



Industrial / Commercial Evaporative Coolers

specification guide

HOW TO USE THIS INDEX

Using the cooling requirement variables of Cooling Feet per Minute and External Static Pressure (shown in inches of water), locate the specific MasterCool model required and its corresponding page number. Turn to the indicated page for specific Performance Data Sizing Tables. Follow the Sizing Instructions listed below to determine the MasterCool product for any cooling installation.

PERFORMANCE: CERTIFIED AIR DELIVERY AT VARIOUS INCREMENTS OF STATIC PRESSURE (Inches Static Pressure Water Gauge)																						
	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"	
	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM
SAS /SAD100 PAGE 4	5377	352	5121	364	4863	376	4605	389	4336	402	4058	415	3754	430	3429	448	3097	469	----	----	----	----
	5918	388	5684	398	5451	409	5215	421	4980	432	4734	444	4479	456	4209	470	3924	485	3619	503	3307	523
	6774	444	6574	453	6366	463	6164	472	5956	482	5751	492	5537	502	5320	513	5095	524	4859	536	4613	548
SAS/SAD 10012 PAGE 6	5371	362	5064	374	4794	386	4536	397	4269	410	3985	423	3667	439	3318	458	2952	481	2591	507	2261	534
	5911	359	5627	410	5375	420	5142	431	4907	441	4663	453	4399	465	4115	479	3809	495	3480	514	3145	536
	6767	457	6513	466	6286	475	6076	484	5872	494	5666	503	5456	513	5238	523	5008	534	4755	546	4497	560
SAS/SAD 150 PAGE 8	7072	275	6622	287	6203	298	5769	308	5298	321	4777	336	4201	355	3607	378	3041	402	2522	424	2040	443
	7783	302	7372	314	6987	324	6602	333	6199	343	5764	355	5285	369	4764	386	4231	406	3699	427	3199	448
	8910	346	8548	356	8205	365	7870	374	7533	382	7182	391	6812	401	6416	412	5993	424	5537	439	5067	456
	N/A	N/A	9476	390	9159	399	8855	406	8555	414	8244	421	7924	430	7592	438	7236	448	6866	459	6470	471
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9315	486	9032	493	8741	500	8436	509
SAS/SAD 15012 PAGE 10	6997	267	6539	278	6087	289	5603	301	5051	315	4415	332	3717	353	3058	376	2497	398	2013	419	1571	436
	7702	294	7286	303	6876	314	6450	324	5994	336	5477	349	4893	364	4260	383	3637	404	3085	425	2609	444
	8817	336	8455	345	8091	353	7734	363	7359	372	6961	382	6525	393	6050	405	5527	419	4976	435	4425	453
	N/A	N/A	9375	378	9044	386	8719	394	8389	402	8043	411	7683	420	7293	430	6869	440	6416	452	5932	465
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9377	466	9070	474	8751	482	8407	490	8046	499
AS/AD100 PAGE 3	7478	391	7323	398	7132	407	6917	416	6680	427	6424	439	6165	451	5897	463	5623	476	5345	490	5054	505
	8231	430	8095	436	7926	444	7740	452	7536	462	7317	472	7088	482	6850	493	6608	505	6360	516	6110	528
	9422	493	9309	498	9169	504	9014	511	8849	518	8670	527	8481	535	8286	544	8084	553	7879	563	7666	573
	11170	584	11082	588	10970	593	10848	599	10718	604	10581	611	10435	617	10284	624	10128	631	9966	639	9798	646
AS/AD10012 PAGE 5	7431	382	7255	390	7052	400	6835	411	6611	424	6376	437	6131	450	5877	464	5610	477	5327	492	5031	507
	8178	421	8024	427	7842	436	7649	446	7450	457	7244	468	7030	480	6809	492	6580	504	6343	517	6095	529
	9362	482	9235	487	9075	494	8914	502	8744	511	8572	520	8393	531	8209	541	8024	551	7827	562	7631	572
	11099	571	11001	575	10868	581	10736	587	10598	594	10457	601	10313	609	10165	617	10016	625	9862	634	9709	643
AS/AD 150 PAGE 7	11405	317	10892	328	10463	338	10064	347	9671	357	9276	367	8874	378	8456	390	8006	403	7530	418	7017	436
	13057	363	12600	373	12204	381	11844	390	11497	398	11153	406	10815	415	10467	424	10113	434	9741	444	9361	456
	15480	430	15082	439	14735	446	14410	454	14106	461	13810	468	13520	475	13234	482	12948	489	12659	496	12361	504
	17719	492	17364	500	17050	507	16756	513	16479	520	16214	526	15947	532	15694	538	15440	544	15188	550	14937	557
AS/AD15012 PAGE 9	11375	303	10905	314	10482	324	10079	335	9678	346	9265	356	8830	368	8366	380	7867	394	7325	409	6753	426
	13020	346	12604	356	12225	365	11865	375	11514	384	11165	393	10807	403	10440	413	10058	423	9651	433	9220	445
	15438	410	15084	419	14749	427	14434	435	14133	443	13838	450	13540	458	13246	466	12899	474	12640	482	12328	490
	17672	470	17360	477	17060	484	16777	491	16505	498	16242	505	15983	512	15724	519	15463	526	15207	532	14947	539
AS/AD/AU 20012 PAGE 11	16267	276	15716	284	15200	292	14696	300	14190	308	13665	317	13110	325	12521	335	11886	346	11194	358	10450	371
	19286	327	18820	334	18371	341	17943	348	17518	355	17092	361	16661	368	16211	375	15752	383	15272	390	14760	399
	22077	374	21670	380	21270	387	20888	393	20514	399	20142	405	19769	410	19395	416	19015	422	18629	428	18229	435
	24301	412	23929	417	23562	423	23204	429	22866	434	22528	440	22190	445	21852	450	21510	456	21171	461	20823	467

