

TX/TXC multiple circuit DX evaporator for R410A

Suitable for R410A

TX/TXC chiller barrels engineered design provides years of reliable service. Ideal for system builder and OEM replacement units. They are designed to work with higher pressure refrigerants.

Standard Designs

TX/TXC dual and multiple circuit chillers are available in standard designs for fresh water duty. They are available in 15 catalog models from 10 to 200 tons. $\frac{3}{4}$ " Armaflex[®] Insulation is fitted as standard.

Tube Materials

TX chillers are manufactured with enhanced $\frac{1}{4}$ " diameter copper tubing and TXC utilize enhanced $\frac{3}{8}$ " diameter copper tubing. The tubes provide heavy wall construction and ease of service from commonly available tube cleaning devices.

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 $\frac{3}{4}$ " insulation is included, $1\frac{1}{2}$ " or no insulation is also available.

Features

Shells

ASME specification 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 specification 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 specification precision machined steel heads. Custom connection versions are available.

Connections

All water side connections are FNPT, MNPT or flanged. 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 3/4" 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 flow rates. To determine nominal flow 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, R404A, R410A and R507A.

Non-Approved Refrigerants Unless Cleared by the Factory
Ammonia/R717, due to copper tubing. Custom units are available for these refrigerants.

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

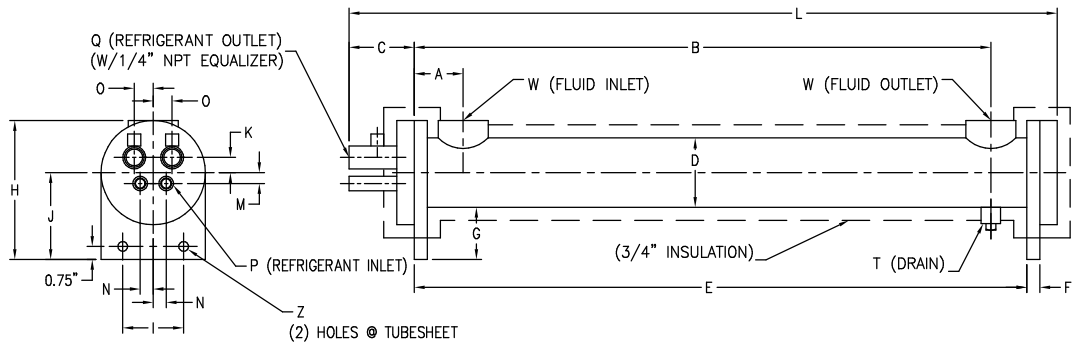
Alternative Options

For lower pressure refrigerants use a TXC units. Applications requiring glycol, use TXC-MPG (suitable for higher pressure refrigerants). For clean fresh water applications use a brazed EVP-ACH.

Codes

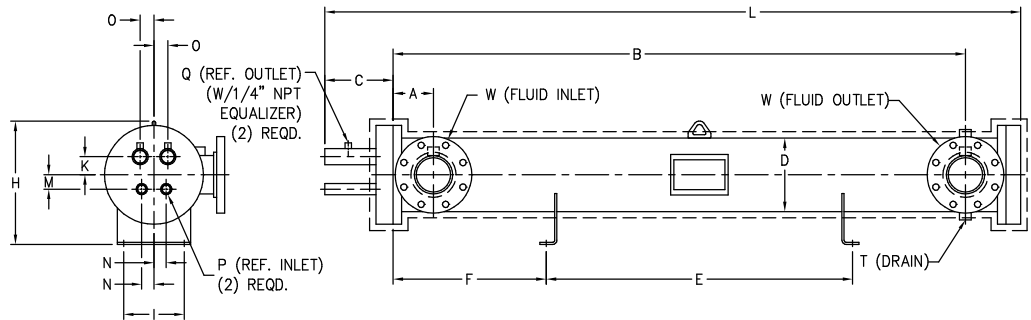
On all units 6 3/8" OD and larger, the refrigerant side is constructed to the latest edition of the ASME Section VIII Div. 1 code standards and is stamped accordingly, while the shell side is non-code. Units 6" OD and smaller are UL stamped. Both sides are tested at 1.3 times the design pressure. Units are helium leak tested to find leaks as small as 1×10^{-5} mbar.l/s. Canadian registration numbers (CRN) are available upon request. For other code registrations please contact the factory.

TX
2-Circuit



Other multi-circuit models available, consult with factory.

