



2024

COMMERCIAL



EVAPORATIVE AIR COOLERS

**PROVIDES HIGH EFFICIENCY IN EVAPORATIVE COOLING TO MEET
TODAY'S GROWING DEMAND.**

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POWERFUL COOLING MAXIMUM EFFICIENCY

Whether used to cool an entire facility or simply to spot-cool specific areas, the AeroCool Commercial Rigid Media Cooler can supplement and/or replace mechanical refrigeration needs. The AeroCool Series is an ideal cooling solution for commercial, industrial, institutional or agricultural facilities and buildings that require moving large quantities of fresh air. Laundries, gymnasiums, kitchens, heat-treating areas and dry cleaning plants are perfect candidates for energy efficient evaporative cooling.

- Perfect for buildings that require large quantities of fresh air.
- Uses highly efficient rigid media.
- Proven alternative to costly mechanical refrigeration systems.
- Constructed of heavy gauge galvanized steel.
- Available in side draft, down draft and updraft configurations.
- Belt included with dry section.
- Metal skids under each module for roof mounting. Lift brackets are supplied for lifting to installation site.
- Knockout for electrical service is 7/8".
- Water supply line is 1/4" O.D. and service can be from either side.

CONFIGURED TO MEET YOUR APPLICATION

We provide a large array of configurations; single and dual wet section models, from 3/4 to 10 horsepower motors and multiple CFM outputs. All sizes of the AeroCool Industrial series are available in side or down draft configurations. In addition, the IUP 701 and IUP 800 up-discharge units are designed for specialized installations or access needs. All these options combine to create an industry-leading level of configuration options allowing you to facilitate the most energy efficient cooler for your specific application.

ENERGY EFFICIENCY AND PERFORMANCE

Specification of critical components is vital in obtaining the required discharge volume. Motor horsepower, voltage, motor pulley outside diameter, motor sheave outside diameter all directly relate to the revolutions per minute (RPM) of the blower wheel. Equally important is the reduction in electrical usage and water required for operation.



DOWN SINGLE
INLET



SIDE SINGLE
INLET



DOWN DUAL
INLET



SIDE DUAL
INLET



UP DUAL
INLET

SIZING PROCEDURES

Use the appropriate air delivery performance tables and the procedure to the right to properly size these AeroCool Commercial units.

8" Media coolers - pages 3 - 4

12" Media coolers - pages 5-6

4 x 4 Media coolers - pages 7-8

The performance or sensible heat capacity of any evaporative cooler is a function of both the CFM and the efficiency (air discharge temperature). Both of these specifications should be considered to properly size the units.

Static pressure, or duct system resistance, also impacts air delivery. Once the model number, CFM air delivery required and static pressure are known, identify the blower wheel RPM in the column to the right of CFM air delivery. This will ensure a properly sized sheave.

1 Determine design Conditions

- Outside Dry-Bulb (DB)
- Outside Wet-Bulb (WB)
- Inside Set Point Temp (TI)

2 Determine the design Sensible Heat Load. (Btuh)

Determine the Cooler Leaving Air Temperature (LAT)

$$LAT = DB - [(DB - WB) EFF]$$

8" Media - EFF ≈ Up to 80%

12" Media - EFF ≈ Up to 90%

4 x 4 Media - EFF ≈ Up to 93%

3 Determine the CFM required

$$CFM = \frac{0.925 \times \text{Sensible Heat Load}}{(TI - LAT)}$$

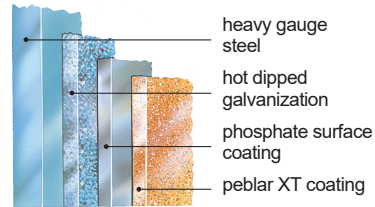
4 Determine the cooler(s) required by referring to the appropriate air flow charts on pages 4, 6 and 8 .

BUILT TO LAST

AeroCool Industrial coolers are constructed of heavy gauge galvanized steel. Each component is then coated with our exclusive multi-layer Peblar XT finish, developed to protect the structure and help it resist rust and corrosion.

The industrial size blower wheels are dynamically balanced and paired with long-life ball bearings to ensure trouble free operation.

The AeroCool series will provide years of reliable service and provide maximum return on your investment.



Modular Wet Sections

AeroCool Industrial coolers can be equipped with wet sections that have 8" or 12" rigid media or the highly-efficient 4 x 4 media for maximum cooling power.

This rigid media is constructed of special cellulose material, infused with insoluble decay resistant chemicals as well as rigidifying saturants. The unique design of the pads, which continually direct water to the air inlet side, induces a highly turbulent mixing of air and water for optimum moisture transfer. This process results in cooler, consistent air flow with lower temperatures.

Each wet section can be configured with 8", 12" or Hi-Density 4 x 4 rigid media. Float is included in wet section.

Each wet section can be configured with 8", 12" or Hi-Density 4 x 4 rigid media.

Float is included in wet section.

SPECIAL SERVICE SOLUTIONS ISVSPC - INTERNAL SINGLE VOLTAGE SINGLE POINT CONNECTION

Factory pre-wire service includes installation and wiring of the motor, motor sheave, float valve, pump and pump junction box. The control box for the ISVSPC is for simplistic wiring especially designed for the desired motor voltage required.

GOOD 8" Rigid Media



- Economical choice
- Lower replacement cost

BETTER 12" Rigid Media

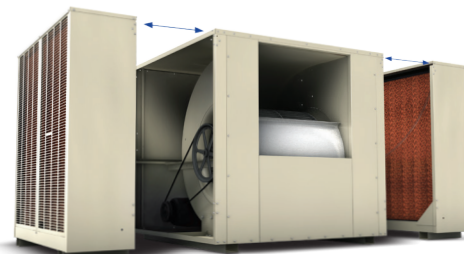


- Ultra efficient
- More surface area for better cooling

BEST 4 x 4 Rigid Media



- Offers the best cooling efficiency
- High density media



8" STANDARD MEDIA

(economical choice - lower replacement cost)

STANDARD 8" WET SECTIONS

CERTIFIED AIR DELIVERY AT VARIOUS EXTERNAL STATIC PRESSURES

Performance certified is for installation Type B - free inlet, ducted outlet. Power Rating (B.H.P.) includes transmission losses. Performance ratings include the effects of evaporative media. Blower RPM values based on motor RPM 1725



Phoenix Manufacturing, Inc. certifies that the evaporative coolers shown below are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

ID500		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 9/875	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS080	3/4	6,700	295	6,250	310	5,850	325	5,400	337	5,000	350	4,500	363	3,800	380	3,200	409	2,975	430	2,550	452	2,200	475
		1	7,350	325	6,950	338	6,625	352	6,200	364	5,800	375	5,425	387	5,000	400	4,500	413	3,650	440	3,375	460	3,050	479
		1 1/2	8,425	371	8,075	384	7,775	396	7,450	408	7,075	417	6,700	427	6,400	437	6,050	447	5,650	458	5,200	471	4,350	495
		2	9,275	410	8,950	420	8,675	432	8,400	442	8,100	451	7,725	460	7,400	469	7,125	478	6,800	488	6,450	497	6,100	507
3	9,875	435	9,875	460	9,875	480	9,825	497	9,600	507	9,325	515	9,025	523	8,725	530	8,450	538	8,200	546	7,950	554		

