

**NEW!**

# ULTRA AT

NOW AVAILABLE WITH  
**LOW SOUND SOLUTIONS**  
(SEE PAGE 4)



Standard with Type 316 Stainless Steel Basin

## ENGINEERING MANUAL





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The EVAPCO Ultra-AT Cooling Tower Engineering Manual is designed to enable you to select Ultra-AT Cooling Towers and provide detailed technical information on each model. In addition, this bulletin will provide application assistance for the Ultra-AT Cooling Tower, including those applications out of the normal scope of cooling tower operation.

The Ultra-AT Cooling Tower Engineering Manual is designed to make cooling tower selections easy and provide detailed technical information at your office to assist in the engineering stages of a project.

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## Technical Support Services

### EVAPSPEC

EVAPSPEC is a Windows based computer selection program which allows the design engineer to choose EVAPCO models and optimize unit selections. The program allows the engineer to evaluate the equipment's thermal performance, space and energy requirements. Once the model is selected and optional equipment features are inserted, the engineer may output a complete specification **AND** a unit drawing from this program. The software is designed to provide the user with maximum flexibility in analyzing the various selection parameters while in a friendly and familiar Windows format.

The EVAPSPEC software is available to all consulting engineering offices and design-build contractors. The programs are distributed through the local EVAPCO sales representative or the EVAPCO Europe office in Tongeren, Belgium.

### EVAPWEB

Log on to EVAPCO's new and improved "EVAPWEB" website (<http://www.evapcoeuropa.com>) for expanded product information. Users can view and download unit certified and steel support drawings in a .pdf format readable using Adobe Acrobat. In addition, scaled isometric views of our equipment in CAD (.dwg format) are also available. Product Literature, Rigging and Maintenance Instructions and EVAPCO logo apparel and merchandise are all accessible online from your computer.

Users may make Requests for Quotation through the website or by e-mailing EVAPCO at this address: [evapco.europa@evapco.be](mailto:evapco.europa@evapco.be).

*With EVAPSPEC and EVAPWEB, equipment selections, written specifications, unit drawing files and EVAPCO on-line information are readily available from the comfort of your own office!*

## System Design

Ultra-AT Cooling Towers are constructed of heavy duty materials and are designed for superior performance providing long, trouble-free operation. However, proper equipment selection, installation and maintenance are necessary to ensure optimum unit performance. Several of the major considerations when designing and operating a cooling tower installation are presented in the following paragraphs. For additional information, contact your local EVAPCO representative.

## Air Circulation

The location of a cooling tower is an important consideration when reviewing system design. Since cooling towers consume large quantities of air, adequate spacing around the unit is necessary for it to perform properly. The best place to locate any cooling tower is on a roof or at ground level away from walls and other obstructions. Cooling towers that are located in wells, enclosures, or are adjacent to high walls must be properly located to avoid the effects of recirculation. Recirculation occurs when some of the hot moist discharge air leaving the cooling tower flows back into the fresh air inlet. When recirculation causes the inlet wet bulb temperature to the cooling tower to be increased, the capacity of the cooling tower is **decreased**. Refer to EVAPCO Bulletin 311, Equipment Layout Manual, for the recommended layout guidelines for cooling towers.

## Maintaining the Recirculated Water System

A cooling tower removes heat by evaporating a portion of the recirculated spray water. **As a general rule, a cooling tower evaporates 1.58 l/h per 1 kW of cooling capacity.** As this water evaporates, it leaves behind all of its mineral content and impurities. Therefore, it is important to bleed an amount equal to that which is evaporated to prevent the buildup of impurities. If this is not done, the mineral content in the water will increase until the solids eventually deposit in the unit, causing heavy scaling. The bleed line should be installed in the external piping of the unit. It must be properly sized for the application and be provided with a metering valve and flow measurement device to allow for field adjustment of the bleed rate.

## Water Treatment

EVAPCO recommends that all cooling tower users should consult with a reputable water treatment company familiar with local water conditions in order to determine the extent and type of water treatment program recommended for each specific application. Any chemical water treatment used must be compatible with the stainless steel construction of the unit. If acid is used for treatment, it should be accurately metered and the concentration properly controlled. The pH of the water should be maintained between 6.5 and 8.0. Batch chemical feeding is not recommended because it does not afford the proper degree of control. If acid cleaning is required extreme caution must be exercised and only inhibited acids should be used. **Consult EVAPCO'S Maintenance Bulletin 112 for additional information.**

## Capacity Control

The design wet bulb temperature for which a cooling tower is sized occurs only a small percentage of the time. Since the wet bulb temperature is lower than design much of the time, and cooling loads tend to fluctuate, some form of capacity control will be required. The simplest form of capacity control is to cycle the fans on and off. However, this type of control results in larger temperature differentials and does not provide close control of the leaving water temperature.

A better method of capacity control is to use two speed fan motors, which add a second step of control. Two speed motors are an excellent method of capacity control for the Ultra-AT Cooling Tower. This arrangement gives capacity steps of 10% (fans off), 60% (Fans at half speed) and 100%.

Two speed motors also reduce operating costs. At half speed, the motor draws approximately 15% of the full load power. Since the maximum wet bulb temperature and maximum load very seldom coincide, the cooling tower will actually operate at half speed about 80% of the time. Therefore, power costs will be reduced by 85% during the major portion of the year.

A third advantage of two speed motors is that noise levels are reduced by approximately 6 dBA when operating at half speed. Since both the load and wet bulb temperature are normally lower at night, the sound generated by the cooling tower will be substantially reduced during the most noise sensitive time period.

For multiple cell units, both fan cycling and two speed motors can be used to provide additional steps of control. The combination of fan cycling and two speed motors offers a simple and inexpensive means of controlling unit capacity along with substantially reducing the energy costs of the cooling tower.

## Piping

Cooling tower piping should be designed and installed in accordance with generally accepted engineering practices. All piping should be supported by properly designing hangers and supports with allowances made for possible expansion and contraction of the piping system. No external loads should be placed on the cooling tower connections. Do **NOT** anchor any of the piping supports to the cooling tower or its framework.

## Control of Biological Contamination

Water quality should be checked regularly for biological contamination. If biological contamination is detected, a more aggressive water treatment and mechanical cleaning program should be undertaken. The water treatment program should be performed by a qualified water treatment company. It is important that all internal surfaces be kept clean of accumulated dirt and sludge. The UAT sloped basin in Type 316 stainless steel is the ideal solution for this situation. In addition, the drift eliminators should be checked periodically to ensure that they are clean and have not been damaged.

**Note:** The location of the cooling tower must be considered during the equipment layout stages of a project. It is important to prevent the discharge air (potential of biological contamination) from being introduced into the fresh air intakes of the building.



# ULTRA-AT APPLICATIONS



## Special Applications of the Ultra-AT Cooling Tower

The standard Ultra-AT Cooling Tower is suitable for the majority of air conditioning and industrial cooling applications. However, there are some design situations where special consideration must be given with regard to materials of construction, thermal performance, sound level and water quality. Some of these special applications are described below.

### Advanced Technology Low Sound Solutions

The *NEW* Ultra-AT Cooling Tower is now available with four (4) equipment options to reduce the overall sound generated from the side or top of the Ultra-AT Cooling Tower. Each option provides various levels of sound reduction and can be used in combination to provide the lowest sound level. Consult EVAPCO's EVAP-SPEC or ES II selection program for unit sound levels. If a detailed analysis or full octave band data sheet is required for your application, please consult your EVAPCO Sales Representative.

**NOTE: These low sound options may impact the overall installed dimensions of the Ultra-AT Cooling Tower selected.**

#### **Super Low Sound Fan** 9–15 dB(A) Reduction versus Standard Fan!

The Super Low Sound Fan offered by EVAPCO utilizes an extremely wide chord blade design available for sound sensitive applications where the lowest sound levels are desired. The fan is one-piece molded heavy duty FRP construction utilizing a forward swept blade design. The Super Low Sound fan is capable of reducing the unit sound pressure levels **9 dB(A) to 15 dB(A)**, depending on specific unit selection and measurement location. The fans are high efficiency axial propeller type and operate with no loss of thermal performance.

*The Super Low Sound Fan is available on all 2.4m wide Ultra-AT and AT Cooling Towers.*

#### **Low Sound Fan** 4–7 dB(A) Reduction!

The Low Sound Fan offered by EVAPCO is a wide chord blade design available for sound sensitive applications where low sound levels are desired. It is aluminum blade construction with a steel fan hub. The Low Sound Fan is capable of reducing the unit sound pressure levels **4 dB(A) to 7 dB(A)**, depending on specific unit selection and measurement location. The fans are high efficiency axial propeller type and operate with no loss of thermal performance.

*The Low Sound Fan is available on 3.6m wide Ultra-AT and AT Cooling Towers.*

#### **Fan Discharge Sound Attenuation** Up to 10 dB(A) Reduction!

The Ultra-AT Fan Discharge Attenuator offered by EVAPCO is an additional option available to further reduce the sound level of the unit. The attenuator can be used with the standard Ultra-AT fan or in combination with the Low Sound Fan option.

The discharge attenuator is a factory assembled straight sided discharge hood designed to reduce overall discharge sound levels at full fan speed **5 dB(A) to 10 dB(A)**, depending on specific unit selection and measurement location. It is constructed of Z-725 galvanized steel as standard (options available for Type 304/316 stainless steel) and includes insulated walls and a low pressure drop baffling system that is acoustically lined with high density fiberglass. The discharge attenuator is self supported by the unit and is shipped loose to be mounted in the field. The discharge attenuator is covered by a heavy gauge hot dip galvanized steel fan guard to prevent debris from entering the attenuator.

The discharge attenuator will have a minimal impact on unit thermal performance (0%-2% derate depending on specific unit selection).

*The Ultra-AT Discharge Attenuator is available on: 3,6m Ultra-AT and AT Models with the Low Sound Fan option.*

*(Note: The Ultra-AT Fan Discharge Attenuator Option is NOT available on Ultra-AT or AT Models provided with the Super Low Sound Fan.)*

#### **Water Silencer** Up to 7 dB(A) Reduction!

The water silencer option is available for all Ultra-AT models and is located in the falling water area of the cold water basin. The water silencer will reduce the high frequency noise associated with the falling water and is capable of reducing overall sound levels **4 dB(A) to 7 dB(A)** measured at 1.5m from the side or end of the unit. The water silencers reduce overall sound levels **9 dB(A) to 12 dB(A)** (depending on water loading and louver height) measured 1,5m from the side or end of the unit when water is circulated with fans off.

The water silencers are constructed of lightweight PVC sections and can be easily removed for access to the basin area. *The water silencer will have no impact on unit thermal performance.*

Consult EVAPCO's **Advanced Technology Low Sound Solutions** Bulletin No. 650-EU for detailed product and specification information.

### Freecooling

Freecooling is when chilled water is produced by the cooling tower without the use of a mechanical chiller during low ambient conditions. The freecooling or economizer mode of an air conditioning system is used to save cost per kWh when the conditions allow the water in the tower to be cooled to "chiller" like temperatures, typically 5.5°C – 7°C LWT.

EVAPCO's counterflow cooling towers are well suited for free cooling applications. The counterflow fill design helps prevent ice formation with its even temperature gradient through the fill section and enclosed location blocking it from the elements. However, special caution must be taken when selecting, sizing and operating a cooling tower during normal winter or severe winter applications.

Please consult EVAPCO's Engineering Bulletin on Free Cooling Operation of Open Cooling Towers or EVAPCO to assist in selecting a tower for a freecooling application.

### High Temperature Applications

EVAPCO's Ultra-AT Cooling Tower as standard is capable of handling up to 55°C entering water temperature, which is higher than most crossflow cooling tower fill sheets. It will not deform or degrade at a continuous temperature application of 55°C.

However, there are applications where a higher temperature rated fill is required. For these applications, a fill material is available as an option which allows the entering water temperature to operate at a continuous 65°C.

Please consult the factory for selections of high temperature fill Cooling Towers.

### Dirty Water Applications

The fill used in the Ultra-AT Cooling Tower is designed to operate in almost all cooling water applications. However, there are some "dirty" water applications where the standard fill spacing is not adequate, such as a pulp and paper mill cooling tower or other application where heavy particulate will be mixed in with the water.

For additional information, contact your local EVAPCO representative.

### Alternate Arrangements

The Ultra-AT Cooling Tower will fit almost every application. However, there are installations with special piping locations or existing steel that will require the Ultra-AT to be modified to fit the layout.

Please contact the factory and we will develop a design to fit your need.

### Consult the Factory

- Layout Guidelines
- Bypass Connection Sizing and Location
- Equalizer Connection Sizing and Location
- Remote Sump Connection Sizing and Location
- Operating and Maintenance Questions
- Ladders, Platforms and Motor Davits

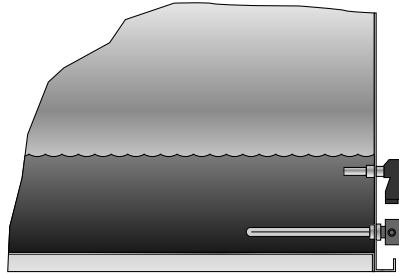
## Optional Equipment for the Ultra-AT Cooling Tower

The standard design of the NEW EVAPCO Ultra-AT provides the customer with the easiest cooling tower to maintain in the industry. There are additional options which can make maintenance easier and extend the life of the cooling tower. These options are listed below.

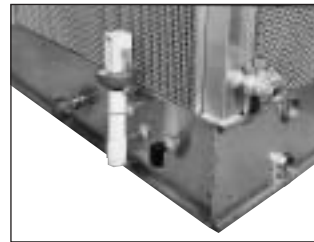
### Electric Heaters

Electric immersion heaters are available factory installed in the basin of the cooling tower. They are sized to maintain a +4 or +5°C pan water temperature with the fans off and an ambient air temperature of -18°C.

They are furnished with a combination thermostat/low water protection device to cycle the heater on when required and to prevent the heater elements from energizing unless they are completely submerged. All components are in weather proof enclosures for outdoor use. The heater power contactors and electric wiring are not included as standard.



### Electric Water Level Control



EVAPCO cooling towers are available with an optional electric water level control system in place of the standard mechanical makeup valve and float assembly. This package provides very accurate control for the basin water level and does not require field adjustment, even under varying operating conditions.

The control was designed by EVAPCO and is manufactured exclusively for EVAPCO. It consists of multiple heavy duty stainless steel electrodes. These electrodes are mounted external to the unit in a vertical stand pipe. For winter operation, the stand pipe must be wrapped with electric heating cable and insulated to protect it from freezing.

The weather protected slow closing solenoid valve(s) for the makeup water connection is factory supplied and is ready for piping to a water supply with a pressure between 140 and 340 kPa.

The weather protected slow closing solenoid valve(s) for the makeup water connection is factory supplied and is ready for piping to a water supply with a pressure between 140 and 340 kPa.

