

# COOLING TOWERS



## *Advanced Crossflow Series*

The New Spin on Crossflow Cooling Tower Technology.



\*Mark owned by the Cooling Technology Institute



# Discover a NEW degree of flexibility.

Introducing the Advanced Crossflow Series (AXS) from EVAPCO—the new spin on crossflow cooling tower technology.

## Modular Hot Water Basins:

- Steel covers in easy to handle sections
- Gravity distribution basins
- Large orifice, non-clog nozzles
- Integral weir dams to accommodate at least 50% design flow



## EVAPAK Crossflow Fill:

- High efficiency bonded block fill
- Polyvinyl Chloride (PVC)
- Prevents air bypass
- Impervious to rot, decay and biological attack
- Integral louvers and drift eliminators
- Easy to handle
- Flame spread rating of 5 per ASTM E84-81a

## Cold Water Basin End Covers:

- Prevents sunlight and debris from entering basin
- Easy lift-off with handles



## The EVAPCO Performance Guarantee

EVAPCO subjects the AXS product line to a rigorous thermal performance test prior to independent, third-party certification by the Cooling Technology Institute (CTI), so you know you are getting a solution guaranteed to get the job done.

\*Mark owned by the Cooling Technology Institute

### Drive System:

- Solid-back multi-groove power-band belt standard
- Premium efficient, inverter capable, cooling tower duty motor
- Heavy-duty pillow block bearings with a minimum L-10 life of 100,000 hours
- Extended lubrication lines
- Corrosion-resistant cast aluminum sheaves



### Exclusive 5 Year Motor and Drive Warranty

### Single Side Inlet:

- Self-balancing
- Includes all interior piping (factory installed)
- Includes all exterior piping (ships loose for field installation)

### Two (2) Oversized Access Doors:

- Swing-in doors on each side wall
- Easy access to interior of unit



### Bottom Supported Fill:

- Non sagging
- Minimum 75mm clearance above basin floor
- Easy to clean underneath fill
- Allows room for optional sump sweeper piping



## About EVAPCO

EVAPCO is the global innovator in heat transfer solutions. Our pledge is to make everyday life easier, more comfortable, more reliable, and more sustainable for people everywhere. With manufacturing facilities and sales offices in more than 40 countries and 28 patents worldwide in the last 10 years alone—we are the team that Engineers and Contractors know they can count on for life.

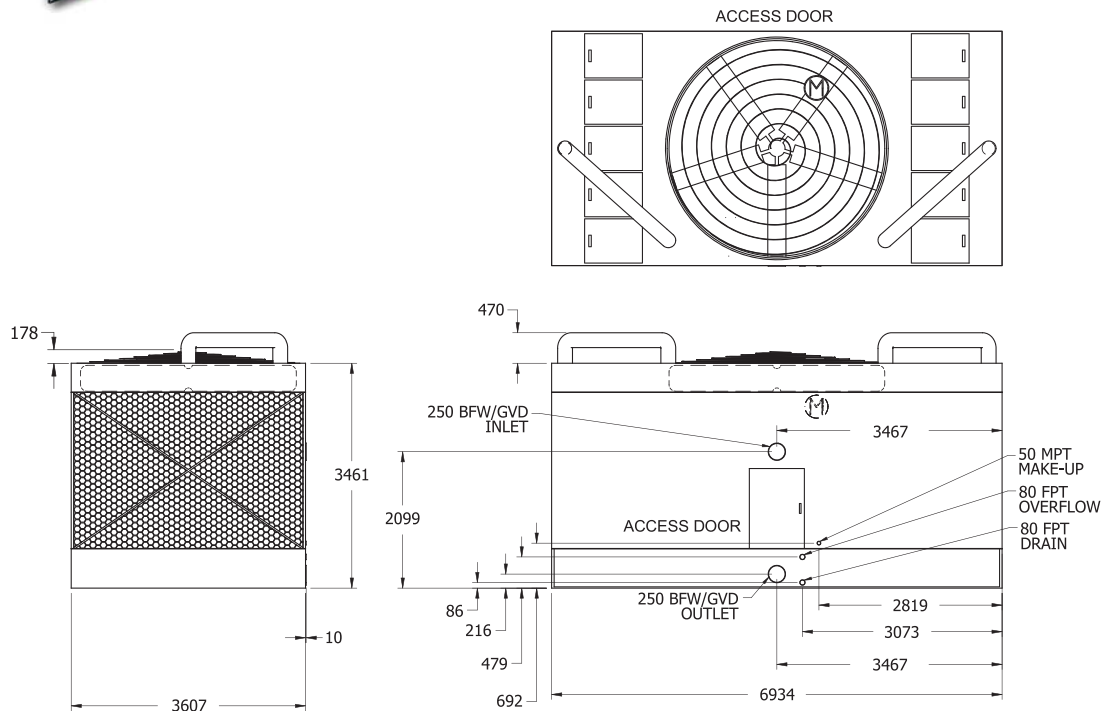
## CONTACT

Your local EVAPCO Representative  
or visit [evapcoasia.com](http://evapcoasia.com) to learn more.



