

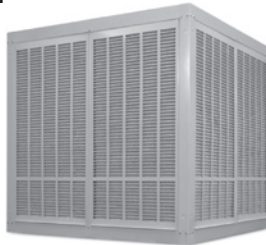
Phoenix Manufacturing, Inc.

3655 E. Roeser Rd. • Phoenix, AZ 85040 • phoenixmanufacturing.com • 602-437-1034

SPECIFICATION DATA INDUSTRIAL FRIGIKING ASPEN MODELS

Frigiking Industrial Evaporative Coolers Feature:

- Dynamically balanced blower wheels.
- Each cooler comes with belt included.
- Models all require 1 pumps.
- Knockout for electrical service is 7/8".
- Bottom pan drain is 3/4" male hose thread
- Solid Shaft for strength & durability.



MODELS: D/H 8801	UD/UH 8801
D/H 2231	UD/UH 2231
D/H 1425	UD/UH 1425
D/H 1425A	

- Units are UL Listed to UL Standard 507
- High quality architectural grade Peblar XT® finish
- Galvanized sheet steel is zinc coated at weight rated G40 or G90
- Multi-layer bottom pan finish

- Up to 22,000 CFM capacity
- Three Phase EISA motors are NEMA MG-1 table 12-12 compliant
- Motor, motor sheave, pump & float ordered separately.
- Bearings have an L10 bearing life of 39,600 hours

PERFORMANCE

AIR DELIVERY - data published and derived from test conducted in accordance with A.M.C.A (Air Movement and Control Assoc.) standard 210.

BEARING LIFE - L10 bearing life of 39,600 hours is based on ABMA standard 9/ISO standard 281.

MOTORS - recognized under UL component standard #1004 for motor certification.

SINGLE PHASE MOTORS - tested under UL standard 507 for locked rotor and heat rise protection.

THREE PHASE MOTORS - EISA motors are NEMA MG-1 table 12-12 construction.

PUMPS - recognized under the UL standard #778 for operating water pumps with thermal overload and locked rotor protection.

CONSTRUCTION

EVAPORATIVE MEDIA - ASPEN PADS - built to federal specification PP-E-911 for Type 1, Class A. Grade 4.

DURACOOl PADS - used in UL Listed coolers is rated to UL 900.

SEALANT - water immersion per ASTM D870.

FLEXIBILITY - per ASTM D756.

HOT DIPPED GALVANIZED SHEET STEEL - is ASTM A653, type CS, with zinc coating weights rated G40 or G90.

CORROSION RESISTANCE - per ASTM B117.

POLYMERIC MATERIALS - listed in accordance with UL 94 and 746C.

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.

PEBLAR XT® - is our one coat TGIC Polyester Powder Coating system that is applied over 5 stage zinc phosphate prepared sheet steel surfaces for protection against atmospheric corrosion. This coating system meets the requirement of UL 1332 - organic coatings for steel enclosures of outdoor use electrical equipment.



UL 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.



UL Classified Models

Commercial Cooler 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). See price sheets for details.



Phoenix Manufacturing certifies that the evaporative coolers shown are licensed to bear the AMCA seal. Cooler ratings are based on tests performed in accordance with AMCA publication 211 and comply with the requirements of the AMCA Certified Rating Program.

All data, specifications and detail contained in this publication are intended as a general guide for using PHOENIX MANUFACTURING, INC. products. These products should not be used in design or construction without an independent evaluation by a qualified engineer or architect to verify the suitability of a particular product for use in a specific application. PHOENIX MANUFACTURING, INC. assumes no liability for failure resulting from the use or misapplication of computation, detail drawings and specifications contained herein. This publication contains the latest information available at the time of printing. PHOENIX MANUFACTURING, INC. reserves the right to make modifications and/or change materials of any of their products without prior notice or obligation. PHOENIX MANUFACTURING, INC. may not produce all of the products contained in this submittal. For product availability and the latest information regarding products contact PHOENIX MANUFACTURING, INC.

Technical Information

Performance shown is installed type B - free inlet, duct outlet. Power Rating does not include drive losses. Performance rating is based on effects of evaporative media in the airstream.

