



WATER COOLED CONDENSER AND HEAT PUMP COIL SELECTION PROCEDURE

Thermal performance is based on the use of refrigerant R-22 at a flow rate of 162 lb/hr per nominal ton operating as a condenser. Please consult factory for use with other refrigerants or operating conditions substantially different from those described herein.

CONDENSER PERFORMANCE

- To determine condenser heat rejection for a given model, first calculate temperature difference, TD, between condensing temperature and entering water temperature.
- Enter condenser chart of unit selected and read condenser heat rejection of COAX model at intersection of TD from Step 1 and given water flow rate in gpm. For COCX models, derate condenser performance shown by 10%. NOTE: Condenser heat rejection charts are based on 15°F subcooling. For other subcooling, multiply capacity shown on chart by:

COAX MODEL	5°F SUBCOOLING	10°F SUBCOOLING
2050-2100	1.08	1.04
2150-2350	1.13	1.08
2400-3030	1.12	1.07

EVAPORATOR PERFORMANCE

- Enter evaporator chart of model selected and read evaporator heat absorption at intersection of entering water temperature, EWT, and given water flow rate in gpm. NOTE: Chart values are based on 8°F superheat.

WATER-SIDE PRESSURE DROP

- Enter water-side pressure drop table for model selected at given water flow rate in gpm and read water-side pressure drop in psi.

EXAMPLE:

DETERMINE PERFORMANCE OF COAX-2050-H AT THE FOLLOWING CONDITIONS

CONDENSER

CONDENSING TEMP = 105°F
 ENTER WATER TEMP = 85°F
 WATER FLOW RATE = 1.6 gpm
 SUBCOOLING = 10°F

EVAPORATOR

ENTER WATER TEMP = 60°F
 WATER FLOW RATE = 1.6 gpm

- $TD = 105 - 85 = 20^\circ F$
- Entering condenser chart of COAX-2050-H at $TD = 20^\circ F$ and 1.6 gpm: Condenser Heat Rejection = 6.8 MBtu/hr. Entering capacity multiplier table at 10° F subcooling for COAX-2050-H: Capacity multiplier = 1.04. Adjust Condenser Heat Rejection = $6.8 \times 1.04 = 7.07$ MBtu/hr.
- Entering evaporator chart of COAX-2050-H at $EWT = 60^\circ F$ and 1.6 gpm; Evaporator Heat Absorption = 5.55 MBtu/hr.
- Entering water-side pressure drop table of COAX-2050-H at 1.6 gpm: Water-side Pressure Drop = 1.0 psi.

WATER-SIDE PRESSURE DROP DATA

GPM = WATER FLOW RATE

PSI = WATER-SIDE PRESSURE DROP

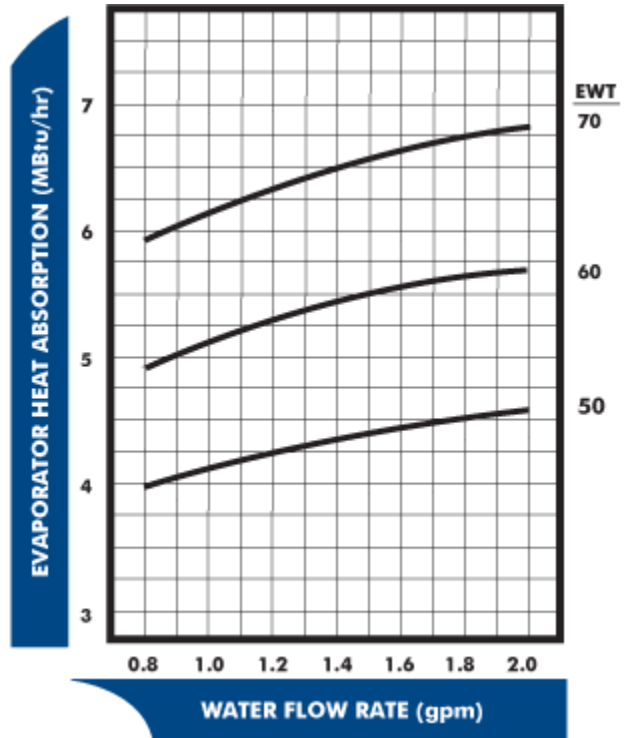
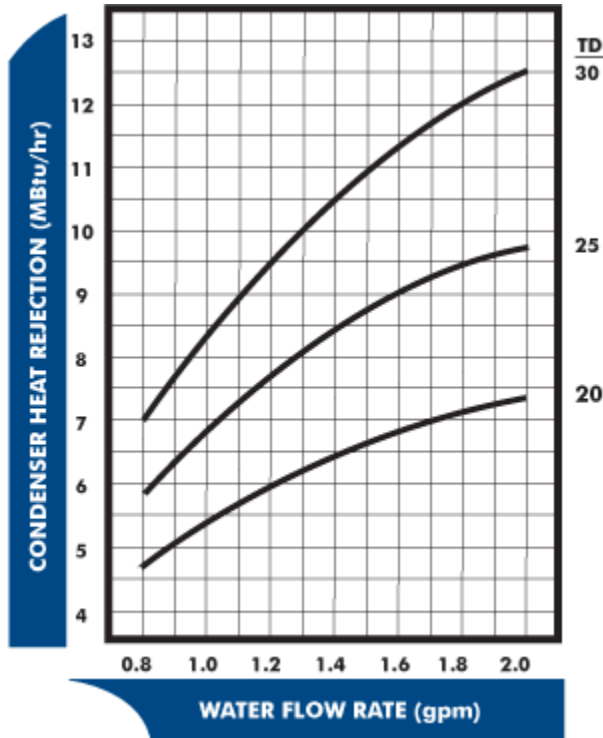
COAX-2050	GPM	0.8	1.0	1.2	1.4	1.6	1.8	2.0
	PSI	0.4	0.5	0.6	0.8	1.0	1.2	1.5
COAX-2075	GPM	0.6	1.0	1.4	1.8	2.2	2.6	3.0
	PSI	0.3	0.6	1.1	1.6	2.2	2.9	3.7
COAX-2100	GPM	1.0	1.5	2.0	2.5	3.0	3.5	4.0
	PSI	0.8	1.5	2.4	3.4	4.6	5.9	7.4
COAX-2150	GPM	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	PSI	0.8	1.2	1.6	2.1	2.6	3.1	3.7
COAX-2200	GPM	2	3	4	5	6	7	8
	PSI	1.0	1.9	3.0	4.3	5.8	7.4	9.3
COAX-2250	GPM	3	4	5	6	7	8	9
	PSI	1.5	2.3	3.3	4.4	5.6	7.0	8.6
COAX-2300	GPM	5	6	7	8	9	10	11
	PSI	1.7	2.3	3.0	3.7	4.4	5.3	6.2
COAX-2350	GPM	6.0	7.0	8.0	9.0	10.0	11.0	12.0
	PSI	2.5	3.2	3.9	4.7	5.6	6.6	7.8
COAX-2400	GPM	7	8	9	10	11	12	13
	PSI	2.7	3.3	4.0	4.8	5.7	6.7	7.7
COAX-2500	GPM	5	7	9	11	13	15	17
	PSI	1.3	1.6	2.1	2.8	3.6	4.6	5.8
COAX-2600	GPM	8	10	12	14	16	18	20
	PSI	2.1	3.0	4.0	5.1	6.4	7.7	9.0
COAX-2750	GPM	12	14	16	18	20	22	24
	PSI	2.4	3.1	3.9	4.7	5.7	6.8	8.3