# Models: AXS 12-11G22 TO 12-11P22

## Single Stack Cooling Towers



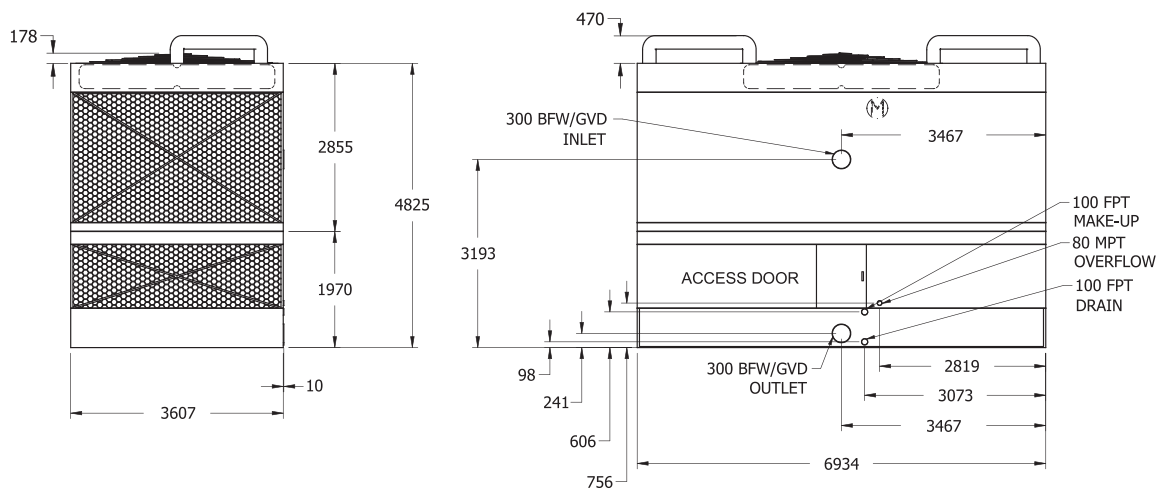
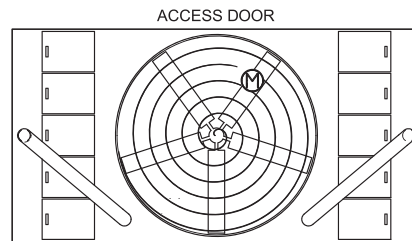
All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)	
				Shipping	Operating
AXS 12-11G22	312	4	35.8	5350	11790
AXS 12-11H22	353	5.5	40.6	5375	11810
AXS 12-11I22	386	7.5	44.4	5380	11820
AXS 12-11J22	438	11	50.4	5430	11865
AXS 12-11K22	479	15	55.0	5455	11895
AXS 12-11L22	513	18.5	58.9	5470	11905
AXS 12-11M22	543	22	62.4	5495	11930
AXS 12-11N22	594	30	68.2	5580	12015
AXS 12-11O22	636	37	73.1	5625	12060
AXS 12-11P22	673	45	77.4	5735	12170

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 (2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.  
 (3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.  
 (4) Fan guard does not ship factory mounted.

# Models: AXS 12-16I22 TO 12-16Q22

## Double Stack Cooling Towers



All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)		
				Shipping	Operating	Heaviest Section*
AXS 12-16I22	493	7.5	56.9	6965	16460	4180
AXS 12-16J22	557	11	64.2	7010	16505	4230
AXS 12-16K22	607	15	70.0	7035	16535	4260
AXS 12-16L22	649	18.5	74.9	7050	16545	4275
AXS 12-16M22	686	22	79.1	7070	16570	4295
AXS 12-16N22	748	30	86.2	7160	16655	4380
AXS 12-16O22	799	37	92.2	7205	16700	4425
AXS 12-16P22	844	45	97.4	7310	16810	4535
AXS 12-16Q22	903	55	104.1	7360	16860	4585

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

(2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.

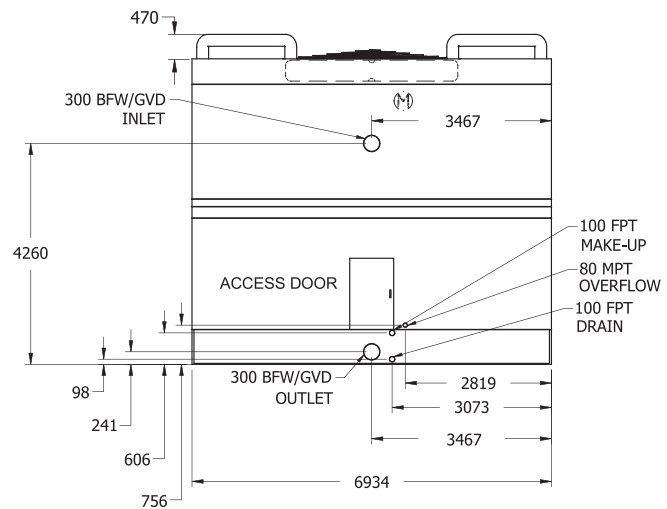
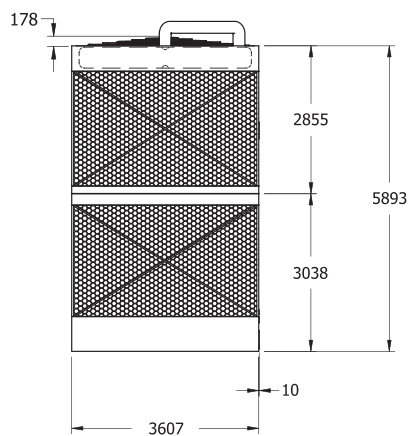
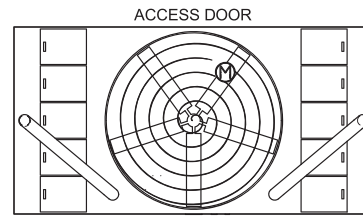
(3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.