TXC
2-Circuit



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

How to Contact:
Mahan's Thermal Inc.
(770)786-5555
www.mahans.com

TX/TXC multiple circuit DX evaporator for R410A

Technical specifications

| Models | R22 Nominal Cap.* (Tons) | R134a Nominal Cap.* (Tons) | R410A Nominal Cap.* (Tons) | R22 Press. Drop (psi) | R134a Press. Drop (psi) | R410A Pressure Drop (psi) |
|--------------|--------------------------------|----------------------------------|----------------------------------|--------------------------|----------------------------|---------------------------------|
| TX10-2-410 | 8.2 | 6.7 | 10.2 | 2.5 | 1.7 | 3.8 |
| TX12-2-410 | 9.6 | 8.0 | 12.0 | 2.8 | 2.0 | 4.2 |
| TX15-2-410 | 12.1 | 9.9 | 15.1 | 2.6 | 1.8 | 3.8 |
| TX20-2-410 | 16.0 | 13.1 | 20.0 | 2.9 | 2.0 | 4.4 |
| TX25-2-410 | 20.3 | 16.7 | 25.3 | 2.9 | 2.0 | 4.4 |
| TXC30-2-410 | 24.9 | 20.4 | 30.5 | 3.4 | 2.3 | 5.0 |
| TXC40-2-410 | 32.7 | 26.7 | 40.2 | 2.4 | 1.6 | 3.6 |
| TXC50-2-410 | 41.3 | 33.5 | 50.7 | 3.0 | 2.0 | 4.5 |
| TXC60-2-410 | 48.9 | 39.5 | 60.5 | 3.5 | 2.3 | 5.2 |
| TXC75-2-410 | 60.8 | 49.3 | 75.8 | 3.8 | 2.5 | 5.9 |
| TXC100-2-410 | 81.7 | 66.0 | 101.0 | 2.9 | 2.0 | 4.4 |
| TXC120-2-410 | 97.8 | 79.3 | 120.7 | 2.6 | 1.8 | 3.9 |
| TXC150-2-410 | 123.0 | 99.5 | 150.3 | 3.3 | 2.2 | 4.8 |
| TXC175-2-410 | 143.0 | 116.1 | 176.3 | 2.7 | 1.8 | 4.0 |
| TXC200-2-410 | 163.7 | 132.6 | 202.3 | 2.9 | 1.9 | 4.3 |

*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 | Connections (inches) | | | | Fluid Volume (gal) | Specifications | | | Working Pressure (psi) | |
|--------------|----------------------|------------------|----------------|----------------|--------------------|-------------------|------------------|-------------------|------------------------|------|
| | P Ref. IN (IDS) | Q Ref. Out (IDS) | W Fluid Conn.) | T Drain (FNPT) | | Tube Length (in.) | Shell Dia. (in.) | Shipping Wt (lbs) | Shell | Tube |
| TX10-2-410 | 5/8 | 7/8 | 2" FPT | 1/2 | 1.2 | 36 | 4 | 71 | 225 | 375 |
| TX12-2-410 | 5/8 | 1 1/8 | 2" FPT | 1/2 | 3.4 | 36 | 6 | 122 | 225 | 375 |
| TX15-2-410 | 5/8 | 1 1/8 | 2.5" FPT | 1/2 | 3.2 | 36 | 6 | 130 | 225 | 375 |
| TX20-2-410 | 5/8 | 1 1/8 | 2.5" FPT | 1/2 | 2.9 | 36 | 6 | 138 | 225 | 375 |
| TX25-2-410 | 7/8 | 1 3/8 | 3" FPT | 1/2 | 2.6 | 36 | 6 | 144 | 225 | 375 |
| TXC30-2-410 | 7/8 | 1 3/8 | 3" MPT | 3/4 | 9.4 | 72 | 6 5/8 | 406 | 150 | 375 |
| TXC40-2-410 | 7/8 | 1 5/8 | 3" MPT | 3/4 | 17.7 | 72 | 8 5/8 | 560 | 150 | 375 |
| TXC50-2-410 | 1 1/8 | 1 5/8 | 4" FLG | 3/4 | 17.3 | 72 | 8 5/8 | 585 | 150 | 375 |
| TXC60-2-410 | 1 1/8 | 1 5/8 | 4" FLG | 3/4 | 20.1 | 84 | 8 5/8 | 638 | 150 | 375 |
| TXC75-2-410 | 1 3/8 | 2 1/8 | 5" FLG | 3/4 | 19.8 | 84 | 8 5/8 | 591 | 150 | 375 |
| TXC100-2-410 | 1 3/8 | 2 1/8 | 5" FLG | 3/4 | 28.8 | 84 | 10 3/4 | 1083 | 150 | 375 |
| TXC120-2-410 | 1 3/8 | 2 5/8 | 6" FLG | 3/4 | 27.2 | 84 | 12 3/4 | 1098 | 150 | 375 |
| TXC150-2-410 | 1 5/8 | 2 5/8 | 6" FLG | 3/4 | 34.4 | 84 | 14 | 1622 | 150 | 375 |
| TXC175-2-410 | 1 5/8 | 3 1/8 | 6" FLG | 3/4 | 31.4 | 84 | 14 | 1722 | 150 | 375 |
| TXC200-2-410 | 2 1/8 | 3 1/8 | 8" FLG | 3/4 | 42.5 | 84 | 16 | 2129 | 150 | 375 |