### Other Options

- Hot Water or Steam Coils
- Steam Injectors
- Bottom Suction Connections
- Vibration Isolators (single cell only)
- Vibration Switches
- Remote Sump Connections
- Concrete Basin (By Others) Cooling Tower Option (Type B and C)

**UAT Heater Sizes**

UAT models	-18°C kW	-29°C kW	-40°C kW
<b>UAT</b> 19-56 to 96	5	7	9
19-28 to 98	6	8	12
18-49 to 99	6	9	12
18-511 to 911	7	10	15
18-312 to 912	2 x 4	2 x 6	2 x 8
18-214 to 914	2 x 5	2 x 7	2 x 9
28-518 to 918	2 x 6	2 x 9	2 x 12
28-521 to 921	2 x 7	2 x 10	2 x 15
28-524 to 924	4 x 4	4 x 6	4 x 8
28-428 to 928	4 x 5	4 x 7	4 x 9
38-236 to 936	6 x 4	6 x 6	6 x 8
38-442 to 942	6 x 5	6 x 7	6 x 9
112-012 to 912	2 x 6	2 x 9	2 x 12
112-314 to 914	2 x 7	2 x 10	2 x 15
112-018 to 918	2 x 9	2 x 15	2 x 18
112-520 to 920	2 x 10	2 x 15	3 x 15
212-024 to 924	4 x 6	4 x 9	4 x 12
212-128 to 928	4 x 7	4 x 10	4 x 15
212-036 to 936	4 x 9	4 x 15	4 x 18
312-036 to 936	6 x 6	6 x 9	6 x 12
312-042 to 942	6 x 7	6 x 10	6 x 15
312-054 to 954	6 x 9	6 x 15	6 x 18
312-260 to 960	6 x 10	6 x 15	9 x 15
224-018 to 918	4 x 9	4 x 15	4 x 18
424-024 to 924	4 x 12	4 x 18	6 x 15
424-036 to 936	4 x 18	6 x 18	8 x 18



# ULTRAAT

## COOLING CAPACITY

MODELS UAT 19-56 TO 28-928

Cooling capacity in l/s																					
MODEL NO.	EWT	32	36	32	36	32	36	32	37	35	40	35	40	35	37	40	42	36	37	41	42
	LWT	27	26	27	26	27	26	27	27	30	30	30	30	30	32	30	32	31	32	31	32
	WB	19	19	20	20	21	21	22	22	24	24	25	25	26	26	26	26	27	27	27	27
UAT 19 - 56		31	17	29	15	26	14	23	14	30	19	27	17	23	33	15	22	24	30	16	20
UAT 19 - 66		34	19	32	17	28	15	25	16	33	21	29	19	25	36	17	24	27	32	18	22
UAT 19 - 76		37	22	34	20	31	18	28	19	36	24	32	22	28	39	20	27	30	35	21	24
UAT 19 - 86		40	24	37	22	34	20	30	21	39	26	35	24	31	42	22	29	32	38	23	27
UAT 19 - 96		45	28	42	26	38	24	35	25	44	30	40	28	35	47	25	33	36	43	27	31
UAT 19 - 28		38	21	35	19	32	16	28	17	37	23	33	21	28	41	18	26	30	36	19	24
UAT 19 - 38		41	23	38	21	34	18	30	19	40	26	35	23	31	44	20	29	32	39	21	26
UAT 19 - 48		44	25	41	22	37	20	32	21	42	28	38	25	33	46	22	31	35	42	23	28
UAT 19 - 58		44	26	41	24	38	21	33	22	43	29	39	26	34	47	23	32	35	42	24	29
UAT 19 - 68		48	28	44	26	41	23	36	25	46	31	42	29	37	50	25	35	38	46	27	32
UAT 19 - 78		49	30	46	28	42	26	38	27	47	33	43	31	38	51	27	36	40	47	29	33
UAT 19 - 88		52	32	49	29	44	26	40	27	50	35	46	32	40	55	28	38	42	50	30	35
UAT 19 - 98		54	34	51	31	46	29	42	30	52	37	48	34	42	57	31	40	44	52	32	37
UAT 18 - 49		51	30	47	27	43	25	38	26	49	33	44	30	39	53	27	37	41	48	28	34
UAT 18 - 59		53	30	49	28	45	25	40	26	51	34	46	31	40	56	27	38	42	51	29	34
UAT 18 - 69		58	35	54	32	49	29	44	30	56	38	51	35	45	60	31	42	46	55	33	39
UAT 18 - 79		59	37	55	34	50	31	45	33	57	40	52	37	46	62	33	44	48	57	35	40
UAT 18 - 89		62	38	58	35	53	32	47	33	60	41	54	38	48	65	34	45	50	59	36	42
UAT 18 - 99		64	40	60	37	55	34	49	35	62	43	56	40	50	N.A.	36	47	52	61	38	44
UAT 18 - 511		58	34	53	31	49	28	43	29	55	37	50	34	44	60	30	41	46	55	32	38
UAT 18 - 611		66	38	61	35	55	31	49	33	63	42	57	38	50	69	34	47	52	63	36	43
UAT 18 - 711		67	42	63	39	57	35	51	37	65	45	59	42	52	70	38	49	54	64	39	46
UAT 18 - 811		71	43	66	40	60	36	54	38	68	47	62	43	55	74	39	52	57	68	41	48
UAT 18 - 911		73	45	68	42	62	39	56	40	71	49	64	46	57	77	41	54	59	70	43	50
UAT 18 - 312		64	37	59	34	54	30	48	32	62	41	56	38	49	67	33	46	51	61	35	42
UAT 18 - 412		68	42	63	38	58	35	52	37	65	45	59	42	52	71	38	50	54	64	39	46
UAT 18 - 512		73	42	68	38	62	34	55	36	71	47	64	42	55	77	37	52	58	70	39	47
UAT 18 - 612		79	48	73	44	67	40	60	42	76	52	69	48	61	83	43	58	63	75	45	53
UAT 18 - 712		82	51	76	47	70	43	63	45	79	55	72	51	64	86	46	60	66	78	48	56
UAT 18 - 812		83	51	78	47	71	42	64	44	80	56	73	51	64	87	46	61	67	79	48	56
UAT 18 - 912		86	54	80	50	74	46	66	48	83	58	76	54	67	N.A.	49	63	70	82	51	59
UAT 18 - 214		78	46	73	42	66	38	59	40	75	51	68	46	60	82	41	56	62	75	43	52
UAT 18 - 314		82	51	76	47	70	43	63	45	79	55	72	51	63	86	46	60	66	78	48	56
UAT 18 - 414		86	49	80	45	72	40	64	42	83	55	74	50	65	90	44	61	68	82	46	55
UAT 18 - 514		86	51	80	47	73	42	65	45	82	56	75	52	66	90	46	62	69	82	48	57
UAT 18 - 614		90	55	83	51	76	47	69	49	86	60	78	56	69	94	50	66	72	85	52	61
UAT 18 - 714		92	56	86	51	78	46	70	49	89	61	81	56	71	97	50	67	74	88	53	62
UAT 18 - 814		96	58	89	54	82	49	73	51	92	64	84	59	74	100	53	70	77	91	55	65
UAT 18 - 914		100	62	93	58	85	53	77	55	96	67	87	62	77	N.A.	56	73	81	95	59	68
UAT 28 - 518		98	60	91	56	84	51	75	53	95	66	86	61	76	103	55	72	79	94	57	67
UAT 28 - 618		108	61	100	56	90	50	80	53	103	68	93	62	81	113	54	76	85	102	57	69
UAT 28 - 718		117	70	109	65	99	58	89	61	112	77	102	71	90	122	63	85	94	111	66	78
UAT 28 - 818		126	77	117	71	107	64	96	67	121	84	110	77	97	132	69	92	101	120	72	85
UAT 28 - 918		130	80	121	75	110	68	99	71	125	87	114	81	100	N.A.	73	95	105	124	76	88
UAT 28 - 521		116	68	108	62	98	56	87	59	112	75	101	69	89	122	61	83	92	111	64	76
UAT 28 - 621		120	74	112	69	103	62	92	65	116	81	105	75	93	126	67	88	97	115	70	82
UAT 28 - 721		133	77	123	70	112	62	99	66	128	85	115	77	101	139	68	94	105	126	72	86
UAT 28 - 821		143	87	133	80	122	72	109	76	138	95	125	88	111	150	78	105	115	136	82	97
UAT 28 - 921		148	92	138	85	126	78	113	81	143	100	130	92	115	155	84	109	119	141	87	101
UAT 28 - 524		135	83	126	77	115	70	103	73	130	91	118	84	105	142	75	99	109	129	79	92
UAT 28 - 624		147	84	136	77	124	69	109	72	141	93	127	85	111	154	75	104	116	140	79	95
UAT 28 - 724		158	95	147	88	134	79	120	83	152	105	138	96	122	165	86	115	127	150	90	106
UAT 28 - 824		166	102	155	94	142	85	127	89	160	111	146	102	129	174	92	122	134	159	96	113
UAT 28 - 924		173	107	161	100	147	91	132	95	166	116	151	108	134	N.A.	98	127	139	165	102	118
UAT 28 - 428		156	92	145	84	132	75	118	79	151	102	136	93	119	164	82	112	125	149	86	103
UAT 28 - 528		172	99	159	90	145	80	128	85	165	109	149	99	130	180	88	122	136	163	92	111
UAT 28 - 628		184	112	172	103	157	93	141	97	178	122	161	112	142	193	100	135	148	176	105	124
UAT 28 - 728		192	117	179	108	163	97	146	102	185	128	168	118	148	201	105	140	154	183	110	129
UAT 28 - 828		192	119	179	110	163	101	147	105	185	129	168	120	149	201	108	141	155	183	113	131
UAT 28 - 928		200	124	186	115	170	106	153	110	193	134	175	125	155	N.A.	113	147	161	191	117	136

Note: For alternate selections and conditions other than those stated, consult your EVAPSPEC II selection program or local EVAPCO representative.



# COOLING CAPACITY

MODELS UAT 38-236 TO 212-928

Cooling capacity in l/s																					
MODEL NO.	EWT	32	36	32	36	32	36	32	37	35	40	35	40	35	37	40	42	36	37	41	42
	LWT	27	26	27	26	27	26	27	27	30	30	30	30	30	32	30	32	31	32	31	32
	WB	19	19	20	20	21	21	22	22	24	24	25	25	26	26	26	26	27	27	27	27
UAT 38 - 236		179	98	165	88	148	77	129	83	171	109	153	99	131	188	86	123	138	169	91	111
UAT 38 - 336		192	112	178	102	162	91	144	96	185	124	167	113	146	201	100	137	153	183	105	126
UAT 38 - 436		203	125	189	115	173	105	155	110	195	136	177	125	157	212	113	149	163	193	118	138
UAT 38 - 536		220	126	204	115	185	103	164	108	212	140	191	127	166	231	112	156	174	209	118	142
UAT 38 - 636		216	129	201	118	183	106	164	112	208	142	188	130	166	226	115	156	173	206	121	144
UAT 38 - 736		236	143	220	132	201	119	180	125	228	157	207	144	183	248	129	173	190	226	135	159
UAT 38 - 836		250	152	233	140	213	127	191	133	240	167	219	153	193	262	137	183	201	238	144	169
UAT 38 - 936		259	161	241	149	221	137	198	143	250	174	227	162	201	N.A.	146	190	209	247	152	176
UAT 38 - 442		222	136	207	126	189	114	170	120	214	148	194	137	172	233	123	163	179	212	128	150
UAT 38 - 542		257	148	239	135	217	120	192	127	248	164	223	149	195	270	131	182	204	245	139	166
UAT 38 - 642		276	167	258	154	235	139	211	146	266	184	242	169	214	290	151	202	223	264	158	186
UAT 38 - 742		288	175	268	161	245	146	220	153	277	192	252	176	222	301	158	210	232	274	165	194
UAT 38 - 842		288	178	268	166	245	152	220	158	277	194	252	179	223	302	162	211	232	275	169	196
UAT 38 - 942		300	186	279	173	255	158	230	165	289	202	262	187	232	N.A.	169	220	242	286	176	204
UAT 112 - 012		93	51	86	46	77	41	68	43	89	57	80	52	69	98	45	64	72	88	48	58
UAT 112 - 112		101	57	93	51	84	45	74	48	97	63	87	57	75	106	50	70	79	96	53	64
UAT 112 - 212		107	61	100	56	90	49	80	52	103	68	93	62	81	113	54	76	85	102	57	69
UAT 112 - 312		108	64	100	59	91	53	82	55	104	71	94	65	83	113	57	78	86	103	60	72
UAT 112 - 412		113	65	105	59	95	53	84	56	109	72	98	66	85	119	58	80	89	108	61	73
UAT 112 - 512		111	68	103	63	94	58	85	60	107	74	97	69	86	116	62	81	89	106	65	75
UAT 112 - 612		115	70	108	64	98	58	88	60	111	76	101	70	89	121	62	84	93	110	65	77
UAT 112 - 712		122	74	114	68	104	62	93	65	118	81	107	75	94	128	67	89	98	117	70	82
UAT 112 - 812		127	79	118	73	108	67	97	70	122	85	111	79	98	133	72	93	102	121	75	86
UAT 112 - 912		136	84	127	78	116	72	104	75	131	91	119	85	105	N.A.	77	100	110	130	80	93
UAT 112 - 314		124	70	115	64	104	57	92	60	119	78	107	71	93	130	62	87	97	118	66	79
UAT 112 - 414		126	75	117	69	107	62	95	65	121	82	110	75	96	132	67	91	101	120	70	84
UAT 112 - 514		130	80	121	74	111	68	99	71	125	87	114	81	101	136	73	95	105	124	76	88
UAT 112 - 614		133	80	124	74	113	66	101	70	128	88	117	81	103	140	72	97	107	127	75	89
UAT 112 - 714		138	85	129	79	118	72	106	76	133	93	121	86	107	145	78	101	111	132	81	94
UAT 112 - 814		145	88	135	81	124	74	111	77	140	97	127	89	112	152	80	106	117	139	83	98
UAT 112 - 914		151	94	141	87	129	80	116	83	146	102	132	94	117	159	85	111	122	144	89	103
UAT 112 - 018		146	81	135	73	122	65	107	69	140	91	126	82	108	154	71	101	114	139	76	92
UAT 112 - 118		153	86	142	78	128	69	113	73	147	96	132	87	114	161	76	107	120	146	80	97
UAT 112 - 218		156	92	145	84	132	75	117	79	150	101	136	93	119	163	82	112	124	149	86	103
UAT 112 - 318		164	98	153	90	139	80	124	84	158	107	143	98	126	172	87	118	131	156	92	109
UAT 112 - 418		169	104	157	97	144	88	129	92	163	113	148	105	131	177	95	124	136	161	99	115
UAT 112 - 518		179	108	167	100	153	90	137	94	173	119	157	109	138	188	97	131	144	171	102	120
UAT 112 - 618		186	115	173	107	158	98	142	102	179	125	162	116	144	195	105	136	150	177	109	126
UAT 112 - 718		192	117	179	108	163	98	146	102	185	128	168	118	148	201	105	140	155	183	110	130
UAT 112 - 818		200	124	186	115	170	105	153	110	192	134	175	124	155	N.A.	113	147	161	190	117	136
UAT 112 - 918		N.A.	129	193	120	177	110	159	114	200	140	182	129	161	N.A.	117	152	167	198	122	141
UAT 112 - 520		186	106	172	97	156	86	138	91	179	118	161	107	140	195	94	131	147	177	99	120
UAT 112 - 620		192	118	178	110	163	100	147	105	185	129	168	119	148	201	108	141	155	183	112	130
UAT 112 - 720		201	121	187	112	171	101	153	106	194	133	176	122	155	211	109	147	162	192	115	135
UAT 112 - 820		208	128	193	119	177	109	159	114	200	140	182	129	161	218	117	152	167	198	122	141
UAT 112 - 920		216	133	201	124	184	114	165	118	208	145	189	134	167	226	122	158	174	206	127	147
UAT 212 - 024		202	113	187	103	168	91	148	96	194	126	174	114	150	212	100	141	158	192	105	128
UAT 212 - 124		199	117	185	106	168	95	150	100	192	129	173	117	152	209	104	143	158	190	109	131
UAT 212 - 224		215	122	199	111	180	99	159	105	207	136	186	123	161	226	108	151	169	204	114	138
UAT 212 - 324		216	128	201	118	183	105	163	111	208	141	188	129	165	226	115	156	173	206	121	143
UAT 212 - 424		226	130	210	119	190	106	169	112	217	144	196	131	171	237	115	160	179	215	122	146
UAT 212 - 524		231	139	215	128	196	115	176	121	222	153	202	140	178	242	125	168	186	220	131	155
UAT 212 - 624		239	148	223	137	204	125	183	131	230	161	209	149	185	250	135	175	193	228	140	163
UAT 212 - 724		245	148	228	137	208	124	187	130	236	163	214	149	189	256	134	179	197	233	140	165
UAT 212 - 824		254	157	236	146	216	134	194	139	244	171	222	158	197	266	143	186	205	242	149	173
UAT 212 - 924		272	169	253	157	232	144	208	150	262	183	238	170	211	N.A.	154	200	219	260	160	185
UAT 212 - 128		235	132	218	120	196	106	173	112	226	147	203	133	175	247	116	164	184	224	123	149
UAT 212 - 228		236	139	219	126	200	113	177	119	227	153	205	140	180	247	123	169	188	225	130	155
UAT 212 - 328		248	141	229	128	208	113	183	120	238	156	214	142	186	260	124	174	195	236	131	159
UAT 212 - 428		252	150	234	137	214	123	190	129	243	165	220	151	193	264	134	182	202	240	141	167
UAT 212 - 528		260	160	242	149	221	135	199	142	250	174	227	161	201	272	145	191	209	248	152	176
UAT 212 - 628		267	160	248	147	227	132	203	139	257	176	233	161	205	280	144	194	214	254	151	178
UAT 212 - 728		276	171	257	159	235	145	211	151	266	186	242	172	214	289	155	203	223	263	162	188
UAT 212 - 828		291	177	271	163	248	147	222	154	280	193	254	178	225	305	159	212	234	277	167	196
UAT 212 - 928		303	187	282	174	258	160	232	166	292	204</										