(4) Fan guard does not ship factory mounted.

♦ Heaviest section is upper section.

# Models: AXS 12-19I22 TO 12-19Q22

## Double Stack Cooling Towers



All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)		
				Shipping	Operating	Heaviest Section*
AXS 12-19I22	493	7.5	60.4	7445	16940	4180
AXS 12-19J22	557	11	68.1	7490	16985	4230
AXS 12-19K22	607	15	74.3	7515	17015	4260
AXS 12-19L22	649	18.5	79.4	7530	17030	4275
AXS 12-19M22	686	22	83.9	7550	17050	4295
AXS 12-19N22	748	30	91.5	7640	17135	4380
AXS 12-19O22	799	37	97.8	7685	17185	4425
AXS 12-19P22	844	45	103.3	7795	17290	4535
AXS 12-19Q22	903	55	110.4	7845	17340	4585

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

(2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.

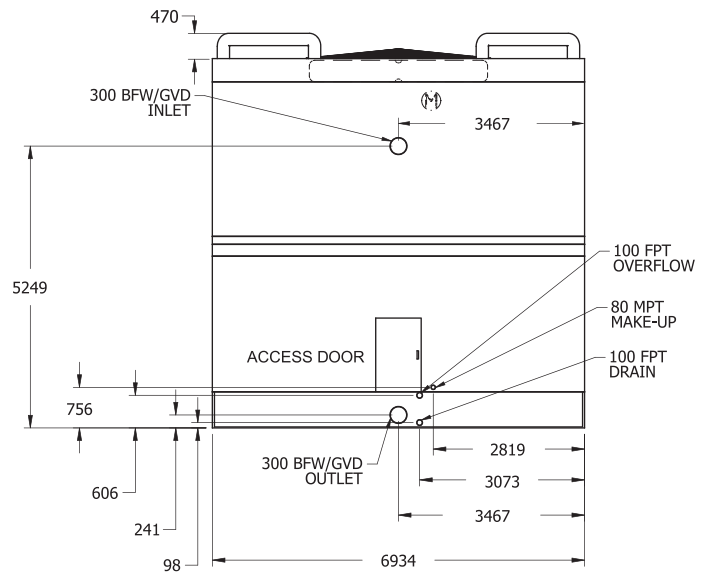
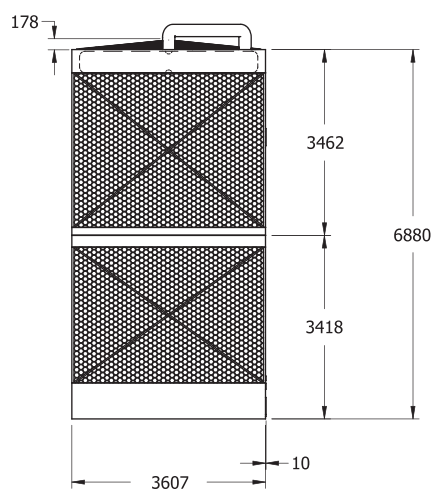
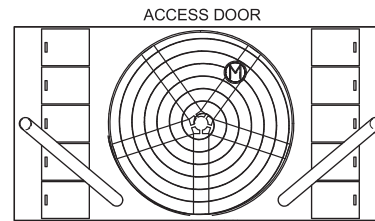
(3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.

(4) Fan guard does not ship factory mounted.

♦ Heaviest section is upper section.

# Models: AXS 12-22I22 TO 12-22R22

## Double Stack Cooling Towers



All dimensions above are in millimeters (mm).