| Models | Dimensions (inches) | | | | | | | | | | | | | | | Gaskets | | Heads | |
|--------------|---------------------|-------|------|-------|------|-------|-------|------|-------|------|------|------|------|------|------|-----------|-----------|--------|-------|
| | H | L | A | B | C | E | F | G | I | J | K | M | N | O | Z | Article # | Article # | Front | Rear |
| TX10-2-410 | 8.00 | 40.75 | 2.81 | 33.06 | 3.75 | 35.25 | 0.75 | 3.00 | 3.50 | 5.00 | 0.69 | 0.94 | 0.75 | 1.00 | 0.56 | 2872 | 2872 | 33752 | 33769 |
| TX12-2-410 | 10.00 | 42.25 | 2.94 | 33.06 | 5.00 | 35.25 | 0.75 | 3.00 | 5.75 | 6.00 | 1.00 | 0.75 | 1.13 | 1.13 | 0.56 | 2889 | 2889 | 35196 | 33745 |
| TX15-2-410 | 11.00 | 42.25 | 3.19 | 32.81 | 5.00 | 35.25 | 0.75 | 3.00 | 5.75 | 6.00 | 1.19 | 7/8 | 1.25 | 1.25 | 0.56 | 2889 | 2889 | 35196 | 33745 |
| TX20-2-410 | 11.00 | 42.25 | 3.19 | 32.81 | 5.00 | 35.25 | 0.75 | 3.00 | 5.75 | 6.00 | 1.19 | 7/8 | 1.25 | 1.25 | 0.56 | 2889 | 2889 | 35196 | 33745 |
| TX25-2-410 | 11.00 | 42.25 | 3.75 | 32.25 | 5.00 | 35.25 | 0.75 | 3.00 | 5.75 | 6.00 | 1.19 | 7/8 | 1.25 | 1.25 | 0.56 | 2889 | 2889 | 33738 | 33745 |
| TXC30-2-410 | 13.50 | 81.50 | 4.25 | 67.75 | 8.00 | 54.00 | 18.00 | 3.00 | 5.25 | - | 1.50 | 1.50 | 1.75 | 1.75 | 0.56 | 2218 | 2218 | 35365 | 35372 |
| TXC40-2-410 | 15.50 | 81.75 | 4.50 | 67.50 | 8.00 | 54.00 | 18.00 | 3.00 | 7.13 | - | 1.75 | 1.63 | 2.00 | 2.00 | 0.56 | 2227 | 2227 | 35741 | 22052 |
| TXC50-2-410 | 16.50 | 81.75 | 4.75 | 67.25 | 8.00 | 54.00 | 18.00 | 3.00 | 7.13 | - | 1.75 | 1.63 | 2.00 | 2.00 | 0.56 | 2227 | 2227 | 35334 | 22052 |
| TXC60-2-410 | 17.50 | 93.75 | 4.75 | 79.25 | 8.00 | 63.00 | 21.00 | 3.00 | 7.13 | - | 1.75 | 1.63 | 2.00 | 2.00 | 0.56 | 2227 | 2227 | 35334 | 22052 |
| TXC75-2-410 | 18.50 | 93.75 | 5.50 | 78.50 | 8.00 | 63.00 | 21.00 | 3.00 | 7.13 | - | 1.75 | 1.63 | 2.00 | 2.00 | 0.56 | 2227 | 2227 | 35758 | 22052 |
| TXC100-2-410 | 19.63 | 95.12 | 5.75 | 78.25 | 8.38 | 63.00 | 21.00 | 3.50 | 11.25 | - | 2.38 | 2.67 | 2.25 | 3.13 | 0.56 | 19299 | 19299 | 35765 | 27088 |
| TXC120-2-410 | 19.63 | 94.87 | 6.38 | 76.13 | 8.38 | 63.00 | 21.00 | 3.50 | 11.25 | - | 2.38 | 2.67 | 2.25 | 3.50 | 0.56 | 4885 | 4892 | 35772 | 35796 |
| TXC150-2-410 | 20.88 | 95.87 | 6.38 | 76.13 | 8.88 | 63.00 | 21.00 | 3.50 | 12.00 | - | 2.63 | 2.13 | 3.00 | 3.00 | 0.69 | 3549 | 3549 | 35808 | 35815 |
| TXC175-2-410 | 20.88 | 95.87 | 6.38 | 76.13 | 8.88 | 63.00 | 21.00 | 3.50 | 12.00 | - | 2.63 | 2.75 | 3.31 | 3.31 | 0.69 | 3549 | 3549 | 38171 | 35815 |
| TXC200-2-410 | 24.13 | 95.87 | 7.50 | 75.00 | 8.88 | 63.75 | 20.25 | 3.50 | 12.00 | - | 2.63 | 2.75 | 2.50 | 3.33 | 0.69 | 5169 | 5169 | 409446 | 35396 |