IS500		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 9/875	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS080	3/4	6,825	291	6,450	302	6,050	314	5,675	325	5,250	338	4,825	358	3,950	380	3,350	400	2,900	425	2,400	455	1,950	480
		1	7,525	320	7,200	330	6,825	341	6,450	352	6,125	363	5,700	375	5,050	392	4,400	414	3,925	431	3,500	452	3,050	476
		1 1/2	8,600	368	8,325	375	8,000	385	7,675	395	7,375	404	7,100	413	6,750	423	6,325	434	5,650	454	5,100	472	4,700	485
		2	9,500	405	9,225	412	8,950	420	8,650	428	8,325	437	8,075	445	7,800	454	7,500	463	7,150	472	6,700	484	6,000	508
3	9,875	420	9,875	439	9,875	455	9,875	473	9,875	491	9,600	498	9,350	507	9,150	514	8,900	522	8,650	529	8,350	537		

ID / IS601		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 17/100	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS080	1	8,725	255	8,275	268	7,775	282	7,300	295	6,825	310	6,350	326	5,850	342	5,300	360	4,700	383	4,050	418	3,475	446
		1 1/2	10,000	292	9,625	304	9,200	315	8,750	327	8,325	339	7,900	352	7,475	366	7,075	379	6,625	393	6,150	409	5,650	428
		2	11,000	321	10,675	332	10,275	342	9,875	353	9,500	364	9,125	375	8,700	387	8,350	399	7,975	412	7,575	423	7,175	436
		3	12,600	369	12,300	378	11,975	386	11,650	395	11,300	404	10,950	413	10,600	424	10,275	434	9,925	445	9,600	456	9,275	466
		5	14,950	438	14,700	445	14,425	452	14,150	460	13,875	468	13,575	474	13,275	482	12,975	490	12,700	499	12,400	506	12,125	516
7 1/2		17,100	500	16,800	507	16,675	514	16,425	520	16,200	526	15,925	532	15,675	540	15,425	546	15,150	553	14,900	560	14,650	568	

ID / IS / IUP701		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 19/750	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS080	1	9,950	206	9,300	220	8,650	234	7,900	250	7,250	265	6,350	285	4,900	324	4,300	342	3,500	362	2,400	380	1,750	416
		1 1/2	11,400	236	10,800	246	10,250	260	9,650	272	9,000	288	8,425	300	7,725	317	6,600	340	5,525	373	5,000	390	4,400	405
		2	12,550	260	12,000	270	11,500	281	11,000	292	10,350	305	9,800	318	9,300	330	8,700	343	7,900	360	6,450	399	5,950	415
		3	14,350	298	13,900	306	13,425	315	13,000	325	12,550	336	12,000	347	11,500	356	11,050	368	10,600	380	10,050	392	9,450	405
		5	17,050	354	16,650	360	16,250	367	15,850	375	15,500	384	15,150	393	14,725	402	14,250	411	13,800	420	13,400	429	13,050	438
		7 1/2	19,500	405	19,200	410	18,800	416	18,450	422	18,125	430	17,800	438	17,500	446	17,150	454	16,800	462	16,400	469	16,000	476
10		OPERATION NOT RECOMMENDED IN THIS AREA WATER ENTRAINMENT WILL OCCUR.										19,750	459	19,750	471	19,625	481	19,350	488	19,050	496	18,750	503	18,400

ID / IS / IUP800		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 25/750	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS880	2	15,000	232	14,400	241	13,700	250	13,000	259	12,400	269	11,700	278	10,900	288	10,200	297	9,200	309	8,600	325	7,000	360
		3	17,200	266	16,600	274	16,100	282	15,500	289	14,900	298	14,400	306	13,700	313	13,100	322	12,400	330	11,800	343	11,200	348
		5	20,400	315	19,900	322	19,500	328	18,900	335	18,500	342	17,900	348	17,500	355	17,000	362	16,500	368	15,900	375	15,400	382
		7 1/2	23,400	361	23,000	367	22,600	373	22,100	378	21,700	384	21,200	390	20,800	395	20,400	402	20,000	407	19,600	413	19,100	420
10		25,750	397	25,400	403	25,000	407	24,600	413	24,200	418	23,800	423	23,400	428	23,000	434	22,600	438	22,200	444	21,900	450	

Do not exceed listed RPM, motor current draw (FLA) will be less than nameplate. Water entrainment may occur if operated at higher RPM's.

NOT RECOMMENDED - Operation in high static pressure - low CFM conditions can lead to unstable operation.



See complete marking on product

UL CLASSIFIED MODELS

The AeroCool Commercial models are UL Classified. In order to maintain this U.L. Classified designation, these models **must be used** in conjunction with PMI supplied Motors, Sheaves, Pumps and Junction Box kits (JBK).



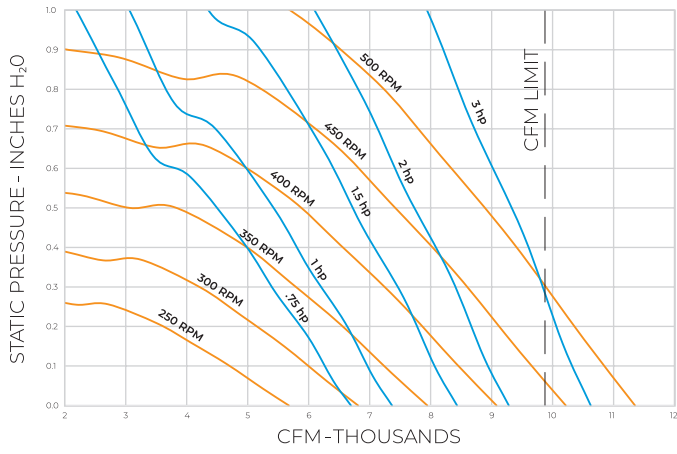
LISTED

UL LISTED MODELS

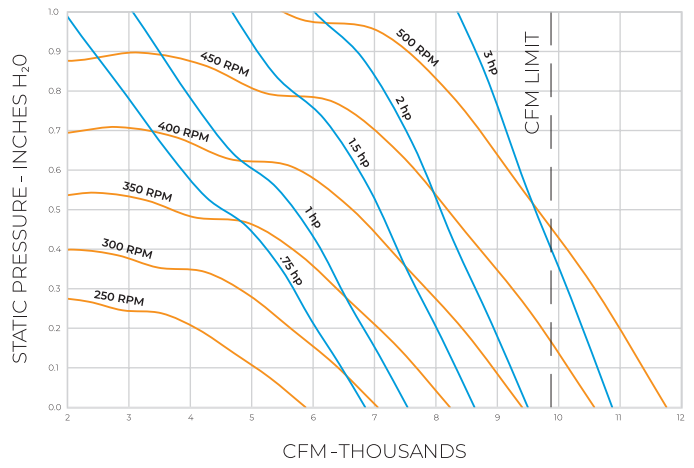
U.L. listed models also available. To specify and order a U.L. Listed model, add a "U" prefix to the front of the appropriate model number.

