



TX Series

Design and Component Specifications

40 to 200 Tons

General

The TX Series central chillers are for indoor use in industrial manufacturing locations. The chillers are produced in our ISO 9001:2000 certified facility. Water-cooled units ship with a full refrigerant charge. Units with a remote air-cooled condenser ship with a nitrogen charge. All units are on a rugged industrial duty frame and are finished with air-dry enamel paint.

Mechanical Features

- Rotary screw compressor(s)
- Variable valve compressor unloading for capacity control
- Two completely independent refrigeration circuits (dual-circuit units)
- Stainless steel copper brazed plate evaporators provide corrosion protection, compact size, and high heat transfer coefficients
- External oil separators with oil cooler(s)
- Liquid line solenoid valve(s)
- Evaporator water supply and return manifolds (dual-circuit units)
- (Water-Cooled Units) Condenser water supply and return manifolds
- (Water-Cooled Units) Generously sized cleanable shell-and-tube water-cooled condenser(s) for industrial environments
- (Remote Condenser Units) Modular design with divided fan sections to prevent 'wind-milling' during fan cycling. Includes galvanized steel fan sections and coil baffles, copper tube/aluminum fin coils tested to 400 PSIG, direct drive multi-blade propeller fans with venture orifices to optimize efficiency, and a nitrogen holding charge.
- (Water-Cooled Units) Condenser water regulating valve(s) to maintain constant refrigerant head pressures
- Refrigerant TXV, filter/drier, and sight glasses
- Freezestat safety switch with solid state sensor(s)
- Encapsulated high and low refrigerant pressure safety sensor(s)
- Fail safe flow switches interlocked with compressor(s)
- (Water-Cooled Units) Factory tested under full load conditions prior to shipment
- Supply and return condenser water manifolds
- Supply and return evaporator water manifolds

Electrical Features

- NEMA-4 electrical enclosure
- Control transformer to provide 115V/1/60 control voltage
- Compressor starters mounted in control panel and wired to motors
- Single-point main power block for simple wiring connection
- Alarm horn and silence switch

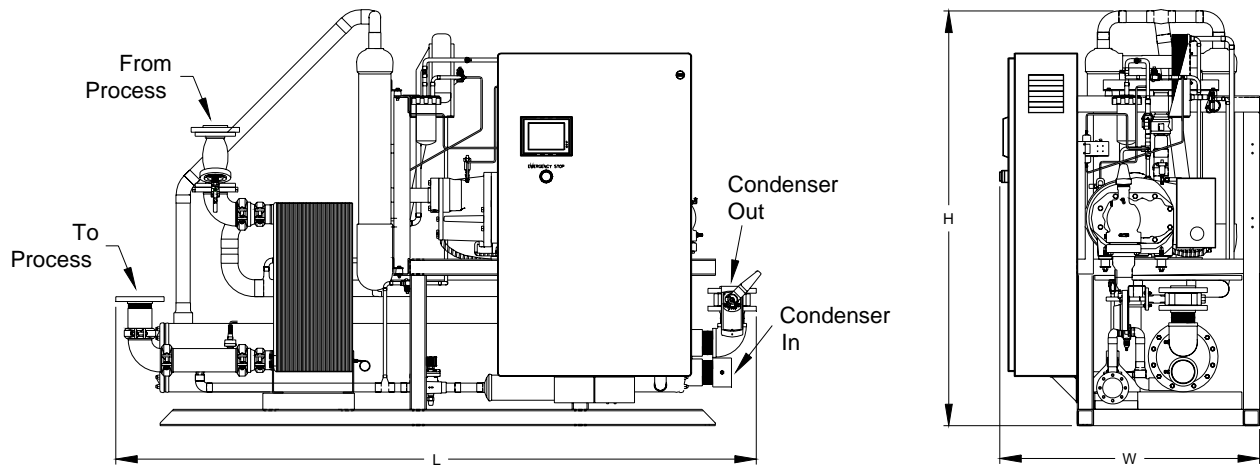
PLC & HMI Features

- Allen-Bradley 5/03 PLC controller
- Maple Systems 7.7 inch, 256 color, 600 x 480 resolution DSTN touch screen control interface with ultra fast 133 MHz processor
- Automatic compressor lead/lag
- Digital display of process water supply, process water return, condenser water supply, condenser water return, and set point temperatures
- Password protection
- Compressor load analysis (% capacity), anti-cycle timers, and running hours
- Mechanical safety interlocks for each circuit low flow, high refrigerant pressure, low refrigerant pressure, freezestat, low oil pressure differential, high oil temperature, high discharge temperature, low compressor pressure, phase monitoring, motor winding thermostat and compressor fault
- Alarm horn with silence keypad

