

## TX/TXC single circuit DX evaporator

### Shell-and-tube horizontal water-cooled single circuit chiller

TX/TXC chiller barrels engineered design provides years of reliable service. Ideal for system builder and OEM replacement units.

#### Standard Designs

TX/TXC single circuit chillers are available in standard designs for fresh water duty. They are available in 17 catalog models from 2 to 120 tons. Three-quarter inch Armalex® Insulation is #tted as standard.

#### Tube Materials

TX chillers are manufactured with enhanced ¼" diameter copper tubing and TXC utilize enhanced ¼" diameter copper tubing.

#### Customization

As standard these units offer horizontal, cleanable tube design. Custom vessels are available with special materials of construction as required by you or your client.

#### Options

Units are available with left, right or top mounted shell side connections, please specify at time of order. As standard ¾" insulation is included, 1½" or no insulation is also available.

#### Features

##### Shells

ASME speci#cation steel pipe. Shells are sand blasted and cleaned prior to assembly.

##### Tubes

Copper high performance internally enhanced designed tubing is standard. Other tubing materials are available for corrosive duties.

##### Tube Sheets

ASME speci#cation steel tube sheets, precision machined for excellent sealing.



#### Tube Supports

Quality tube supports are manufactured to close tolerances to minimize the risk of vibration.

#### Heads

ASME speci#cation precision machined steel heads. Custom connection versions are available.

#### Connections

All water side connections are FNPT, MNPT or langed. All refrigerant side connections are IDS. Safety connections are FNPT. Custom nozzle orientations and locations are available.

#### Finish

Exterior surfaces are cleaned and painted with a high quality black paint and primer. Units are shipped with ¾" insulation as standard, custom thickness insulation is available upon request.

Working Pressures:  
See table for working pressures.

Nominal Water Pressure Drop  
Nominal pressure drops are given at nominal water low rates. To determine nominal low rates in gallons per minute (gpm), multiply the nominal capacity in tons by 2.4. Water pressure drops provided do not include any external fittings or valves.

Approved Refrigerants  
R22, R134a.

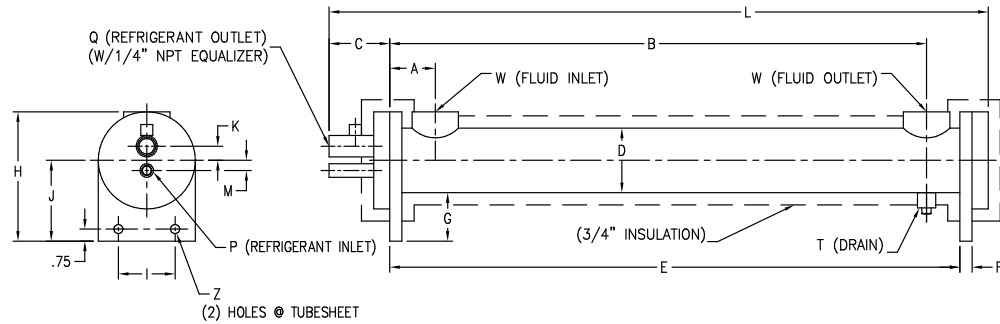
Non-Approved Refrigerants Unless Cleared by the Factory  
Ammonia/R717, due to copper tubing. R404A, R410A & R507A due to recommended operating pressures. Custom units are available for these refrigerants.

Other Refrigerants  
All other refrigerants must be approved by Alfa Laval before use.

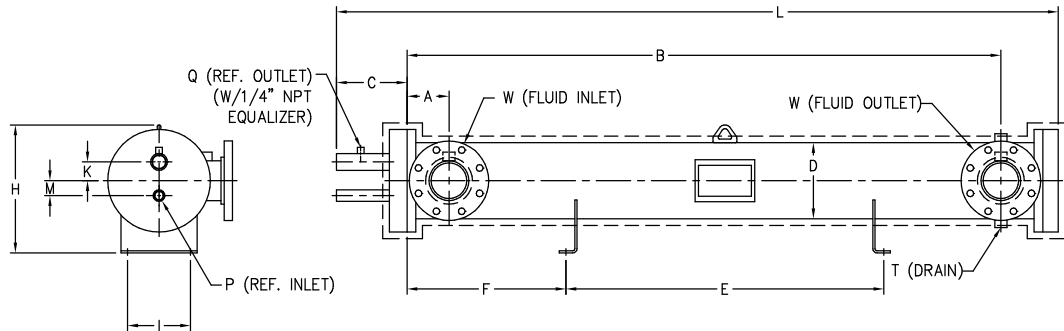
Alternative Options  
For more than one circuit, use a TX/TXC multiple circuit units. For higher pressure refrigerants use a TXC-MP units. Applications requiring glycol, use TXC-MPG (only available in multiple circuits). For clean fresh water applications use a brazed EVP-ACH.