Example: UID601 & UWS100

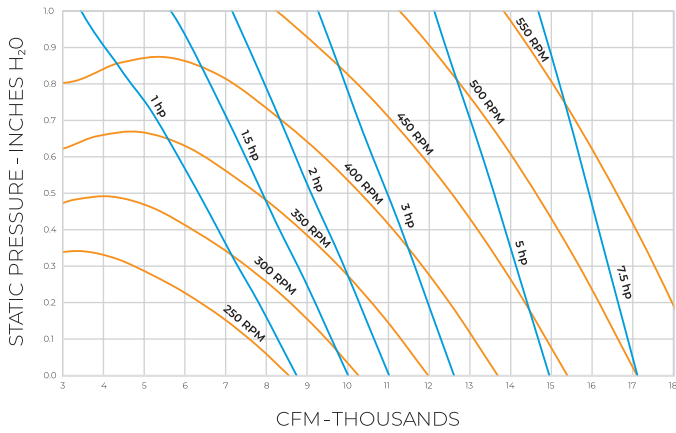
ID500 W / WS080 - AIRFLOW DATA



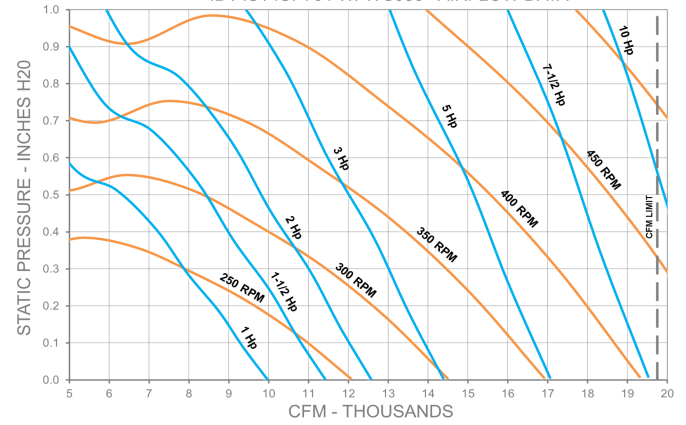
IS500 W / WS080 - AIRFLOW DATA



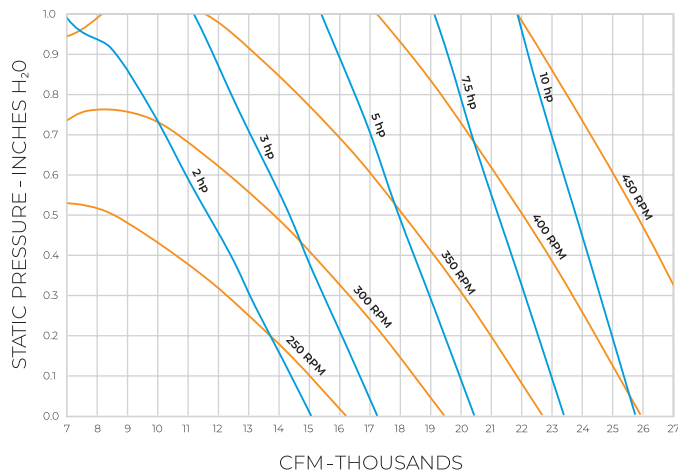
ID / IS601 W / WS080 - AIRFLOW DATA



ID / IS / IUP701 W / WS080 - AIRFLOW DATA



ID / IS / IUP800 W / WS880 - AIRFLOW DATA



12" STANDARD MEDIA

(high efficiency - more surface area for better cooling)

STANDARD 12" WET SECTIONS

CERTIFIED AIR DELIVERY AT VARIOUS EXTERNAL STATIC PRESSURES

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ID500		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 9875	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS100	3/4	6,700	275	6,325	294	5,925	307	5,500	320	5,125	333	4,775	348	3,900	380	3,250	400	2,800	418	2,400	443	2,000	465
		1	7,350	304	7,050	320	6,675	332	6,300	344	5,925	356	5,575	368	5,250	382	4,850	400	3,800	434	3,375	448	2,975	469
		1 1/2	8,425	348	8,150	362	7,850	375	7,525	385	7,200	395	6,850	405	6,550	416	6,275	427	6,000	439	5,650	452	4,600	490
		2	9,275	384	9,050	396	8,750	407	8,475	417	8,175	427	7,850	436	7,550	445	7,300	455	7,025	465	6,750	476	6,500	487
3	9,875	406	9,875	429	9,875	450	9,875	467	9,675	478	9,350	487	9,150	495	8,875	502	8,625	510	8,375	520	8,150	528		

IS500		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 9875	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS100	3/4	6,725	281	6,350	295	5,900	307	5,475	320	5,050	334	4,200	360	3,700	377	3,375	393	2,950	415	2,350	447	1,800	476
		1	7,400	310	7,050	322	6,650	334	6,300	345	5,875	357	5,450	365	4,550	397	4,175	411	3,850	426	3,550	442	3,100	465
		1 1/2	8,500	354	8,175	365	7,850	376	7,525	386	7,175	396	6,800	406	6,475	417	6,050	429	5,250	457	4,850	468	4,525	480
		2	9,250	390	9,075	400	8,775	409	8,450	418	8,150	428	7,850	437	7,500	447	7,200	457	6,975	467	6,150	489	5,650	507
3	9,875	410	9,875	432	9,875	450	9,875	470	9,675	480	9,400	489	9,125	496	8,850	504	8,550	513	8,300	521	8,000	530		

ID / IS601		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 16,875	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS100	1	8,625	262	8,150	275	7,675	290	7,175	305	6,700	318	6,225	332	5,725	346	5,200	365	4,500	392	3,800	422	3,400	444
		1 1/2	9,850	300	9,475	312	9,050	323	8,600	337	8,175	350	7,750	362	7,350	373	6,925	386	6,500	399	6,050	415	5,500	432
		2	10,850	330	10,500	340	10,125	352	9,725	362	9,325	375	8,925	387	8,550	398	8,175	408	7,825	419	7,425	431	7,025	442
		3	12,425	378	12,125	386	11,800	396	11,450	406	11,100	417	10,750	427	10,400	438	10,075	448	9,750	456	9,450	465	9,100	475
		5	14,750	447	14,475	455	14,200	463	13,925	471	13,650	480	13,350	488	13,050	497	12,750	506	12,475	515	12,200	523	11,900	531
		7 1/2	16,875	511	16,650	519	16,400	526	16,175	532	15,950	540	15,675	547	15,425	555	15,175	562	14,900	570	14,650	577	14,400	585

ID / IS / IUP701		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 19,750	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS100	1	10,100	206	9,450	219	8,800	231	8,100	248	7,400	262	6,700	280	4,900	314	4,200	333	3,700	354	3,100	374	2,450	392
		1 1/2	11,600	235	11,000	248	10,450	258	9,850	270	9,225	284	8,600	297	8,050	311	6,325	344	5,500	362	4,900	379	4,350	396
		2	12,750	259	12,250	270	11,700	280	11,200	290	10,600	302	10,050	314	9,500	327	9,000	339	8,400	353	6,500	389	5,850	403
		3	14,650	296	14,150	305	13,700	315	13,250	322	12,800	332	12,275	344	11,800	354	11,300	364	10,825	375	10,375	386	9,950	398
		5	17,350	350	16,950	359	16,550	366	16,150	373	15,750	382	15,400	390	14,950	398	14,550	407	14,150	416	13,750	425	13,350	434
		7 1/2	19,750	402	19,500	409	19,150	416	18,800	422	18,475	429	18,150	435	17,800	442	17,475	449	17,100	456	16,750	465	16,400	472
		10	19,750	402	19,750	417	19,750	430	19,750	442	19,750	451	19,750	465	19,750	470	19,750	478	19,375	485	19,050	498	18,750	505