Warranty

- 12 months parts and labor

TXW40 - TXW105 Single-Circuit Water-Cooled Chillers

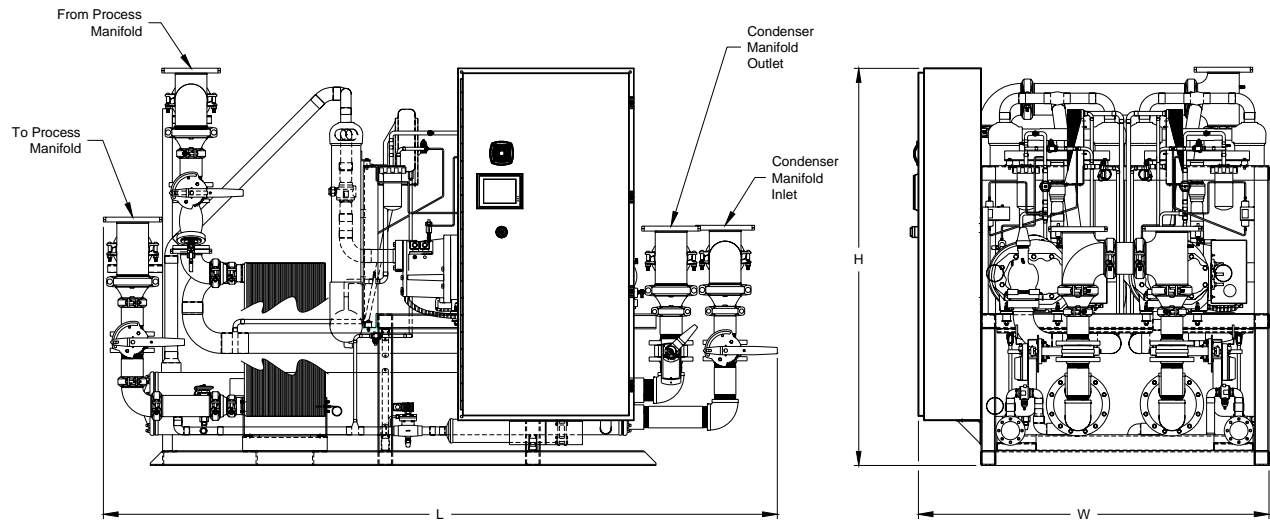


Model	TXW40	TXW50	TXW60	TXW70	TXW85	TXW105
Cooling Capacity (tons) ¹	45	58	69	87	95	113
Set Point Range (°F)	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80
Number of Compressors	1	1	1	1	1	1
Refrigerant Type	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22
Condenser Water Flow Requirement (GPM)	135	174	207	261	285	339
Process Supply & Return Connection Size (inches)	3	3	3	4	4	4
Condenser Supply & Return Connection Size (inches)	3	3	3	4	4	4
Unit MCA @ 460/3/60 ²	88	115	136	170	195	229
Unit Length (inches)	120	120	120	120	120	120
Unit Width (inches)	48	48	48	48	48	48
Unit Height (inches)	77	77	77	77	77	77
Shipping Weight (pounds)	2,700	3,000	3,100	3,700	3,900	4,200
Operating Weight (pounds)	2,900	3,200	3,300	4,000	4,200	4,500

¹Cooling capacity based on 12,000 BTU/Hr/ton with 55°F leaving coolant and 85°F condenser water.

²MCA (Minimum Circuit Ampacity) is 125% of the compressor RLA plus control circuit transformer.

