CHILLER COIL SELECTION PROCEDURE

1. Determine the operating conditions:
   Enter Water Temperature (EWT): _____°F
   Leaving Water Temperature (LWT): _____°F
   Saturated Suction Temperature (SST): _____°F
   Water Flow Rate (GPM): _____ gal/min OR Chiller Capacity (CAP): _____ MBTU/hr (MBTU/hr = BTU x 1000)

2. Calculate the Approach and Range:
   Approach = [LWT - SST] = _____ - _____ = _____°F
   Range = [EWT - LWT] = _____ - _____ = _____°F

3. Calculate the Chiller Capacity or Water Flow Rate, whichever was not given in Step 1:
   CAP = [GPM x Range] ÷ 2 = _____ x _____ ÷ 2 = _____ MBTU/hr
   GPM = [2 x CAP] ÷ Range = 2 x _____ ÷ _____ = _____ gal/min.

4. Select the appropriate Packless Chiller Model:
   Pick the chart on the performance data page that most closely matches the Range calculated in Step 2, then select the column in that chart that matches the Approach calculated in Step 2. Look down the selected column and find a value equal to (or greater than) the Capacity (CAP) from Step 1 or Step 3 and select the corresponding Packless Chiller Coil Model. CHAX-_____-_____

5. For non-standard applications, materials and configurations, please consult factory.

* Capacity data is applicable to parallel or counterflow water and refrigerant flows under the following conditions: (a) 70°F maximum entering water temperature, (b) 39°F minimum leaving water temperature, and (c) 32°F minimum saturated suction temperature.

EXAMPLE:

1. Determine the operating conditions:
   Enter Water Temperature (EWT): **54**°F
   Leaving Water Temperature (LWT): **44**°F
   Saturated Suction Temperature (SST): **35**°F
   Water Flow Rate (GPM): **3.6** gal/min OR Chiller Capacity (CAP): _____ MBTU/hr

2. Calculate the Approach and Range:
   Approach = [LWT - SST] = **44** - **35** = **9**°F
   Range = [EWT - LWT] = **54** - **44** = **10**°F

3. Calculate the Chiller Capacity or Water Flow Rate, whichever was not given in Step 1:
   CAP = [GPM x Range] ÷ 2 = **3.6** x **10** ÷ 2 = **18** MBTU/hr (18,000 BTU/hr)

4. Select the appropriate Packless Chiller Model:
   Pick the chart labeled 10° Range and select the column for a 9° Approach. Look down the 9° Approach column and find the value of 18.3 MBTU/hr, which is slightly higher than the desired capacity of 18 MBTU/hr. This corresponds to Packless Model CHAX-3150-H.

WATER-SIDE PRESSURE DROP DATA

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

CHAX-3100-H	GPM	1.5	2.0	2.5	3.0	3.5	4.0	4.5
	PSI	1.9	2.8	4.1	5.5	7.0	8.8	10.8
CHAX-3150-H	GPM	2	3	4	5	6	7	8
	PSI	0.7	1.3	2.0	2.8	3.7	4.7	5.9
CHAX-3200-H	GPM	4	5	6	7	8	9	10
	PSI	0.9	1.3	1.8	2.4	3.0	3.7	4.5
CHAX-3250-H	GPM	2	4	6	8	10	12	14
	PSI	0.4	1.1	2.2	3.6	5.4	7.5	10.0
CHAX-3300-H	GPM	4	6	8	10	12	14	16
	PSI	0.4	0.8	1.3	1.8	2.5	3.2	4.1
CHAX-3400-H	GPM	6	8	10	12	14	16	18
	PSI	0.9	1.4	2.0	2.7	3.5	4.5	5.5
CHAX-3500-J	GPM	8	12	16	20	24	28	32
	PSI	1.1	2.1	3.5	5.3	7.5	10.0	12.8

PERFORMANCE DATA

8 RANGE

MODEL NO.	APPROACH (F) 7	8	9	10	11	12	13	14	15
CHAX-3100-H	7.5	9.4	11.5	12.8	14.0	15.2	16.4	17.5	18.5
CHAX-3150-H	11.5	14.7	18.3	21.0	23.8	25.3	26.8	28.2	29.6
CHAX-3200-H	16.9	20.9	24.4	26.3	28.2	30.1	31.9	36.5	41.0
CHAX-3250-H	21.9	24.5	26.8	29.6	32.7	35.8	41.3	46.8	52.0
CHAX-3300-H	23.0	29.1	35.5	38.5	41.5	44.4	47.2	53.2	59.2
CHAX-3400-H	28.7	36.0	42.8	46.3	50.4	54.3	57.8	63.2	68.6
CHAX-3500-J	38.1	47.8	58.4	72.8	86.6	93.9	101.1	109.5	117.9