# ULTRAAT

## COOLING CAPACITY

MODELS UAT 212-036 TO 312-960

Cooling capacity in l/s																					
MODEL NO.	EWT	32	36	32	36	32	36	32	37	35	40	35	40	35	37	40	42	36	37	41	42
	LWT	27	26	27	26	27	26	27	27	30	30	30	30	30	32	30	32	31	32	31	32
	WB	19	19	20	20	21	21	22	22	24	24	25	25	26	26	26	26	27	27	27	27
UAT 212 - 036		295	171	274	157	249	140	221	147	283	190	256	173	224	309	152	210	234	281	160	193
UAT 212 - 136		306	172	283	156	256	138	225	146	294	191	264	173	228	322	152	214	240	291	160	194
UAT 212 - 236		319	196	297	182	272	166	244	173	307	214	279	198	247	334	178	234	257	304	186	216
UAT 212 - 336		328	195	305	179	278	160	248	169	316	215	286	197	251	343	174	237	262	313	183	218
UAT 212 - 436		338	209	314	193	288	176	258	184	325	227	296	210	262	354	189	248	272	322	197	230
UAT 212 - 536		358	217	334	199	305	180	273	189	345	237	314	218	276	376	195	261	288	342	204	241
UAT 212 - 636		371	230	346	214	316	195	284	204	358	250	325	231	288	389	209	273	299	354	218	253
UAT 212 - 736		383	234	357	216	327	195	293	205	369	256	336	235	297	402	211	281	309	366	220	259
UAT 212 - 836		399	247	372	230	340	211	306	220	385	269	350	249	309	N.A.	225	293	322	381	235	272
UAT 212 - 936		N.A.	257	386	239	353	219	318	228	400	279	363	259	321	N.A.	234	305	335	396	244	282
UAT 312 - 036		306	172	283	156	256	138	225	146	294	191	264	173	228	322	152	214	239	291	160	194
UAT 312 - 136		302	177	281	162	255	144	227	152	290	195	263	179	230	317	157	216	240	288	166	198
UAT 312 - 236		326	186	302	169	274	150	241	159	313	206	282	187	245	342	164	230	257	310	174	209
UAT 312 - 336		327	195	304	179	277	160	247	168	315	214	285	196	251	342	174	236	262	312	183	217
UAT 312 - 436		336	208	313	192	286	175	257	183	324	226	294	209	260	352	188	247	271	320	196	228
UAT 312 - 536		350	211	326	194	298	175	266	184	337	231	306	212	270	367	189	255	281	334	198	235
UAT 312 - 636		362	224	337	208	308	190	277	198	349	243	317	225	280	379	204	266	292	345	212	246
UAT 312 - 736		371	225	345	208	316	187	283	197	357	246	324	227	286	388	203	271	298	353	212	250
UAT 312 - 836		385	238	358	221	328	203	294	211	370	259	337	240	298	403	217	282	310	367	226	262
UAT 312 - 936		N.A.	255	384	238	351	218	316	227	397	277	361	257	319	N.A.	233	303	332	393	242	281
UAT 312 - 042		333	192	309	175	280	157	249	165	320	213	289	194	252	349	171	237	264	317	180	216
UAT 312 - 142		357	200	330	182	298	161	262	170	343	223	308	202	266	375	177	249	279	339	187	226
UAT 312 - 242		340	208	316	192	289	175	260	183	327	227	297	209	263	356	188	249	274	324	196	230
UAT 312 - 342		358	210	332	192	303	172	269	181	344	232	311	212	273	375	187	257	285	341	197	235
UAT 312 - 442		381	227	355	209	324	187	289	197	367	250	333	229	293	400	203	276	306	364	213	253
UAT 312 - 542		393	243	366	225	335	205	301	215	379	264	344	245	305	412	220	289	317	375	230	267
UAT 312 - 642		404	243	376	223	344	201	307	212	389	267	354	245	311	424	218	294	325	386	229	271
UAT 312 - 742		418	259	390	241	356	220	320	229	403	281	366	260	324	438	235	307	337	399	245	285
UAT 312 - 842		440	268	410	247	375	224	336	234	424	293	386	270	341	462	242	322	355	420	253	297
UAT 312 - 942		458	284	427	264	391	242	351	252	442	308	401	286	355	N.A.	259	337	370	437	269	312
UAT 312 - 054		462	260	428	236	386	209	340	221	444	289	398	262	345	486	229	323	362	439	242	293
UAT 312 - 154		470	277	437	254	398	227	354	239	452	306	410	280	359	493	247	338	375	448	260	310
UAT 312 - 254		503	288	467	263	423	234	374	247	484	320	436	291	379	528	256	356	398	479	270	325
UAT 312 - 354		494	294	460	270	419	242	374	255	476	324	432	297	379	518	263	357	396	471	277	328
UAT 312 - 454		509	314	474	291	433	266	390	278	490	342	446	316	394	533	285	373	410	485	298	346
UAT 312 - 554		540	327	503	301	460	272	412	285	521	358	473	329	417	566	294	394	435	515	308	363
UAT 312 - 654		560	346	521	322	477	294	428	307	539	376	490	349	434	586	315	411	451	534	328	381
UAT 312 - 754		578	352	538	325	492	294	442	309	557	386	506	355	447	606	318	423	466	551	332	391
UAT 312 - 854		602	373	561	347	513	318	461	331	580	405	527	375	466	N.A.	340	442	485	574	354	410
UAT 312 - 954		N.A.	388	582	361	533	330	479	344	602	421	547	390	484	N.A.	353	459	504	597	368	426
UAT 312 - 260		473	273	439	249	398	222	353	234	455	303	410	275	358	496	242	336	374	450	255	307
UAT 312 - 360		485	296	451	274	413	249	370	261	467	324	424	298	375	508	268	355	390	462	280	328
UAT 312 - 460		554	317	514	289	466	257	412	271	533	352	480	319	417	582	281	392	438	527	296	357
UAT 312 - 560		556	332	517	305	472	273	421	288	535	365	486	334	427	582	297	402	445	530	312	370
UAT 312 - 660		572	353	533	328	487	299	438	312	551	384	501	356	443	599	321	420	461	546	335	389
UAT 312 - 760		600	362	559	334	510	301	457	316	578	397	525	365	463	628	326	437	482	572	342	403
UAT 312 - 860		620	383	577	357	528	326	474	340	597	417	542	386	480	649	349	455	500	591	364	422
UAT 312 - 960		643	398	599	371	548	339	493	354	620	433	563	401	498	674	363	472	519	614	378	438

Note: For alternate selections and conditions other than those stated, consult your EVAPSPEC II selection program or local EVAPCO representative.



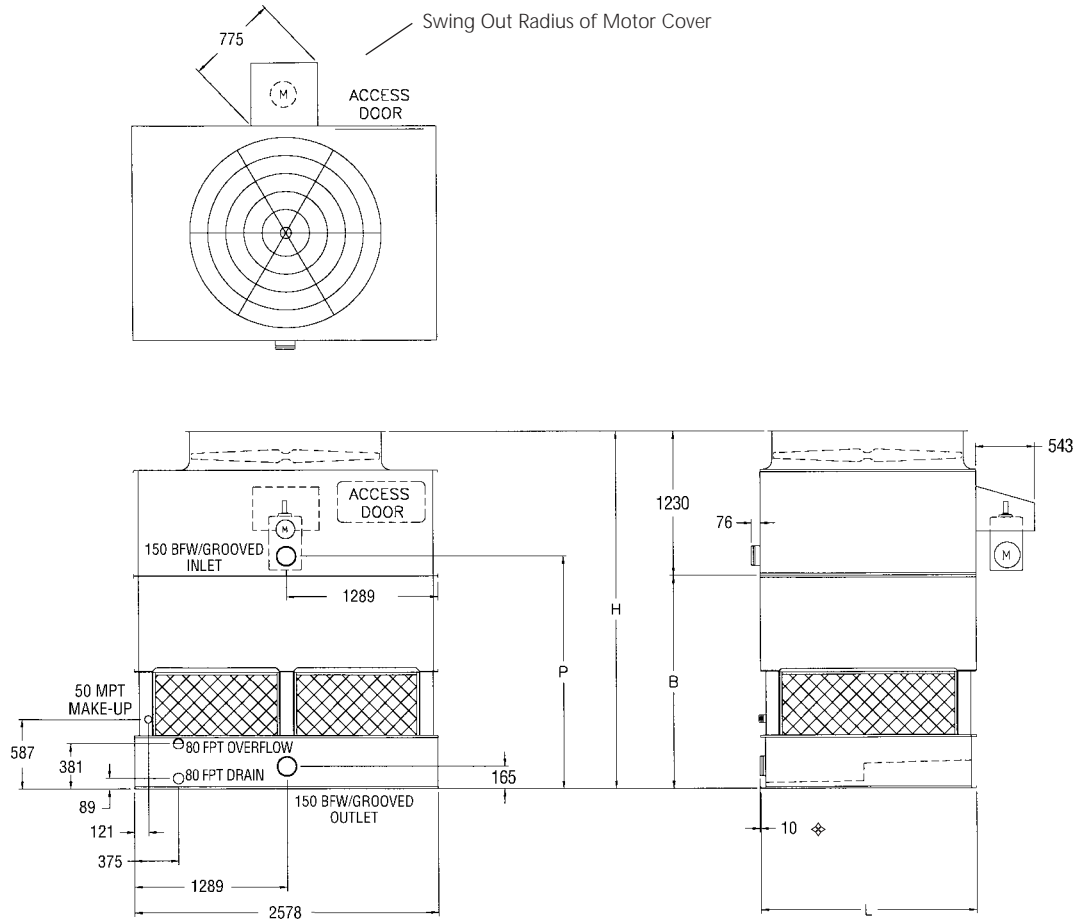
# COOLING CAPACITY

MODELS UAT 224-018 TO 424-936

Cooling capacity in l/s																					
MODEL NO.	EWT	32	36	32	36	32	36	32	37	35	40	35	40	35	37	40	42	36	37	41	42
	LWT	27	26	27	26	27	26	27	27	30	30	30	30	30	32	30	32	31	32	31	32
	WB	19	19	20	20	21	21	22	22	24	24	25	25	26	26	26	26	27	27	27	27
UAT 224 - 018		293	162	270	147	243	130	214	138	281	181	251	164	217	308	143	203	228	278	151	184
UAT 224 - 118		306	172	283	156	256	138	225	146	294	191	264	173	228	322	152	214	240	291	160	194
UAT 224 - 218		312	184	290	168	264	150	235	158	300	203	272	185	238	327	164	224	249	297	172	206
UAT 224 - 318		334	191	310	174	281	155	248	164	321	212	289	193	251	350	169	236	264	317	179	215
UAT 224 - 418		328	195	305	179	278	160	248	169	316	215	286	197	251	343	174	237	262	313	183	218
UAT 224 - 518		338	209	314	193	288	176	258	184	325	227	296	210	262	354	189	248	272	322	197	230
UAT 224 - 618		358	217	334	199	305	180	273	189	345	237	314	218	276	376	195	261	288	342	204	241
UAT 224 - 718		383	234	357	216	327	195	293	205	369	256	336	235	297	402	211	281	309	366	220	259
UAT 224 - 818		399	247	372	230	340	211	306	220	385	269	350	249	309	N.A.	225	293	322	381	235	272
UAT 224 - 918		N.A.	257	386	239	353	219	318	228	400	279	363	259	321	N.A.	234	305	335	396	244	282
UAT 424 - 024		371	204	342	184	308	162	270	173	356	228	318	206	274	391	179	256	288	352	189	232
UAT 424 - 124		401	225	371	204	335	180	294	191	385	250	346	227	299	422	198	280	314	381	209	254
UAT 424 - 224		396	232	368	211	335	189	297	199	381	256	345	233	301	416	206	284	315	378	217	260
UAT 424 - 324		428	243	396	221	358	196	316	208	411	270	370	245	321	449	215	301	337	407	227	274
UAT 424 - 424		429	255	399	234	364	210	325	220	413	281	375	257	329	450	228	310	344	409	240	285
UAT 424 - 524		450	258	417	236	379	210	335	222	432	286	390	261	340	472	229	319	356	428	242	291
UAT 424 - 624		441	272	411	252	376	230	338	240	425	296	386	274	342	462	247	324	356	421	258	300
UAT 424 - 724		460	276	428	254	391	229	350	241	443	303	402	278	354	482	248	334	369	438	260	308
UAT 424 - 824		487	295	453	272	414	246	371	257	469	323	426	297	376	510	265	355	392	464	278	328
UAT 424 - 924		541	335	504	312	461	286	414	298	521	364	474	338	419	N.A.	306	397	437	516	318	369
UAT 424 - 036		538	292	495	264	444	230	389	246	515	328	459	295	394	567	256	369	415	509	271	333
UAT 424 - 136		566	312	522	281	469	248	412	264	542	348	485	315	418	596	273	390	439	536	289	354
UAT 424 - 236		604	354	562	323	511	289	454	305	582	391	526	357	460	634	315	433	481	576	331	397
UAT 424 - 336		646	368	599	334	542	297	478	314	621	408	559	371	485	679	325	455	509	615	343	414
UAT 424 - 436		636	376	591	344	539	309	480	325	612	415	554	379	486	666	335	458	508	606	353	421
UAT 424 - 536		655	404	610	374	558	341	501	356	631	440	573	407	507	686	366	480	528	625	382	445
UAT 424 - 636		695	418	648	384	591	346	529	364	670	459	608	421	536	729	375	506	559	663	393	466
UAT 424 - 736		744	452	693	417	633	376	568	394	717	495	651	455	575	779	407	543	599	710	426	501
UAT 424 - 836		775	480	722	446	660	409	593	426	746	521	678	483	600	812	437	569	625	739	455	527
UAT 424 - 936		805	499	750	464	685	425	616	443	775	541	705	502	623	N.A.	454	591	649	768	473	548

Note: For alternate selections and conditions other than those stated, consult your EVAPSPEC II selection program or local EVAPCO representative.