TXW80 – TXW200 Dual-Circuit Water-Cooled Chillers

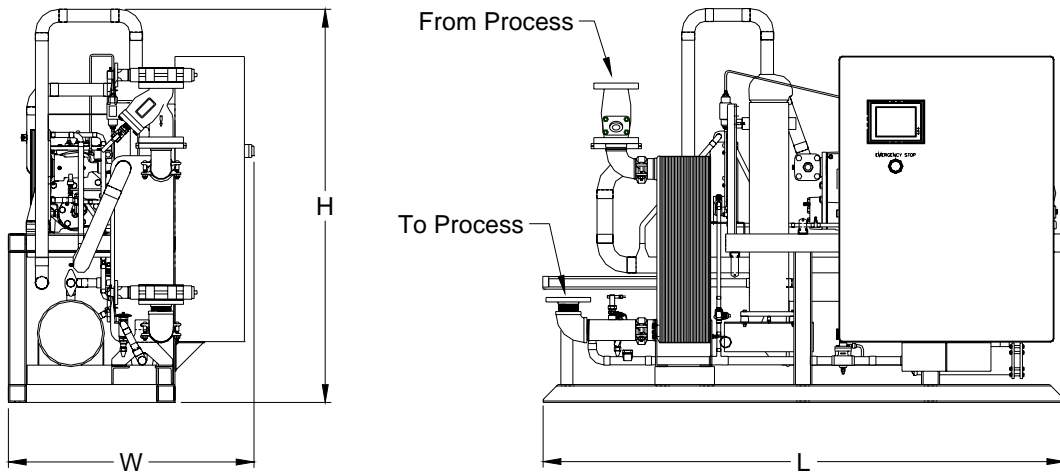


Model	TXW80	TXW100	TXW120	TXW140	TXW170	TXW200
Cooling Capacity (tons) ¹	90	116	140	174	189	227
Set Point Range (°F)	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80
Number of Compressors	2	2	2	2	2	2
Refrigerant Type	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22
Condenser Water Flow Requirement (GPM)	270	348	420	522	567	681
Process Supply & Return Connection Size (inches)	4	4	4	6	6	6
Condenser Supply & Return Connection Size (inches)	4	4	4	6	6	6
Unit MCA @ 460/3/60 ²	158	207	245	306	351	412
Unit Length (inches)	112	112	112	134	134	134
Unit Width (inches)	64	64	64	72	72	72
Unit Height (inches)	71	71	71	82	82	82
Shipping Weight (pounds)	4,600	5,100	5,500	6,500	7,000	7,500
Operating Weight (pounds)	4,900	5,400	5,900	7,000	7,500	8,000

¹Cooling capacity based on 12,000 BTU/Hr/ton with 55°F leaving coolant and 85°F condenser water.

²MCA (Minimum Circuit Ampacity) is 125% of one compressor RLA plus 100% of the remaining compressor RLA plus control circuit transformer.