GPM = WATER FLOW RATE
PSI = WATER-SIDE PRESSURE DROP

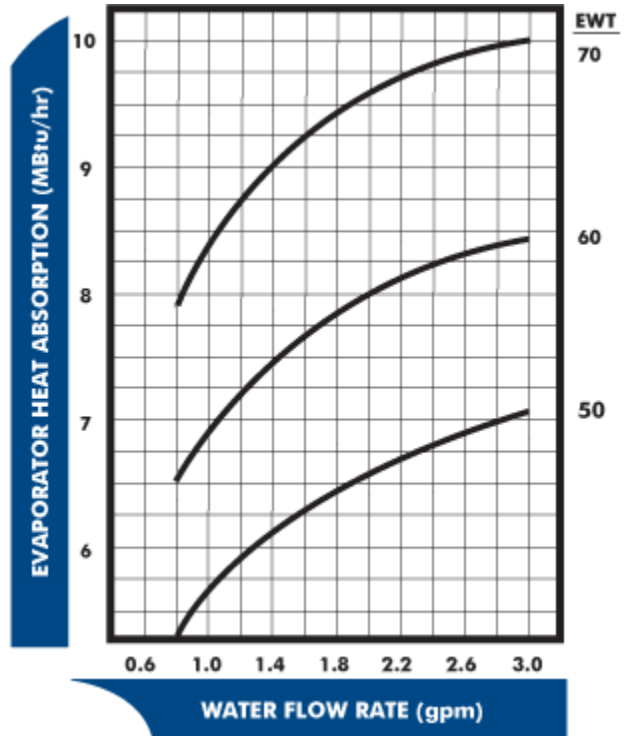
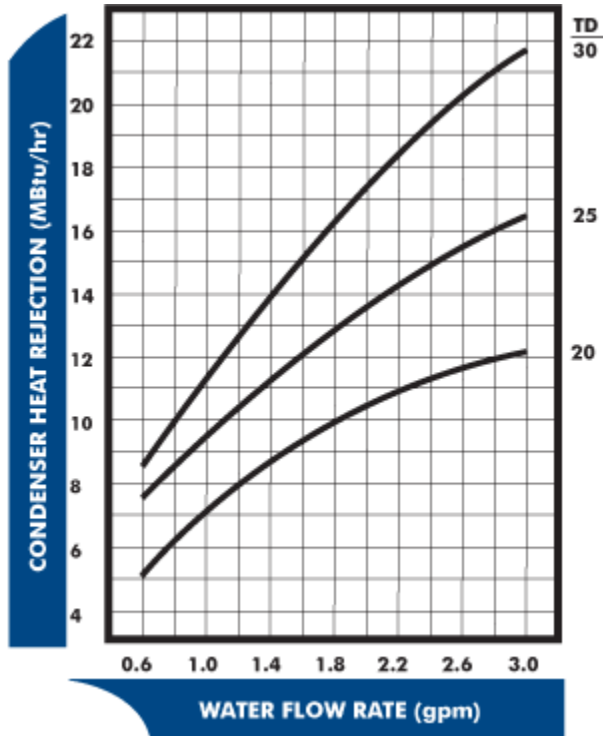
COAX-3010	GPM	10	14	18	22	26	30	34
	PSI	1.5	2.0	2.7	3.5	4.3	5.6	7.1
COAX-3012	GPM	16	20	24	28	32	36	40
	PSI	2.4	3.4	4.6	5.8	7.3	8.8	10.3
COAX-3015	GPM	24	28	32	36	40	44	48
	PSI	2.9	3.6	4.5	5.3	6.5	7.8	9.6
COAX-3020	GPM	20	28	36	44	52	60	68
	PSI	1.7	2.3	3.1	3.9	4.8	6.1	7.6
COAX-3025	GPM	32	40	48	56	64	72	80
	PSI	2.6	3.7	4.9	6.2	7.7	9.2	10.7
COAX-3030	GPM	48	56	64	72	80	88	96
	PSI	3.1	3.8	4.7	5.7	6.9	8.4	10.4

PERFORMANCE DATA

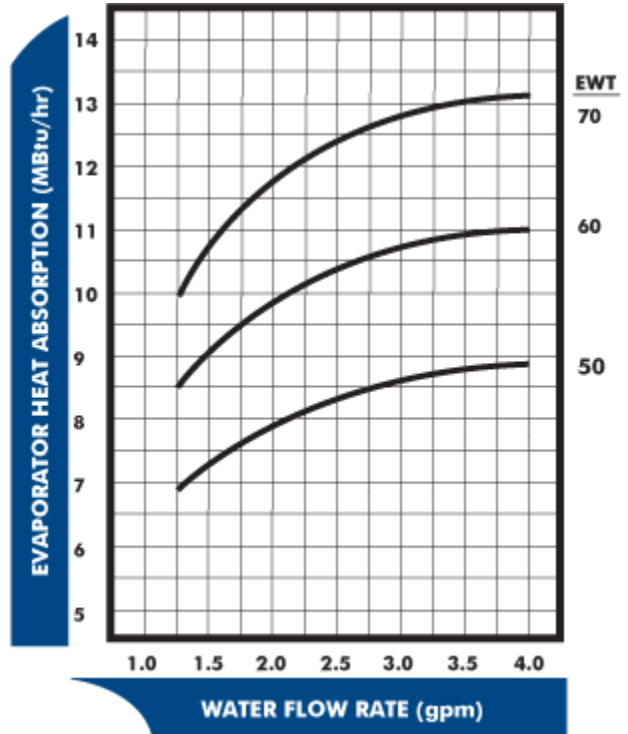
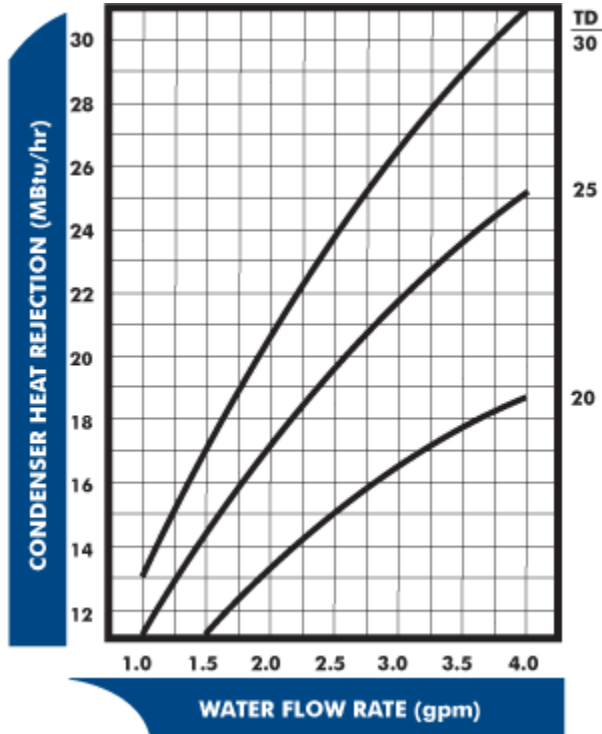
Nominal 1/2 Ton