Dimensions do not include the 3/4" insulation

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

| TX10-2-410 | | Approach Temperature (°F) | | | | | | | | | | | |
|-------------|------------------|---------------------------|-----------------------|---------------------|-------------|-----------------------|---------------------|-------------|-----------------------|---------------------|-------------|-----------------------|---------------------|
| | | 5 | | | 6 | | | 7 | | | 8 | | |
| Refrigerant | Temp. Range (°F) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) |
| R22 | 6 | - | - | - | - | - | - | 5.50 | 21.91 | 3.38 | 6.70 | 26.70 | 4.96 |
| | 8 | - | - | - | - | - | - | 5.85 | 17.47 | 2.17 | 6.90 | 20.55 | 2.98 |
| | 10 | - | - | - | 4.82 | 11.51 | 0.97 | 6.18 | 14.80 | 1.58 | 7.10 | 16.86 | 2.03 |
| | 12 | - | - | - | 5.18 | 10.28 | 0.78 | 6.38 | 12.68 | 1.17 | 7.40 | 14.74 | 1.56 |
| | 15 | - | - | - | 5.70 | 9.05 | 0.61 | 6.73 | 10.70 | 0.84 | 7.75 | 12.35 | 1.11 |
| R134a | 6 | - | - | - | - | - | - | 4.64 | 18.49 | 2.43 | 5.53 | 21.91 | 3.38 |
| | 8 | - | - | - | - | - | - | 4.98 | 14.90 | 1.60 | 5.83 | 17.47 | 2.17 |
| | 10 | - | - | - | - | - | - | 5.18 | 12.33 | 1.11 | 6.02 | 14.39 | 1.49 |
| | 12 | - | - | - | 4.49 | 8.91 | 0.59 | 5.49 | 10.97 | 0.88 | 6.21 | 12.34 | 1.11 |
| | 15 | - | - | - | 4.99 | 7.96 | 0.48 | 5.72 | 9.05 | 0.61 | 6.53 | 10.43 | 0.80 |
| R404A | 6 | 3.46 | 13.69 | 1.36 | 4.67 | 18.49 | 2.43 | 5.70 | 22.60 | 3.58 | 6.75 | 26.70 | 4.96 |
| | 8 | 3.98 | 11.82 | 1.02 | 5.00 | 14.90 | 1.60 | 6.02 | 17.98 | 2.30 | 7.06 | 21.06 | 3.13 |
| | 10 | 4.32 | 10.28 | 0.78 | 5.32 | 12.75 | 1.18 | 6.23 | 14.80 | 1.58 | 7.26 | 17.27 | 2.12 |
| | 12 | 4.64 | 9.25 | 0.64 | 5.53 | 10.97 | 0.88 | 6.54 | 13.03 | 1.23 | 7.57 | 15.08 | 1.63 |
| | 15 | 4.99 | 7.96 | 0.48 | 5.88 | 9.33 | 0.65 | 6.90 | 10.98 | 0.88 | 7.92 | 12.62 | 1.16 |
| R410A | 6 | - | - | - | 5.49 | 21.91 | 3.38 | 6.91 | 27.39 | 5.21 | 8.28 | 32.87 | 7.43 |
| | 8 | - | - | - | 5.87 | 17.47 | 2.17 | 7.24 | 21.58 | 3.27 | 8.59 | 25.69 | 4.59 |
| | 10 | 4.81 | 11.51 | 0.97 | 6.22 | 14.80 | 1.58 | 7.56 | 18.09 | 2.32 | 8.79 | 20.97 | 3.10 |
| | 12 | 5.17 | 10.28 | 0.78 | 6.56 | 13.03 | 1.23 | 7.78 | 15.42 | 1.71 | 9.00 | 17.82 | 2.26 |
| | 15 | 5.71 | 9.05 | 0.61 | 7.04 | 11.25 | 0.93 | 8.25 | 13.17 | 1.26 | 9.48 | 15.09 | 1.63 |