Codes  
On all units 6<sup>3</sup>/<sub>8</sub>" OD and larger, the refrigerant side is constructed to the latest edition of the ASME Section VIII Div. 1 code standards and is stamped accordingly, while the shell side is non-code. Units 6" OD and smaller are UL stamped. Both sides are tested at 1.3 times the design pressure. Units are helium leak tested to #nd leaks as small as  $1 \times 10^{-6}$  mbar.l/s. Canadian registration numbers (CRN) are available upon request. For other code registrations please contact the factory.

TX  
1-Circuit



TXC  
1-Circuit



Alfa Laval reserves the right to change specifications without prior notification.

How to contact Mahan's Thermal Products, Inc.

(770)786-5555

[www.mahans.com](http://www.mahans.com)

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### Technical specifications

Models	R22 Nominal Cap.* (Tons)	R134a Nominal Cap.* (Tons)	R22 Press. Drop (psi)	R134a Press. Drop (psi)	Connections (inches)				Fluid Volume (gal)	Specifications			Working Pres- sure (PSI)	
					P Ref. IN (IDS)	Q Ref. Out (IDS)	W Fluid Conn.)	T Drain (FNPT)		Tube Length (in.)	Shell Dia. (in.)	Ship- ping Wt (lbs)	Shell	Tube
TX2 -1	2.0	1.6	1.9	1.3	5/8	7/8	1" FPT	3/8	0.4	24	2 3/4	46	225	225
TX3 -1	2.9	2.4	1.7	1.1	5/8	7/8	1" FPT	3/8	0.4	24	2 3/4	50	225	225
TX5 -1	4.9	3.9	0.8	0.5	5/8	1 1/8	1 1/4" FPT	1/2	1.6	36	4	62	225	225
TX6 -1	6.7	5.4	1.1	0.8	5/8	1 1/8	1 1/2" FPT	1/2	1.5	36	4	64	225	225
TX7 1/2 -1	7.6	6.2	1.6	1.0	7/8	1 5/8	1 1/2" FPT	1/2	1.4	36	4	66	225	225
TX10 -1	11.3	9.1	5.8	3.8	7/8	1 5/8	2" FPT	1/2	1.2	36	4	70	225	225
TX12 -1	14.3	11.5	2.4	1.6	7/8	1 5/8	2" FPT	1/2	3.4	36	6	120	225	225
TX15-1	18.3	14.6	3.5	2.3	1 1/8	2 1/8	2 1/2" FPT	1/2	3.2	36	6	128	225	225
TX20-1	22.6	18.0	5.9	3.8	1 1/8	2 1/8	3" FPT	1/2	2.9	36	6	136	225	225
TX25 -1	27.2	21.7	5.4	3.5	1 1/8	2 5/8	3" FPT	1/2	2.6	36	6	142	150	225
TXC30 -1	29.8	24.2	4.7	3.1	1 1/8	2 5/8	3" MPT	3/4	9.3	72	6 5/8	414	150	300
TXC40 -1	40.2	32.7	3.0	2.0	1 3/8	2 5/8	3" MPT	3/4	17.5	72	8 5/8	563	150	300
TXC50 -1	50.9	40.9	5.4	3.5	1 3/8	3 1/8	4" FLANGE	3/4	17.1	72	8 5/8	594	150	300
TXC60 -1	59.6	47.8	4.0	2.6	1 5/8	3 1/8	4" FLANGE	3/4	19.8	84	8 5/8	642	150	300
TXC75 -1	75.2	59.6	5.0	3.2	2 1/8	3 1/8	5" FLANGE	3/4	19.5	84	8 5/8	587	150	300
TXC100-1	100.5	79.4	5.0	3.1	2 1/8	3 5/8	5" FLANGE	3/4	28.4	84	10 3/4	1070	150	225
TXC120-1	123.3	98.7	3.0	2.0	2 1/8	3 5/8	6" FLANGE	3/4	26.9	84	12 3/4	1080	150	225

\*Ratings are based on entering water 54°F, leaving water 44°F, saturated suction temperature of 35°F, entering TXV temperature of 100°F with 7°F of superheating

ProSuite software values are the most accurate

Includes 3/4" thick insulation as standard

Values shown are correct at the time of publication, all data should be reconfirmed at the time of purchase