ID / IS / IUP800		0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"		
CFM UP TO 25,500	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS812	2	14,800	232	14,200	241	13,500	250	12,800	257	12,200	268	11,500	278	10,900	288	10,100	299	9,200	312	8,200	328	6,500	360
		3	17,000	265	16,400	274	15,800	281	15,300	288	14,700	296	14,100	305	13,500	313	12,900	321	12,400	330	11,600	340	10,900	351
		5	20,200	315	19,700	322	19,200	328	18,700	335	18,200	341	17,700	347	17,200	354	16,700	361	16,200	368	15,800	375	15,300	382
		7 1/2	23,100	362	22,700	367	22,200	372	21,700	378	21,400	383	20,900	388	20,500	394	20,100	400	19,600	408	19,200	412	18,800	418
10		25,500	398	25,100	403	24,700	408	24,300	413	23,800	417	23,400	422	23,100	428	22,700	433	22,300	438	21,900	443	21,500	448	

Do not exceed listed RPM, motor current draw (FLA) will be less than nameplate. Water entrainment may occur if operated at higher RPM's.

NOT RECOMMENDED - Operation in high static pressure - low CFM conditions can lead to unstable operation.



See complete marking on product

UL CLASSIFIED MODELS

The AeroCool Commercial models are UL Classified. In order to maintain this U.L. Classified designation, these models **must be used** in conjunction with PMI supplied Motors, Sheaves, Pumps and Junction Box kits (JBK).

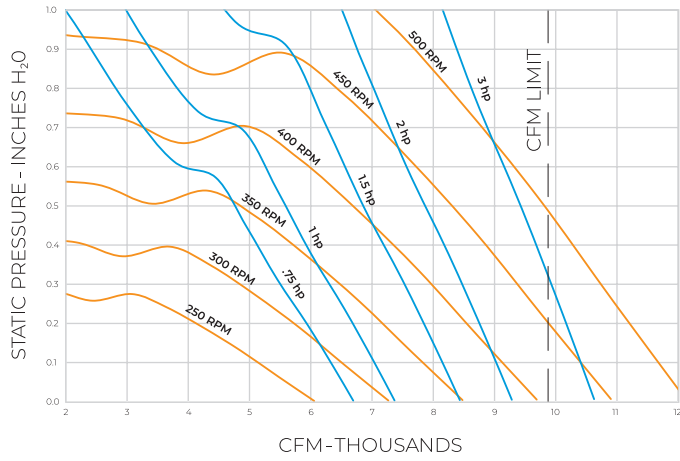


UL LISTED MODELS

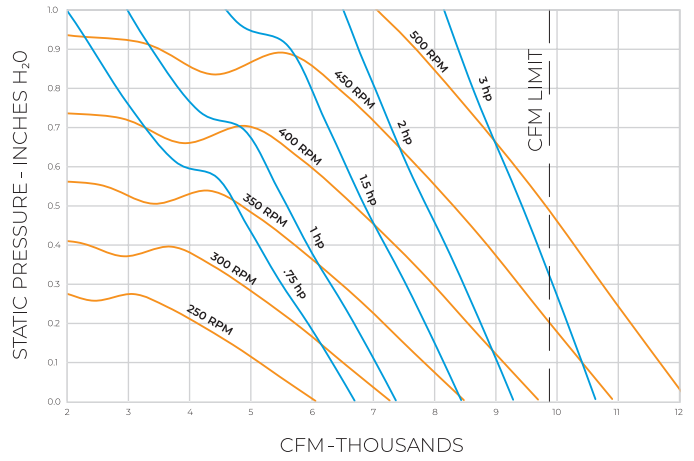
U.L. listed models also available. To specify and order a U.L. Listed model, add a "U" prefix to the front of the appropriate model number.

Example: UID601 & UWS100

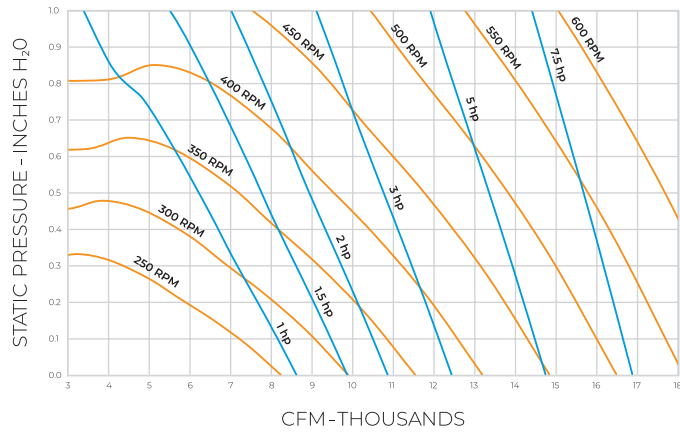
ID500 W / WS100 - AIRFLOW DATA



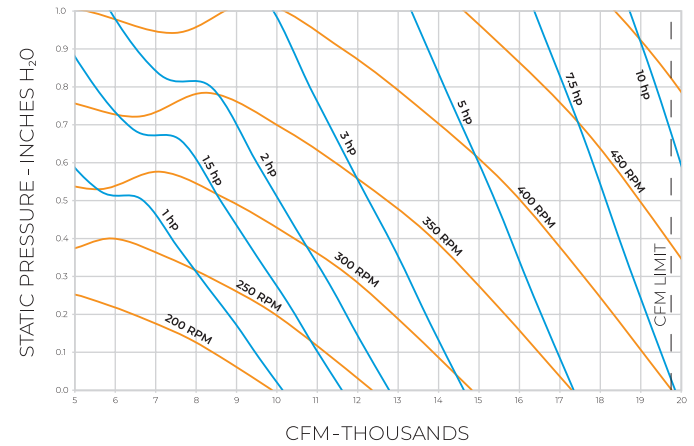
IS500 W/WS100 - AIRFLOW DATA



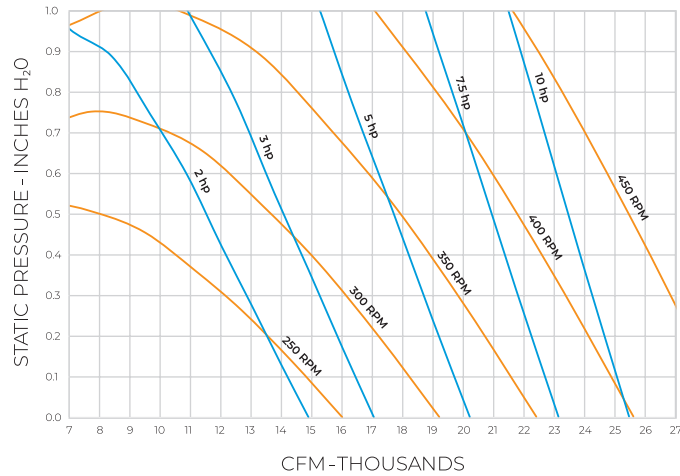
ID / IS601 W / WS100 - AIRFLOW DATA



ID / IS / IUP 701 W / WS100 - AIRFLOW DATA



ID / IS / IUP800 W / WS812 - AIRFLOW DATA



4 x 4 HI-DENSITY MEDIA

(highest efficiency provides for the most cooling)