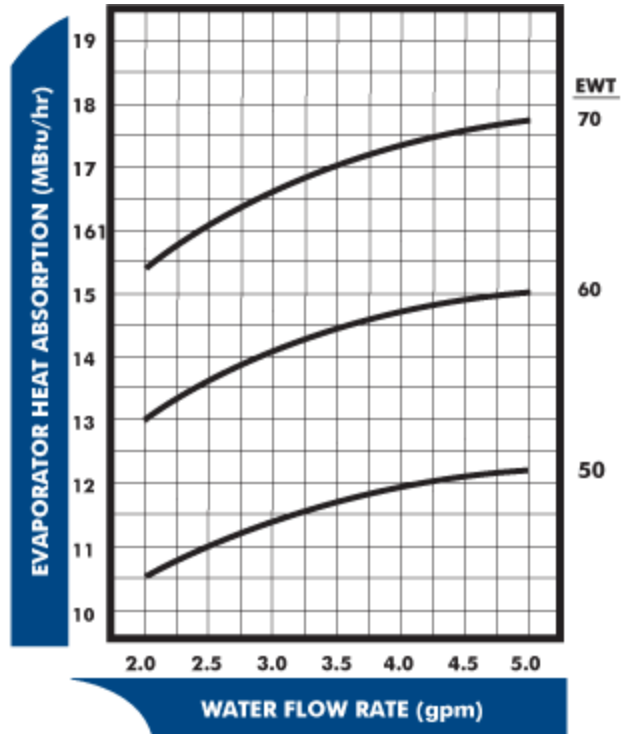
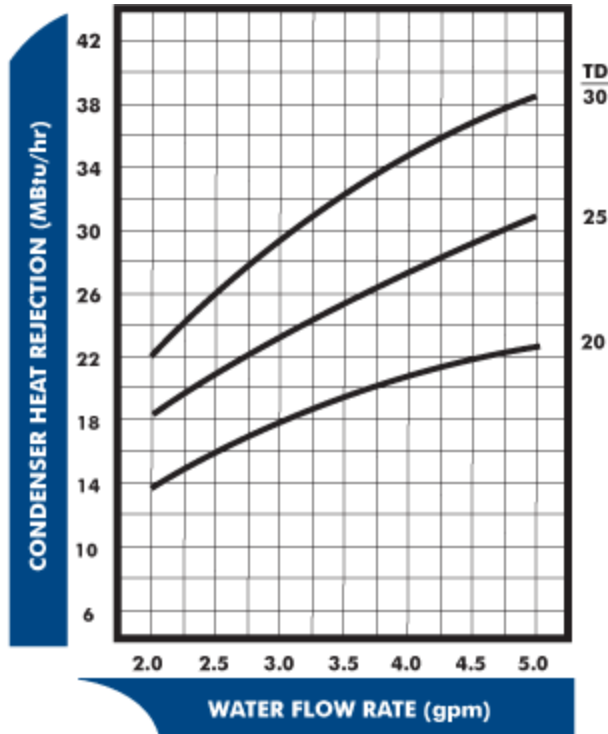
Nominal 3/4 Ton



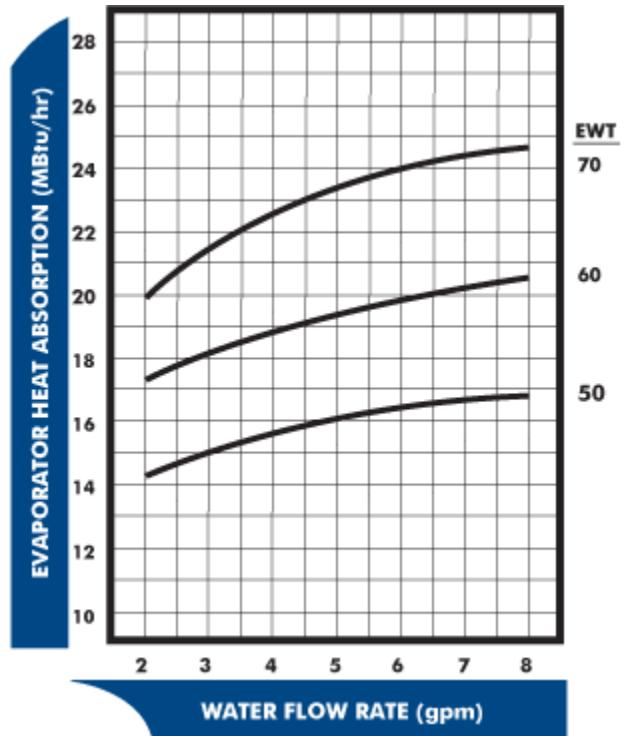
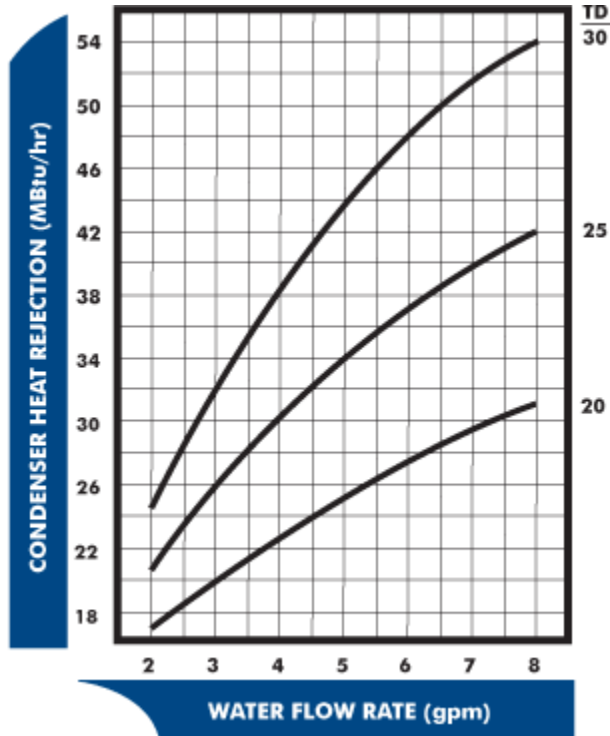
Nominal 1 Ton