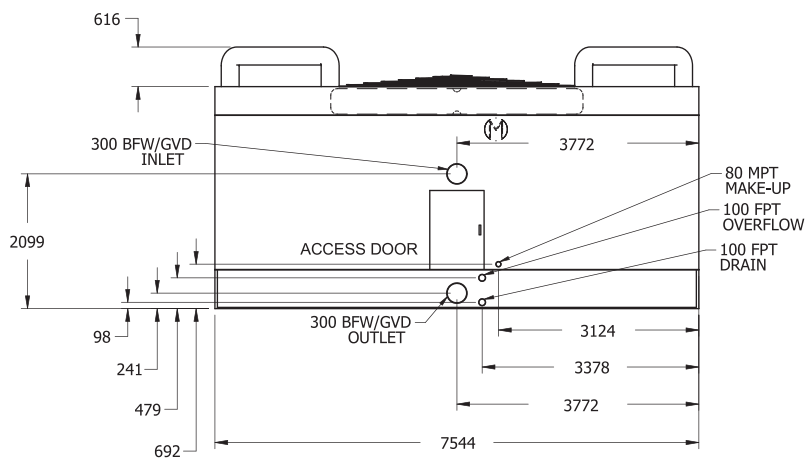
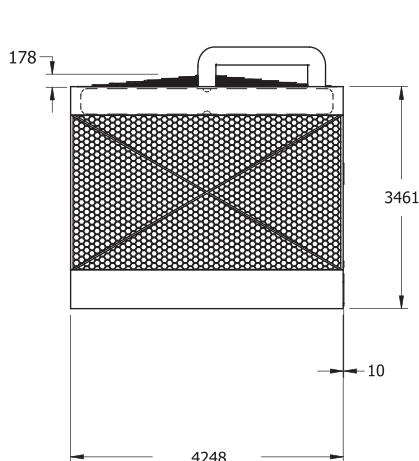
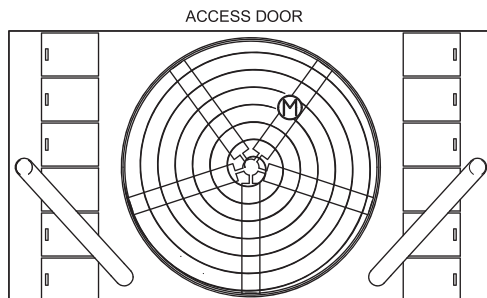
Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)		
				Shipping	Operating	Heaviest Section*
AXS 12-22I22	576	7.5	62.6	8540	18040	4705
AXS 12-22J22	650	11	70.7	8585	18085	4755
AXS 12-22K22	709	15	77.1	8615	18110	4780
AXS 12-22L22	758	18.5	82.4	8625	18125	4795
AXS 12-22M22	800	22	87.0	8650	18150	4815
AXS 12-22N22	872	30	94.9	8735	18235	4905
AXS 12-22O22	933	37	101.4	8780	18285	4950
AXS 12-22P22	985	45	107.1	8890	18390	5060
AXS 12-22Q22	1,053	55	114.5	8940	18440	5105
AXS 12-22R22	1,148	75	124.9	9325	18825	5495

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.  
 (2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.  
 (3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.  
 (4) Fan guard does not ship factory mounted.

♦ Heaviest section is upper section.

# Models: AXS 14-11H24 TO 14-11P24

## Single Stack Cooling Towers



All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)	
				Shipping	Operating
AXS 14-11H24	387	5.5	49.5	6475	14600
AXS 14-11I24	423	7.5	54.0	6500	14630
AXS 14-11J24	479	11	61.0	6480	14610
AXS 14-11K24	524	15	66.5	6515	14635
AXS 14-11L24	561	18.5	71.1	6595	14720
AXS 14-11M24	594	22	75.1	6620	14740
AXS 14-11N24	650	30	81.9	6690	14820
AXS 14-11O24	696	37	87.5	6695	14825
AXS 14-11P24	737	45	92.5	6805	14930

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

(2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.

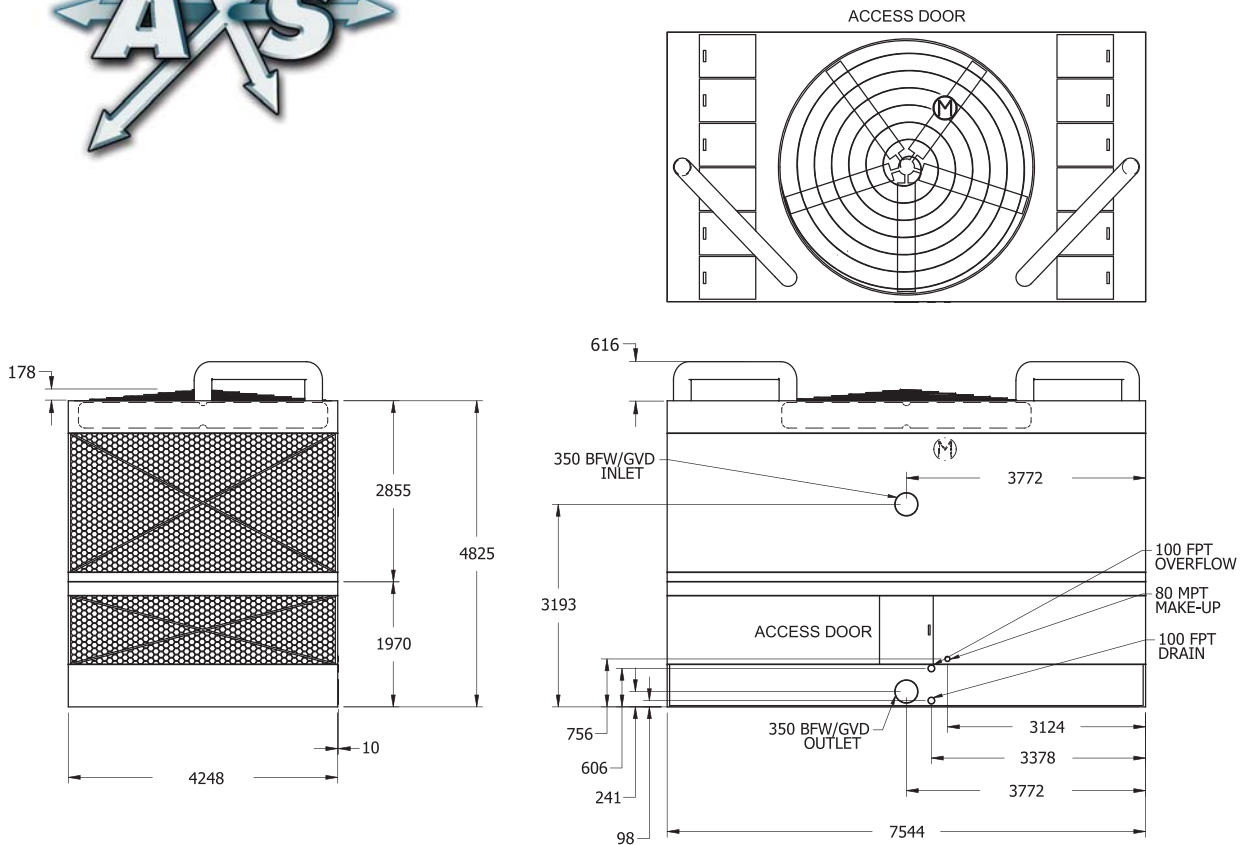
(3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.