Capacity Tons = 12,000 BTU/hr

Models	Dimensions (inches)													Gaskets		Heads	
	H	L	A	B	C	E	F	G	I	J	K	M	Z	Article #	Article #	Front	Rear
TX2-1	6.06	28.25	2.13	21.88	3.50	23.50	0.50	2.50	2.50	3.88	0.75	0.69	0.56	2865	2865	3444	3451
TX3-1	6.06	28.25	2.13	21.88	3.50	23.50	0.50	2.50	2.50	3.88	0.75	0.69	0.56	2865	2865	3444	3451
TX5-1	8.75	40.25	2.31	33.69	3.50	35.50	0.50	3.00	3.50	5.00	0.94	0.75	0.56	2872	2872	3501	3682
TX6-1	8.00	40.25	2.44	33.56	3.50	35.50	0.50	3.00	3.50	5.00	0.94	0.75	0.56	2872	2872	3501	3682
TX7 ½-1	8.00	40.25	2.44	33.56	3.50	35.50	0.50	3.00	3.50	5.00	1.06	0.94	0.56	4809	4816	3468	3682
TX10-1	8.00	40.25	2.81	33.19	3.50	35.50	0.50	3.00	3.50	5.00	1.06	0.94	0.56	4809	4816	3468	3682
TX12-1	10.00	41.25	2.94	33.06	4.50	35.50	0.50	3.00	5.75	6.00	1.19	0.94	0.56	2889	2889	3794	3701
TX15-1	10.31	41.25	3.19	32.81	4.50	35.50	0.50	3.00	5.75	6.00	1.50	1.00	0.56	2889	2889	3482	3701
TX20-1	11.00	41.25	3.50	32.50	4.50	35.50	0.50	3.00	5.75	6.00	1.50	1.00	0.56	2889	2889	3482	3701
TX25-1	11.00	41.25	3.50	32.50	4.50	35.50	0.50	3.00	5.75	6.00	1.50	1.25	0.56	2889	2889	3532	3701
TXC30-1	12.50	81.75	4.25	67.75	8.00	36.00	18.00	4.00	5.25	-	1.75	1.75	0.56	2218	2218	21992	21985
TXC40-1	14.50	81.75	4.50	67.50	8.00	36.00	18.00	4.00	7.13	-	2.13	1.67	0.56	2227	2227	22021	22038
TXC50-1	15.50	81.75	4.75	67.25	8.00	36.00	18.00	4.00	7.13	-	2.25	2.38	0.56	2227	2227	22069	22038
TXC60-1	14.50	93.75	4.75	79.25	8.00	42.00	21.00	4.00	7.13	-	2.25	2.38	0.56	2227	2227	22076	22038
TXC75-1	15.50	93.75	5.50	78.50	8.00	42.00	21.00	4.00	7.13	-	2.25	2.38	0.56	2227	2227	22102	22038
TXC100-1	19.63	95.13	5.75	78.25	8.38	42.00	21.00	4.50	10.25	-	2.75	2.38	0.56	2236	2236	23824	5390
TXC120-1	19.69	94.88	6.38	77.63	8.38	42.00	21.00	5.00	11.25	-	3.44	2.75	0.56	4892	4904	5176	5183

Dimensions do not include the 3/4" insulation

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		Approach Temperature (°F)											
		5			6			7			8		
Refrigerant	ΔT Range (°F)	Water			Water			Water			Water		
		Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)	Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)	Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)	Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)
R22	6	-	-	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-	1.61	4.79	2.31
	10	-	-	-	-	-	-	-	-	-	1.73	4.11	1.73
	12	-	-	-	-	-	-	1.56	3.12	1.03	1.88	3.74	1.45
	15	-	-	-	-	-	-	1.73	2.74	0.81	2.04	3.24	1.11
R134a	6	-	-	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	1.53	3.04	0.98
	15	-	-	-	-	-	-	-	-	-	1.68	2.68	0.78

		Approach Temperature (°F)											
		9			10			11			12		
Refrigerant	ΔT Range (°F)	Water			Water			Water			Water		
		Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)	Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)	Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)	Cap. (Tons)	Flow Rate (gpm)	Pressure Drop (psi)
R22	6	1.80	7.16	4.93	2.11	8.40	6.68	2.35	9.34	8.16	2.58	10.27	9.79
	8	1.92	5.72	3.23	2.20	6.54	4.15	2.43	7.24	5.03	-	-	-
	10	2.04	4.86	2.37	2.28	5.42	2.91	2.52	5.98	3.51	-	-	-
	12	2.15	4.28	1.87	2.39	4.75	2.27	2.62	5.22	2.71	-	-	-
	15	2.28	3.62	1.36	2.51	3.99	1.63	-	-	-	-	-	-
R134a	6	1.45	5.76	3.27	1.69	6.69	4.34	1.88	7.47	5.35	2.04	8.09	6.22
	8	1.56	4.67	2.20	1.77	5.25	2.75	1.96	5.84	3.36	2.12	6.30	3.88
	10	1.65	3.92	1.59	1.85	4.39	1.96	2.03	4.86	2.37	2.19	5.23	2.73
	12	1.76	3.51	1.28	1.93	3.82	1.51	2.11	4.21	1.81	2.26	4.52	2.07
	15	1.88	2.99	0.95	2.04	3.24	1.11	2.20	3.49	1.27	2.36	3.74	1.45

For performance data with other refrigerants and conditions use ProSuite or contact the factory