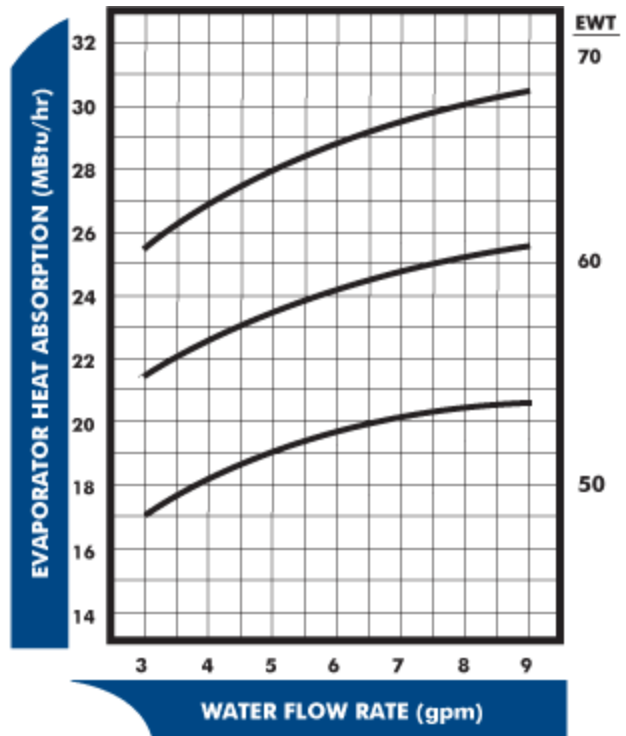
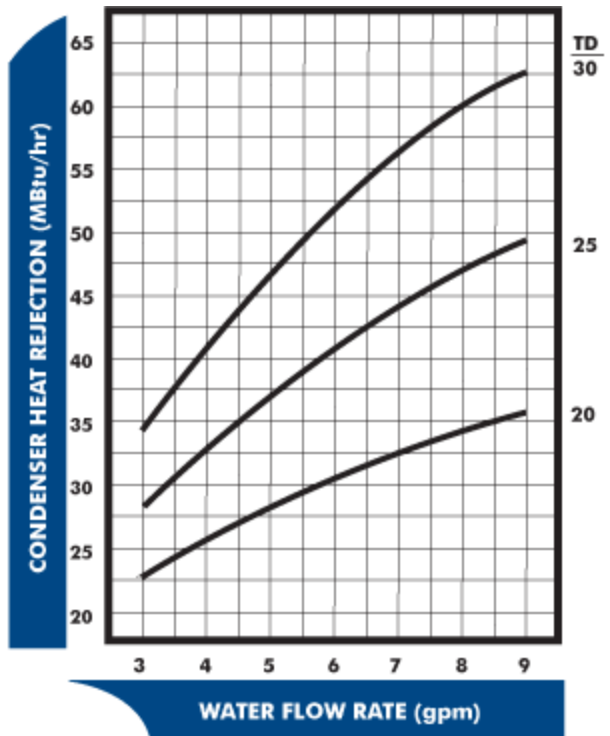
Nominal 1-1/2 Ton



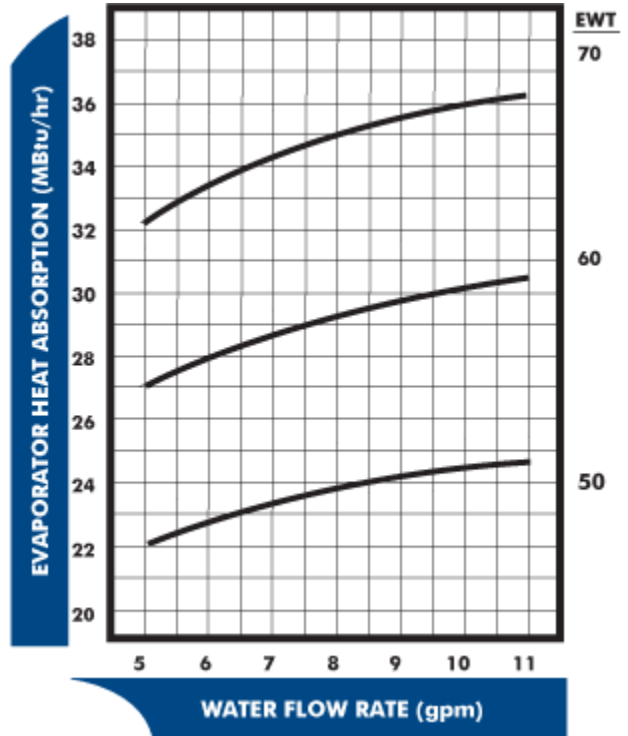
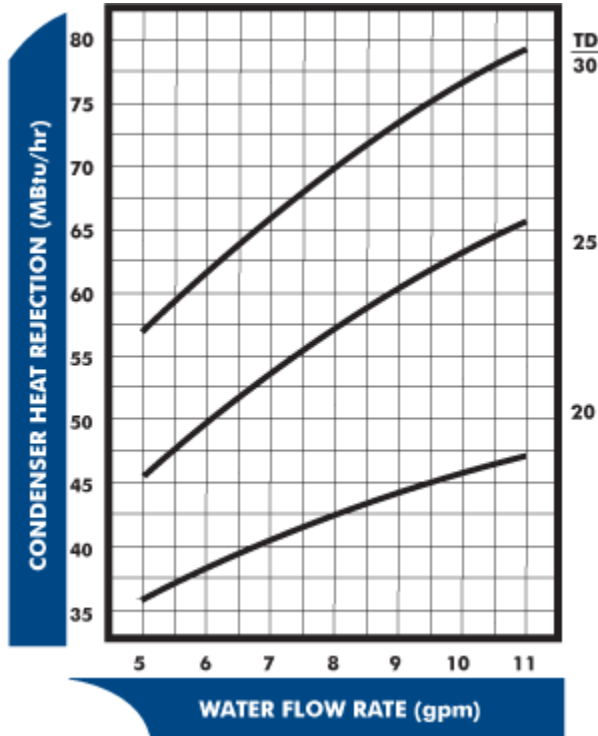
Nominal 2 Ton



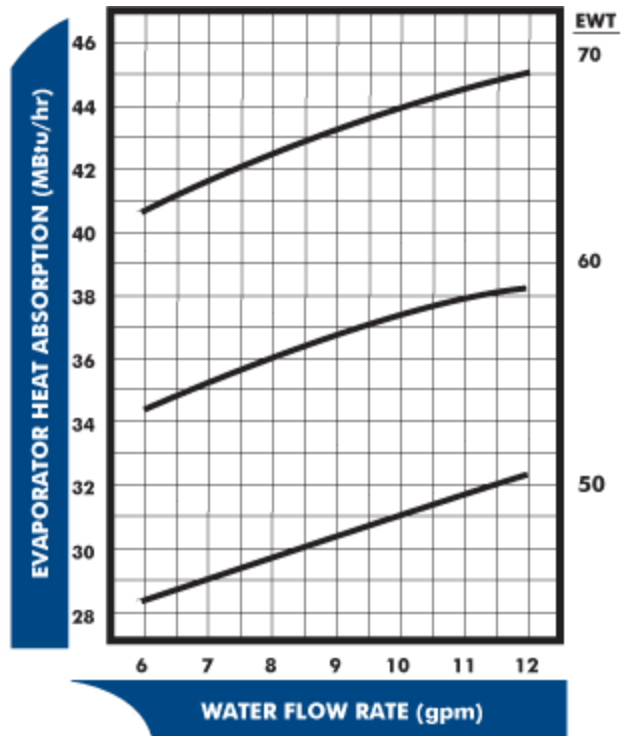
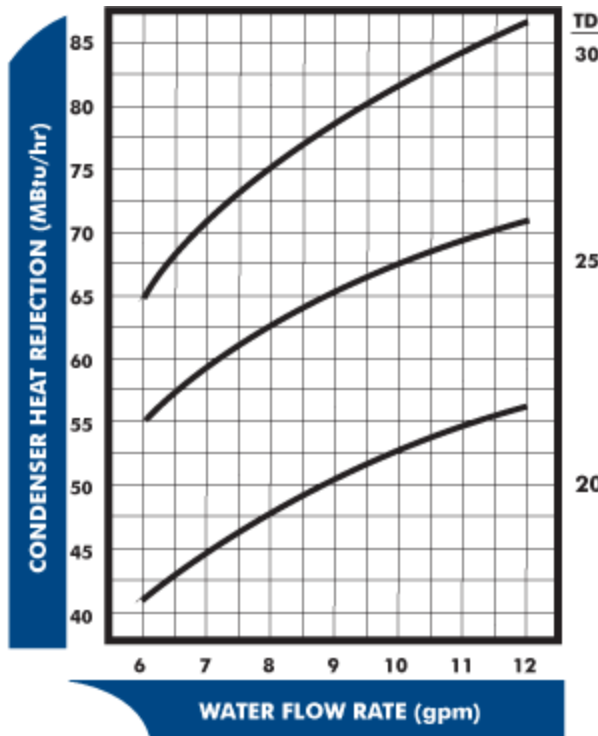
Nominal 2-1/2 Ton