(4) Fan guard does not ship factory mounted.



# Models: AXS 14-16J24 TO 14-16R24

## Double Stack Cooling Towers



All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)		
				Shipping	Operating	Heaviest Section*
AXS 14-16J24	615	11	66.6	8965	21050	5290
AXS 14-16K24	671	15	72.6	8990	21080	5315
AXS 14-16L24	717	18.5	77.6	9070	21160	5400
AXS 14-16M24	758	22	81.9	9095	21185	5420
AXS 14-16N24	826	30	89.3	9165	21255	5495
AXS 14-16O24	883	37	95.5	9170	21260	5500
AXS 14-16P24	911	45	100.9	9285	21375	5605
AXS 14-16Q24	975	55	107.9	9360	21445	5680
AXS 14-16R24	1062	75	117.6	9795	21880	6120

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

(2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.

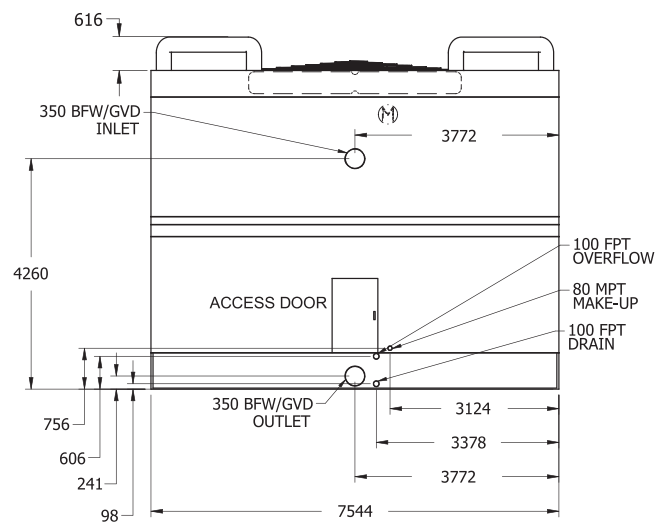
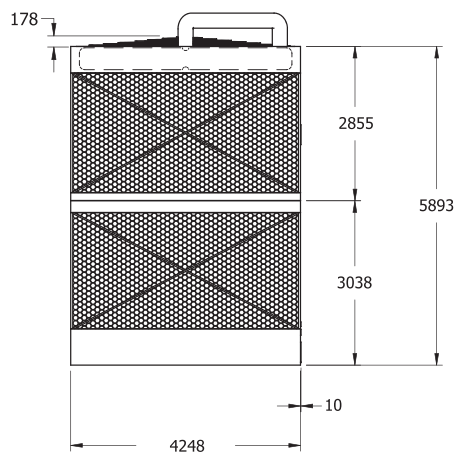
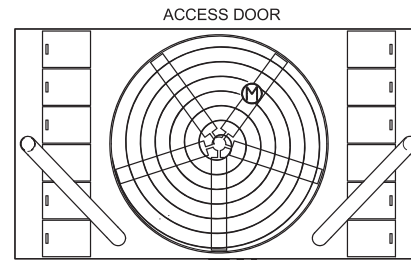
(3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.

(4) Fan guard does not ship factory mounted.

\* Heaviest section is upper section.

# Models: AXS 14-19J24 TO 14-19R24

## Double Stack Cooling Towers



All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)		
				Shipping	Operating	Heaviest Section*
AXS 14-19J24	685	11	71.4	9530	21620	5290
AXS 14-19K24	746	15	77.8	9560	21645	5315
AXS 14-19L24	798	18.5	83.2	9645	21725	5400
AXS 14-19M24	843	22	87.8	9665	21750	5420
AXS 14-19N24	919	30	95.8	9740	21825	5495
AXS 14-19O24	982	37	102.4	9745	21830	5500
AXS 14-19P24	1014	45	108.2	9850	21940	5605
AXS 14-19Q24	1085	55	115.7	9925	22015	5680
AXS 14-19R24	1182	75	126.1	10365	22450	6120

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

(2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.