SIZING INSTRUCTIONS

The performance or Sensible Heat Capacity of any evaporative cooler is a function of both the CFM and the efficiency, which should be considered as part of the sizing process. To help ensure proper sizing of a MasterCool, use the Index above to locate Performance Data and Sizing Tables for a specific MasterCool model. Follow the procedure below to determine the cooler size.

- Determine design conditions:
 - Outside Dry-Bulb
 - Outside Wet-Bulb
 - Inside Dry-Bulb (TI)
- Determine the design Sensible Heat Load (Btuh)
- Determine the cooler leaving air temperature (LAT) from the tables.
- Determine CFM from the performance tables.
- Calculate Sensible Heat Capacity of cooler using: $SHC = 1.08(TI - LAT) \text{ CFM}$
- Determine the number of coolers by dividing the Sensible Heat Load by the Sensible Heat Capacity.

Example:

- Outside Dry-Bulb = 105
- Outside Wet-Bulb = 65
- Inside Dry-Bulb (TI) = 80

Determine the number of AD150 MasterCool coolers with 3 horsepower motors required to cool 195,000 Btuh heat load. Assume .5" (water) external static pressure.

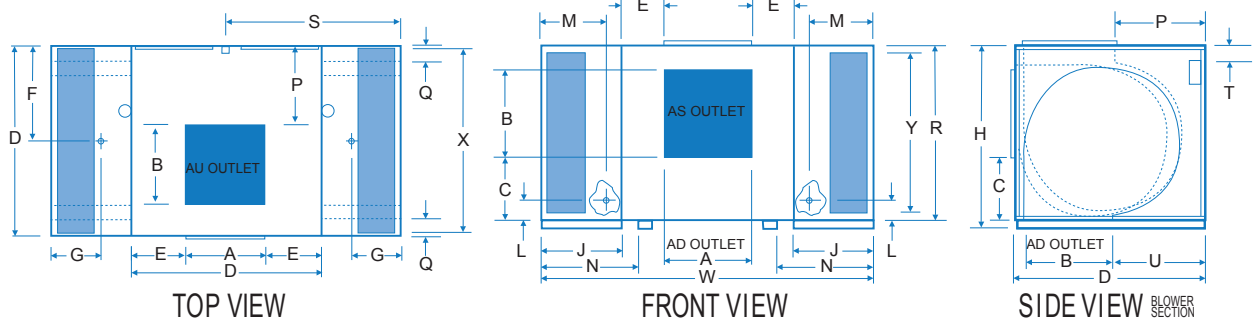
Using the Sizing Tables, the following information should be calculated:

LAT = 72

CFM = 11153

$SHC = 1.08(80-72)11153 = 96,360 \text{ Btuh}$

Number of Coolers = $195,000 / 96,360 = 2$



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (AS)	U (AD)	P (AU)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
44	82	45	21 - 3/4	21 - 3/4	13 - 19/32	21 - 11/32	N/A	11 - 5/8	22 - 1/2	12 - 1/2	18 - 1/2	44 - 3/4	36 - 5/8	5 - 7/8	14 - 5/8	39 - 7/8	5 - 5/32	23 - 1/4	4 - 3/4	42

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

2 Pumps Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	AS100B
DOWN DISCHARGE BLOWER MODULE	AD100B
WET MODULE	AS/AD100W

SPECIFICATIONS				PERFORMANCE		Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)																			
MAX B.H.P.	OPER. WGT.	AD MODEL BELT	AS MODEL BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"	
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM
1-1/2	706	A76	A82	7478	391	7323	398	7132	407	6917	416	6680	427	6424	439	6165	451	5897	463	5623	476	5345	490	5054	505
2	710	B77	B83	8231	430	8095	436	7926	444	7740	452	7536	462	7317	472	7088	482	6850	493	6608	505	6360	516	6110	528
3	723	B80	B86	9422	493	9309	498	9169	504	9014	511	8849	518	8670	527	8481	535	8286	544	8084	553	7879	563	7666	573
5	739	B81	B87	11170	584	11082	588	10970	593	10848	599	10718	604	10581	611	10435	617	10284	624	10128	631	9966	639	9798	646

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models AS/AD 100 include the effects of an 8 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P., & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
1-1/2	1	115/208-230	1	20/11-10	5/8	41	110459-1	2	1	230/460	3	6.8/3.4	7/8	44	110464-9
1-1/2	1	200	3	6.9	7/8	40	110463-92	3	1	200	3	11.0	1-1/8	83	110465-92
1-1/2	1	230/460	3	6/3	7/8	40	110463-9	3	1	230/460	3	9.6/4.8	1-1/8	83	110465-9
2	1	115/208-230	1	24/13.2-12	5/8	49	110460-1	5	1	200	3	17.5	1-1/8	87	110466-92
2	1	200	3	7.8	7/8	44	110464-92	5	1	230/460	3	15.2/7.6	1-1/8	87	110466-9

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	AD MODEL BELT	AS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN												CHAMPION-AD PULLEY-BELT KIT NO.	CHAMPION-AS PULLEY-BELT KIT NO.
					12	11	10	9	8	7	6	5	4	3	2	1		
1-1/2	D8450	5/8*	A76	A82	391	401	412	422	433	443	454	464	475	485	496	506	3DI-11	3DI-31
1-1/2	D8450	7/8*	A76	A82	391	401	412	422	433	443	454	464	475	485	496	506	3DI-10	3DI-30
2	D8450	5/8*	B77	B83	414	424	434	445	455	465	475	485	495	506	516	526	3DI-16	3DI-36
2	D8450	7/8*	B77	B83	414	424	434	445	455	465	475	485	495	506	516	526	3DI-15	3DI-35
3	D8550	1-1/8	B80	B86	482	492	502	513	523	533	543	553	563	574	584	594	3DI-20	3DI-40
5	D8600	1-1/8	B81	B87	549	559	569	580	590	600	610	620	630	641	651	661	3DI-25	3DI-45

*When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

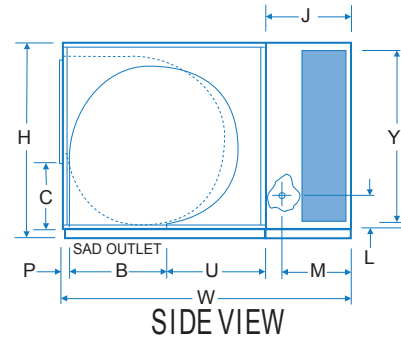
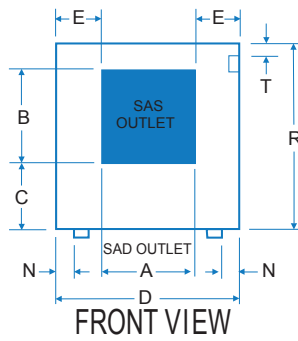
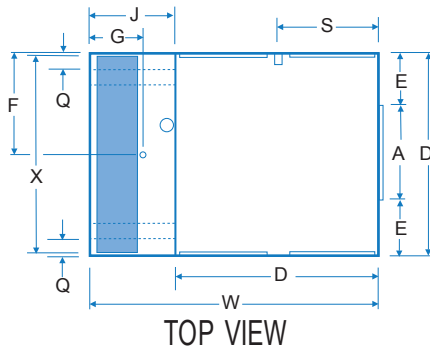
SIZING TABLES