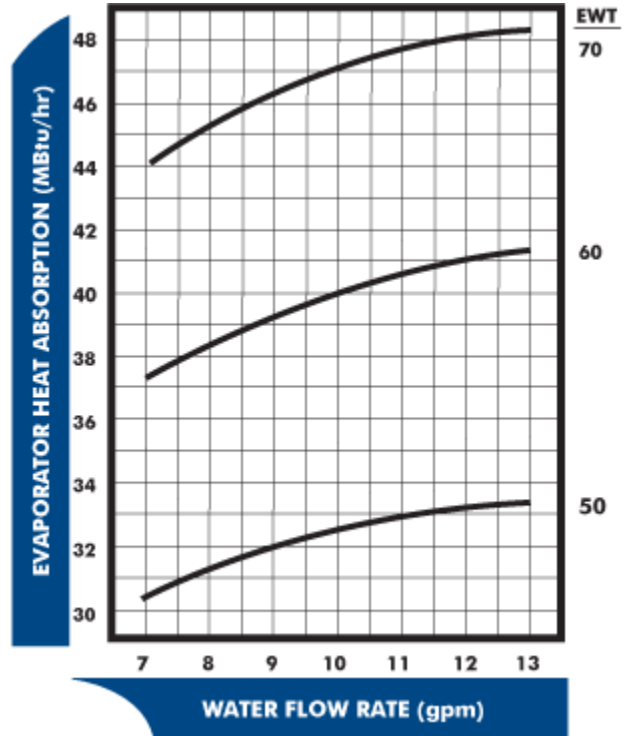
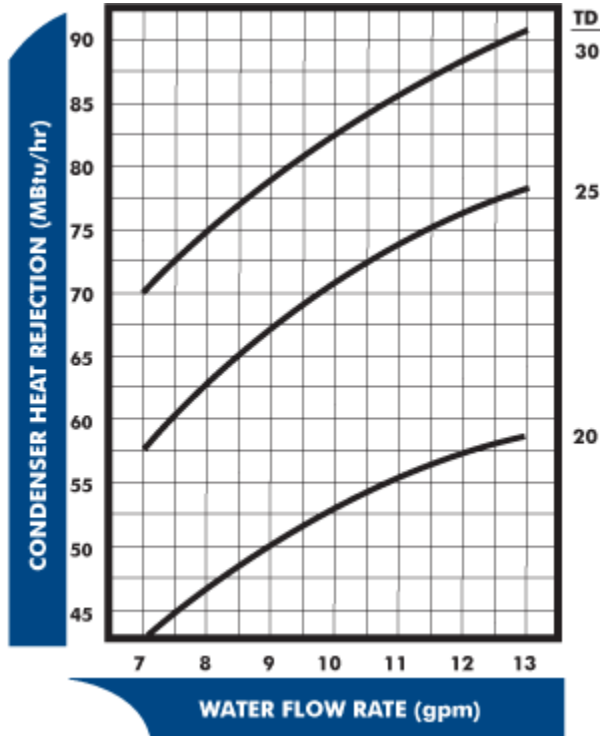
Nominal 3 Ton



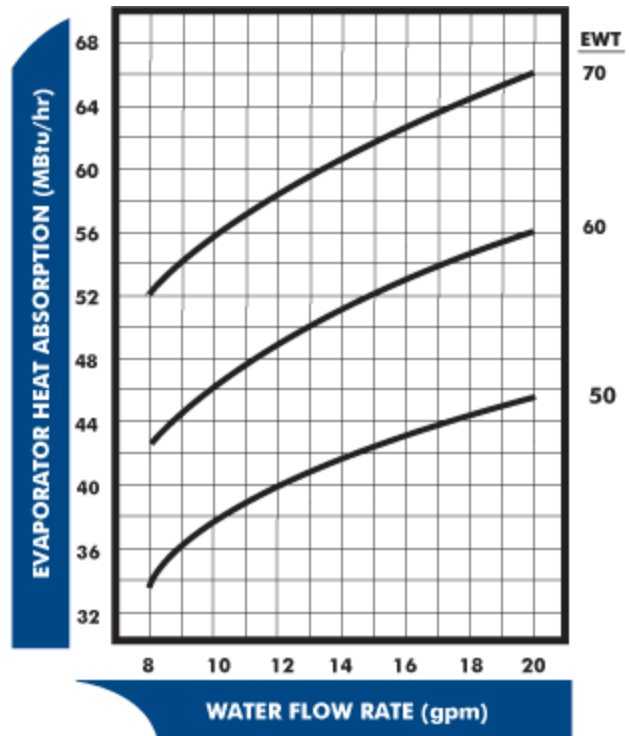
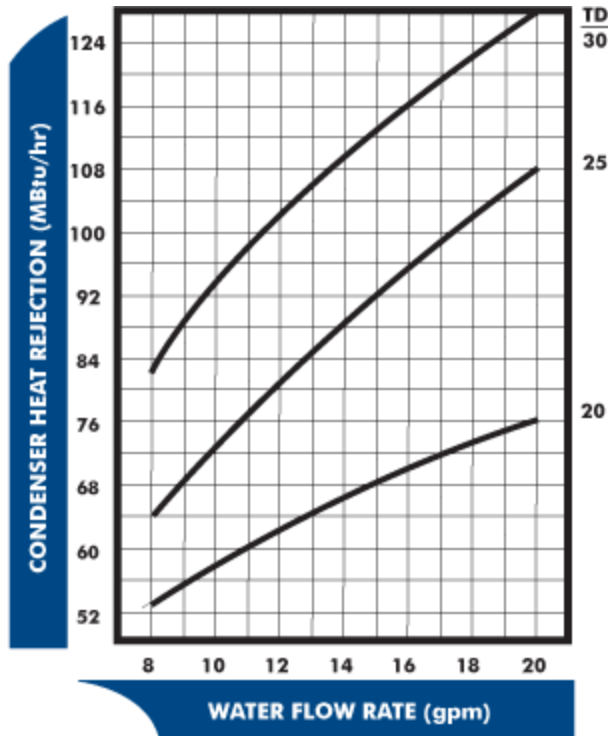
Nominal 3-1/2 Ton