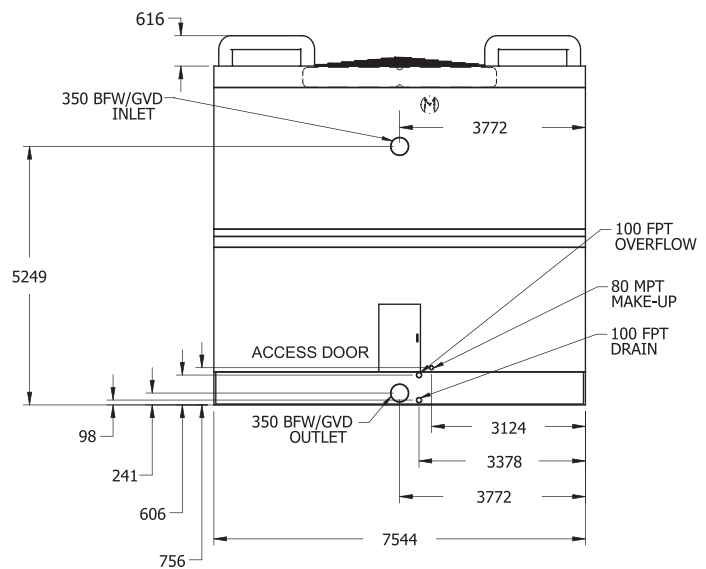
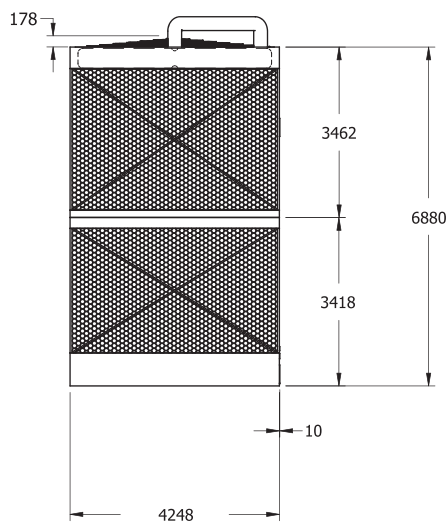
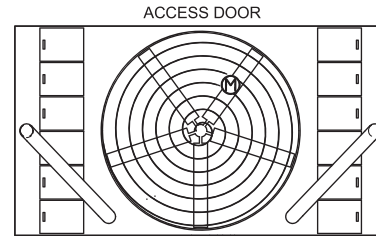
(3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.

(4) Fan guard does not ship factory mounted.

♦ Heaviest section is upper section.

# Models: AXS 14-22J24 TO 14-22S24

## Double Stack Cooling Towers



All dimensions above are in millimeters (mm).

Model No.	Nominal Tonnage	Fan Motor (kW)	Air Flow (m <sup>3</sup> /s)	Weights (kg)		
				Shipping	Operating	Heaviest Section*
AXS 14-22J24	718	11	73.6	10135	22220	5710
AXS 14-22K24	783	15	80.3	10160	22250	5740
AXS 14-22L24	837	18.5	85.8	10240	22330	5820
AXS 14-22M24	884	22	90.7	10265	22355	5840
AXS 14-22N24	964	30	98.8	10335	22425	5915
AXS 14-22O24	1,031	37	105.7	10340	22430	5920
AXS 14-22P24	1,089	45	111.6	10455	22545	6030
AXS 14-22Q24	1,164	55	119.4	10530	22615	6100
AXS 14-22R24	1,269	75	130.1	10965	23050	6540
AXS 14-22S24	1,357	95	139.1	11210	23295	6785

NOTE: (1) An adequately sized bleed line must be installed in the cooling tower system to prevent build-up of impurities in the recirculated water.

(2) Do not use catalog drawings for certified prints. Dimensions and weights are subject to change.

(3) Adequate spacing must be allowed for access to the cooling tower. Refer to EVAPCO's Equipment Layout Manual.

(4) Fan guard does not ship factory mounted.

♦ Heaviest section is upper section.



# AXS Design Features

## Cold Water Basin End Covers

The cold water basin is provided with removable end covers that protect the end of the basin from dirt, debris and sunlight while still allowing for access under the fill for thorough cleaning.



## EVAPAK® Crossflow Fill

The UV inhibited PVC fill media in every AXS cooling tower is bottom-supported, bonded block fill which maintains its rigidity through years of use. The bottom-supported design ensures that the fill will never sag which prevents loss of heat transfer and minimizes the risk of under deposit corrosion due to dirt and debris build-up.