### MODELS: UAT 19-56 to 19-98



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)			
		Shipping	Operating	Heaviest Section (Lower)			H†	B	P	L
UAT 19-56	109	1315	2240	675	4.0	12.5	3026	1797	1965	1826
UAT 19-66	120	1335	2260	675	5.5	14.3	3026	1797	1965	1826
UAT 19-76	135	1425	2350	765	5.5	14.0	3331	2102	2270	1826
UAT 19-86	148	1440	2365	765	7.5	15.3	3331	2102	2270	1826
UAT 19-96	169	1570	2495	865	11.0	17.2	3636	2397	2578	1826
UAT 19-28	133	1490	2585	770	4.0	14.8	3077	1848	2016	2283
UAT 19-38	144	1505	2605	770	5.5	16.8	3077	1848	2016	2283
UAT 19-48	156	1520	2615	770	7.5	18.5	3077	1848	2016	2283
UAT 19-58	162	1610	2710	875	5.5	16.6	3381	2152	2320	2283
UAT 19-68	175	1625	2720	875	7.5	18.1	3381	2153	2321	2283
UAT 19-78	183	1745	2845	1,000	7.5	17.9	3686	2457	2626	2283
UAT 19-88	193	1650	2750	875	11.0	20.6	3381	2153	2321	2283
UAT 19-98	204	1775	2870	1,000	11.0	20.3	3686	2457	2626	2283

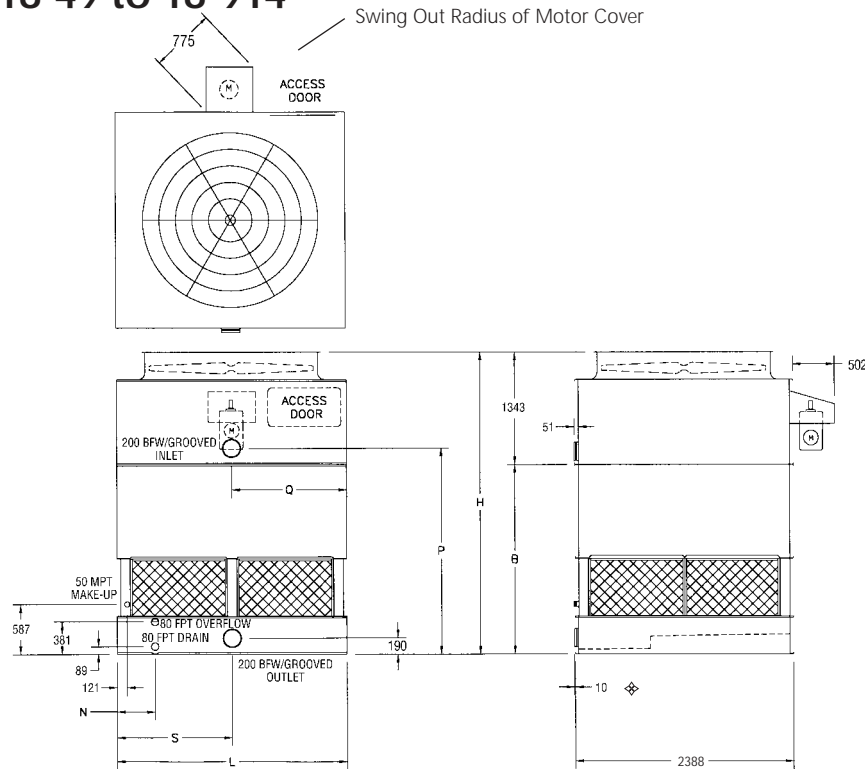
NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 Do not use catalog drawings for certified prints. Dimensions are subject to change.  
 Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.  
 Adequate spacing must be allowed for access to the cooling tower.

† Height includes fan guard which ships factory mounted.

❖ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

## MODELS: UAT 18-49 to 18-914



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)					
		Shipping	Operating	Heaviest Section (Lower)			H†	B	P	L	N	S&Q
UAT 18-49	186	1740	2960	935	7.5	19.4	3588	2245	2438	2731	460	1365
UAT 18-59	191	1660	2880	840	11.0	22.5	3283	1940	2134	2731	460	1365
UAT 18-69	214	1775	2995	935	11.0	22.0	3588	2245	2438	2731	460	1365
UAT 18-79	222	1900	3120	1060	11.0	21.7	3893	2550	2743	2731	460	1365
UAT 18-89	231	1795	3015	935	15.0	24.2	3588	2245	2438	2731	460	1365
UAT 18-99	240	1925	3145	1060	15.0	23.7	3893	2550	2743	2731	460	1365
UAT 18-511	209	1980	3395	1065	7.5	22.0	3588	2245	2438	3188	565	1594
UAT 18-611	237	1905	3320	970	15.0	27.8	3283	1940	2134	3188	565	1594
UAT 18-711	251	2165	3580	1215	11.0	24.5	3893	2550	2743	3188	565	1594
UAT 18-811	264	2035	3450	1065	15.0	27.3	3588	2245	2438	3188	565	1594
UAT 18-911	275	2185	3600	1215	15.0	26.8	3893	2550	2743	3188	565	1594
UAT 18-312	232	2195	3845	1185	7.5	24.5	3588	2245	2438	3651	454	1826
UAT 18-412	252	2360	4010	1345	7.5	24.0	3893	2550	2743	3651	454	1826
UAT 18-512	263	2100	3750	1065	15.0	31.0	3283	1940	2134	3651	454	1826
UAT 18-612	293	2250	3900	1185	15.0	30.4	3588	2245	2438	3651	454	1826
UAT 18-712	307	2415	4065	1345	15.0	29.9	3893	2550	2743	3651	454	1826
UAT 18-812	310	2265	3915	1185	18.5	32.7	3588	2245	2488	3651	454	1826
UAT 18-912	323	2425	4080	1345	18.5	32.1	3893	2550	2743	3651	454	1826
UAT 18-214	285	2430	4370	1335	11.0	30.4	3699	2356	2550	4261	302	2130
UAT 18-314	306	2615	4555	1520	11.0	29.9	4004	2661	2854	4261	302	2130
UAT 18-414	308	2295	4230	1160	18.5	36.3	3394	2051	2245	4261	302	2130
UAT 18-514	315	2455	4390	1335	15.0	33.2	3699	2356	2550	4261	302	2130
UAT 18-614	335	2640	4575	1520	15.0	32.7	4004	2661	2854	4261	302	2130
UAT 18-714	342	2470	4405	1335	18.5	35.6	3699	2356	2550	4261	302	2130
UAT 18-814	357	2475	4415	1335	22.0	37.8	3699	2356	2550	4261	302	2130
UAT 18-914	374	2665	4600	1520	22.0	37.1	4004	2661	2854	4261	302	2130

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water. Do not use catalog drawings for certified prints. Dimensions are subject to change. Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling. Adequate spacing must be allowed for access to the cooling tower.

† Height includes fan guard which ships factory mounted.

◆ Outlet connection extends 10mm beyond bottom flange.

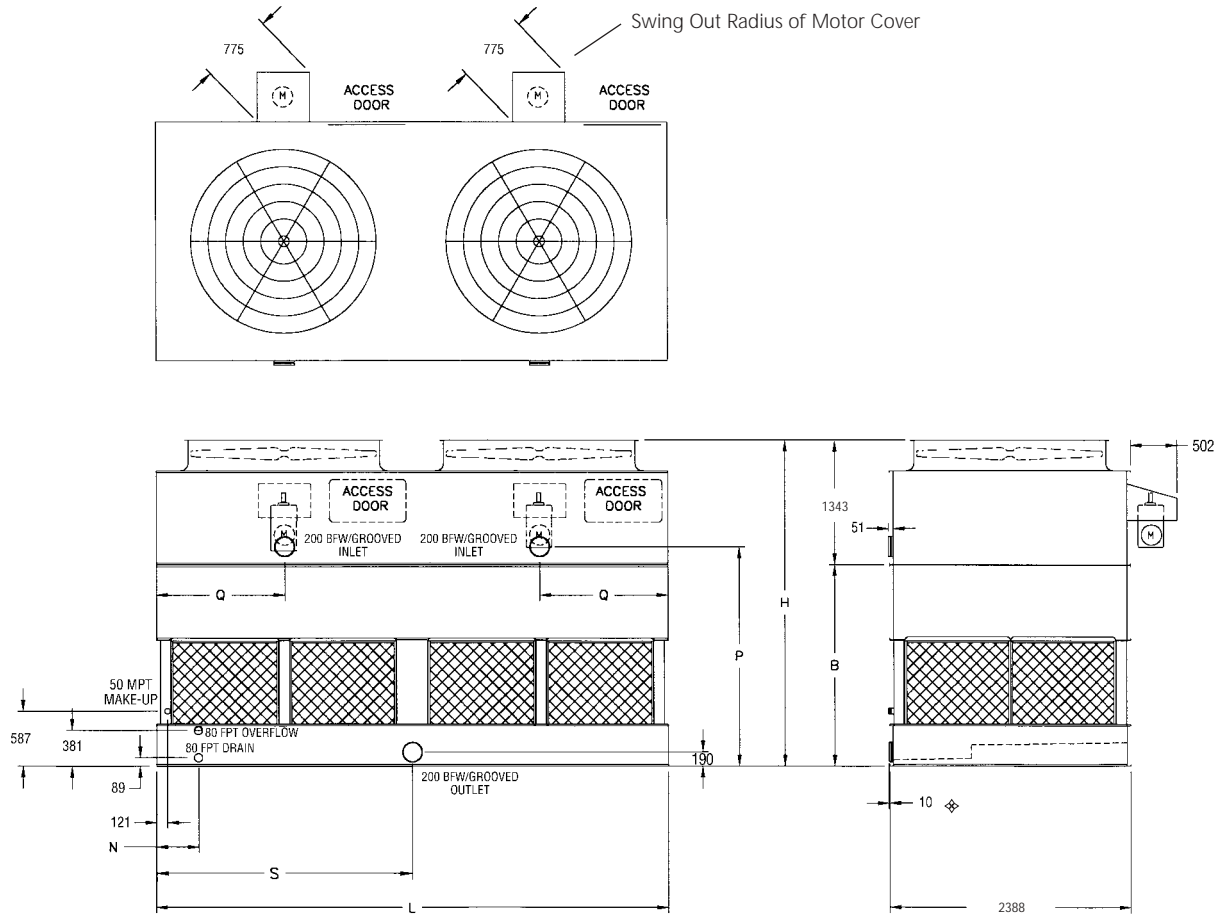
\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.



# ULTRAAT

## ENGINEERING DATA & DIMENSIONS

### MODELS: UAT 28-518 to 28-921



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m³/s)	Dimensions (mm)						
		Shipping	Operating	Heaviest Section (Lower)			H†	B	P	L	N	Q	S
UAT 28-518	367	3545	6070	2075	(2) 5.5	35.2	4105	2762	2956	5486	451	1365	2743
UAT 28-618	384	3130	5650	1610	(2) 11.0	45.4	3496	2153	2346	5486	451	1365	2743
UAT 28-718	432	3350	5875	1835	(2) 11.0	44.5	3800	2457	2651	5486	451	1365	2743
UAT 28-818	467	3375	5895	1835	(2) 15.0	48.8	3800	2457	2651	5486	451	1365	2743
UAT 28-918	485	3615	6135	2075	(2) 15.0	48.0	4105	2762	2956	5486	451	1365	2743
UAT 28-521	423	3790	6765	2065	(2) 7.5	44.2	3800	2457	2651	6401	565	1594	3200
UAT 28-621	450	4070	7040	2340	(2) 7.5	43.5	4105	2762	2956	6401	565	1594	3200
UAT 28-721	478	3590	6565	1810	(2) 15.0	56.0	3496	2153	2346	6401	565	1594	3200
UAT 28-821	532	3845	6815	2065	(2) 15.0	55.0	3800	2457	2651	6401	565	1594	3200
UAT 28-921	554	4125	7095	2340	(2) 15.0	54.0	4105	2762	2956	6401	565	1594	3200

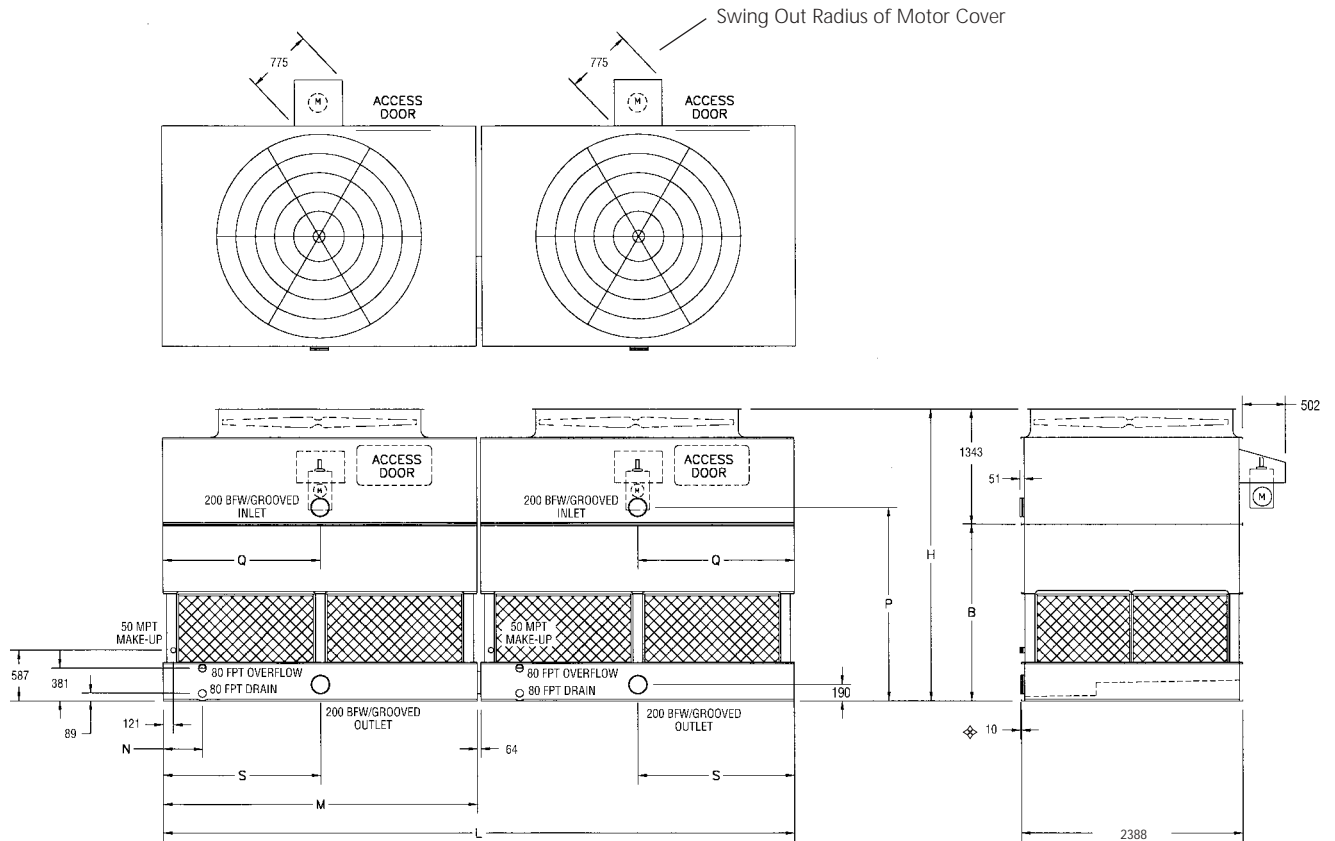
NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water. Do not use catalog drawings for certified prints. Dimensions are subject to change. Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling. Adequate spacing must be allowed for access to the cooling tower.

† Height includes fan guard which ships factory mounted.