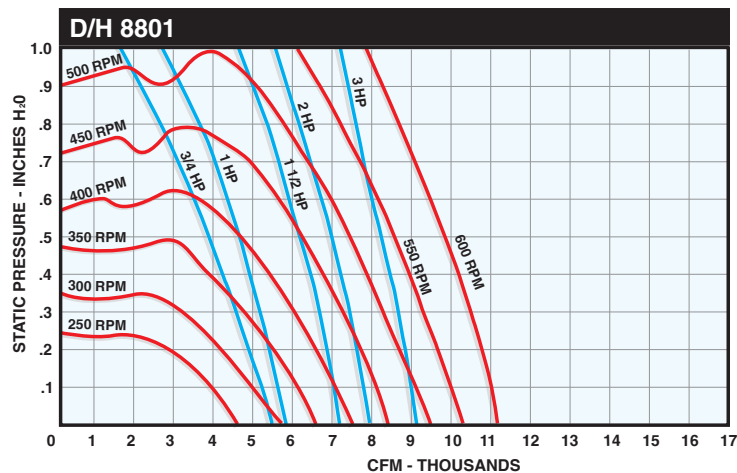
Certified Air Delivery at Various External Static Pressures																- Blower RPM Values based on motor RPM 1725 - AMCA Licensed Ratings							
Model Number	Static Pressure	.0"		.1"		.2"		.3"		.4"		.5"		.6"		.7"		.8"		.9"		1.0"	
	Max HP Required	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM
D/H 8801	3/4	5480	303	5200	317	4950	332	4650	348	4350	366	4000	385	3631	406	3274	428	2790	457	2191	492	1617	521
D/H 8801	1	6030	332	5800	347	5550	360	5300	373	5020	388	4700	406	4400	425	4075	441	3770	461	3400	483	2909	512
D/H 8801	1 1/2	7230	384	6997	395	6769	408	6544	420	6316	432	6084	445	5849	458	5607	472	5354	486	5107	499	4883	513
D/H 8801	2	7958	384	7746	409	7538	444	7332	455	7127	466	6919	478	6708	489	6496	500	6279	513	6052	526	5822	538
D/H 8801	3	9110	483	8923	492	8741	502	8560	511	8381	522	8202	532	8021	541	7838	551	7654	561	7468	571	7280	582
D 1425	1	8675	240	8153	255	7679	267	7144	282	6636	297	6111	312	5505	332	4685	357	3774	394	3080	420	2552	439
D 1425	1 1/2	9930	275	9462	286	9053	299	8618	311	8146	323	7701	337	7257	350	6771	365	6218	383	5506	404	4777	434
D 1425	2	10930	302	10497	313	10120	324	9744	335	9329	347	8901	358	8499	370	8099	382	7671	394	7205	410	6666	427
D 1425	3	12511	346	12126	356	11785	365	11462	375	11131	384	10770	395	10393	404	10029	414	9681	425	9333	436	8966	446
H 1425	1	8616	235	8114	248	7662	263	7148	279	6614	295	6003	310	5498	333	4553	362	3506	395	2917	417	2635	437
H 1425	1 1/2	9862	269	9411	287	9021	294	8606	307	8152	320	7691	335	7164	347	6664	364	6221	384	5400	407	4386	441
H 1425	2	10855	296	10438	307	10077	318	9720	330	9322	342	8909	355	8490	367	8019	379	7535	391	7141	411	6677	426
H 1425	3	12426	339	12053	348	11727	357	11420	369	11104	378	10758	389	10396	399	10037	411	9666	422	9254	432	8822	442
D 2231	1 1/2	13131	219	12494	229	11804	241	11100	254	10382	266	9642	280	8908	294	8172	310	7049	332	5637	364	4762	386
D 2231	2	14453	241	13879	250	13261	260	12623	272	11982	283	11323	295	10651	307	9982	320	9328	334	8555	350	7340	374
D 2231	3	16545	276	16049	283	15520	292	14970	302	14411	312	13852	322	13283	332	12700	342	12112	353	11527	364	10952	375
D 2231	5	19616	327	19203	333	18767	340	18314	348	17850	356	17380	364	16909	373	16437	381	15959	390	15472	398	14978	407
D 2231	7 1/2	22454	374	22096	380	21722	386	21335	392	20937	399	20532	406	20122	413	19711	420	19300	428	18887	435	18471	443
H 2231	1 1/2	13466	239	12747	249	12361	262	11672	271	10769	281	10316	295	9637	308	8651	320	7902	336	6851	361	5664	392
H 2231	2	14821	263	14122	271	13756	284	13325	294	12514	301	11770	311	11376	324	10830	336	9931	346	9157	360	8462	376
H 2231	3	16966	301	16304	308	15927	318	15631	329	15216	337	14519	343	13766	350	13299	361	12976	373	12510	383	11762	392
H 2231	5	20115	357	19512	362	19114	369	18836	379	18590	388	18292	396	17854	402	17233	406	16573	412	16056	420	15722	430