OUTDOOR DRY BULB TEMP.		1-1/2 H.P. MOTOR / CFM-SP*			2 H.P. MOTOR / CFM-SP*			3 H.P. MOTOR / CFM-SP*			5 H.P. MOTOR / CFM-SP*		
		7478 / 0	6424 / 5	5054 / 1.0	8231 / 0	7317 / 5	6110 / 1.0	9422 / 0	8670 / 5	7666 / 1.0	11170 / 0	10581 / 5	9798 / 1.0
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
85	LAT	77 69 60	77 68 60	76 68 59	77 69 61	77 69 60	77 68 60	77 69 61	77 69 61	77 69 60	77 69 62	77 69 61	77 69 61
	GPH	7 15 22	6 13 19	5 10 15	8 16 24	7 14 21	6 12 18	9 19 28	9 17 25	8 15 23	11 22 33	10 21 31	10 19 29
95	LAT	79 70 62	78 70 61	78 69 60	79 71 62	79 70 62	78 69 61	79 71 63	79 71 63	79 70 62	79 72 64	79 71 63	79 71 63
	GPH	15 22 29	13 19 25	10 15 20	16 24 32	14 22 29	12 18 24	19 28 37	17 26 34	15 23 30	22 33 44	21 31 41	19 29 38
105	LAT	80 72 -	80 71 -	79 71 -	81 74 -	80 72 -	79 71 -	81 73 -	81 73 -	80 72 -	82 74 -	81 73 -	81 73 -
	GPH	22 29 -	19 25 -	15 20 -	24 32 -	22 29 -	18 24 -	28 37 -	26 34 -	23 30 -	33 44 -	31 42 -	29 39 -
115	LAT	82 74 -	81 73 -	80 72 -	82 74 -	82 74 -	81 72 -	83 75 -	83 74 -	82 74 -	84 76 -	83 75 -	83 75 -
	GPH	30 37 -	25 32 -	20 25 -	33 40 -	29 36 -	24 30 -	37 46 -	34 43 -	30 38 -	44 55 -	42 52 -	39 48 -

* Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT=Cooler Discharge Temperature.



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (SAS)	U (SAD)	P (SAD)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
44	63 - 3/8	45	21 - 3/4	21 - 3/4	13 - 19/32	21 - 11/32	1.29/32	11 - 5/8	22 - 1/2	12 - 1/2	18 - 1/2	44 - 3/4	36 - 5/8	5 - 7/8	14 - 5/8	21 - 1/2	5 - 5/32	4 - 3/4	4 - 3/4	42

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

1 Pump Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	SAS100B
DOWN DISCHARGE BLOWER MODULE	SAD100B
WET MODULE	SAS/SAD100W

SPECIFICATIONS				PERFORMANCE																								Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)																							
MAX B.H.P.	OPER. WGT.	SAD MODEL BELT	SAS MODEL BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"																											
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM																								
3/4	480	B77	B83	5377	352	5121	364	4863	376	4605	389	4336	402	4058	415	3754	430	3429	448	3097	469	----	----	----	----																										
1	483	B77	B83	5918	388	5684	398	5451	409	5215	421	4980	432	4734	444	4479	456	4209	470	3924	485	3619	503	3307	523																										
1 1/2	498	B77	B83	6774	444	6574	453	6366	463	6164	472	5956	482	5751	492	5537	502	5320	513	5095	524	4859	536	4613	548																										