⊕ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

## MODELS: UAT 28-524 to 28-928



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)						
		Shipping	Operating	Heaviest Section			H†	B	P	L	N	S&Q	M
UAT 28-524	505	4710	8010	1345	(2) 7.5	47.9	4105	2762	2956	7366	454	1826	3651
UAT 28-624	526	4190	7495	1065	(2) 15.0	61.7	3496	2153	2346	7366	454	1826	3651
UAT 28-724	585	4490	7795	1180	(2) 15.0	60.6	3800	2457	2651	7366	454	1826	3651
UAT 28-824	620	4520	7820	1180	(2) 18.5	65.0	3800	2457	2651	7366	454	1826	3651
UAT 28-924	647	4845	8145	1345	(2) 18.5	63.9	4105	2762	2956	7366	454	1826	3651
UAT 28-428	570	4890	8765	1345	(2) 11.0	61.7	3953	2610	2804	8586	302	2130	4261
UAT 28-528	616	4620	8490	1175	(2) 18.5	73.8	3648	2305	2499	8586	302	2130	4261
UAT 28-628	684	4960	8835	1345	(2) 18.5	72.4	3953	2610	2804	8586	302	2130	4261
UAT 28-728	713	4980	8855	1345	(2) 22.0	76.8	3953	2610	2804	8586	302	2130	4261
UAT 28-828	718	5335	9210	1535	(2) 18.5	71.2	4258	2915	3108	8586	302	2130	4261
UAT 28-928	748	5350	9225	1535	(2) 22.0	75.4	4258	2915	3108	8586	302	2130	4261

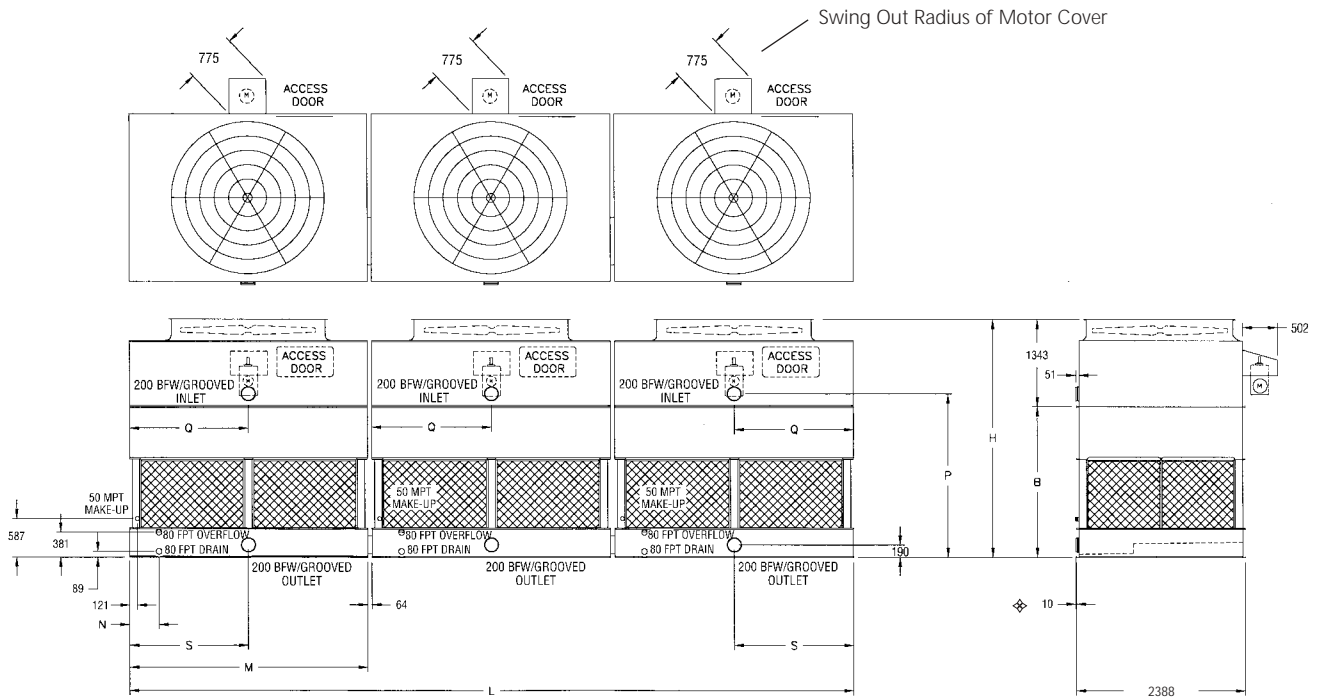
NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 Do not use catalog drawings for certified prints. Dimensions are subject to change.  
 Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.  
 Adequate spacing must be allowed for access to the cooling tower.  
 Unit can operate as two (2) independent cells with the addition of a flume plate or water tight partition.  
 \* "M" dimension is identical for both cells.

† Height includes fan guard which ships factory mounted.  
 ❖ Outlet connection extends 10mm beyond bottom flange.  
 \* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.



# ULTRAAT ENGINEERING DATA & DIMENSIONS

## MODELS: UAT 38-236 to 38-942



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)						
		Shipping	Operating	Heaviest Section			H†	B	P	L	N	S&Q	M
UAT 38-236	620	6165	11120	1045	(3) 7.5	73.9	3648	2305	2499	11081	454	1826	3651
UAT 38-336	696	6615	11565	1195	(3) 7.5	72.7	3953	2610	2804	11081	454	1826	3651
UAT 38-436	757	7105	12055	1355	(3) 7.5	71.4	4258	2915	3108	11081	454	1826	3651
UAT 38-536	789	6330	11280	1065	(3) 15.0	92.1	3648	2305	2499	11081	454	1826	3651
UAT 38-636	794	6710	11660	1195	(3) 11.0	82.5	3953	2610	2804	11081	454	1826	3651
UAT 38-736	878	6775	11730	1195	(3) 15.0	90.3	3953	2610	2804	11081	454	1826	3651
UAT 38-836	930	6815	11770	1195	(3) 18.5	97.0	3953	2610	2804	11081	454	1826	3651
UAT 38-936	970	7305	12260	1355	(3) 18.5	95.3	4258	2915	3108	11081	454	1826	3651
UAT 38-442	829	7785	13595	1530	(3) 7.5	79.5	4258	2915	3108	12911	302	2130	4261
UAT 38-542	924	6915	12725	1170	(3) 18.5	110.1	3648	2305	2499	12911	302	2130	4261
UAT 38-642	1026	7430	13240	1345	(3) 18.5	108.0	3953	2610	2804	12911	302	2130	4261
UAT 38-742	1070	7455	13270	1345	(3) 22.0	114.5	3953	2610	2804	12911	302	2130	4261
UAT 38-842	1077	7990	13800	1530	(3) 18.5	106.2	4258	2915	3108	12911	302	2130	4261
UAT 38-942	1112	8015	13825	1530	(3) 22.0	112.5	4258	2915	3108	12911	302	2130	4261

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

Do not use catalog drawings for certified prints. Dimensions are subject to change.

Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.

Adequate spacing must be allowed for access to the cooling tower.

Unit can operate as three (3) independent cells with the addition of a flume plate or water tight partition.

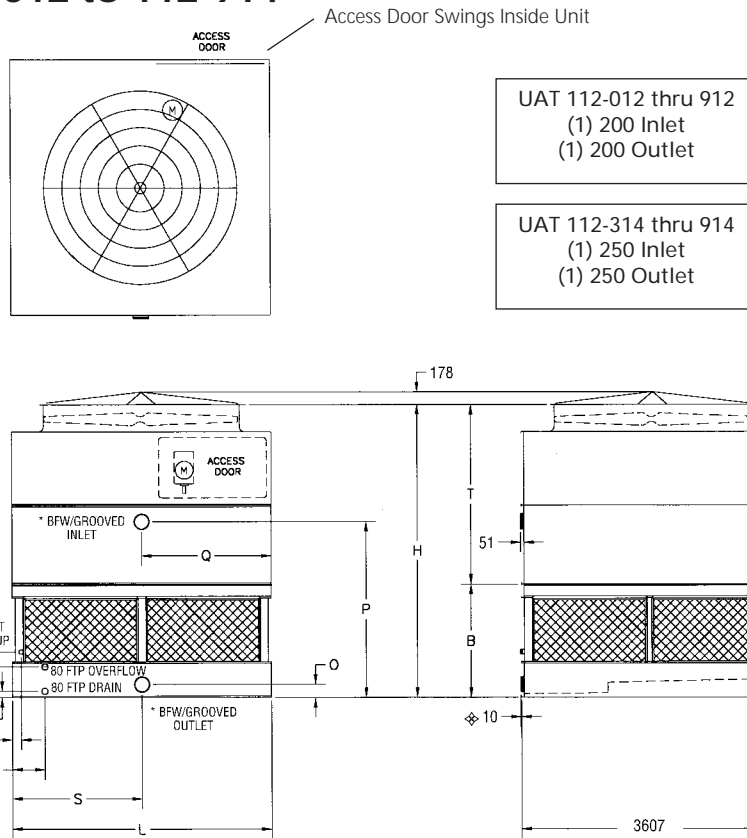
\* "M" dimension is identical for both cells.

† Height includes fan guard which ships factory mounted.

◆ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

## MODELS: UAT 112-012 to 112-914



UAT 112-012 thru 912  
(1) 200 Inlet  
(1) 200 Outlet

UAT 112-314 thru 914  
(1) 250 Inlet  
(1) 250 Outlet

Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)							
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P	B	L	N	S&Q	O
UAT 112-012	325	3375	6190	2270	11.0	38.4	4128	2540	2496	1588	3651	454	1826	184
UAT 112-112	355	3395	6215	2290	15.0	42.1	4128	2540	2496	1588	3651	454	1826	184
UAT 112-212	382	3420	6235	2315	18.5	45.2	4128	2540	2496	1588	3651	454	1826	184
UAT 112-312	396	3640	6460	2535	15.0	41.4	4432	2845	2800	1588	3651	454	1826	184
UAT 112-412	406	3465	6280	2360	22.0	47.9	4128	2540	2496	1588	3651	454	1826	184
UAT 112-512	415	3865	6680	2760	15.0	40.7	4737	††3150	3105	1588	3651	454	1826	184
UAT 112-612	427	3665	6480	2560	18.5	44.4	4432	2845	2800	1588	3651	454	1826	184
UAT 112-712	454	3710	6525	2605	22.0	47.0	4432	2845	2800	1588	3651	454	1826	184
UAT 112-812	475	3935	6750	2825	22.0	46.2	4737	††3150	3105	1588	3651	454	1826	184
UAT 112-912	509	4045	6865	2940	30.0	50.6	4737	††3150	3105	1588	3651	454	1826	184
UAT 112-314	440	3750	7075	2550	22.0	52.1	4280	2540	2623	1740	4261	302	2131	216
UAT 112-414	462	4020	7345	2815	18.5	48.3	4585	2845	2927	1740	4261	302	2131	216
UAT 112-514	485	4255	7580	3055	18.5	47.5	4890	††3150	3232	1740	4261	302	2131	216
UAT 112-614	492	4050	7375	2850	22.0	51.1	4585	2845	2927	1740	4261	302	2131	216
UAT 112-714	517	4285	7610	3085	22.0	50.3	4890	††3150	3232	1740	4261	302	2131	216
UAT 112-814	541	4170	7495	2965	30.0	56.0	4585	2845	2927	1740	4261	302	2131	216
UAT 112-914	566	4405	7730	3200	30.0	55.0	4890	††3150	3232	1740	4261	302	2131	216

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water. Do not use catalog drawings for certified prints. Dimensions are subject to change. Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling. Adequate spacing must be allowed for access to the cooling tower.

† Height does not include fan guard.

†† Fan Guard ships loose for field mounting.

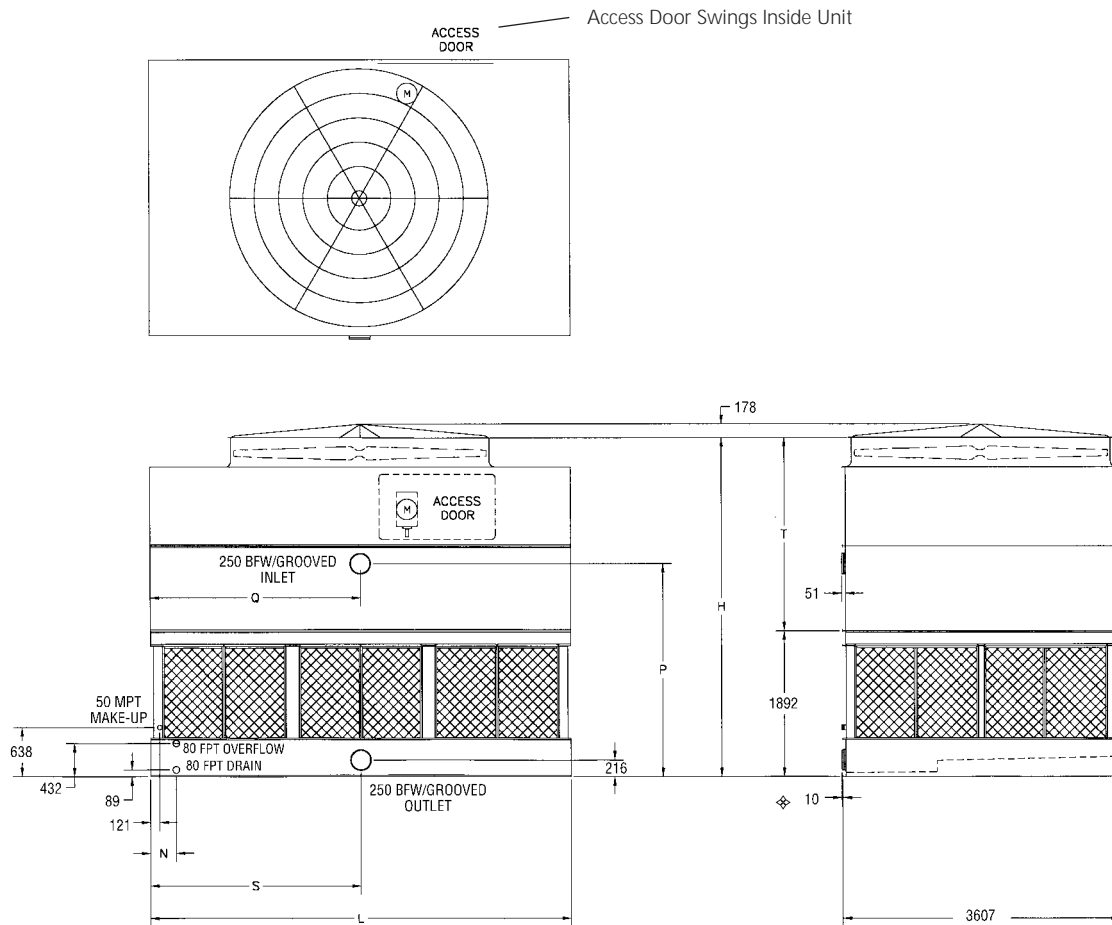
◆ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.



# ULTRAAT ENGINEERING DATA & DIMENSIONS

## MODELS: UAT 112-018 to 112-920



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)					
		Shipping	Operating	Heaviest Section (Upper)			Ht	T	P	L	N	S&Q
UAT 112-018	512	4705	8910	3090	18.5	61.2	4432	2540	2775	5486	337	2743
UAT 112-118	540	4755	8960	3140	22.0	64.9	4432	2540	2775	5486	337	2743
UAT 112-218	569	5060	9260	3445	18.5	60.2	4737	2845	3080	5486	337	2743
UAT 112-318	602	5105	9310	3495	22.0	63.7	4737	2845	3080	5486	337	2743
UAT 112-418	631	5445	9650	3830	22.0	62.7	5042	††3150	3385	5486	337	2743
UAT 112-518	664	5225	9430	3610	30.0	69.7	4737	2845	3080	5486	337	2743
UAT 112-618	695	5560	9765	3945	30.0	68.6	5042	††3150	3385	5486	337	2743
UAT 112-718	714	5255	9455	3640	37.0	74.8	4737	2845	3080	5486	337	2743
UAT 112-818	747	5590	9795	3975	37.0	73.5	5042	††3150	3385	5486	337	2743
UAT 112-918	776	5640	9845	4025	45.0	77.9	5042	††3150	3385	5486	337	2743
UAT 112-520	664	5215	9935	3490	37.0	78.1	4432	2540	2775	6096	311	3048
UAT 112-620	717	5930	10645	4200	30.0	70.3	5042	††3150	3385	6096	311	3048
UAT 112-720	745	5545	10265	3820	37.0	76.6	4737	2845	3080	6096	311	3048
UAT 112-820	777	5955	10675	4225	37.0	75.3	5042	††3150	3385	6096	311	3048
UAT 112-920	807	6005	10725	4275	45.0	79.8	5042	††3150	3385	6096	311	3048

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

Do not use catalog drawings for certified prints. Dimensions are subject to change.

Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.

Adequate spacing must be allowed for access to the cooling tower.