Sheave Selection		Blower RPM Values based on motor RPM 1725							
Model Number	Motor H.P.	I.D.	Blower RPM - Sheave Turns Open						PMI Part
			5	4	3	2	1	0	
D/H 8801	3/4, 1, 1 1/2, 2	5/8	234	259	283	308	333	357	S1
D/H 8801	3/4, 1, 1 1/2, 2	7/8	234	259	283	308	333	357	S1A
D/H 8801	3/4, 1, 1 1/2, 2	5/8	296	320	345	370	394	419	S2
D/H 8801	3/4, 1, 1 1/2, 2	7/8	296	320	345	370	394	419	S2A
D/H 8801	3/4, 1, 1 1/2, 2	5/8	345	370	394	419	444	468	S3
D/H 8801	3/4, 1, 1 1/2, 2	7/8	345	370	394	419	444	468	S3A
D/H 8801	3/4, 1, 1 1/2, 2	5/8	419	444	468	493	518	542	S4A
D/H 8801	3/4, 1, 1 1/2, 2	7/8	419	444	468	493	518	542	S4
D/H 8801	3	1 1/8	419	444	468	493	518	542	S4B
D/H 8801	3	1 1/8	492	518	542	567	592	616	S11B
D/H 1425	1, 1 1/2, 2	5/8	230	249	268	288	307	326	S2
D/H 1425	1, 1 1/2, 2	7/8	230	249	268	288	307	326	S2A
D/H 1425	1, 1 1/2, 2	5/8	268	288	307	326	345	364	S3
D/H 1425	1, 1 1/2, 2	7/8	268	288	307	326	345	364	S3A
D/H 1425	1, 1 1/2, 2	5/8	326	345	364	383	403	422	S4A
D/H 1425	1, 1 1/2, 2	7/8	326	345	364	383	403	422	S4
D/H 1425	1, 1 1/2, 2	5/8	383	403	422	441	460	479	S11
D/H 1425	1, 1 1/2, 2	7/8	383	403	422	441	460	479	S11A
D/H 1425	3	1 1/8	326	345	364	383	403	422	S4B
D/H 1425	3	1 1/8	383	403	422	441	460	479	S11B
D/H 2231	1 1/2, 2	5/8	192	211	230	249	268	288	S5A
D/H 2231	1 1/2, 2	7/8	192	211	230	249	268	288	S5
D/H 2231	1 1/2, 2	5/8	249	268	288	307	326	345	S6A
D/H 2231	1 1/2, 2	7/8	249	268	288	307	326	345	S6
D/H 2231	1 1/2, 2	5/8	326	345	364	383	403	422	S8A
D/H 2231	1 1/2, 2	7/8	326	345	364	383	403	422	S8B
D/H 2231	3, 5	1 1/8	249	268	288	307	326	345	S7
D/H 2231	3, 5	1 1/8	326	345	364	383	403	422	S8
D/H 2231	5	1 1/8	403	422	441	460	479	498	S9
D 2231	7 1/2	1 3/8	355	374	393	413	431	452	S8C
D 2231	7 1/2	1 3/8	403	422	441	460	479	498	S9C