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models SAS/SAD 100 include the affects of an 8 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P. , & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
3/4	1	115/208-230	1	13.8/7.6-6.9	5/8	24	110455	1	1	200	3	4.8	7/8	34	110462-92
3/4	2	230	1	6.9	5/8	29	110456	1	1	230/460	3	4.2/2.1	7/8	34	110462-9
3/4	1	208-230/460	3	3.5-3.2/1.6	5/8	20	110461	1-1/2	1	115/208-230	3	20/11-10	5/8	41	110459-1
1	1	115/230	1	16/8	5/8	28	110457	1-1/2	1	200	3	6.9	7/8	40	110463-92
1	2	230	1	8	5/8	29	110458	1-1/2	1	230/460	3	6/3	7/8	40	110463-9

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	SAD MODEL BELT	SAS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN												CHAMPION-SAD PULLEY-BELT KIT NO.	CHAMPION-SAS PULLEY-BELT KIT NO.
					12	11	10	9	8	7	6	5	4	3	2	1		
3/4, 1	8350K	5/8*	B77	B83	303	313	323	333	343	353	364	374	384	394	404	414	3DI-90	3DI-110
3/4, 1, 1-1/2	8450K	5/8*	B77	B83	414	424	434	445	455	465	475	485	495	506	516	526	3DI-95	3DI-115
1	8350	7/8*	B77	B83	303	313	323	333	343	353	364	374	384	394	404	414	3DI-100	3DI-120
1, 1-1/2	8450K	7/8*	B77	B83	414	424	434	445	455	465	475	485	495	506	516	526	3DI-105	3DI-125

*When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

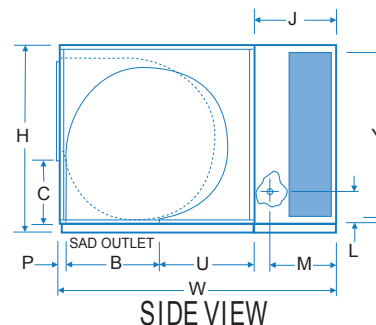
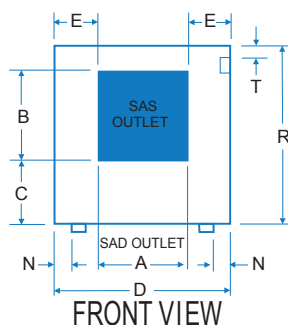
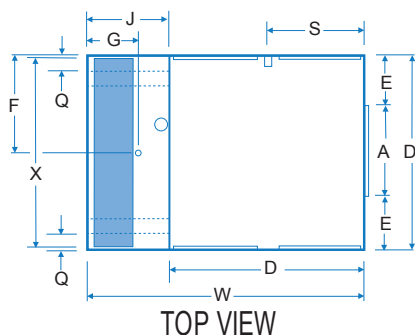
SIZING TABLES

OUTDOOR DRY BULB TEMP.		3/4 H.P. MOTOR / CFM-SP*			1 H.P. MOTOR / CFM-SP*			1-1/2 H.P. MOTOR / CFM-SP*		
		5377 / 0	4058 / .5	3097/.8	5918 / 0	4734 / .5	3307 /1.0	6774 / 0	5751 / .5	4613 / 1.0
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
75	65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55
85	LAT GPH	77 69 61 5 10 15	77 69 60 4 8 12	76 67 59 3 6 9	77 69 62 6 11 17	77 69 61 5 9 14	77 68 60 3 7 10	77 70 62 6 13 19	77 69 61 6 11 17	77 69 61 5 9 13
95	LAT GPH	79 71 63 10 15 21	79 70 62 8 12 16	77 69 60 6 9 12	79 72 64 11 17 22	79 71 63 9 14 19	78 70 61 7 10 13	80 72 64 13 19 25	79 71 64 11 17 22	79 70 63 9 13 18
105	LAT GPH	81 73 - 15 21 -	80 72 - 12 16 -	79 70 - 9 12 -	82 74 - 17 22 -	81 73 - 14 19 -	80 71 - 10 13 -	82 74 - 19 25 -	81 74 - 17 22 -	81 73 - 13 18 -
115	LAT GPH	83 75 - 21 26 -	82 74 - 16 21 -	80 72 - 12 15 -	84 76 - 22 28 -	83 75 - 19 23 -	81 73 - 13 16 -	84 77 - 25 32 -	84 76 - 22 28 -	83 75 - 18 22 -

*Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT=Cooler Discharge Temperature.