ULTRA-EFFICIENT 4 X 4 WET SECTIONS

CERTIFIED AIR DELIVERY AT VARIOUS EXTERNAL STATIC PRESSURES

Performance certified is for installation Type B - free inlet, ducted outlet. Power Rating (B.H.P.) transmission losses as noted. Performance ratings include the effects of evaporative media. Blower RPM values based on motor RPM 1725



Phoenix Manufacturing, Inc. certifies that the evaporative coolers shown below are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Power rating (B.H.P.) **does** include transmission losses

ID500		0"		1"		2"		3"		4"		5"		6"		7"		8"		9"		10"		
CFM UP TO 9,100	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS144	3/4	5,900	292	5,400	310	4,900	322	4,450	334	3,900	350	3,350	376	2,650	403	1,950	429	1,450	453	1,050	478		
		1	6,550	322	6,050	340	5,600	350	5,150	360	4,700	375	4,250	390	3,700	413	3,100	438	2,450	462	1,850	485	1,450	505
		1 1/2	7,500	370	7,050	385	6,600	395	6,250	405	5,900	412	5,500	420	5,100	435	4,650	453	4,200	475	3,650	496	3,050	518
		2	8,250	405	7,800	420	7,450	430	7,100	440	6,750	448	6,400	455	6,100	462	5,700	475	5,350	490	4,900	510	4,450	530
3	9,400	465	9,050	478	8,700	490	8,400	495	8,100	503	7,800	510	7,500	518	7,200	525	6,900	532	6,600	542	6,250	555		

IS500		0"		1"		2"		3"		4"		5"		6"		7"		8"		9"		10"		
CFM UP TO 9,750	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS144	3/4	6,150	290	5,700	298	5,200	314	4,600	332	3,950	355	3,250	380	2,550	405	1,900	428	1,250	446	750	465	300	482
		1	6,750	316	6,350	325	5,900	340	5,400	355	4,850	374	4,250	395	3,600	418	2,950	435	2,350	460	1,800	480	1,250	495
		1 1/2	7,750	360	7,400	370	7,000	380	6,600	393	6,150	406	5,700	422	5,150	442	4,600	460	4,050	480	3,500	500	2,950	518
		2	8,500	400	8,200	405	7,900	415	7,500	425	7,100	438	6,700	450	6,300	465	5,800	481	5,350	498	4,800	516	4,300	534
3	9,750	455	9,500	462	9,200	470	8,900	478	8,600	486	8,250	496	7,900	509	7,500	520	7,150	535	6,750	548	6,300	562		

ID / IS601		0"		1"		2"		3"		4"		5"		6"		7"		8"		9"		10"		
CFM UP TO 15,300	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS144	1	7,800	271	7,300	286	6,800	300	6,250	314	5,700	330	5,100	346	4,450	365	3,850	385	3,200	408	2,550	432	1,850	458
		1 1/2	8,900	311	8,500	325	8,100	336	7,600	350	7,100	362	6,650	374	6,100	386	5,600	403	5,050	420	4,500	438	3,950	456
		2	9,850	341	9,450	355	9,050	368	8,650	378	8,200	388	7,800	398	7,300	410	6,850	423	6,400	436	5,900	452	5,400	465
		3	11,300	392	10,900	404	10,600	414	10,200	423	9,900	432	9,500	441	9,100	451	8,700	461	8,300	471	7,900	482	7,500	493
		5	13,400	465	13,100	475	12,800	483	12,500	492	12,200	500	11,900	508	11,600	515	11,250	524	10,900	532	10,600	540	10,300	548
7 1/2		15,300	532	15,100	540	14,800	550	14,550	558	14,250	565	14,000	570	13,750	578	13,500	584	13,200	592	12,950	598	12,700	605	

ID / IS / IUP701		0"		1"		2"		3"		4"		5"		6"		7"		8"		9"		10"		
CFM UP TO 19,750	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS144	1	9,200	206	8,500	226	7,800	242	6,850	260	5,700	282	4,400	313	3,200	349								
		1 1/2	10,500	236	10,000	255	9,350	270	8,600	282	7,800	297	6,800	318	5,700	342	4,500	373	3,500	402				
		2	11,600	259	11,100	276	10,550	291	9,900	303	9,250	316	8,450	330	7,500	347	6,500	371	5,500	398	4,500	425	3,600	450
		3	13,250	297	12,850	313	12,400	327	11,900	338	11,350	348	10,750	360	10,050	372	9,300	384	8,500	402	7,650	421	6,700	443
		5	15,750	351	15,400	367	15,000	378	14,600	389	14,200	398	13,750	408	13,250	417	12,750	426	12,150	435	11,600	446	10,950	457
		7 1/2	18,000	402	17,750	416	17,400	427	17,050	437	16,700	446	16,300	454	15,950	462	15,550	470	15,100	477	14,650	485	14,200	494
10		19,750	443	19,550	455	19,250	466	18,950	475	18,650	484	18,350	492	18,000	500	17,650	506	17,300	513	16,900	521	16,500	529	

Power rating (B.H.P.) **does not** include transmission losses

ID / IS / IUP800		0"		1"		2"		3"		4"		5"		6"		7"		8"		9"		10"		
CFM UP TO 24,900	WET SECTION	HP	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM		
	WS844	2	14,500	234	13,850	242	13,150	251	12,450	261	11,800	270	11,200	280	10,400	290	9,600	301	8,700	316	7,800	335	6,900	360
		3	16,650	267	16,100	275	15,450	283	14,850	291	14,250	299	13,650	307	13,050	315	12,450	325	11,800	334	11,150	343	10,400	355
		5	19,750	317	19,250	323	18,750	330	18,250	336	17,750	343	17,200	350	16,700	357	16,200	363	15,700	372	15,200	378	14,700	386
		7 1/2	22,600	362	22,150	368	21,750	374	21,300	380	20,850	385	20,400	392	19,950	397	19,500	404	19,050	410	18,600	416	18,200	422
		10	24,900	398	24,500	404	24,100	409	23,700	414	23,300	420	22,900	425	22,450	431	22,050	436	21,650	442	21,250	447	20,850	452

NOT RECOMMENDED - Operation in high static pressure - low CFM conditions can lead to unstable operation.