TXR40 - TXR105 Single-Circuit Remote Air-Cooled Condenser Chillers

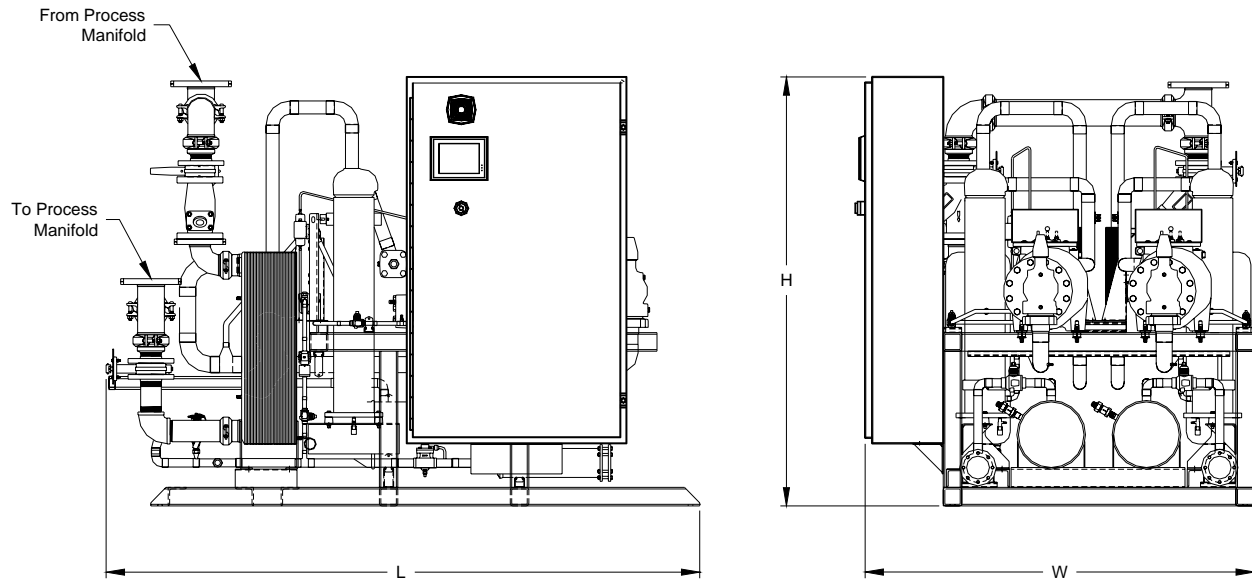


Model	TXR40	TXR50	TXR60	TXR70	TXR85	TXR105
Cooling Capacity (tons) ¹	40	51	61	78	86	104
Set Point Range (°F)	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80
Number of Compressors	1	1	1	1	1	1
Refrigerant Type	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22
Liquid Line Refrigerant Connection Size (inches)	1 1/8	1 3/8	1 3/8	1 3/8	1 3/8	1 5/8
Discharge Line Refrigerant Connection Size (inches)	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8
Process Supply & Return Connection Size (inches)	3	3	3	4	4	4
Unit MCA @ 460/3/60 ²	88	115	136	170	195	229
Unit Length (inches)	120	120	120	120	120	120
Unit Width (inches)	48	48	48	48	48	48
Unit Height (inches)	77	77	77	77	77	77
Shipping Weight (pounds)	2,700	3,000	3,100	3,700	3,900	4,200
Operating Weight (pounds)	2,900	3,200	3,300	4,000	4,200	4,500

¹Cooling capacity based on 12,000 BTU/Hr/ton with 55°F leaving coolant and 95°F condenser air.

²MCA (Minimum Circuit Ampacity) is 125% of the compressor RLA plus control circuit transformer.

TXR80 – TXR200 Dual-Circuit Remote Air-Cooled Condenser Chillers



Model	TXR80	TXR100	TXR120	TXR140	TXR170	TXR200
Cooling Capacity (tons) ¹	80	101	122	155	171	208
Set Point Range (°F)	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80	20 - 80
Number of Compressors	2	2	2	2	2	2
Refrigerant Type	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22
Liquid Line Refrigerant Connection Size (inches)	(2) 1 1/8	(2) 1 3/8	(2) 1 3/8	(2) 1 3/8	(2) 1 3/8	(2) 1 5/8
Discharge Line Refrigerant Connection Size (inches)	(2) 2 1/8	(2) 2 1/8	(2) 2 1/8	(2) 2 1/8	(2) 2 1/8	(2) 2 1/8
Process Supply & Return Connection Size (inches)	4	4	4	6	6	6
Unit MCA @ 460/3/60 ²	158	207	245	306	351	412
Unit Length (inches)	98	98	98	120	120	120
Unit Width (inches)	64	64	64	72	72	72
Unit Height (inches)	71	71	71	82	82	82
Shipping Weight (pounds)	4,600	5,100	5,500	6,500	7,000	7,500
Operating Weight (pounds)	4,900	5,400	5,900	7,000	7,500	8,000

¹Cooling capacity based on 12,000 BTU/Hr/ton with 55°F leaving coolant and 95°F condenser air.

²MCA (Minimum Circuit Ampacity) is 125% of one compressor RLA plus 100% of the remaining compressor RLA plus control circuit transformer.

Notes



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