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (SAS)	U (SAD)	P (SAD)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
44	67 - 3/8	45	21 - 3/4	21 - 3/4	13 - 19/32	21 - 11/32	1 - 29/32	11 - 5/8	22 - 1/2	16 - 1/2	22 - 1/2	44 - 3/4	36 - 5/8	5 - 7/8	18 - 5/8	21 - 1/2	5 - 5/32	4 - 3/4	4 - 3/4	42

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

1 Pump Required.

BLOWER AND WET MODULE PART NUMBERS	
SIDE DISCHARGE BLOWER MODULE	SAS100B
DOWN DISCHARGE BLOWER MODULE	SAD100B
WET MODULE	SAS/SAD10012W

SPECIFICATIONS				PERFORMANCE																				Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)																			
MAX B.H.P.	OPER. WGT.	SAD MODEL BELT	SAS MODEL BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"																			
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM																
3/4	527	B77	B83	5371	362	5064	374	4794	386	4536	397	4269	410	3985	423	3667	439	3318	458	2952	481	2591	507	2261	534																		
1	530	B77	B83	5911	359	5627	410	5375	420	5142	431	4907	441	4663	453	4399	465	4115	479	3809	495	3480	514	3145	536																		
1-1/2	545	B77	B83	6767	457	6513	466	6286	475	6076	484	5872	494	5666	503	5456	513	5238	523	5008	534	4755	546	4497	560																		

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models SAS/SAD 10012 include the affects of an 12 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P. , & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
3/4	1	115/208-230	1	13.8/7.6-6.9	5/8	24	110455	1	1	200	3	4.8	7/8	34	110462-92
3/4	2	230	1	6.9	5/8	29	110456	1	1	230/460	3	4.2/2.1	7/8	34	110462-9
3/4	1	208-230/460	3	3.5-3.2/1.6	5/8	20	110461	1 1/2	1	115/208-230	1	20/11-10	5/8	41	110459-1
1	1	115/230	1	16/8	5/8	28	110457	1-1/2	1	200	3	6.9	7/8	40	110463-92
1	2	230	1	8	5/8	29	110458	1-1/2	1	230/460	3	6/3	7/8	40	110463-9

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	SAD MODEL BELT	SAS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN											CHAMPION-SAD PULLEY-BELT KIT NO.	CHAMPION-SAS PULLEY-BELT KIT NO.	
					12	11	10	9	8	7	6	5	4	3	2			1
3/4, 1	8350K	5/8*	B77	B83	303	313	323	333	343	353	364	374	384	394	404	414	3DI-90	3DI-110
3/4, 1, 1-1/2	8450K	5/8*	B77	B83	414	424	434	445	455	465	475	485	495	506	516	526	3DI-95	3DI-115
1	8350	7/8*	B77	B83	303	313	323	333	343	353	364	374	384	394	404	414	3DI-100	3DI-120
1, 1-1/2	8450K	7/8*	B77	B83	414	424	434	445	455	465	475	485	495	506	516	526	3DI-105	3DI-125

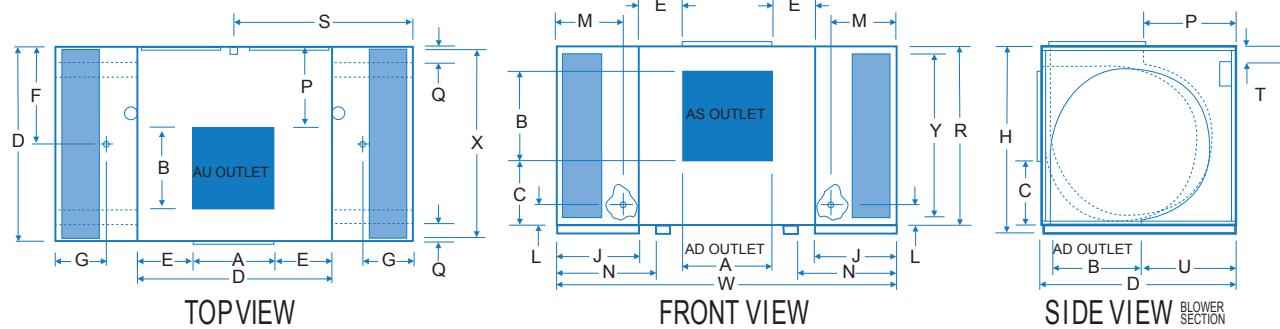
*When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

