Chiltrix Chiller FCU Indoor Unit Sizing Guide Hydronic Fan Coil Units for Reverse Cycle Chillers/Heat Pumps

The following pages list cooling and heating BTU capacity data for the CXI-series FCU (Fan Coil Unit) product line. Each page contains four charts of data for that specific model. Use the data to determine the proper size FCU for each room.

COOLING

For a Chiltrix system installed with the Psychrologix[™] / DHC controller please always use the center row and cell of the cooling capacity chart for estimating cooling capacity. For example, for CXI34, use 2643 as its BTU cooling capacity. If not using DHC then use the center row and far left column. Note - the overall efficiency of the system, with DHC, can be up to or more than 47% higher than our official rating. Psychrologix[™] / DHC is highly recommended.

HEATING

For a Chiltrix CX30 system installed under standard conditions please always use the center row and 2nd Column for heating BTU capacity. For example, for CXI34, use 3013 as its standard BTU heating capacity.

SELECTION NOTES

For systems that will be used for both cooling and heating always select the FCU based on the higher of the cooling or heating BTU capacity requirement.

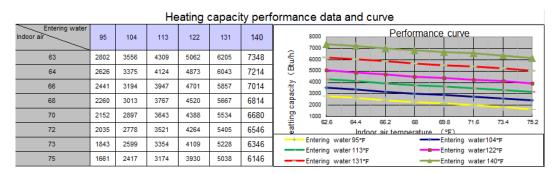
NON-STANDARD DESIGN

The CX30 can be set to operate at various loop temperatures. You can see from the capacity charts how loop temperature affects FCU capacity. To understand the relationship between loop temperature and CX30 system capacity, see: http://www.chiltrix.com/chiller-technology.html. Using the suggested row and column cell for IDU sizing assumes the CX30 system will be operated at its standard loop temperature.

Please contact us for assistance if you intend to use a non-standard loop temperature. Modifications to loop temperature will cause changes to system and FCU capacity.



CXI-34 Performance curve (at 2.4GPM per each 12,000BTU) Temps in F



				The	e leavii	ng wat	er temperature data
Entering water	95	104	113	122	131	140	Performance curve
63	87.0	93.9	100.8	107.6	113.4	119.1	110 tem 100 te
64	87.5	94.4	101.3	108.1	113.8	119.5	ŭ 110
66	88.1	94.9	101.8	108.6	114.3	120.1	100
68	88.6	95.4	102.3	109.2	114.9	120.6	
70	88.9	95.8	102.6	109.5	115.3	121.0	80 62.6 64.4 66.2 68 69.8 71.6 73.4 75.2
72	89.2	96.1	103.0	109.9	115.6	121.4	Indoor air temperature (°F)
73	89.8	96.6	103.5	110.3	116.1	122.0	Entering water 113°F — Entering water 104°F — Entering water 112°F — Entering water 122°F
75	90.3	97.1	104.0	110.8	116.7	122.5	Entering water 131°F Entering water 140°F

			Co	oling	capaci	ty performance data and curve
Entering water	44	49	54	59	64	4000 Performance curve
75.2/62.6	3135	2712	2381	2067	1778	3000
77/64.4	3271	2830	2484	2156	1855	§
78.8/64.4	3376	2920	2564	2225	1914	2900
80.6/67.1	3480	3010	2643	2294	1973	1500
82.4/68	3615	3127	2746	2383	2050	75.2/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor Air DB/WB(°F)
84.2/69.8	3717	3215	2823	2450	2107	"Entering water 44°F" —— "Entering water 54°F" —— Entering water 54°F
86/71.6	3828	3311	2907	2523	2170	Entering water 59°F = Entering water 64°F

				The	leavii	ing water temperature data
Entering water Indoor air	44	49	54	59	64	Performance curve
75.2/62.6	52.9	56.7	60.8	64.9	69.1	The leaving water temperture temperture temperture state of the state
77/64.4	53.3	57.0	61.1	65.1	69.3	wing sertiful
78.8/64.4	53.6	57.3	61.3	65.3	69.4	tella se la
80.6/67.1	53.9	57.6	61.5	65.5	69.6	50 45
82.4/68	54.3	57.9	61.8	65.8	69.8	752/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor air temperature (°F)
84.2/69.8	54.6	58.1	62.0	66.0	70.0	Entering water 44°F — Entering water 49°F
86/71.6	54.9	58.4	62.3	66.2	70.2	Entering water 59°F Entering water 59°F Entering water 64°F