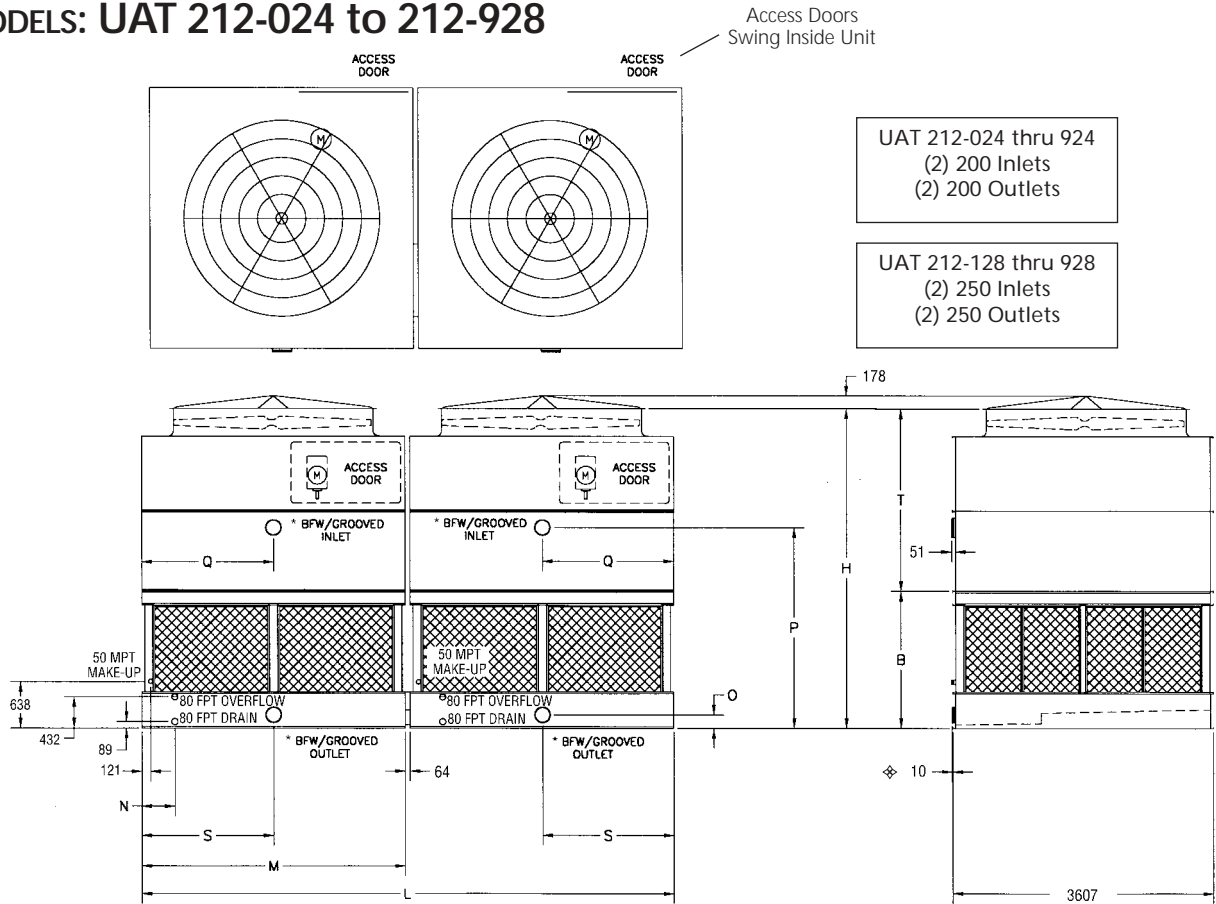
† Height does not include fan guard.

†† Fan Guard ships loose for field mounting.

◆ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

## MODELS: UAT 212-024 to 212-928



UAT 212-024 thru 924  
(2) 200 Inlets  
(2) 200 Outlets

UAT 212-128 thru 928  
(2) 250 Inlets  
(2) 250 Outlets

Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m³/s)	Dimensions (mm)								
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P	B	L	N	S&Q	M	O
UAT 212-024	711	6775	12410	2290	(2) 15.0	84.3	4432	2540	2800	1892	7366	454	1826	3651	184
UAT 212-124	724	7220	12855	2515	(2) 11.0	75.6	4737	2845	3105	1892	7366	454	1826	3651	184
UAT 212-224	765	6820	12455	2315	(2) 18.5	90.4	4432	2540	2800	1892	7366	454	1826	3651	184
UAT 212-324	791	7265	12900	2535	(2) 15.0	82.7	4737	2845	3105	1892	7366	454	1826	3651	184
UAT 212-424	812	6915	12545	2360	(2) 22.0	95.8	4432	2540	2800	1892	7366	454	1826	3651	184
UAT 212-524	853	7310	12945	2560	(2) 18.5	88.7	4737	2845	3105	1892	7366	454	1826	3651	184
UAT 212-624	894	7755	13390	2780	(2) 18.5	87.3	5042	††3150	3410	1892	7366	454	1826	3651	184
UAT 212-724	909	7405	13035	2605	(2) 22.0	93.9	4737	2845	3105	1892	7366	454	1826	3651	184
UAT 212-824	950	7845	13480	2825	(2) 22.0	92.4	5042	††3150	3410	1892	7366	454	1826	3651	184
UAT 212-924	1018	8075	13710	2940	(2) 30.0	101.1	5042	††3150	3410	1892	7366	454	1826	3651	184
UAT 212-128	829	7430	14080	2515	(2) 18.5	98.4	4737	2540	3080	2197	8585	302	2131	4261	216
UAT 212-228	858	7975	14625	2790	(2) 15.0	90.1	5042	2845	3385	2197	8585	302	2131	4261	216
UAT 212-328	879	7495	14145	2550	(2) 22.0	104.2	4737	2540	3080	2197	8585	302	2131	4261	216
UAT 212-428	923	8030	14680	2815	(2) 18.5	96.6	5042	2845	3385	2197	8585	302	2131	4261	216
UAT 212-528	971	8500	15150	3055	(2) 18.5	95.1	5347	††3150	3689	2197	8585	302	2131	4261	216
UAT 212-628	985	8090	14740	2850	(2) 22.0	102.3	5042	2845	3385	2197	8585	302	2131	4261	216
UAT 212-728	1033	8565	15215	3085	(2) 22.0	100.6	5347	††3150	3689	2197	8585	302	2131	4261	216
UAT 212-828	1081	8330	14980	2965	(2) 30.0	112.0	5042	2845	3385	2197	8585	302	2131	4261	216
UAT 212-928	1133	8800	15450	3200	(2) 30.0	110.0	5347	††3150	3689	2197	8585	302	2131	4261	216

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water. Do not use catalog drawings for certified prints. Dimensions are subject to change. Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling. Adequate spacing must be allowed for access to the cooling tower. Unit can operate as two (2) independent cells with the addition of a flume plate or water tight partition. \*M\* dimension is identical for both cells.

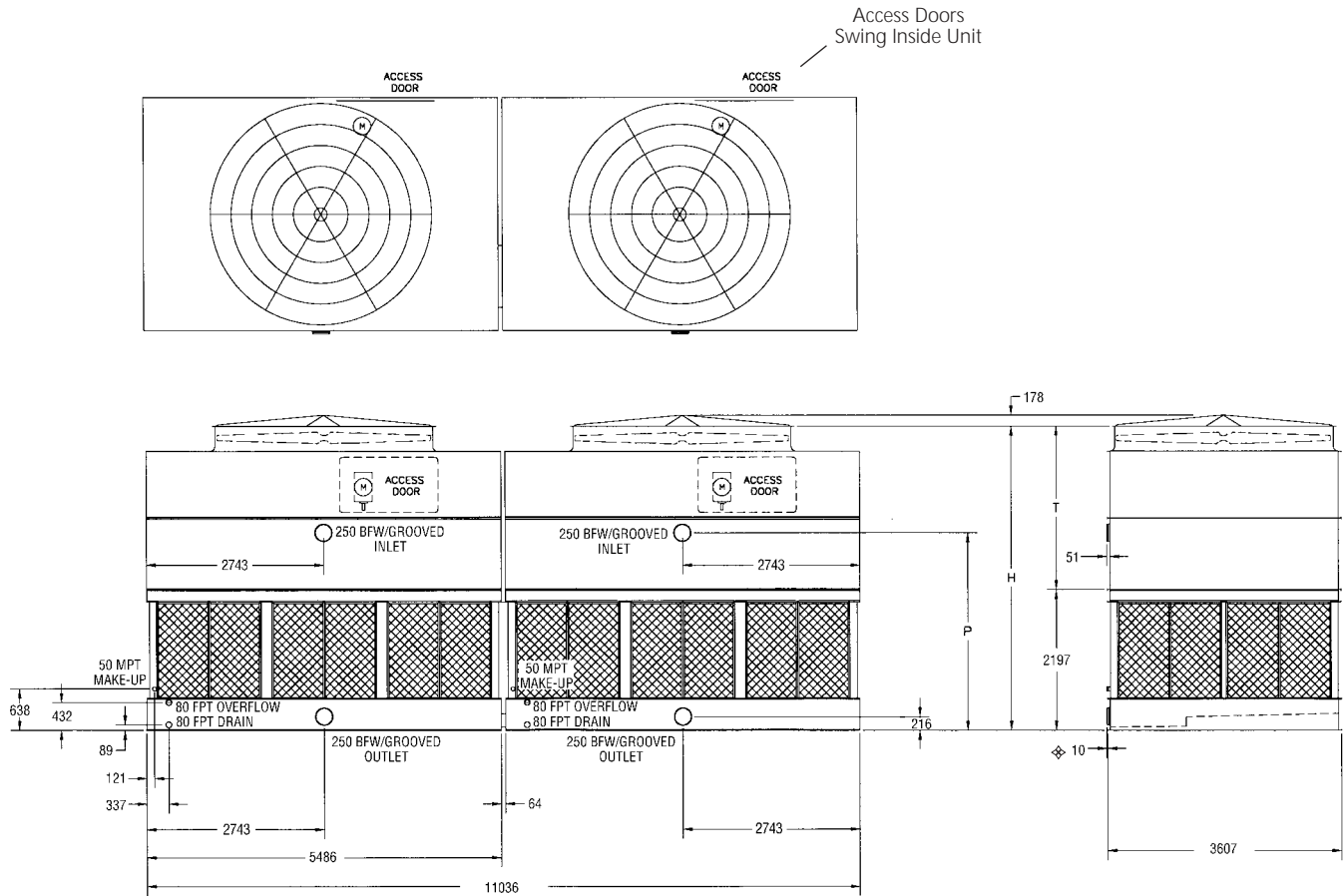
† Height includes fan guard which ships factory mounted.  
 †† Fan Guard ships loose for field mounting.  
 ❖ Outlet connection extends 10mm beyond bottom flange.  
 \* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.



# ULTRAAT

## ENGINEERING DATA & DIMENSIONS

### MODELS: UAT 212-036 to 212-936



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)		
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P
UAT 212-036	1067	10190	18595	3420	(2) 15.0	112.1	5042	2845	3385
UAT 212-136	1080	9625	18035	3140	(2) 22.0	129.8	4737	2540	3080
UAT 212-236	1191	10905	19315	3780	(2) 18.5	118.5	5347	††3150	3689
UAT 212-336	1203	10335	18740	3495	(2) 22.0	127.5	5042	2845	3385
UAT 212-436	1262	11005	19415	3830	(2) 22.0	125.4	5347	††3150	3689
UAT 212-536	1328	10570	18980	3610	(2) 30.0	139.5	5042	2845	3385
UAT 212-636	1389	11240	19650	3945	(2) 30.0	137.2	5347	††3150	3689
UAT 212-736	1427	10625	19035	3640	(2) 37.0	149.7	5042	2845	3385
UAT 212-836	1495	11295	19705	3975	(2) 37.0	147.0	5347	††3150	3689
UAT 212-936	1553	11395	19805	4025	(2) 45.0	155.7	5347	††3150	3689

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 Do not use catalog drawings for certified prints. Dimensions are subject to change.  
 Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.  
 Adequate spacing must be allowed for access to the cooling tower.  
 Unit can operate as two (2) independent cells with the addition of a flume plate or water tight partition.

† Height does not include fan guard.

†† Fan Guard ships loose for field mounting.

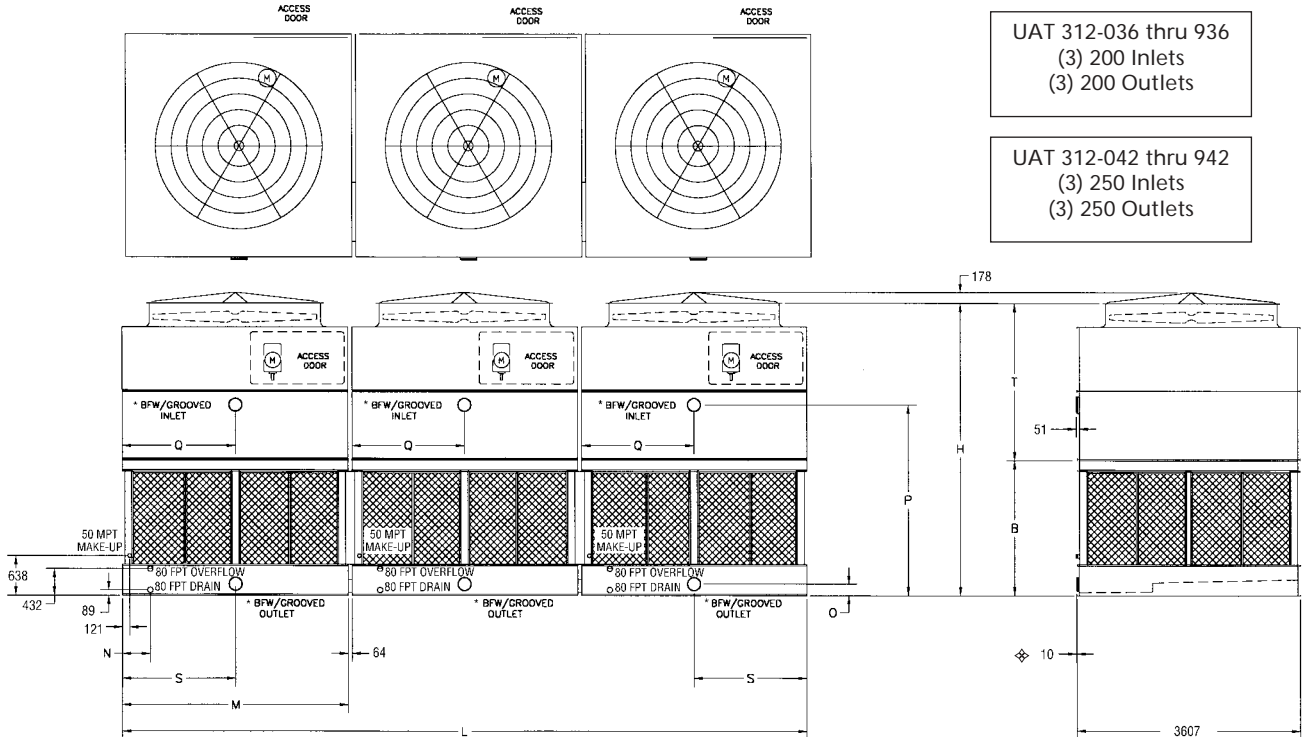
❖ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

## MODELS: UAT 312-036 to 312-942

((3) THREE-CELL COOLING TOWERS)