## Oversized Access Doors

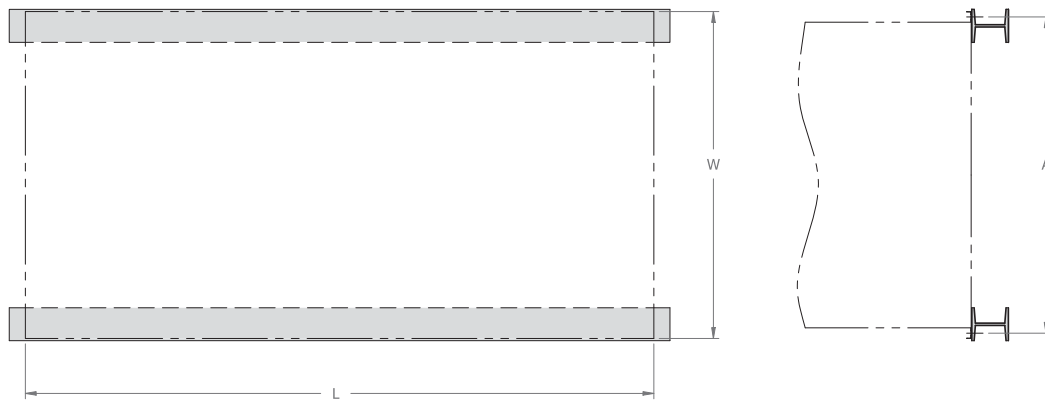
The standard oversized access doors are located on each side wall of the cooling tower for easy, unobstructed access to the plenum area from either side of the cooling tower.



# Structural Steel Support

All AXS Models

## Suggested I-Beam Arrangement



Longitudinal Steel Support Arrangement

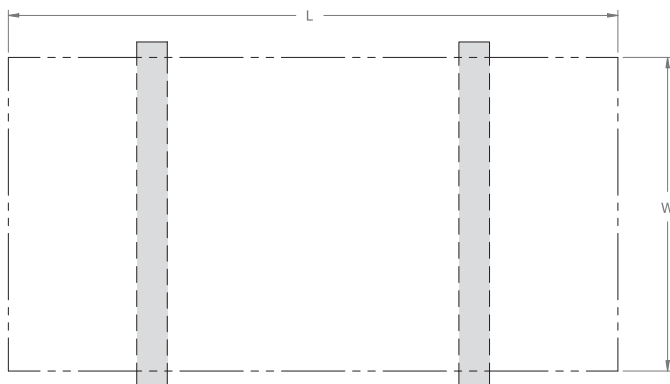
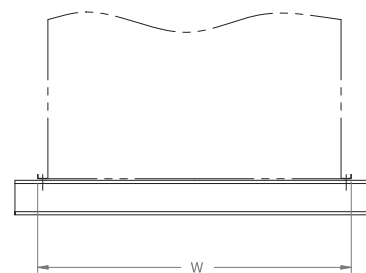
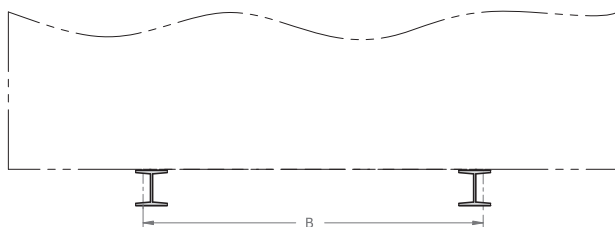


Table 1					
				Standard	Minimum
Unit	W (mm)	L (mm)	A (mm)	B (mm)	B (mm)
3.6m wide	3607	6934	3570	3912	2896
4.2m wide	4248	7544	4210	4674	3658



Transverse Steel Support Arrangement

### NOTES:

1. These are suggested arrangements for preliminary layout purposes. Consult your EVAPCO representative for factory certified steel support drawings.
2. 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.
3. Deflection may be calculated by using 55% of the operating weight as a uniform load on each beam.
4. Beams should be level before setting the unit in place. Do not level the unit by shimming between it and the I-beams.
5. Support beams and anchor bolts are to be furnished by others.
6. Dimensions, weights and data are subject to change without notice. Refer to the factory certified drawings for exact dimensions.
7. The unit will have pre-punched anchor bolt holes in the standard and minimum hole spacing locations only (see B dimensions from table 1). All other anchor bolt holes will be located and drilled by others.
8. For alternate beam positioning, please consult your EVAPCO representative.