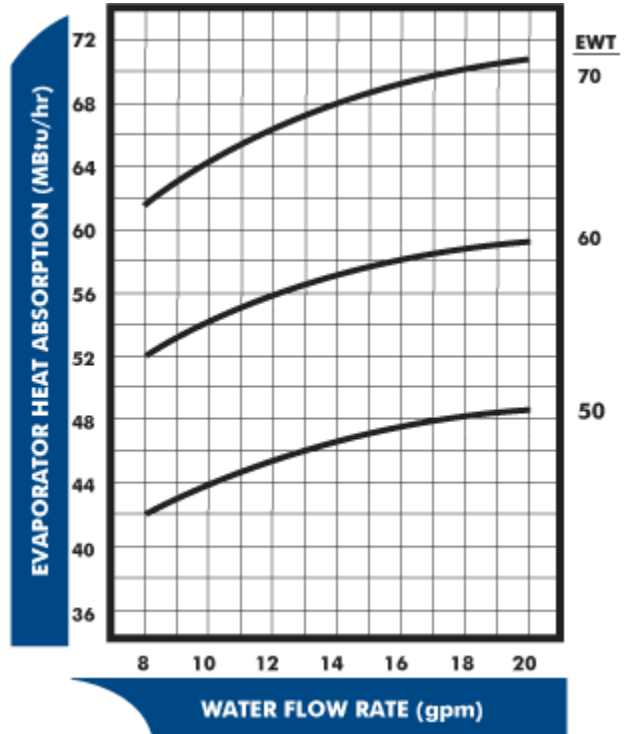
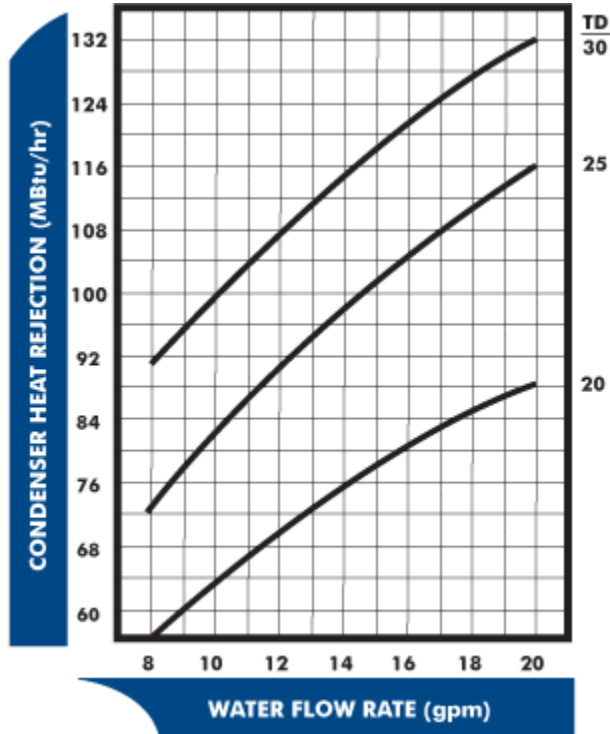
Nominal 4 Ton



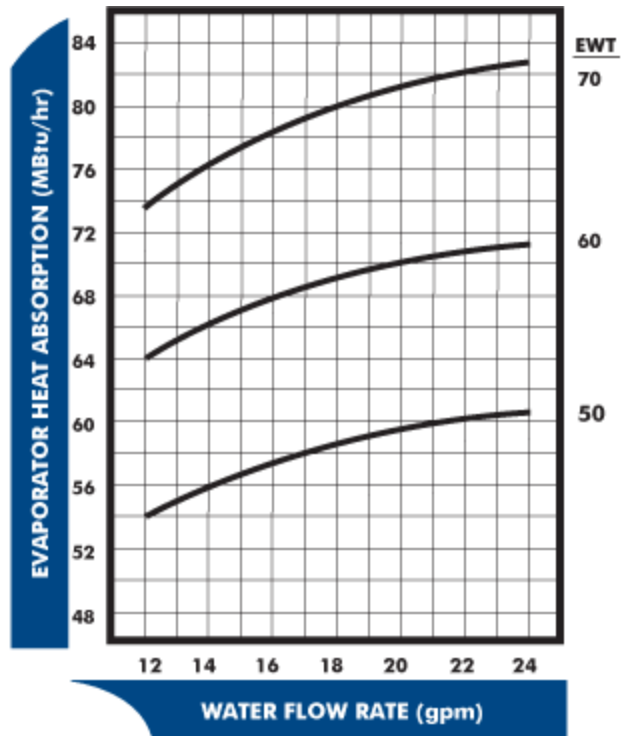
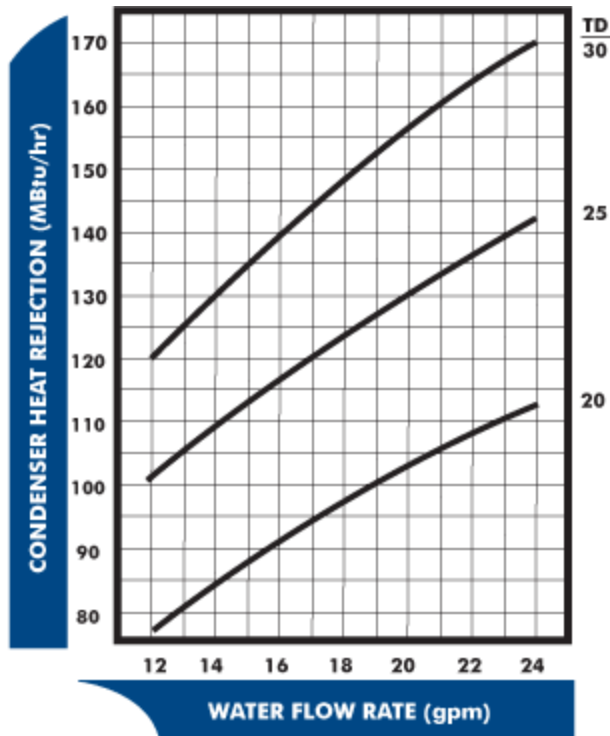
Nominal 5 Ton



