

Series 1500 Cooling Towers

Engineering Data



Engineering Data

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Engineering Data

Single Cell Unit

Series 1500 Engineering Data

Model Number	Nominal Tonnage ^a	Motor HP	Ind. Fan Motor Option	Fan (CFM)	Weights (lbs)			Dimensions					Inlet Conn. ²	
					Operating ¹	Shipping	Heaviest Section	L	H	A	C	D		
15146	146	7.5	N/A	40,320	7,920	3,940	3,940							
15160	160	10	N/A	44,190	7,940	3,960	3,960	8' 5-3/4"	10' 2-7/8"	N/A	9' 8-5/8"	4' 2-7/8"	6"	
15176	176	15	N/A	48,160	7,990	4,010	4,010							
15162	162	7.5	N/A	43,080	8,610	4,200	4,200							
15177	177	10	N/A	47,070	8,630	4,220	4,220	8' 5-3/4"	11' 6-7/8"	N/A	11' 0-5/8"	4' 2-7/8"	6"	
15201	201	15	N/A	53,540	8,690	4,280	4,280							
15219	219	20	N/A	58,240	8,710	4,300	4,300							
15200	200	10	N/A	52,320	11,430	5,350	2,770							
15227	227	15	N/A	59,380	11,490	5,410	2,780	8' 5-3/4"	14' 3-3/8"	7' 4-3/4"	13' 9-1/4"	4' 2-7/8"	6"	
15250	250	20	N/A	65,400	11,510	5,430	2,800							
15214	214	10	N/A	56,610	12,450	5,640	2,920							
15245	245	15	N/A	64,810	12,510	5,700	2,920	8' 5-3/4"	15' 7-3/8"	8' 8-3/4"	15' 1-1/4"	4' 2-7/8"	6"	
15270	270	20	N/A	71,420	12,530	5,720	2,920							
15282	282	25	N/A	74,600	12,610	5,800	2,920							
15296	296	15	(2) 7.5	77,440	15,540	6,750	3,540							
15325	325	20	(2) 10	85,030	15,590	6,800	3,590	12' 1-1/4"	14' 3-3/8"	7' 4-3/4"	13' 9-1/4"	6' 0-5/8"	8"	
15350	350	25	(2) 15	91,560	15,640	6,850	3,640							
15368	368	30	(2) 15	96,280	15,660	6,870	3,660							
15310	310	15	(2) 7.5	82,000	17,050	7,070	3,540							
15340	340	20	(2) 10	89,940	17,100	7,120	3,590							
15365	365	25	(2) 15	96,550	17,150	7,170	3,640	12' 1-1/4"	15' 7-3/8"	8' 8-3/4"	15' 1-1/4"	6' 0-5/8"	8"	
15385	387	30	(2) 15	101,840	17,180	7,200	3,670							
15425	428	40	(2) 20	112,340	17,450	7,470	3,940							