Capacity is in MBTU/hr

10 RANGE

MODEL NO.	APPROACH (F) 7	8	9	10	11	12	13	14	15
CHAX-3100-H	7.5	9.4	11.5	12.8	14.0	15.2	16.4	17.5	18.5
CHAX-3150-H	11.5	14.7	18.3	21.0	23.8	25.3	26.8	28.2	29.6
CHAX-3200-H	16.9	20.9	24.4	26.3	28.2	30.1	31.9	36.5	41.0
CHAX-3250-H	22.0	24.6	27.0	30.0	33.0	36.0	41.2	46.3	51.4
CHAX-3300-H	23.0	29.1	35.5	38.6	41.7	44.7	47.6	53.3	59.0
CHAX-3400-H	28.7	36.0	42.8	46.5	52.6	58.7	64.7	70.7	76.8
CHAX-3500-J	38.2	47.9	58.5	72.9	86.6	93.9	101.1	109.5	117.9

Capacity is in MBTU/hr

12 RANGE

MODEL NO.	APPROACH (F) 7	8	9	10	11	12	13	14	15
CHAX-3100-H	7.5	9.4	11.5	12.8	13.9	15.1	16.3	17.4	18.4
CHAX-3150-H	11.4	14.6	18.2	21.0	23.8	25.3	26.8	28.2	29.6
CHAX-3200-H	16.8	20.8	24.3	26.2	28.1	30.0	31.8	36.3	40.8
CHAX-3250-H	22.0	24.6	27.0	30.0	33.2	36.4	41.5	46.5	51.5
CHAX-3300-H	23.0	29.1	35.5	38.7	41.8	44.9	47.9	53.4	58.8
CHAX-3400-H	28.7	36.0	42.8	47.3	53.1	58.6	64.0	70.0	76.0
CHAX-3500-J	38.2	47.9	58.8	73.1	86.7	93.8	100.8	109.2	117.6

Capacity is in MBTU/hr

15 RANGE

MODEL NO.	APPROACH (F) 7	8	9	10	11	12	13	14	15
CHAX-3100-H	7.5	9.4	11.5	12.7	13.9	15.1	16.3	17.4	18.4
CHAX-3150-H	11.4	14.6	18.2	21.1	24.0	25.5	27.0	28.5	29.9
CHAX-3200-H	16.8	20.8	24.3	26.3	28.2	30.2	32.1	36.5	40.9
CHAX-3250-H	22.0	24.6	27.0	30.0	33.4	36.8	41.8	46.7	51.6
CHAX-3300-H	23.2	29.3	35.8	38.7	41.6	44.4	47.2	52.6	57.9
CHAX-3400-H	28.7	36.0	42.8	47.3	53.0	58.6	63.5	69.5	75.4
CHAX-3500-J	38.7	48.5	59.2	73.3	86.8	93.7	100.5	108.9	117.3

Capacity is in MBTU/hr

20 RANGE

MODEL NO.	APPROACH (F) 7	8	9	10	11	12	13	14	15
CHAX-3100-H	7.5	9.4	11.5	12.7	13.9	15.1	16.2	17.3	18.3
CHAX-3150-H	11.7	15.0	18.7	21.4	24.1	25.6	27.1	28.6	30.0
CHAX-3200-H	16.8	20.8	24.3	26.3	28.2	30.2	32.1	36.5	40.9
CHAX-3250-H	22.2	25.0	27.8	31.6	34.4	37.2	42.1	46.9	51.7
CHAX-3300-H	23.2	29.3	35.8	38.6	41.4	44.1	46.8	52.1	57.4
CHAX-3400-H	29.0	36.4	43.0	47.3	52.9	58.4	63.2	69.1	75.0
CHAX-3500-J	38.6	48.4	59.1	73.1	86.6	93.4	100.2	108.6	116.9

Capacity is in MBTU/hr