CXI-65 Performance curve (at 2.4GPM per each 12,000BTU) Temps in F



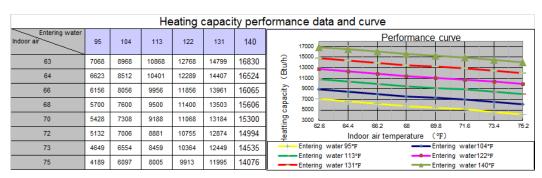
				The	leavii	ng wat	ter temperature data
Entering water	95	104	113	122	131	140	Performance curve
63	87.3	94.2	101.1	108.0	115.5	123.0	110 Had 1100
64	87.7	94.7	101.6	108.5	115.9	123.3	110 mg 110
66	88.3	95.2	102.1	109.0	116.4	123.8	100
68	88.8	95.7	102.6	109.5	116.9	124.3	
70	89.1	96.0	102.9	109.9	117.2	124.6	50 80 80 80 80 80 80 80 80 80 80 80 80 80
72	89.4	96.3	103.3	110.2	117.6	124.9	indoor air temperature (%)
73	89.9	96.8	103.7	110.7	118.0	125.4	Entering water 104°F Entering water 113°F Entering water 122°F
75	90.4	97.3	104.2	111.1	118.5	125.8	Entering water 131°F — Entering water 140°F

			Co	oling	capaci	ty performance data and curve
Entering water	44	49	54	59	64	7500 Performance curve
75.2/62.6	5974	5167	4537	3938	3387	6000
77/64.4	6232	5391	4733	4108	3533	5000
78.8/64.4	6431	5563	4884	4240	3646	(f) 4500 4000
80.6/67.1	6630	5735	5035	4371	3759	3500 3000 3000 and
82.4/68	6888	5958	5231	4541	3905	(a) 75.2/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor Air DB/WB (°F)
84.2/69.8	7081	6125	5378	4668	4014	Entering water 44°R —— "Entering water 49°R"
86/71.6	7293	6308	5539	4808	4135	Entering water 54°F

				The	e leavir	ng water temperature data
Entering water Indoor air	44	49	54	59	64	80 Performance curve
75.2/62.6	52.8	56.6	60.7	64.8	69.0	The leaving water the period of the period o
77/64.4	53.1	56.9	60.9	65.0	69.2	e di di
78.8/64.4	53.4	57.2	61.2	65.2	69.3	te e e e e e e e e e e e e e e e e e e
80.6/67.1	53.7	57.4	61.4	65.4	69.5	. 50
82.4/68	54.1	57.7	61.7	65.7	69.7	75.2/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor air temperature (°F)
84.2/69.8	54.4	58.0	61.9	65.8	69.9	Entering water 44°F Entering water 49°F
86/71.6	54.7	58.3	62.1	66.1	70.1	Entering water 54°F ——Entering water 59°F ——Entering water 64°F



CXI-85 Performance curve (at 2.4GPM per each 12,000BTU) temps in F



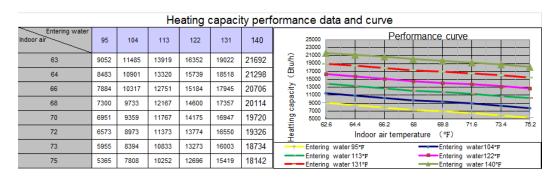
				The	leavii	ng wat	er temperature data
Entering water Indoor air	95	104	113	122	131	140	Performance curve
63	87.2	94.0	100.9	107.8	114.6	121.3	110 to 100 to 10
64	87.6	94.5	101.5	108.4	115.0	121.7	in 110
66	88.2	95.1	101.9	108.8	115.5	122.2	100
68	88.7	95.6	102.5	109.3	116.0	122.7	
70	89.0	95.9	102.8	109.7	116.4	123.0	80 62.6 64.4 66.2 68 69.8 71.6 73.4 75.2
72	89.3	96.2	103.1	110.1	116.7	123.4	Indoor air temperature (°F)
73	89.8	96.7	103.6	110.5	117.2	123.9	Entering water 113°F — Entering water 122°F — Entering water 122°F
75	90.3	97.2	104.1	111.0	117.7	124.4	Entering water 131°F — Entering water 140°F