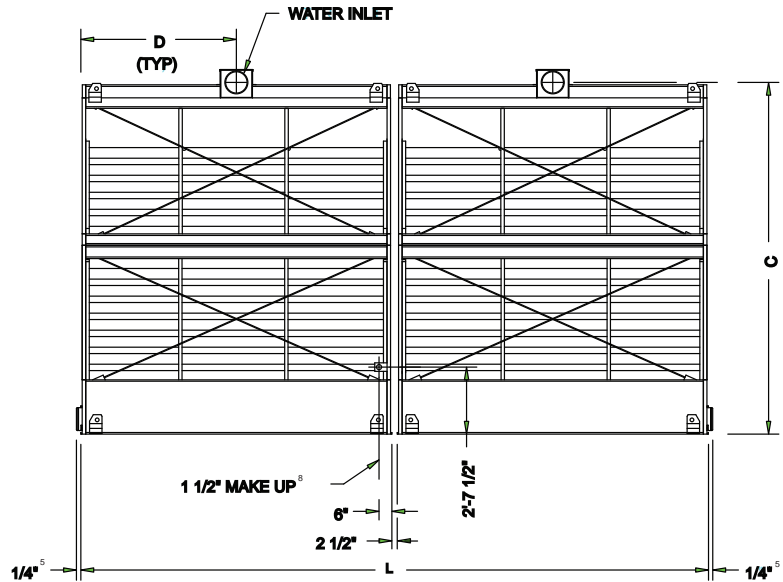
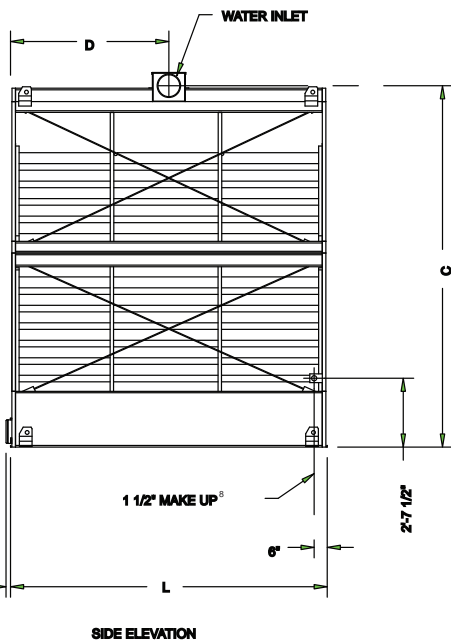
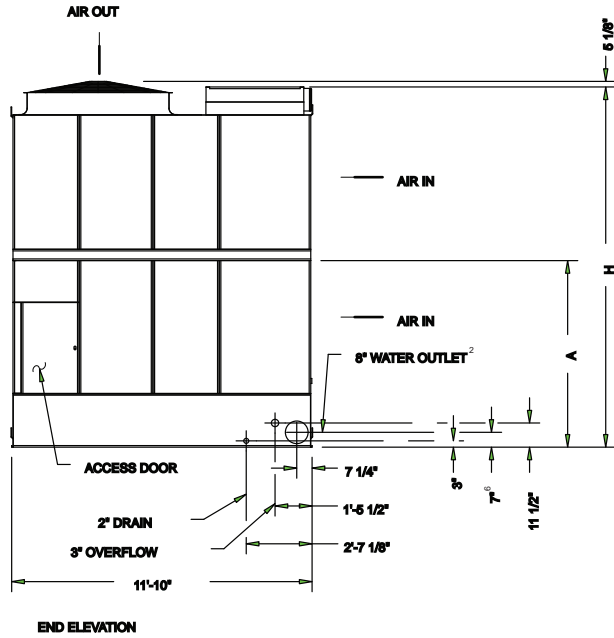
Multi-Cell Units

15146-2	292	(2) 7.5	N/A	80,640	15,840	7,880	3,940							
15160-2	320	(2) 10	N/A	88,380	15,880	7,920	3,960	17' 2"	10' 2-7/8"	N/A	9' 8-5/8"	4' 2-7/8"	(2) 6"	
15176-2	352	(2) 15	N/A	96,320	15,890	8,020	4,010							
15162-2	324	(2) 7.5	N/A	86,160	17,220	8,400	4,200							
15177-2	354	(2) 10	N/A	94,140	17,260	8,440	4,220	17' 2"	11' 6-7/8"	N/A	11' 0-5/8"	4' 2-7/8"	(2) 6"	
15201-2	402	(2) 15	N/A	106,900	17,380	8,560	4,280							
15219-2	438	(2) 20	N/A	116,480	17,420	8,600	4,300							
15200-2	400	(2) 10	N/A	104,640	22,860	10,700	2,770							
15227-2	454	(2) 15	N/A	118,760	22,980	10,820	2,780	17' 2"	14' 3-3/8"	7' 4-3/4"	13' 9-1/4"	4' 2-7/8"	(2) 6"	
15250-2	500	(2) 20	N/A	130,800	23,020	10,860	2,800							
15214-2	428	(2) 10	N/A	113,220	24,900	11,280	2,920							
15245-2	490	(2) 15	N/A	129,620	25,020	11,400	2,920	17' 2"	15' 7-3/8"	8' 8-3/4"	15' 1-1/4"	4' 2-7/8"	(2) 6"	
15270-2	540	(2) 20	N/A	142,840	25,060	11,440	2,920							
15282-2	564	(2) 25	N/A	149,200	25,220	11,600	2,920							
15296-2	592	(2) 15	(4) 7.5	154,880	31,080	13,500	3,540							
15325-2	650	(2) 20	(4) 10	170,060	31,180	13,600	3,590	24' 5"	14' 3-3/8"	7' 4-3/4"	13' 9-1/4"	6' 0-5/8"	(2) 8"	
15350-2	700	(2) 25	(4) 15	183,120	31,280	13,700	3,640							
15368-2	736	(2) 30	(4) 15	192,560	31,320	13,740	3,660							
15310-2	620	(2) 15	(4) 7.5	164,000	34,100	14,140	3,540							
15340-2	680	(2) 20	(4) 10	179,880	34,200	14,240	3,590							
15365-2	730	(2) 25	(4) 15	193,100	34,300	14,340	3,640	24' 5"	15' 7-3/8"	8' 8-3/4"	15' 1-1/4"	6' 0-5/8"	(2) 8"	
15385-2	774	(2) 30	(4) 15	203,680	34,360	14,400	3,670							
15425-2	856	(2) 40	(4) 20	224,680	34,900	14,940	3,940							

Do not use for construction. Refer to factory certified dimensions.