Access Doors  
Swing Inside Unit



UAT 312-036 thru 936  
(3) 200 Inlets  
(3) 200 Outlets

UAT 312-042 thru 942  
(3) 250 Inlets  
(3) 250 Outlets

Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m³/s)	Dimensions (mm)								
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P	B	L	N	S&Q	M	O
UAT 312-036	1080	10095	18545	2290	(3) 15.0	127.6	4737	2540	3105	2197	11081	454	1826	3651	184
UAT 312-136	1098	10765	19215	2515	(3) 11.0	114.5	5042	2845	3410	2197	11081	454	1826	3651	184
UAT 312-236	1161	10165	18615	2315	(3) 18.5	137.0	4737	2540	3105	2197	11081	454	1826	3651	184
UAT 312-336	1200	10830	19280	2535	(3) 15.0	125.3	5042	2845	3410	2197	11081	454	1826	3651	184
UAT 312-436	1256	11500	19950	2760	(3) 15.0	123.4	5347	††3150	3715	2197	11081	454	1826	3651	184
UAT 312-536	1294	10900	19350	2560	(3) 18.5	134.4	5042	2845	3410	2197	11081	454	1826	3651	184
UAT 312-636	1355	11565	20015	2780	(3) 18.5	132.2	5347	††3150	3715	2197	11081	454	1826	3651	184
UAT 312-736	1377	11035	19485	2605	(3) 22.0	142.3	5042	2845	3410	2197	11081	454	1826	3651	184
UAT 312-836	1439	11705	20155	2825	(3) 22.0	139.9	5347	††3150	3715	2197	11081	454	1826	3651	184
UAT 312-936	1543	12045	20495	2940	(3) 30.0	153.2	5347	††3150	3715	2197	11081	454	1826	3651	184
UAT 312-042	1199	12150	22125	2760	(3) 11.0	124.5	5347	2845	3689	2502	12910	302	2130	4261	216
UAT 312-142	1259	11415	21390	2515	(3) 18.5	148.9	5042	2540	3385	2502	12910	302	2130	4261	216
UAT 312-242	1267	12860	22835	3000	(3) 11.0	122.4	5652	††3150	3994	2502	12910	302	2130	4261	216
UAT 312-342	1302	12235	22210	2790	(3) 15.0	136.3	5347	2845	3689	2502	12910	302	2130	4261	216
UAT 312-442	1401	12315	22290	2815	(3) 18.5	146.2	5347	2845	3689	2502	12910	302	2130	4261	216
UAT 312-542	1471	13025	22995	3055	(3) 18.5	143.9	5652	††3150	3994	2502	12910	302	2130	4261	216
UAT 312-642	1493	12410	22385	2850	(3) 22.0	154.8	5347	2845	3689	2502	12910	302	2130	4261	216
UAT 312-742	1565	13120	23090	3085	(3) 22.0	152.3	5652	††3150	3994	2502	12910	302	2130	4261	216
UAT 312-842	1639	12765	22740	2965	(3) 30.0	169.5	5347	2485	3689	2502	12910	302	2130	4261	216
UAT 312-942	1716	13470	23445	3200	(3) 30.0	166.5	5652	††3150	3994	2502	12910	302	2130	4261	216

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 Do not use catalog drawings for certified prints. Dimensions are subject to change.  
 Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.  
 Adequate spacing must be allowed for access to the cooling tower.  
 Unit can operate as three (3) independent cells with the addition of two flume plates or water tight partitions.  
 † Height does not include fan guard. †† Fan Guard ships loose for field mounting.  
 ⋄ Outlet connection extends 10mm beyond bottom flange.  
 \* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

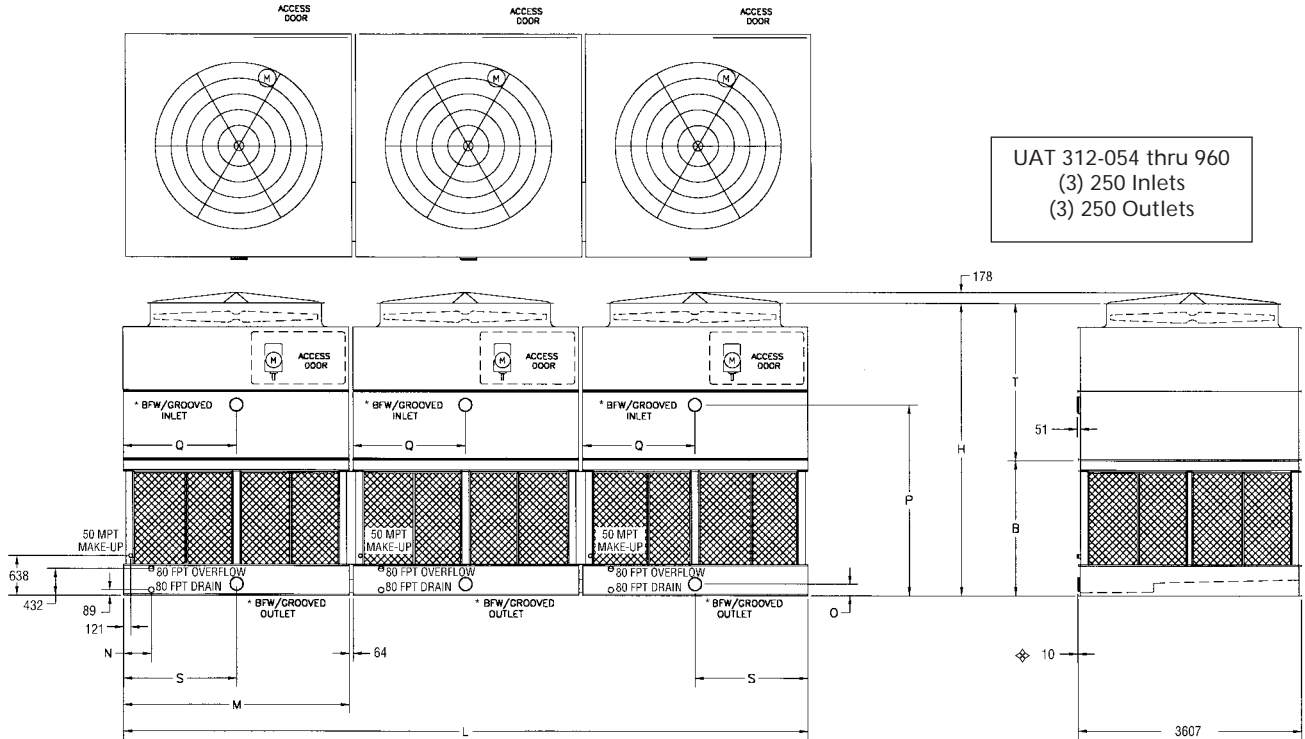


# ULTRAAT

## ENGINEERING DATA & DIMENSIONS

### MODELS: UAT 312-054 to 312-960 (3) THREE-CELL COOLING TOWERS

Access Doors  
Swing Inside Unit



UAT 312-054 thru 960  
(3) 250 Inlets  
(3) 250 Outlets

Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m³/s)	Dimensions (mm)								
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P	B	L	N	S&Q	M	O
UAT 312-054	1631	14640	27255	3140	(3) 22.0	194.8	5042	2540	3385	2502	16586	337	2743	5486	216
UAT 312-154	1716	15555	28170	3445	(3) 18.5	180.6	5347	2845	3689	2502	16586	337	2743	5486	216
UAT 312-254	1801	14995	27610	3255	(3) 30.0	213.4	5042	2540	3385	2502	16586	337	2743	5486	216
UAT 312-354	1815	15705	28320	3495	(3) 22.0	191.3	5347	2845	3689	2502	16586	337	2743	5486	216
UAT 312-454	1903	16710	29325	3830	(3) 22.0	188.3	5652	††3150	3994	2502	16586	337	2743	5486	216
UAT 312-554	2003	16055	28670	3610	(3) 30.0	209.3	5347	2845	3689	2502	16586	337	2743	5486	216
UAT 312-654	2095	17065	29680	3945	(3) 30.0	205.9	5652	††3150	3994	2502	16586	337	2743	5486	216
UAT 312-754	2152	16140	28755	3640	(3) 37.0	224.6	5347	2845	3689	2502	16586	337	2743	5486	216
UAT 312-854	2253	17145	29760	3975	(3) 37.0	220.6	5652	††3150	3994	2502	16586	337	2743	5486	216
UAT 312-954	2341	17295	29910	4025	(3) 45.0	233.7	5652	††3150	3994	2502	16586	337	2743	5486	216
UAT 312-260	1702	16465	30615	3625	(3) 18.5	184.3	5347	2845	3689	2502	18415	311	3048	6096	216
UAT 312-360	1807	17690	31840	4030	(3) 18.5	181.3	5652	††3150	3994	2502	18415	311	3048	6096	216
UAT 312-460	1980	16055	30210	3490	(3) 37.0	233.2	5042	2540	3385	2502	18415	311	3048	6096	216
UAT 312-560	2045	16970	31120	3790	(3) 30.0	213.3	5347	2845	3689	2502	18415	311	3048	6096	216
UAT 312-660	2139	18195	32345	4200	(3) 30.0	209.9	5652	††3150	3994	2502	18415	311	3048	6096	216
UAT 312-760	2223	17050	31205	3820	(3) 37.0	228.6	5347	2845	3689	2502	18415	311	3048	6096	216
UAT 312-860	2319	18275	32425	4225	(3) 37.0	224.9	5652	††3150	3994	2502	18415	311	3048	6096	216
UAT 312-960	2408	18425	32575	4275	(3) 45.0	238.4	5652	††3150	3994	2502	18415	311	3048	6096	216

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
Do not use catalog drawings for certified prints. Dimensions are subject to change.  
Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.  
Adequate spacing must be allowed for access to the cooling tower.  
Unit can operate as three (3) independent cells with the addition of two flume plates or water tight partitions.

† Height does not include fan guard.

†† Fan Guard ships loose for field mounting.

◆ Outlet connection extends 10mm beyond bottom flange.

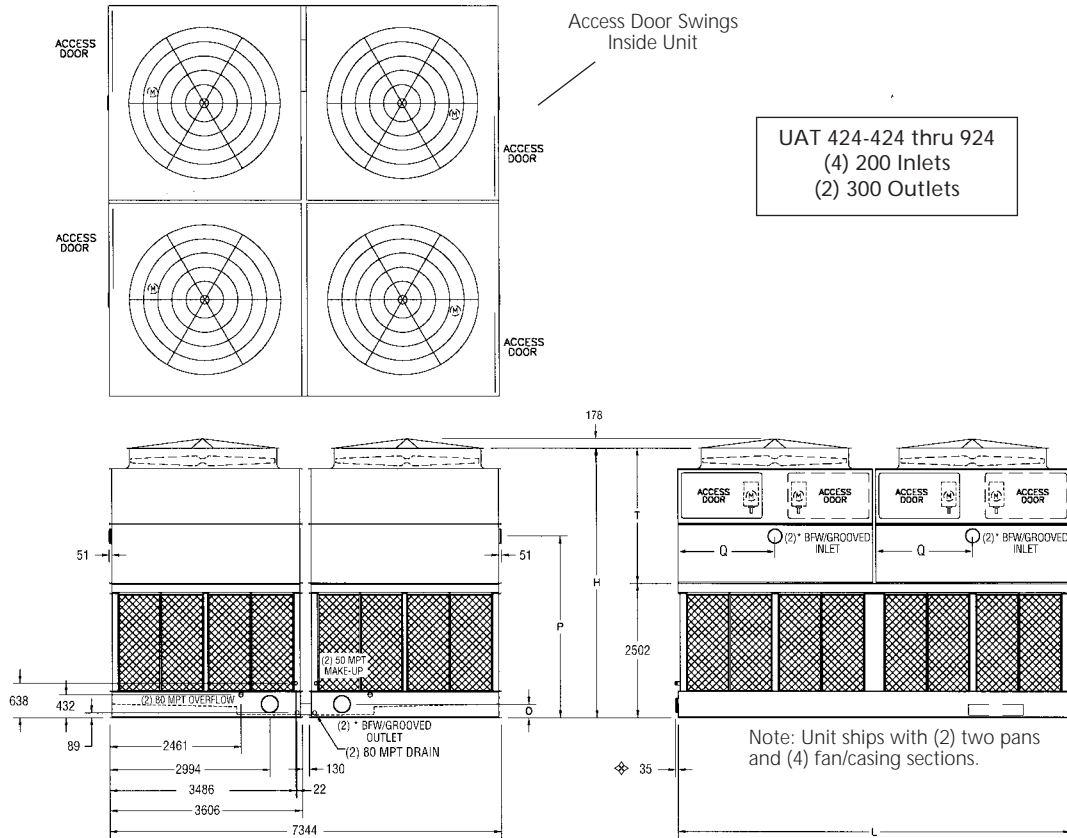
\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.





# ULTRAAT ENGINEERING DATA & DIMENSIONS

## MODELS: UAT 424-024 to 424-924



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)					
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P	L	O	Q
UAT 424-024	1291	13415	24695	2270	(4) 11.0	152.3	5042	2540	3410	7360	251	1826
UAT 424-124	1413	13510	24785	2290	(4) 15.0	167.0	5042	2540	3410	7360	251	1826
UAT 424-224	1439	14395	25675	2515	(4) 11.0	149.8	5347	2845	3715	7360	251	1826
UAT 424-324	1520	13600	24875	2315	(4) 18.5	179.2	5042	2540	3410	7360	251	1826
UAT 424-424	1573	14490	25765	2535	(4) 15.0	164.0	5347	2845	3715	7360	251	1826
UAT 424-524	1613	13780	25055	2360	(4) 22.0	189.9	5042	2540	3410	7360	251	1826
UAT 424-624	1650	15375	26655	2760	(4) 15.0	161.4	5652	††3150	4020	7360	251	1826
UAT 424-724	1697	14580	25855	2560	(4) 18.5	175.8	5347	2845	3715	7360	251	1826
UAT 424-824	1808	14760	26035	2605	(4) 22.0	186.2	5347	2845	3715	7360	251	1826
UAT 424-924	2026	16105	27380	2940	(4) 30.0	200.4	5652	††3150	4020	7360	251	1826

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

Do not use catalog drawings for certified prints. Dimensions are subject to change.

Connections larger than 80mm are Beveled for Welding (BFW) and grooved for a mechanical coupling.

Adequate spacing must be allowed for access to the cooling tower.

Unit can operate as two (2) independent cells with the addition of a flume plate or water tight partition.

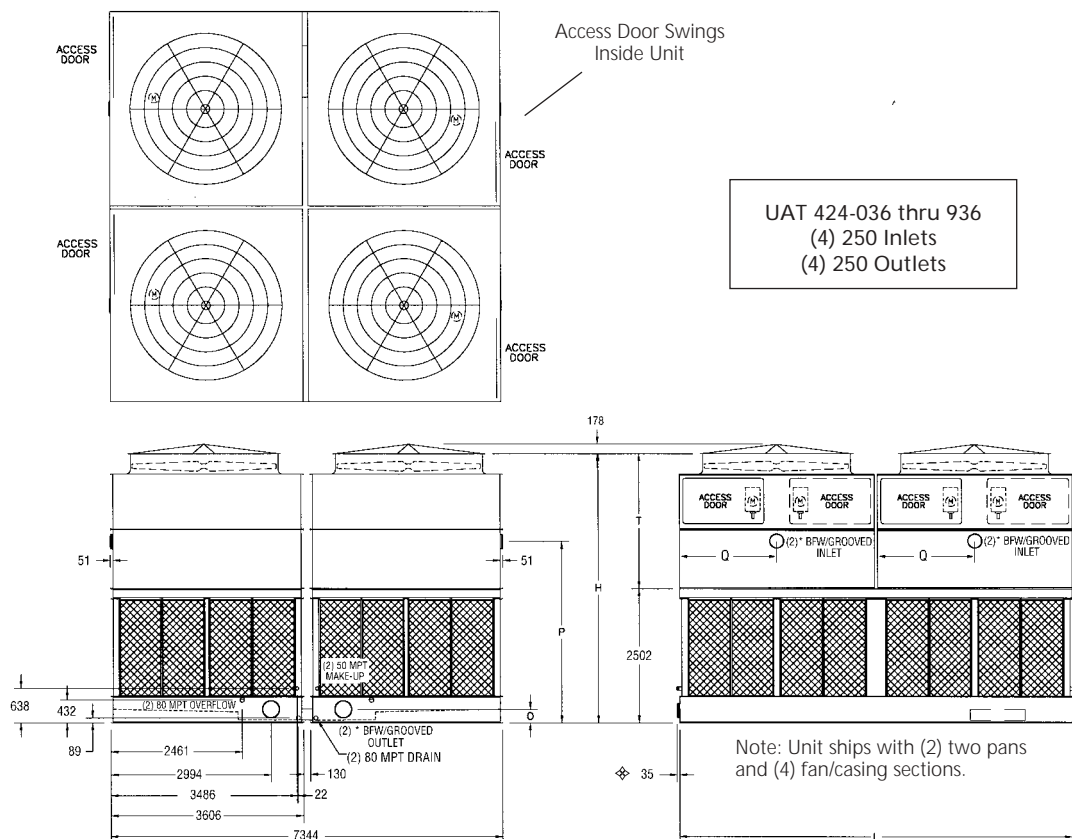
† Height does not include fan guard.

†† Fan Guard ships loose for field mounting.