See complete marking on product

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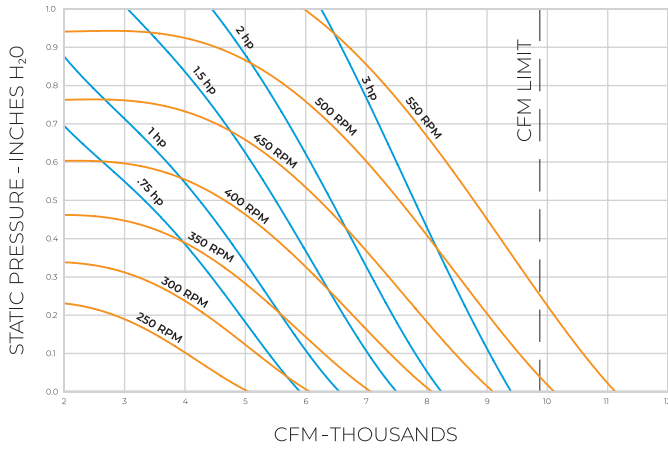
LISTED

UL LISTED MODELS

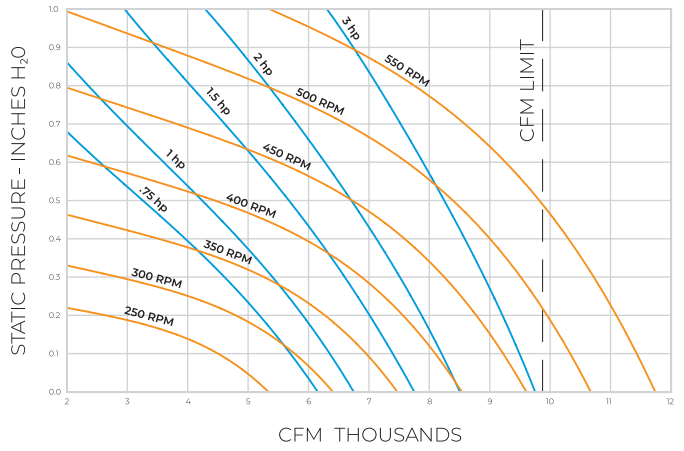
U.L. listed models also available. To specify and order a U.L. Listed model, add a "U" prefix to the front of the appropriate model number.

Example: UID601 & UWS100

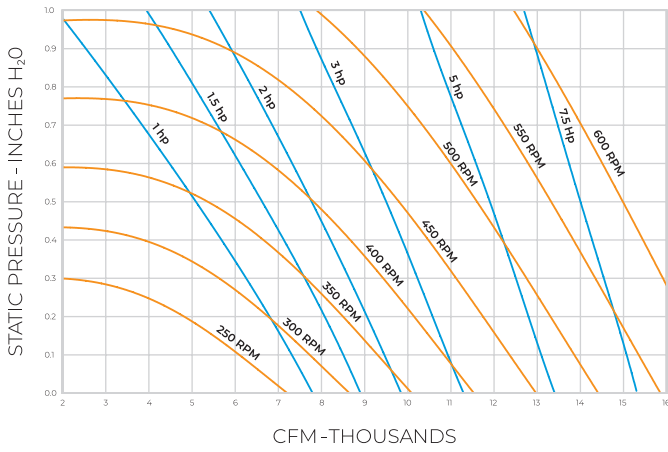
ID500 W / WS144 - AIRFLOW DATA



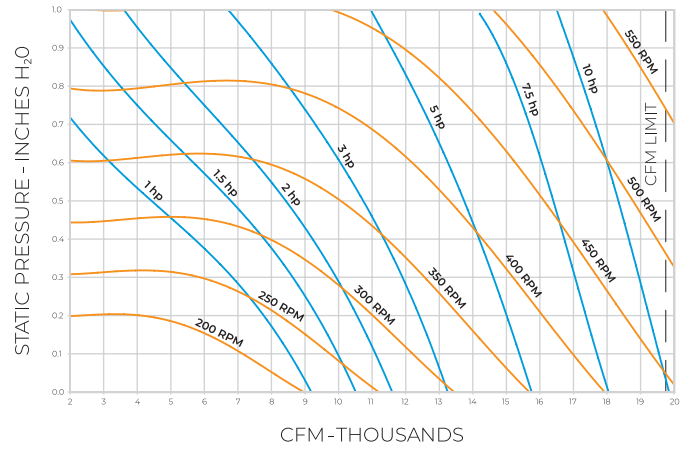
IS500 W / WS144 - AIRFLOW DATA



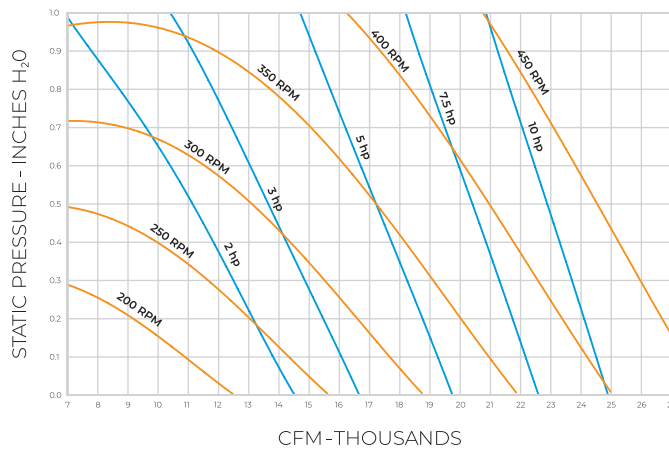
ID / IS601 W / WS144 - AIRFLOW DATA



ID / IS / IUP701 W / WS144 - AIRFLOW DATA



ID / IS / IUP800 W / WS844 - AIRFLOW DATA



SHEAVE & MOTOR DATA

Sheave and motor combinations, pump and belt options.

SHEAVE SELECTION

All sheaves listed are adjustable to meet the blower speed RPM requirements for your application. Using the model number combined with the motor horsepower and blower RPM, use this chart to locate the corresponding part number in the far right column.

SHEAVE SELECTION

MODEL NUMBER	MOTOR H.P.	BORE	BLOWER RPM - SHEAVE TURNS OPEN						PMI PART
			5	4	3	2	1	0	
ID / IS 500	3/4, 1, 1 1/2, 2	5/8	252	279	305	332	358	385	S1
	1, 1 1/2, 2	7/8	252	279	305	332	358	385	S1A
	3/4, 1, 1 1/2, 2	5/8	318	345	372	398	425	451	S2
	1, 1 1/2, 2	7/8	318	345	372	398	425	451	S2A
	3/4, 1, 1 1/2, 2	5/8	372	398	425	451	478	504	S3
	1, 1 1/2, 2	7/8	372	398	425	451	478	504	S3A
	1, 1 1/2, 2	5/8	451	478	504	531	557	584	S4A
	1, 1 1/2, 2	7/8	451	478	504	531	557	584	S4
	3	1 1/8	372	398	425	451	478	504	S3B
3	1 1/8	451	478	504	531	557	584	S4B	
ID / IS 601	1, 1 1/2, 2	5/8	249	268	288	307	326	345	S6A
	1, 1 1/2, 2	7/8	249	268	288	307	326	345	S6
	1, 1 1/2, 2	5/8	326	345	364	383	403	422	S8A
	1, 1 1/2, 2	7/8	326	345	364	383	403	422	S8B
	1, 1 1/2, 2	5/8	383	403	422	441	461	479	S9A
	1, 1 1/2, 2	7/8	403	422	441	460	479	498	S9B
	3	1 1/8	326	345	364	383	403	422	S8
	3, 5	1 1/8	403	422	441	460	479	498	S9
	5	1 1/8	450	470	489	508	527	546	S10A
	7 1/2	1 3/8	450	470	489	508	527	546	S10
	7 1/2	1 3/8	498	518	537	556	575	594	S12
ID / IS / IUP 701	1, 1 1/2, 2	5/8	192	211	230	249	268	288	S5A
	1, 1 1/2, 2	7/8	192	211	230	249	268	288	S5
	1, 1 1/2, 2	5/8	249	268	288	307	326	345	S6A
	1, 1 1/2, 2	7/8	249	268	288	307	326	345	S6
	1, 1 1/2, 2	5/8	326	345	364	383	403	422	S8A
	1, 1 1/2, 2	7/8	326	345	364	383	403	422	S8B
	3	1 1/8	249	268	288	307	326	345	S7
	3, 5	1 1/8	326	345	364	383	403	422	S8
	3, 5	1 1/8	403	422	441	460	479	498	S9
	7 1/2	1 3/8	355	374	393	413	432	441	S8C
	7 1/2, 10	1 3/8	403	422	441	460	479	498	S9C
	10	1 3/8	450	470	489	508	527	546	S10
	ID / IS / IUP 800	2	5/8	192	211	230	249	268	288
2		7/8	192	211	230	249	268	288	S5
2		5/8	249	268	288	307	326	345	S6A
2		7/8	249	268	288	307	326	345	S6
2		5/8	326	345	364	383	403	422	S8A
2		7/8	326	345	364	383	403	422	S8B
3, 5		1 1/8	249	268	288	307	326	345	S7
3, 5		1 1/8	326	345	364	383	403	422	S8
7 1/2, 10		1 3/8	355	374	393	413	432	441	S8C
10		1 3/8	403	422	441	460	479	498	S9C