Dimensional Reference Drawings



Notes:

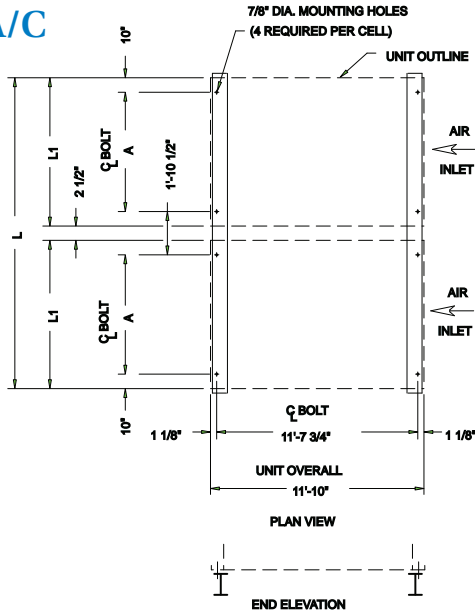
1. Operating weight is for tower with water level in the cold water basin at overflow. If a lower operating weight is needed to meet design requirements, your local BAC Representative can provide additional assistance.
2. The specific size of the inlet and outlet connection may vary with the cooling water design flow rate. Consult unit print for dimensions.
3. Unless otherwise indicated, all connections 3" and smaller are MPT. Connections 4" and larger are beveled for welding and mechanically grooved.
4. The heaviest section for all models except 15214 through 15282 is the upper section. Models 15146 to 15219 ship in one piece.
5. Models 15296 through 15425 – 2 1/8"
6. Models 15296 through 15425 – 8"
7. Models 15146 through 15219 and 15296 through 15425 – 2 3/4"
8. Models 15296 through 15425 – 1 1/2"
9. Nominal tons of cooling represents 3 GPM of water cooled from 95°F to 85°F at a 78°F entering wet-bulb temperature.



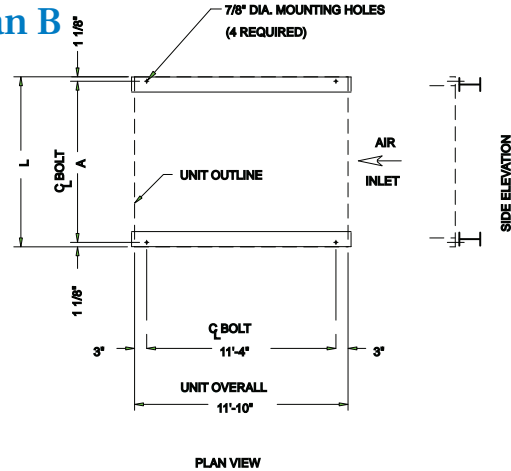
Structural Support

The recommended support arrangement for the Series 1500 Cooling Tower consists of parallel I-beams positioned as shown in the following drawings. Besides providing adequate support, the steel also serves to raise the unit above any solid foundation to ensure access to the bottom of the tower. The Series 1500 may also be supported on columns at the anchor bolt locations shown in Plan A/C or Plan B. A minimum 12"x12" (304.8mm x 304.8mm) bearing surface must be provided under each of the concentrated load points (See Note 5). To support a Series 1500 Cooling Tower on columns or in an alternate steel support arrangement, consult your local BAC Representative.

Plan A/C



Plan B



Plan A/C: Single-Cell and Multi-Cell Units

Model Number	A	L1	L
15146 to 15282	6' 9-3/4"	8' 5-3/4"	-
15296 to 15425	10' 5-1/4"	12' 1-1/4"	-
15146-2 to 15282-2	6' 9-3/4"	8' 5-3/4"	17' 2"
15296-2 to 15425-2	10' 5-1/4"	12' 1-1/4"	24' 5"

Plan B: Single-Cell Units Only

Model Number	A	L
15146 to 15282	8' 3-1/2"	8' 5-3/4"
15296 to 15425	11' 11"	12' 1-1/4"

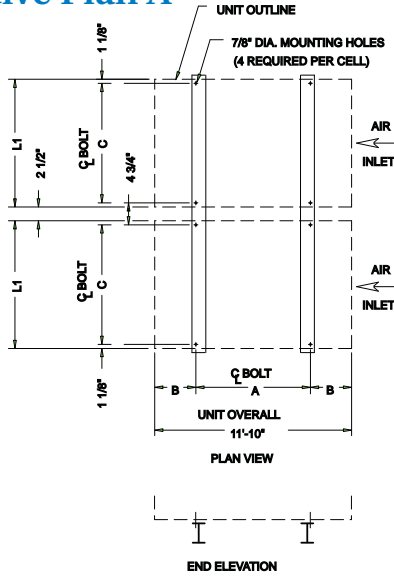
Notes:

- Support beams and anchor bolts are to be selected and installed by others.
- All supporting steel must be level at the top.
- Beams must be selected in accordance with accepted structural practice. Maximum deflection of beam under unit to be 1/360 of span, not to exceed 1/2 inch.
- All units can be furnished with an optional vibration isolation package, if required, to be installed between the tower and supporting steel. The BAC vibration isolation package is designed for units on support Plan A/C. When determining the length of steel beams, allow for the length of vibration isolation rails, as they may be longer than the tower length shown above.
- If point vibration isolation is used with multi-cell towers, the isolators must be located under the supporting steel, not between the support steel and the cooling towers.
- When using Alternative Plan A support arrangements with optional bottom water outlet, size and location restrictions will apply to water outlet piping. Consider the Cantilevered Plan A support arrangement or consult your local BAC Representative for details.

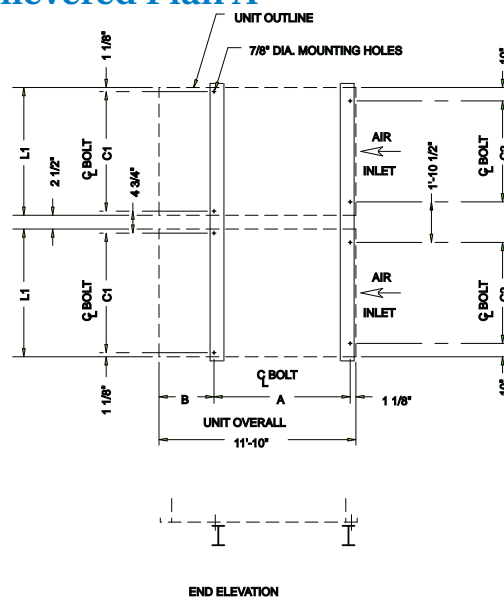
Structural Support Alternatives

For replacement installations, the Series 1500 Cooling Tower has been designed to match the supporting steel of most existing counterflow and crossflow cooling towers without modifications. Shown below are the most common steel support arrangements which can be accommodated by the Series 1500. If individual point support is required, or if steel arrangement is not as shown below, consult your local BAC Representative for assistance.

Alternative Plan A



Cantilevered Plan A



Alternative Plan A: Typical Dimensions for Single-Cell and Multi-Cell Units

Model Number	Unit Replaced	A	B	C	L1
15146 to 15282	VLT/VST	8' 9-1/8"	1' 6-7/16"	8' 3-1/2"	8' 5-3/4"
15296 to 15425	VLT/VST/VXT	8' 11-1/4"	1' 5-3/8"	11' 11"	12' 1-1/4"
	VXT/VXMT	9' 7-1/2"	1' 1-1/4"	11' 11"	12' 1-1/4"
15146 to 15282	CFT	8' 0"	1' 11"	8' 3-1/2"	8' 5-3/4"
	Series 3000	8' 3-1/4"	1' 9-3/8"	8' 3-1/2"	8' 5-3/4"
15296 to 15425	CFT	8' 0"	1' 11"	11' 11"	12' 1-1/4"
	Series 3000	9' 6"	1' 2"	11' 11"	12' 1-1/4"

Cantilevered Plan A: Typical Dimensions for Single-Cell and Multi-Cell Units

Model Number	Unit Replaced	A	B	C1	C2	L1
15146 to 15282	VLT/VST	8' 9-1/8"	2' 11-3/4"	8' 3-1/2"	6' 9-3/4"	8' 5-3/4"
15296 to 15425	VLT/VST/VXT	8' 11-1/4"	2' 9-5/8"	11' 11"	10' 5-1/4"	12' 1-1/4"
	VXT/VXMT	9' 7-1/2"	2' 1-3/8"	11' 11"	10' 5-1/4"	12' 1-1/4"
15146 to 15282	CFT	8' 0"	3' 8-7/8"	8' 3-1/2"	6' 9-3/4"	8' 5-3/4"
	Series 3000	8' 3-1/4"	3' 5-5/8"	8' 3-1/2"	6' 9-3/4"	8' 5-3/4"
15296 to 15425	CFT	8' 0"	3' 8-7/8"	11' 11"	10' 5-1/4"	12' 1-1/4"
	Series 3000	9' 6"	2' 2-7/8"	11' 11"	10' 5-1/4"	12' 1-1/4"

See Notes on previous page.