⊕ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

## MODELS: UAT 424-036 to 424-936



Model No.	Nominal Tons*	Weights (kg)			Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Dimensions (mm)					
		Shipping	Operating	Heaviest Section (Upper)			H†	T	P	L	O	Q
UAT 424-036	1857	18780	35690	3255	(4) 15.0	218.9	5042	2540	3385	11030	216	2743
UAT 424-136	1969	18870	35780	3255	(4) 18.5	235.3	5042	2540	3385	11030	216	2743
UAT 424-236	2198	20285	37195	3445	(4) 18.5	231.4	5347	2845	3689	11030	216	2743
UAT 424-336	2298	19540	36450	3255	(4) 30.0	273.3	5042	2540	3385	11030	216	2743
UAT 424-436	2324	20485	37395	3495	(4) 22.0	245.0	5347	2845	3689	11030	216	2743
UAT 424-536	2448	21825	38735	3830	(4) 22.0	241.1	5652	††3150	3994	11030	216	2743
UAT 424-636	2569	20955	37865	3610	(4) 30.0	268.1	5347	2845	3689	11030	216	2743
UAT 424-736	2764	21065	37975	3640	(4) 37.0	287.6	5347	2845	3689	11030	216	2743
UAT 424-836	2900	22405	39315	3975	(4) 37.0	282.6	5652	††3150	3994	11030	216	2743
UAT 424-936	3012	22605	39515	4025	(4) 45.0	299.5	5652	††3150	3994	11030	216	2743

NOTE: An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 Do not use catalog drawings for certified prints. Dimensions are subject to change.  
 Connections larger than 80mm are Beveled for Welding (BW) and grooved for a mechanical coupling.  
 Adequate spacing must be allowed for access to the cooling tower.  
 Unit can be arranged for independent cell operation. Consult the factory.

† Height does not include fan guard.

†† Fan Guard ships loose for field mounting.

⊕ Outlet connection extends 10mm beyond bottom flange.

\* Nominal tons are based on cooling 3 GPM per ton from 95°F to 85°F with a 78°F entering wet bulb temperature.

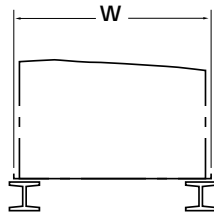


# ULTRAAT

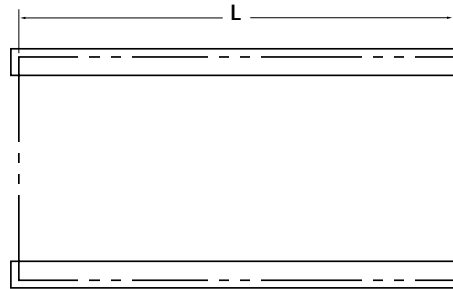
# STRUCTURAL STEEL SUPPORT

## Models UAT 19-56 to UAT 312-960

### Suggested Two "I" Beam Arrangement



End Elevation



Plan View

#### Models UAT 19-56 through 38-942

Two "I" Beams Required (by Others)

Dimensions (mm)		
Model No.	W	L
UAT 19-56 to 96	1826	2578
UAT 19-28 to 98	2283	2578
UAT 18-49 to 99	2388	2731
UAT 18-511 to 911	2388	3188
UAT 18-312 to 912	2388	3651
UAT 18-214 to 914	2388	4261
UAT 28-518 to 918	2388	5486
UAT 28-521 to 921	2388	6401
UAT 28-524 to 924	2388	7366
UAT 28-428 to 928	2388	8585
UAT 38-236 to 936	2388	11081
UAT 38-442 to 942	2388	12911

#### Models UAT 112-012 through 312-960

Two "I" Beams Required (by Others)

Dimensions (mm)		
Model No.	W	L
UAT 112-012 to 912	3607	3651
UAT 112-314 to 914	3607	4261
UAT 112-018 to 918	3607	5486
UAT 112-520 to 920	3607	6096
UAT 212-024 to 924	3607	7366
UAT 212-128 to 928	3607	8585
UAT 212-036 to 936	3607	11036
UAT 312-036 to 936	3607	11081
UAT 312-042 to 942	3607	12911
UAT 312-054 to 954	3607	16586
UAT 312-260 to 960	3607	18415

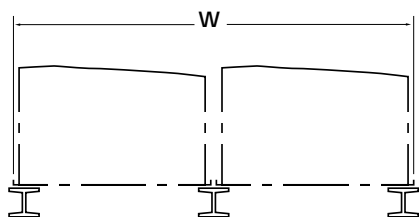
#### Notes:

Models UAT 19-56 through 312-960

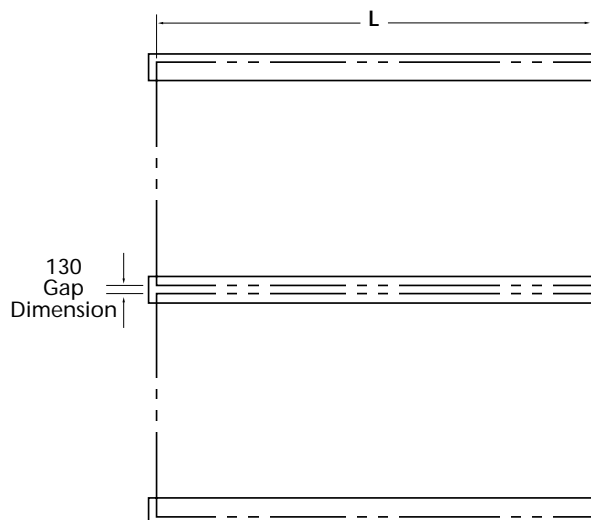
1. These are suggested arrangements for preliminary layout purposes. Consult your EVAPCO representative or [www.evapcoeurope.com](http://www.evapcoeurope.com) for factory certified steel support drawings.
2. The recommended support for the Ultra-AT Cooling Tower is structural "I" beams located under the outer flanges and running the entire length of the unit. The unit should be elevated to allow access underneath the unit and to the roof below. Mounting holes, 19mm in diameter, are located in the bottom flanges of the pan to provide for bolting to the structural steel.
3. Beams should be sized in accordance with accepted structural practices. Maximum deflection of beam under unit to be 1/360 of the unit length, not to exceed 13mm.
4. For these models where two support beams are required, deflection may be calculated by using 55% of the operating weight as a uniform load on each beam.
5. Beams should be level before setting the unit in place. Do not level the unit by shimming between it and the "I" beams.
6. Support beams and Anchor bolts are to be furnished by others.
7. Dimensions, weights and data are subject to change without notice. Refer to the factory certified drawings for exact dimensions.
8. For alternate layout arrangements please consult the factory. *NOTE: OPTIONAL BOTTOM CONNECTIONS WILL REQUIRE THE UNIT TO BE ELEVATED TO ALLOW FOR PIPING.*

## Models UAT 224-018 to UAT 424-936

### Suggested Three "I" Beam Arrangement



End Elevation



Plan View

### Models UAT 224-018 through 424-936

Three "I" Beams Required (by Others)

Dimensions (mm)		
Model No.	W	L
UAT 224-018 to 918	7344	5486
UAT 424-024 to 924	7344	7360
UAT 424-036 to 936	7344	11030

#### Notes:

Models UAT 224-018 through 424-936

1. These are suggested arrangements for preliminary layout purposes. Consult your EVAPCO representative or [www.evapcoeurope.com](http://www.evapcoeurope.com) for factory certified steel support drawings.
2. The recommended support for the Ultra-AT Cooling Tower is structural "I" beams located under the outer flanges and running the entire length of the unit. The unit should be elevated to allow access underneath the unit and to the roof below. Mounting holes, 19mm in diameter are located in the bottom flanges of the pan to provide for bolting to the structural steel.
3. Beams should be sized in accordance with accepted structural practices. Maximum deflection of beam under unit to be 1/360 of the unit length, not to exceed 13mm.
4. For these models only where three support beams are required, deflection may be calculated using 56% of the operating weight on the CENTER BEAM and 27% on each OUTBOARD beam.
5. Beams should be level before setting the unit in place. Do not level the unit by shimming between it and the "I" beams.
6. Support beams and Anchor bolts are to be furnished by others.
7. Dimensions, weights and data are subject to change without notice. Refer to the factory certified drawings for exact dimensions.
8. For alternate layout arrangements please consult the factory. *NOTE: OPTIONAL BOTTOM CONNECTIONS WILL REQUIRE THE UNIT TO BE ELEVATED TO ALLOW FOR PIPING.*



# ULTRAAT

## DRAIN DOWN VOLUME FOR REMOTE SUMP APPLICATIONS

The following chart provides the maximum drain down volume allowable per Ultra-AT box size. Use this chart when sizing indoor or outdoor remote sumps tanks. Remote sump applications are commonly used whenever a cooling tower is idle during sub-freezing weather to protect the water in the basin from freezing or for large multi-tower industrial applications. Either application allows the circulating water to gravity drain into a remote sump tank indoors or a large outdoor concrete basin located underneath the cooling tower.

The water volume provided is the cooling tower portion of the remote sump tank only. The tank should allow for drain down water from external piping and pump suction coverage.

UAT models	Maximum Liters of drain down
<b>UAT</b> 19-56 to 96	1,060
19-28 to 98	1,250
18-49 to 99	1,440
18-511 to 911	1,690
18-312 to 912	1,950
18-214 to 914	2,280
28-518 to 918	2,950
28-521 to 921	3,440
28-524 to 924	3,900
28-428 to 928	4,560
38-236 to 936	5,850
38-442 to 942	6,840
112-012 to 912	3,150
112-314 to 914	3,690
112-018 to 918	4,770
112-520 to 920	5,300
212-024 to 924	6,300
212-128 to 928	7,380
212-036 to 936	9,540
312-036 to 936	9,450
312-042 to 942	11,070
312-054 to 954	14,310
312-260 to 960	15,900
224-018 to 918	9,540
424-024 to 924	12,840
424-036 to 936	19,310

# MECHANICAL SPECIFICATIONS

FOR POWER-BAND DRIVE ULTRA-AT COOLING TOWERS

Furnish and install as shown on the plans an EVAPCO Model \_\_\_\_\_ induced draft counterflow cooling tower. Each unit shall have the capacity to cool \_\_\_\_\_ lps (GPM) of water from \_\_\_\_\_ °C (°F) to \_\_\_\_\_ °C (°F) with a \_\_\_\_\_ °C (°F) entering wet bulb temperature.

## Pan

The pan shall be constructed of Type 316 stainless steel for long life and durability. Standard pan accessories shall include overflow, drain, anti-vortexing hood, stainless steel strainers, and brass make-up valve with plastic float. The entire pan area shall incorporate a stepped configuration for reduced water volume, lower operating weight and easier pan maintenance. The upper and lower pan bottoms shall be sloped to provide positive drainage of the complete basin section. Depressed side outlet sumps which are not an integral part of the basin shall not be acceptable.

## Casing

The casing shall be constructed of Type 304 or Type 316 stainless steel. The casing panels shall totally encase the sides of the fill section to protect the surface from direct atmospheric contact. *The casing shall not be constructed of flammable materials such as fiberglass.*

## Models UAT 19-56 to UAT 38-942

### Fan Motor(s)

\_\_\_\_\_ kW (HP) totally enclosed fan cooled (T.E.F.C.) ball bearing fan motor(s) shall be furnished suitable for cooling tower service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase. Motor(s) shall be mounted on an adjustable base which is mounted on the side of the unit for service. A hinged protective cover shall shield the motor and sheave from the weather.

### Drive

The fan drive shall be a multigroove, solid back V-belt type with taper lock sheaves designed for 1.5 service factor of the motor nameplate horsepower (kW). The belt material shall be neoprene reinforced with polyester cord and specifically designed for cooling tower service. A hinged protective cover shall shield the motor and sheave from the weather. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance. *All sheaves located in the airstream shall be constructed of aluminum alloy, vented guards shall not be acceptable. If internal belt adjustment is necessary, an internal working platform and ladder is required to access the drive system.*

## Models UAT 112-012 to UAT 424-936

### Fan Motor(s)

\_\_\_\_\_ kW (HP) totally enclosed air over (T.E.A.O.) ball bearing fan motor(s) shall be furnished suitable for cooling tower service on \_\_\_\_\_ volts, \_\_\_\_\_ hertz, and \_\_\_\_\_ phase. *Motor(s) shall be mounted on an adjustable base which allows the motor to swing to the outside of the unit for servicing.*

### Drive

The fan drive shall be a multigroove, solid back V-belt type with taper lock sheaves designed for 1.5 service factor of the motor nameplate horsepower (kW). The belt material shall be neoprene reinforced with polyester cord and specifically designed for cooling tower service. Fan and motor sheaves shall be aluminum alloy construction. Belt adjustment shall be accomplished from the exterior of the unit. Bearing lube lines shall be extended to the exterior of the unit for easy maintenance. *All sheaves located in the airstream shall be constructed of aluminum alloy, vented guards shall not be acceptable. If internal belt adjustment is necessary, an internal working platform and ladder is required to access the drive system.*

## Axial Propeller Fans

Fans shall be heavy duty axial propeller type statically balanced. The fans shall be fabricated by the cooling tower manufacturer for single source responsibility and reliability. The fans shall be constructed of extruded aluminum alloy blades, installed in a closely fitted cowl with venturi air inlet for maximum fan efficiency. Each fan blade shall be individually adjustable. *Fan cowl shall be covered with a heavy gauge stainless steel wire fan guard.*

## Fan Shaft Bearings

Fan shaft bearings shall be heavy duty self-aligning ball type with self locking collars and grease fittings extended to the outside of the unit. Bearings shall be designed for a minimum L-10 life of 75,000 hours.

## Fill

The cooling tower fill shall be PVC (Polyvinyl Chloride) of cross-fluted design for optimum heat transfer efficiency. The cross-fluted sheets shall be bonded together for strength and durability. The fill shall be fabricated, formed and installed by the cooling tower manufacturer and shall be elevated a minimum of 1220 mm (4 feet) above the floor of the cold water basin to facilitate cleaning. *The fill shall be suitable for use as a working platform.* The PVC fill shall be self-extinguishing for fire resistance with a flame spread rating of 5 per ASTM E84-81a. It shall also be resistant to rot, decay and biological attack. The fill shall be able to withstand a water temperature of 55°C (130°F).

## Non-Corrosive Water Distribution System

Each cell of the cooling tower shall have one (1) hot water return inlet connected to a main spray header. The spray header and branches shall be constructed of Schedule 40 polyvinyl chloride (PVC) pipe for corrosion resistance and shall have a stainless steel connection which is beveled for weld/grooved for a mechanical coupling to attach the external piping. The spray header and branches shall be removable for cleaning purposes and have threaded end caps to allow debris to be removed. The water shall be distributed over the fill by precision molded ABS spray nozzles with large 3/8 by 1 inch (10 by 25mm) orifice openings and integral sludge ring to eliminate clogging. The nozzles shall be threaded into the water distribution piping to assure positive positioning.

*If open type gravity distribution pans are used, they shall be constructed of non-corrosive materials (stainless steel, FRP or PVC).*

*If two (2) gravity distribution pans are required, pipework to convert to a single inlet per cell must be included and top perimeter handrailing with a ladder to the top of the tower must also be provided for servicing the pans.*

## Eliminators

The eliminators shall be constructed entirely of inert polyvinyl chloride (PVC) in easily handled sections and be completely separate from the fill section for maximum efficiency. The eliminator design shall incorporate three changes in air direction to assure removal of all entrained moisture from the discharge air stream. Maximum drift rate shall be less than .001% of the circulating water rate.

## Air Inlet Louver Screens

The louvers screens shall be constructed of polyvinyl chloride (PVC) and mounted in easily removable Type 316 SS frames on all four sides of the cooling tower for access to the entire basin area for maintenance. The louvers shall have a minimum of two changes in air direction to prevent splashout, block direct sunlight from entering the basin, and have a 19 mm (3/4") opening to prevent debris from entering the basin.

## 5-Year Warranty

The unit shall be warranted against failure caused by defects in materials and workmanship for FIVE (5) years from the date of shipment. All cooling tower and drive system components are included.



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