| TX10-2-410 | | Approach Temperature (°F) | | | | | | | | | | | |
|-------------|-----------------|---------------------------|-----------------------|---------------------|-------------|-----------------------|---------------------|-------------|-----------------------|---------------------|-------------|-----------------------|---------------------|
| | | 9 | | | 10 | | | 11 | | | 12 | | |
| Refrigerant | Temp Range (°F) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) | Cap. (Tons) | Water Flow Rate (gpm) | Pressure Drop (psi) |
| R22 | 6 | 7.74 | 30.81 | 6.55 | 8.79 | 34.92 | 8.36 | 9.95 | 39.71 | 10.74 | 11.00 | 43.82 | 13.02 |
| | 8 | 7.93 | 23.63 | 3.91 | 8.97 | 26.71 | 4.96 | 10.00 | 29.80 | 6.13 | 11.04 | 32.88 | 7.43 |
| | 10 | 8.12 | 19.32 | 2.64 | 9.14 | 21.79 | 3.34 | 10.17 | 24.26 | 4.11 | 11.20 | 26.73 | 4.96 |
| | 12 | 8.31 | 16.45 | 1.93 | 9.33 | 18.51 | 2.43 | 10.36 | 20.57 | 2.98 | 11.37 | 22.62 | 3.59 |
| | 15 | 8.65 | 13.72 | 1.36 | 9.67 | 15.37 | 1.69 | 10.69 | 17.01 | 2.06 | 11.69 | 18.66 | 2.46 |
| R134a | 6 | 6.37 | 25.33 | 4.48 | 7.09 | 28.07 | 5.47 | 7.91 | 31.50 | 6.84 | 8.63 | 34.24 | 8.04 |
| | 8 | 6.55 | 19.52 | 2.70 | 7.26 | 21.58 | 3.28 | 8.08 | 24.15 | 4.08 | 8.79 | 26.20 | 4.78 |
| | 10 | 6.73 | 16.04 | 1.84 | 7.44 | 17.68 | 2.22 | 8.25 | 19.74 | 2.75 | 8.96 | 21.38 | 3.22 |
| | 12 | 6.91 | 13.71 | 1.36 | 7.62 | 15.08 | 1.63 | 8.43 | 16.80 | 2.01 | 9.13 | 18.17 | 2.34 |
| | 15 | 7.24 | 11.52 | 0.97 | 7.94 | 12.62 | 1.16 | 8.65 | 13.72 | 1.36 | 9.34 | 14.82 | 1.58 |
| R404A | 6 | 7.92 | 31.50 | 6.84 | 8.96 | 35.60 | 8.68 | 9.97 | 39.71 | 10.74 | 10.87 | 43.14 | 12.63 |
| | 8 | 8.11 | 24.15 | 4.07 | 9.13 | 27.23 | 5.15 | 10.03 | 29.80 | 6.13 | 11.00 | 32.88 | 7.43 |
| | 10 | 8.29 | 19.74 | 2.75 | 9.31 | 22.20 | 3.46 | 10.29 | 24.67 | 4.25 | 11.07 | 26.31 | 4.81 |
| | 12 | 8.59 | 17.14 | 2.09 | 9.49 | 18.85 | 2.52 | 10.37 | 20.57 | 2.98 | 11.33 | 22.62 | 3.59 |
| | 15 | 8.94 | 14.27 | 1.47 | 9.83 | 15.64 | 1.75 | 10.69 | 17.01 | 2.06 | 11.55 | 18.38 | 2.39 |
| R410A | 6 | 9.69 | 38.34 | 10.03 | 11.20 | 44.51 | 13.42 | - | - | - | - | - | - |
| | 8 | 9.97 | 29.80 | 6.13 | 11.36 | 33.91 | 7.89 | - | - | - | - | - | - |
| | 10 | 10.05 | 23.85 | 3.97 | 11.42 | 27.14 | 5.11 | - | - | - | - | - | - |
| | 12 | 10.36 | 20.57 | 2.98 | 11.72 | 23.31 | 3.80 | - | - | - | - | - | - |
| | 15 | 10.72 | 17.01 | 2.06 | - | - | - | - | - | - | - | - | - |

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