MOTOR SELECTION

Motors of varying voltages and identical horsepower may have different motor shaft sizes. Be certain the motor shaft diameter and motor sheave bore size are the same size.

All single phase motors are thermally protected and do not require starting devices.

Motors comply with US DOE Efficiency regulation 10 CFR Section 431 Subpart B or Subpart X.

TECHNICAL MOTOR SPECIFICATIONS

MODEL	H.P.	PH	VOLT	AMPERAGE	WT.	BASE	FRM.	SHAFT DIA.
M180	3/4 (2 spd)	1	120	11.5 - 6.4	27	Resilient	56	5/8
M161	3/4	1	120 / 208-240	7.0 / 3.5	29	Resilient	56	5/8
M163B	3/4	3	208-240 / 480	2.8-2.8 / 1.4	26	Resilient	56	5/8
M181A	1 (2 spd)	1	120	12.4 - 6.1	32	Resilient	56	5/8
M165	1	1	120 / 208-240	14.0 / 7.0-7.0	34	Resilient	56	5/8
M166C	1	3	208-240 / 480	3.2-3.1 / 1.6	30	Rigid	143T	7/8
M167C	1	3	200	3.6	30	Rigid	143T	7/8
M168	1 (2 spd)	1	240	7.0 - 3.7	30	Resilient	56	5/8
M169A	1 1/2	1	120 / 240	13.4 / 7.6	41	Resilient	56	5/8
M170C	1 1/2	3	208-240 / 480	4.4-4.2 / 2.1	35	Rigid	143T	7/8
M171C	1 1/2	3	200	4.9	35	Rigid	145T	7/8
M172A	2	1	120 / 240	17.0 / 8.5	46	Rigid	56	5/8
M173C	2	3	208-240 / 480	5.9-5.6 / 2.8	35	Rigid	145T	7/8
M174C	2	3	200	6.4	35	Rigid	145T	7/8
M176C	3	3	208-240 / 480	8.3-7.6 / 3.8	50	Rigid	182T	1 1/8
M177C	3	3	200	9.5	70	Rigid	182T	1 1/8
M178C	5	3	208-240 / 480	13.7-13.0 / 6.5	70	Rigid	184T	1 1/8
M179C	5	3	200	14.2	70	Rigid	184T	1 1/8
M182B	7 1/2	3	208-240 / 480	20.2-18.5 / 9.3	105	Rigid	213T	1 3/8
M183A	10	3	208-240 / 480	26.3-23.8 / 11.9	133	Rigid	215T	1 3/8

PUMP SPECIFICATIONS

PUMP MODEL	VOLTS	AMPS	WATTS	GPM AT 5' HEAD
PK60LA	120	1.7	105	7.3
PK62LA	240	1.1	105	7.3

REQUIRED BELT CHANGE

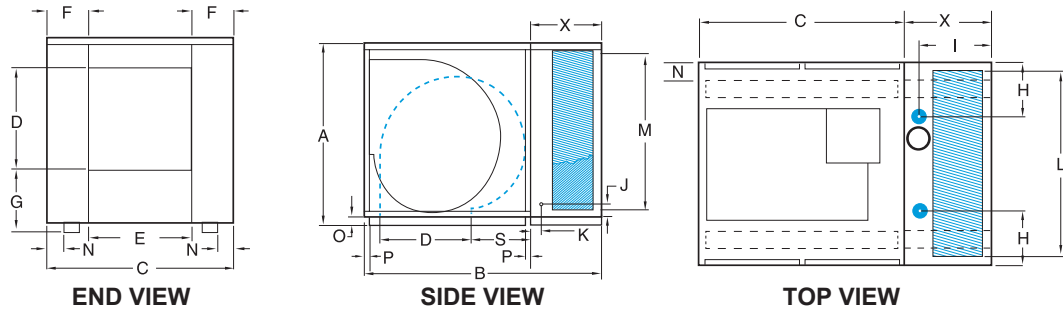
UNIT NUMBER	MOTOR H.P.	BELT # / PART #
IS 500	3	Belt A83 / 5-3-100
ID 500	3	Belt / 5-3-98

NOTE: ID/IS 500 .8" static pressure and higher requires belt change.

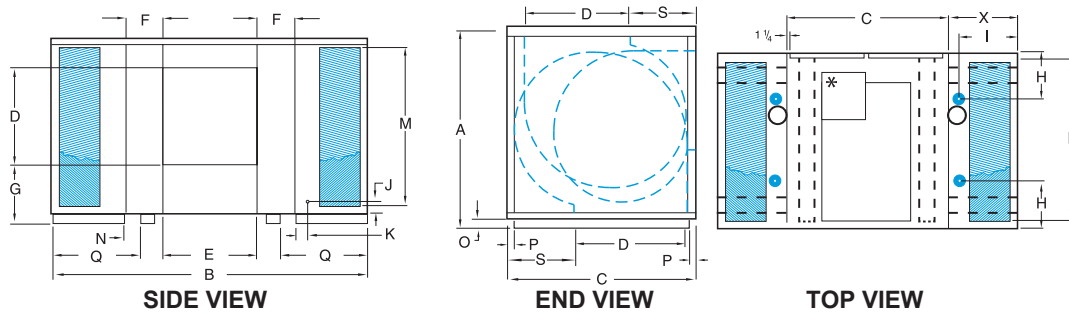
ENGINEERING DATA

Dimensional information for the Aerocool industrial coolers with 12" media, 8" media and the Ultra-efficient 4 x 4 media.