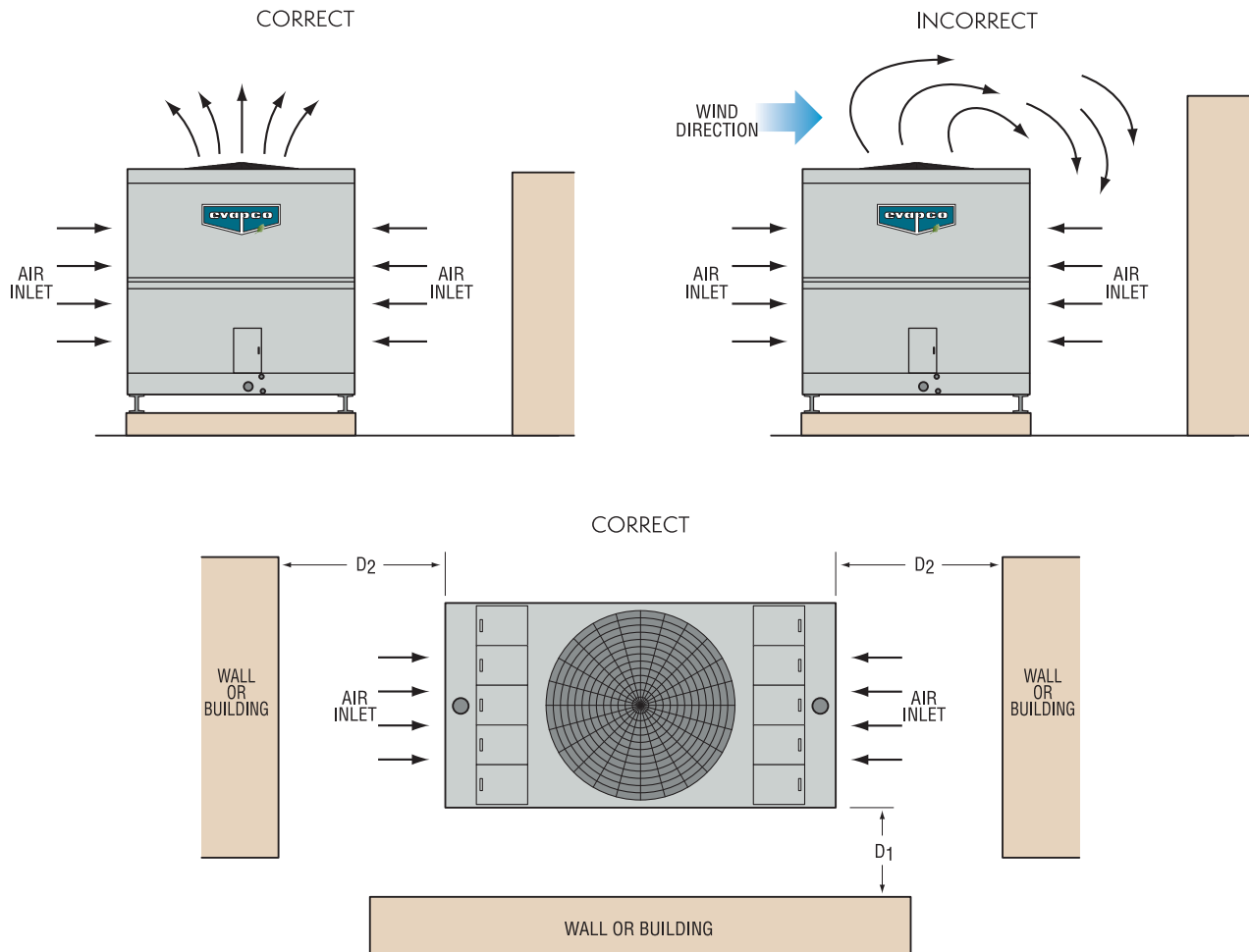
NOTE: OPTIONAL BOTTOM CONNECTIONS WILL REQUIRE THE UNIT TO BE ELEVATED TO ALLOW FOR PIPING.

# Equipment Layout Guidelines

All AXS Models

## Unit Layout

Since evaporative cooling equipment requires large quantities of air, adequate spacing around the unit must be provided for it to perform properly. An equally important consideration when laying out the equipment is to locate the unit so that recirculation is minimized. The top of the cooling tower must be equal to or higher than any adjacent walls, buildings or other structures. When the top of the unit is lower than the surrounding structures recirculation can be a major problem.



Unit	Minimum Dimension (m)*				
	D1	D2 - one unit	D2 - two units	D2 - three units	D2 - four units
Single Stack - 3.6m wide	1	2.1	3.4	4.1	4.6
Double Stack - 3.6m wide	1	2.3	3.7	4.7	5.5
Single Stack - 4.2m wide	1	2.4	3.7	4.4	4.9
Double Stack - 4.2m wide	1	2.4	4	5	5.8

\*Minimum dimensions will increase on multi-cell installations.  
CONSULT FACTORY FOR LARGER INSTALLATIONS.



## NOTES

[illegible]

Dimensions, weights, and data are subject to change without notice.



# WORLDWIDE MANUFACTURING FACILITIES



- World Headquarters/  
Research and  
Development Center
- EVAPCO Facilities

## EVAPCO, Inc. — World Headquarters & Research / Development Center

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[evapcomw@evapcomw.com](mailto:evapcomw@evapcomw.com)

#### EVAPCO-Dry Cooling, Inc.

1011 U.S. Highway 22 West  
Bridgewater, NJ 08807 USA  
1-908-379-2665 p  
[info@evapco-blct.com](mailto:info@evapco-blct.com)

#### Refrigeration Valves & Systems Corporation

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1520 Crosswind Drive  
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979-778-0095 p | 979-778-0030 f  
[rsv@rvscorp.com](mailto:rsv@rvscorp.com)

#### EVAPCO Northwest

5775 SW Jean Road, Suite 210  
Lake Oswego, OR 97035 USA  
503-639-2137 p | 503-639-1800 f

#### EvapTech, Inc.

A wholly owned subsidiary of EVAPCO, Inc.  
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[marketing@evaptech.com](mailto:marketing@evaptech.com)

#### Tower Components, Inc.

A wholly owned subsidiary of EVAPCO, Inc.  
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### South America

#### EVAPCO SEMCO

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