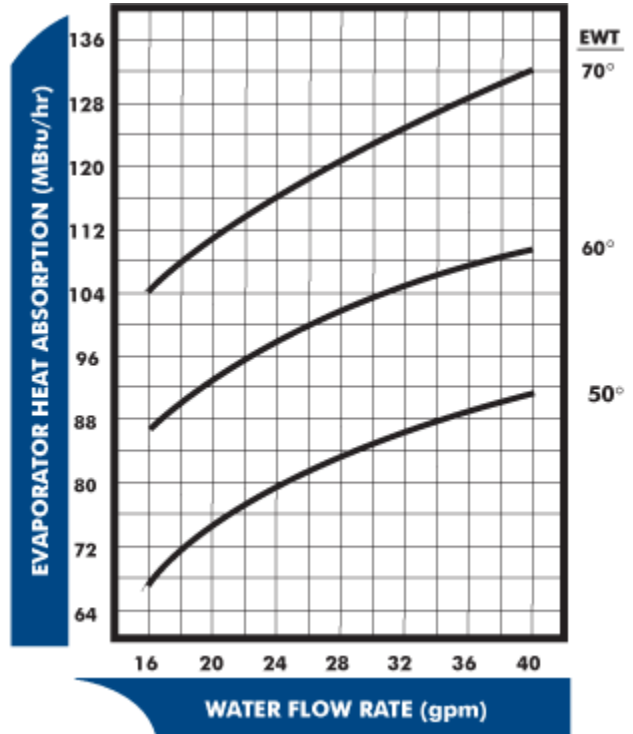
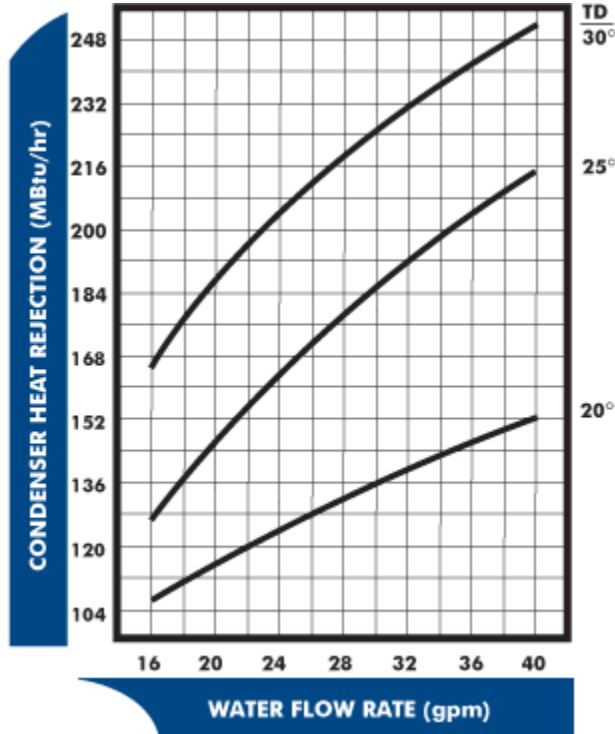
Nominal 6 Ton



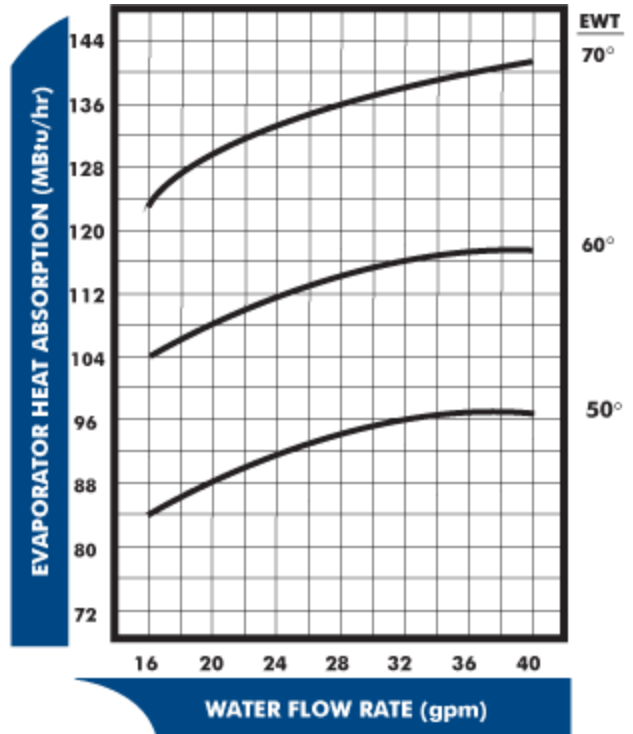
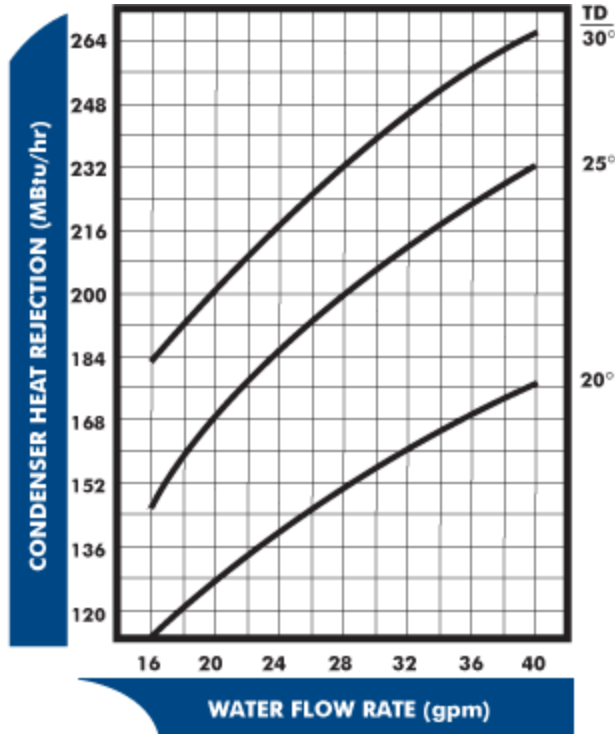
Nominal 7-1/2 Ton



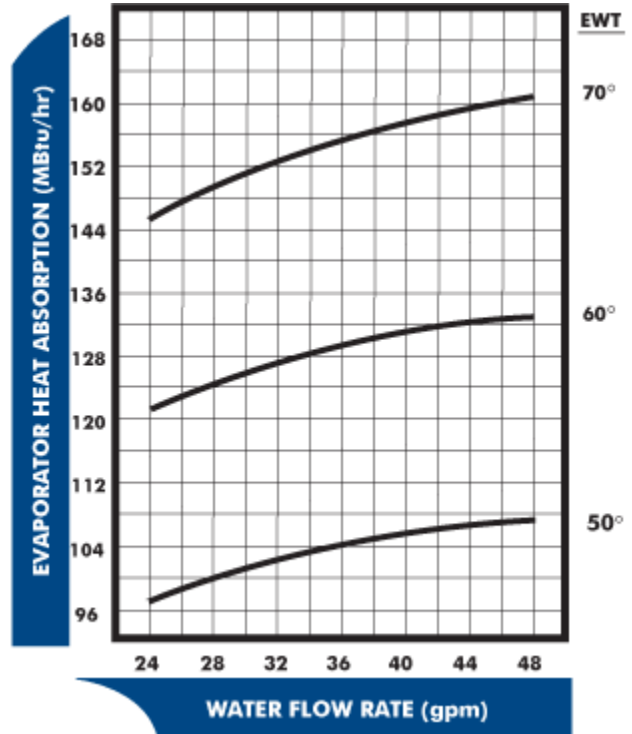
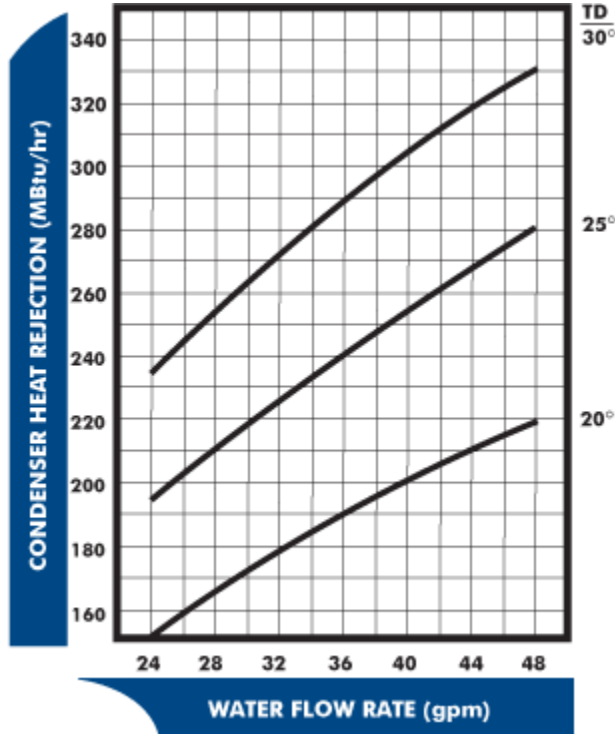
Nominal 10 Ton