SINGLE INLET 500 SERIES



DUAL INLET 601 / 701 / 800 SERIES



12" STANDARD MEDIA

MODEL NUMBER	CABINET DIMENSIONS (INCHES)																			SHIP WT.	OPER. WT.	BLOWER WHEEL DIA X WIDTH	BLOWER PULLEY PITCH DIAMETER				
	DUCT OPENING					DRAIN LOC.				WATER SVC.		MEDIA		SKID LOCATION				BELTS									
	H	W	D	WET CAB	X	D	E	S	F	G	H	I	J	K	L	M	N	O	P					Q	QTY	SIDE	DOWN
ID500	51 1/2	70	49	21	27	26 3/8	17 1/4	11 1/2	N/A	13	17 3/8	5	3 7/16	48	44 1/2	4 1/2	2 1/2	1 1/2	N/A	1	A80	A77	N/A	485	565	24 X 24	13" Single
IS500	51 1/2	70	49	21	27	26 3/8	N/A	11 1/2	16 3/4	13	17 3/8	5	3 7/16	48	44 1/2	4 1/2	2 1/2	1 1/2	N/A	1	A80	A77	N/A	485	565	24 X 24	13" Single
ID601	51 1/2	91	49	21	27	26 3/8	17 1/4	11 1/2	N/A	13	17 3/8	5	3 7/16	48	44 1/2	1 1/2	2 1/2	1 1/2	25 1/4	2	A98	A98	N/A	645	774	24 x 24	18" Dual
IS601	51 1/2	91	49	21	27	26 3/8	N/A	11 1/2	19 3/4	13	17 3/8	5	3 7/16	48	44 1/2	1 1/2	2 1/2	1 1/2	25 1/4	2	A98	A98	N/A	645	774	24 x 24	18" Dual
ID/IS 701	51 1/2	91	49	21	31 3/4	31 3/4	14 1/2	8 1/2	17 3/8	13	17 3/8	5	3 7/16	48	44 1/2	1 1/2	2 1/2	1 1/2	22 3/8	2	A90	A85	N/A	668	830	28 x 28	18" Dual
IUP 701	51 1/2	91	49	21	31 3/4	31 3/4	13 3/4	8 1/2	N/A	13	17 3/8	5	3 7/16	48	44 1/2	1 1/2	2 1/2	1 1/2	22 3/8	2	N/A	N/A	A95	668	830	28 x 28	18" Dual
ID/IS/IUP 800	61 1/2	103 1/2	62	21	34	34	22 3/4	14	25 1/4	13	17 3/8	5	3 1/2	60	54 1/2	6	2 1/2	1 1/2	26 3/8	2	A105	A90	A108	920	1,160	30 x 28	18" Dual

8" STANDARD MEDIA / ULTRA-EFFICIENT 4x4

MODEL NUMBER	CABINET DIMENSIONS (INCHES)																			SHIP WT.	OPER. WT.	BLOWER WHEEL DIA X WIDTH	BLOWER PULLEY PITCH DIAMETER				
	DUCT OPENING					DRAIN LOC.				WATER SVC.		MEDIA		SKID LOCATION				BELTS									
	H	W	D	WET CAB	X	D	E	S	F	G	H	I	J	K	L	M	N	O	P					Q	QTY	SIDE	DOWN
ID500	51 1/2	66	49	17	27	26 3/8	17 1/4	11 1/2	N/A	13	13 3/8	5	3 1/2	48	44 1/2	4 1/2	2 1/2	1 1/2	N/A	1	A80	A77	N/A	460	538	24 X 24	13" Single
IS500	51 1/2	66	49	17	27	26 3/8	N/A	11 1/2	16 3/4	13	13 3/8	5	3 1/2	48	44 1/2	4 1/2	2 1/2	1 1/2	N/A	1	A80	A77	N/A	460	538	24 X 24	13" Single
ID601	51 1/2	83	49	17	27	26 3/8	17 1/4	11 1/2	N/A	13	13 3/8	5	3 1/2	48	44 1/2	1 1/2	2 1/2	1 1/2	21 1/4	2	A98	A98	N/A	595	719	24 x 24	18" Dual
IS601	51 1/2	83	49	17	27	26 3/8	N/A	11 1/2	19 3/4	13	13 3/8	5	3 1/2	48	44 1/2	1 1/2	2 1/2	1 1/2	21 1/4	2	A98	A98	N/A	595	719	24 x 24	18" Dual
ID/IS 701	51 1/2	83	49	17	31 3/4	31 3/4	14 1/2	8 1/2	17 3/8	13	13 3/8	5	3 1/2	48	44 1/2	1 1/2	2 1/2	1 1/2	18 3/8	2	A90	A85	N/A	619	775	28 x 28	18" Dual
IUP 701	51 1/2	83	49	17	31 3/4	31 3/4	13 3/4	8 1/2	N/A	13	13 3/8	5	3 1/2	48	44 1/2	1 1/2	2 1/2	1 1/2	18 3/8	2	N/A	N/A	A95	619	775	28 x 28	18" Dual
ID/IS/IUP 800	61 1/2	95	62	17	34	34	22 3/4	14	25 1/4	13	17 3/8	5	3 1/2	60	54 1/2	6	2 1/2	1 1/2	22 3/8	2	A105	A90	A108	880	1,070	30 x 28	18" Dual

AEROCOOL® Evaporative Coolers and components are designed and tested in accordance with one or more of the following standards or agencies: **AIR DELIVERY** - data published derived from tests conducted in accordance with Air Movement and Control Assoc. standard 210. **EVAPORATIVE MEDIA** - Specially corrugated cellulose material, impregnated with insoluble antirot salts and rigidifying saturants. **SEALANT** - water immersion per ASTM D870. **FLEXIBILITY** - per ASTM D756. **CORROSION RESISTANCE** - per ASTM B117. **PENCIL HARDNESS** - per ASTM D3363. **IMPACT RESISTANCE** - per D2794. **FLEXIBILITY** - per ASTM D522. **SURFACE BURNING CHARACTERISTICS** of building materials (best rating) per UL 723 and ASTM E-84. **SINGLE PHASE MOTOR** tested under UL standard 507 for locked rotor and heat rise protection. **BLOWER WHEEL** - balanced in accordance with ISO 1940 and A.N.S.I. standard S2.19, quality grade G6.3.

SPECIAL SERVICE SOLUTIONS

ISVSPC - INTERNAL SINGLE VOLTAGE - SINGLE POINT CONNECTION

Factory pre-wire service includes installation and wiring of the motor, motor sheave, float valve, pump and pump junction box. The control box for the ISVSPC is for simplistic wiring especially designed for the desired motor voltage required.



EISA
MOTOR

(Optional)



SWITCH
BOX



120V.
PUMP



ROTARY
SWITCH

(Optional)



PDP12-1
PUMP

Value & Commitment

Phoenix Manufacturing, Inc. (PMI) is a designer, manufacturer, and distributor that primarily produces evaporative cooling products designed for the comfort of the home or business.

Values at PMI begin with our employees, customers, and suppliers. We strive each day to treat those involved with PMI with respect while performing our duties with integrity. We put a premium on those values to best serve our industry in a manner that will deliver quality in everything we do. The phone calls, e-mails and meetings, along with our products and services, are designed to deliver these values as no one else does and to do it consistently each day.



WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



DESIGNED & ASSEMBLED IN
THE USA SINCE 1975