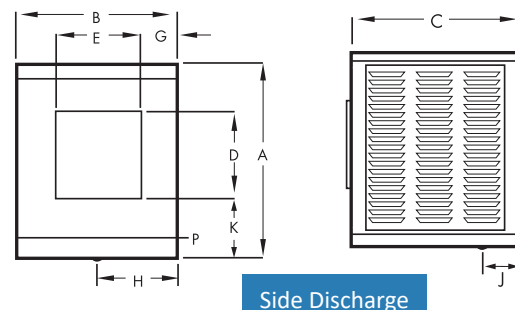
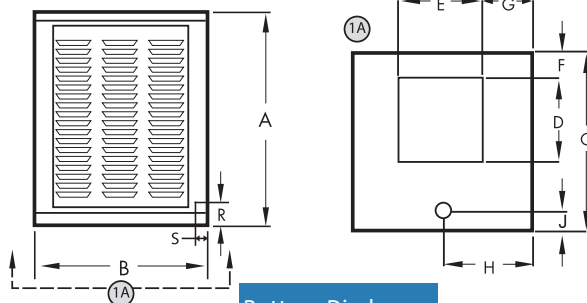
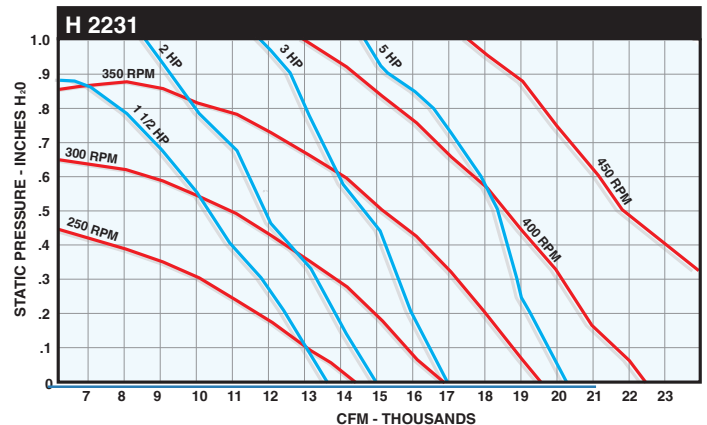
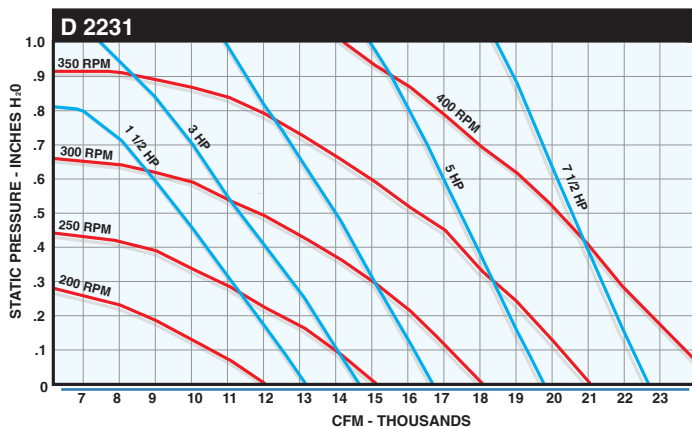
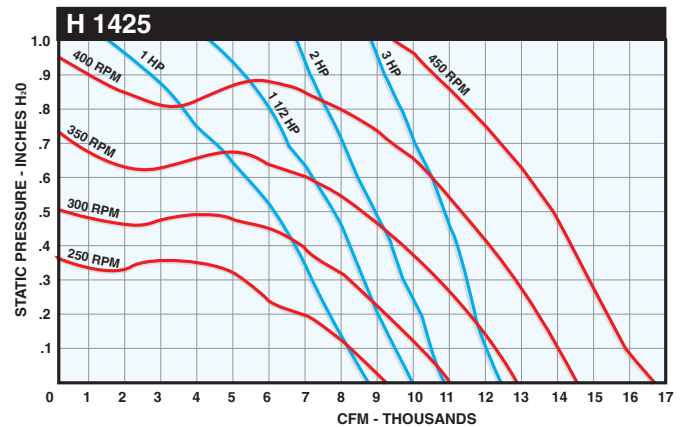
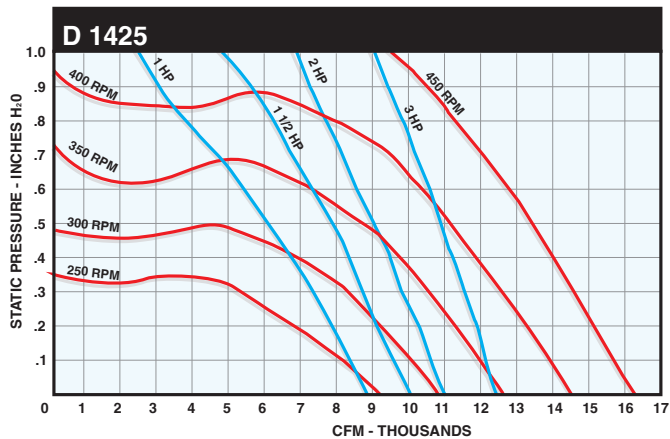
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Motor Specifications								
Model Number	H.P.	Phase	Volt	Amperage	lbs.	Base	Frame	Shaft O.D.
*M180	3/4 - 2 spd.	1	120	10.5-5.8	32.3	Resilient	56	5/8
*M161	3/4	1	120 / 208-240	10.6 / 5.3	24.2	Resilient	56	5/8
M163B	3/4	3	208-240 / 480	2.7-2.8/1.4	22	Resilient	56	5/8
*M181A	1 - 2 spd.	1	120	11.8 / 6.1	32.3	Resilient	56	5/8
*M165	1	1	120 / 208-240	14.0 / 7.0	30.2	Resilient	56	5/8
M166C	1	3	208-240 / 480	3.3-3.1 / 1.6	40	Rigid	143T	7/8
M167B	1	3	200	3.6	40	Rigid	143T	7/8
*M168	1 - 2 spd.	1	240	7.2	32.4	Resilient	56	5/8
*M169A	1 1/2	1	120 / 208-240	18 / 9.3-9	41.7	Resilient	56H	5/8
M170C	1 1/2	3	208-240 / 480	4.6-4.4 / 2.2	40	Rigid	145T	7/8
M171B	1 1/2	3	200	5.1	40	Rigid	145T	7/8
*M172A	2	1	120 / 208-240	21 / 11.3-10	50	Resilient	56H	5/8
M173C	2	3	208-240 / 480	6.2-5.8 / 2.9	44	Rigid	145T	7/8
M174B	2	3	200	6.7 / 6.0	44	Rigid	145T	7/8
M176C	3	3	208-240 / 480	8.4-7.8 / 3.9	75	Rigid	182T	1 1/8
M177B	3	3	200	10.6 / 10.2	55	Rigid	182T	1 1/8
M178C	5	3	208-240 / 480	13.6-12.4 / 6.2	81	Rigid	184T	1 1/8
M179B	5	3	200	15.2-14.6	70	Rigid	184T	1 1/8
M182B	7 1/2	3	208-240 / 480	19.2-9.6	121	Rigid	213T	1 3/8



