlet A	Outlet B	External Equalizer J	Overall Height H MIN	Lay in Length I	Capillary Tube Bending Height D MIN	C	E	F	G	K	L	M		
TX7-3	1/2 ODF	5/8 ODF	1/4 ODF	4.17	4.32	0.39	5.12	1.54	0.51	0.31	0.36	0.44	0.31		
TX7-4	5/8 ODF	7/8 ODF	1/4 ODF		4.06						0.44	0.63			
TX7-5	5/8 ODF	7/8 ODF	1/4 ODF												
TX7-6	7/8 ODF	1-1/8 ODF	1/4 ODF	4.29	3.75			0.39	5.12	1.59	0.43	0.63		0.74	0.31
TX7-7	7/8 ODF	1-1/8 ODF	1/4 ODF												
TX7-8	7/8 ODF	1-1/8 ODF	1/4 ODF												
TX7-9	7/8 ODF	1-1/8 ODF	1/4 ODF												