			Co	oling	capaci	ty performance data and curve
Entering water	44	49	54	59	64	Performance curve
75.2/62.6	7812	6757	5933	5150	4429	8000
77/64.4	8150	7050	6190	5373	4620	도 7000 6500
78.8/64.4	8410	7275	6387	5544	4768	5500
80.6/67.1	8670	7500	6585	5715	4915	5000 / U 4000
82.4/68	9007	7791	6841	5938	5106	हैं 75.2/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6
84.2/69.8	9260	8010	7032	6104	5250	"Entering water 44°F — "Entering water 49°F" — Entering water 54°F
86/71.6	9537	8250	7243	6287	5407	Entering Water 59°F Entering water 64°F

				The	e leavii	ing water temperature data
Entering water	44	49	54	59	64	Performance curve
75.2/62.6	52.7	56.5	60.6	64.7	68.9	The leaving water temperature leaving water
77/64.4	53.0	56.8	60.9	65.0	69.1	es es the second of the second
78.8/64.4	53.3	57.1	61.1	65.2	69.3	
80.6/67.1	53.6	57.3	61.3	65.3	69.5	# 55 50
82.4/68	54.0	57.6	61.6	65.6	69.7	75.2/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor air temperature (°F)
84.2/69.8	54.3	57.9	61.8	65.8	69.8	Entering water 44°F ——Entering water 49°F
86/71.6	54.6	58.2	62.0	66.0	70.0	Entering water 54°F — Entering water 59°F — Entering water 64°F



CXI-120 Performance curve (at 2.4GPM per each 12,000BTU) Temps in F



				The	e leavii	ng wat	er temperature data
Entering water Indoor air	95	104	113	122	131	140	Performance curve
63	87.9	95.0	102.1	109.2	116.1	123.0	E 120
64	88.3	95.4	102.5	109.6	116.5	123.3	110
66	88.8	95.9	103.0	110.1	116.9	123.7	
68	89.3	96.4	103.5	110.5	117.4	124.2	90 80 82.6 64.4 66.2 68 69.8 71.6 73.4 75.2
70	89.5	96.7	103.8	110.9	117.7	124.5	80 82.6 64.4 66.2 68 69.8 71.6 73.4 75.2
72	89.8	97.0	104.1	111.2	118.0	124.8	Indoor air temperature (°F)
73	90.3	97.4	104.5	111.6	118.4	125.3	Entering water 95°F — Entering water 104°F — Entering water 113°F — Entering water 122°F
75	90.8	97.9	105.0	112.0	118.9	125.8	Entering water 131°F — Entering water 140°F

				The	eleavir	ing water temperature data
Entering water	44	49	54	59	64	75 Performance curve
75.2/62.6	52.6	56.5	60.6	64.7	68.9	The leaving water temperture estimates and the seaving water temperture estimates and the seaving water temperature estimates and the seaving water temper
77/64.4	53.0	56.8	60.9	64.9	69.1	s s s s s s s s s s s s s s s s s s s
78.8/64.4	53.3	57.1	61.1	65.1	69.3	te lea
80.6/67.1	53.6	57.3	61.3	65.3	69.4	50
82.4/68	54.0	57.6	61.6	65.6	69.7	75.2/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor air temperature (°F)
84.2/69.8	54.3	57.9	61.8	65.8	69.8	Entering water 44°F ——Entering water 49°F
86/71.6	54.6	58.1	62.0	66.0	70.0	Entering water 59°F Entering water 64°F Entering water 64°F

			Co	oling	capac	ty performance data and curve
Entering water Indoor air	44	49	54	59	64	15000 Performance curve
75.2/62.6	11028	9539	8376	7270	6252	12000
77/64.4	11506	9952	8738	7585	6523	F 10000
78.8/64.4	11873	10270	9017	7827	6731	C 3000
80.6/67.1	12240	10588	9296	8069	6939	6000 ac tr
82.4/68	12716	10999	9657	8383	7209	ल 752/62.6 77/64.4 78.8/64.4 80.6/67.1 82.4/68 84.2/69.8 86/71.6 Indoor Air DB/WB (°F)
84.2/69.8	13072	11308	9928	8618	7411	© "Entering water 44°F
86/71.6	13464	11646	10226	8876	7633	Entering water 59°F — Entering water 64°F