Required Belt Change		
Model	Motor H.P.	Belt Size
H 8801	3	A79
D 8801	1 1/2 HP & UP	A76
D/H 1425	3 HP w/ S11 sheave only	A96
D 2231	7 1/2	A105

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



Commercial/Industrial Engineering Data

Model Number	Blower Wheel		Belt Size D/H	Blower Pulley Pitch Diameter	Cabinet Dimensions (Inches)												Approx. Oper. Wt.	Approx. Cabinet Ship Wt.	Pad Filler Dimensions			
					Cabinet			Duct Opening		Drain			Water Inlet									
	Dia.	Width			A	B	C	D	E	F	G	H	J	K	*P	R			S	No.	Ht.	Width
D/H 8801	21	20	A74/A76	14 Single	52	41	41	21 3/4	21 3/4	4 3/8	9 5/8	20 1/2	4 1/2	15 7/8	3 1/2	7 1/8	1 1/2	476	280	4/3	45	35
D/H 1425A	24	24	A94/A94	18 Single	52	50	52	26 3/4	26 3/4	4 1/2	11 5/8	25	4 1/2	21 1/4	3 1/2	7 1/8	1	721	415	8/6	45	22
D/H 2231	28	28	A102/A98	18 Dual	60	62	62	31 3/4	31 3/4	8 1/8	15 1/8	31	4 1/2	23 3/4	3 1/2	7 1/8	1 1/2	1006	550	8/6	54	26



SUBMITTAL DATA

Project: _____

Location: _____

Architect: _____

Engineer: _____

Contractor: _____

Submitted by: _____

Date: _____

Ref. No.	Cooler Model No.	Quantity	CFM	Static Pressure	HP	Volts	Phase
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Notes: _____

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