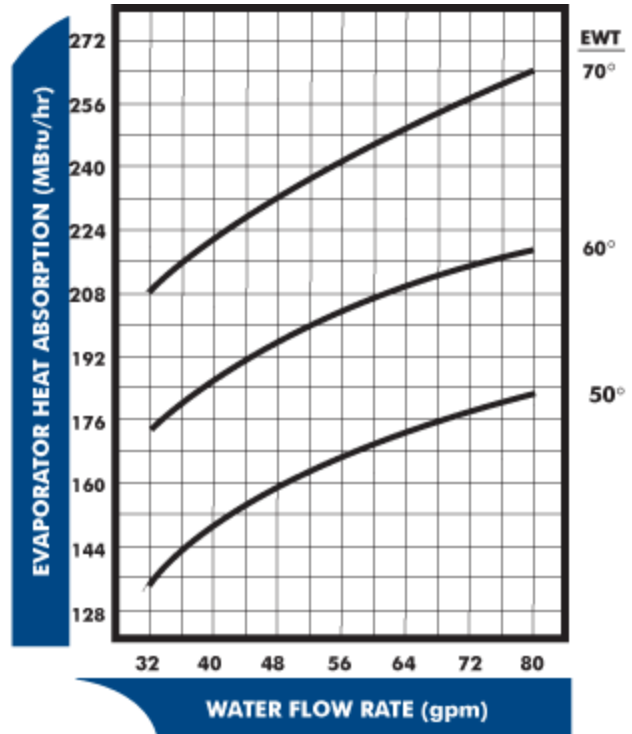
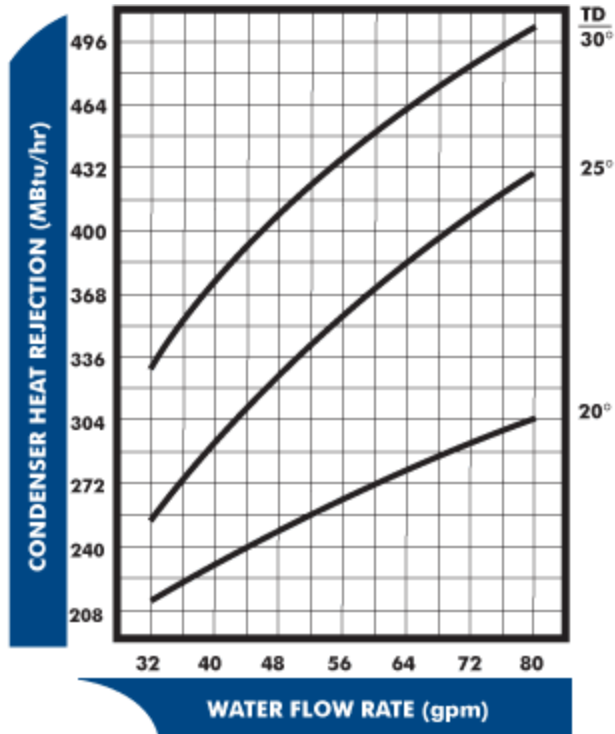
Nominal 12-1/2 Ton



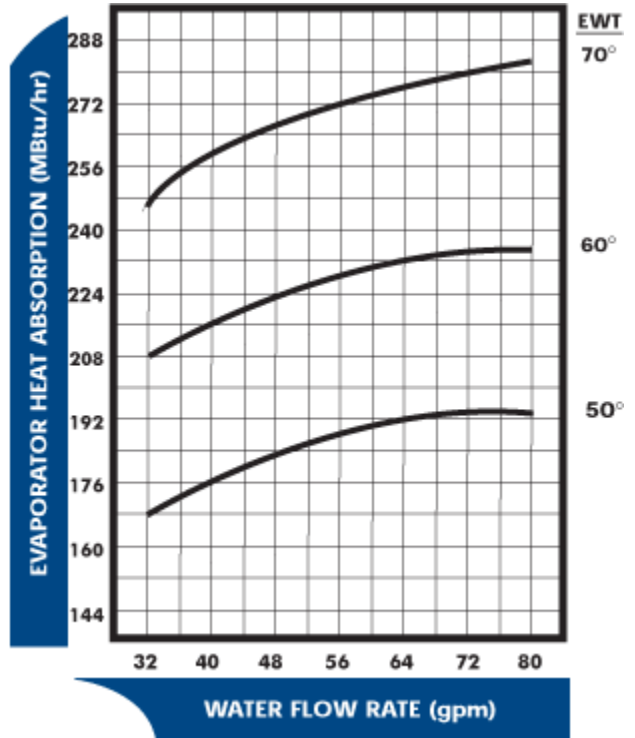
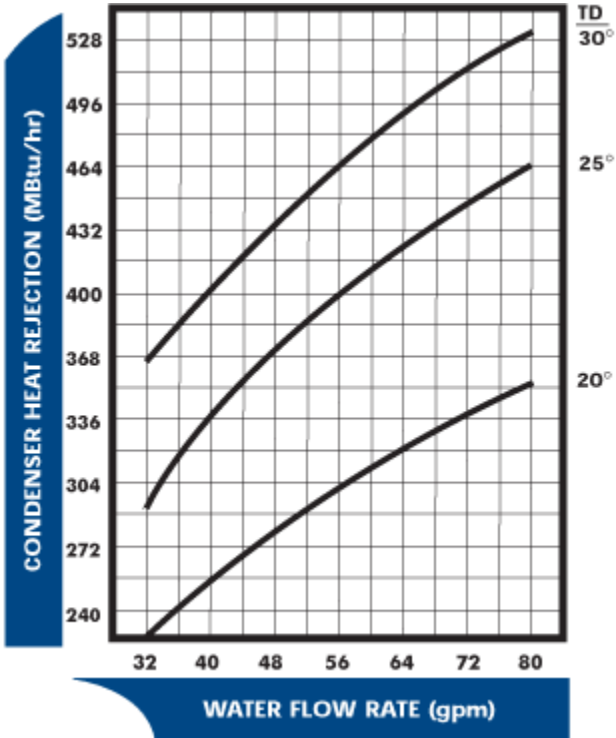
Nominal 15 Ton



Nominal 20 Ton



Nominal 25 Ton



Nominal 30 Ton