SIZING TABLES		3/4 H.P. MOTOR / CFM-SP*			1 H.P. MOTOR / CFM-SP*			1-1/2 H.P. MOTOR / CFM-SP*		
OUTDOOR DRY BULB TEMP.		5371 / 0	3985 / .5	2261 / 1.0	5911 / 0	4663 / .5	3145 / 1.0	6767 / 0	5666 / .5	4497 / 1.0
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
		75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55	75 65 55
85	LAT GPH	76 67 58	76 67 58	76 66 57	76 67 58	76 67 58	76 67 58	76 67 59	76 67 58	76 67 58
		6 12 17	6 12 13	2 5 7	6 13 19	6 13 19	5 10 16	7 14 22	6 12 18	6 10 15
95	LAT GPH	77 68 59	77 68 59	76 67 58	77 68 59	77 68 59	77 68 58	77 69 60	77 68 60	77 68 59
		12 17 23	12 17 23	5 7 9	13 19 25	10 15 20	7 10 13	14 22 29	12 18 25	10 15 19
105	LAT GPH	78 69 -	78 69 -	77 68 -	78 69 -	78 69 -	78 68 -	79 70 -	78 70 -	78 69 -
		17 23 -	12 16 -	7 9 -	19 25 -	15 20 -	10 13 -	22 29 -	18 25 -	15 19 -
115	LAT GPH	79 70 -	79 70 -	78 68 -	79 71 -	79 70 -	78 69 -	80 71 -	80 71 -	79 70 -
		23 29 -	16 20 -	9 11 -	25 32 -	20 25 -	13 16 -	29 36 -	25 31 -	19 24 -

*Static pressure (inches of water).

GPH = water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT=Cooler Discharge Temperature.



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (AS)	U (AD)	P (AU)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
54	85 - 1/4	48 - 1/4	26 - 7/8	26 - 7/8	16 - 13/16	19 - 5/32	N/A	10 - 11/16	24 - 1/8	12 - 1/2	18 - 1/2	48	46 - 3/8	5 - 7/8	14 - 5/8	41 - 1/2	5 - 5/32	23 - 1/4	4 - 3/4	52

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

2 Pumps Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	AS150B
DOWN DISCHARGE BLOWER MODULE	AD150B
WET MODULE	AS/AD150W

SPECIFICATIONS				PERFORMANCE																				Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)																			
MAX B.H.P.	OPER. WGT.	AD MODEL BELT	AS MODEL BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"																			
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM																
2	854	B90	B96	11405	317	10892	328	10463	338	10064	347	9671	357	9276	367	8874	378	8456	390	8006	403	7530	418	7017	436																		
3	867	B92	B100	13057	363	12600	373	12204	381	11844	390	11497	398	11153	406	10815	415	10467	424	10113	434	9741	444	9361	456																		
5	883	B93	B100	15480	430	15082	439	14735	446	14410	454	14106	461	13810	468	13520	475	13234	482	12948	489	12659	496	12361	504																		
7-1/2	919	B95	B101	17719	492	17364	500	17050	507	16756	513	16479	520	16214	526	15947	532	15694	538	15440	544	15188	550	14937	557																		

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models AS/AD 150 include the affects of an 8 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P. , & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
2	1	115/208-230	1	24/13.2-12	5/8	49	110460-1	3	1	230/460	3	9.6/4.8	1-1/8	83	110465-9
2	1	200	3	7.8	7/8	44	110464-92	5	1	200	3	17.5	1-1/8	87	110466-92
2	1	230/460	3	6.8/3.4	7/8	44	110464-9	5	1	230/460	3	15.2/7.6	1-1/8	87	110466-9
3	1	200	3	11	1-1/8	83	110465-92	7-1/2	1	200	3	25	1-3/8	121	110470-92
								7-1/2	1	230/460	3	22/11	1-3/8	121	110470-9

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	AD MODEL BELT	AS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN												CHAMPION-AD PULLEY-BELT KIT NO.	CHAMPION-AS PULLEY-BELT KIT NO.
					12	11	10	9	8	7	6	5	4	3	2	1		
2	D8400	5/8"	B90	B96	291	299	308	316	325	333	342	350	359	367	376	384	3DI-51	3DI-71
2	D8450	5/8"	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-53	3DI-73
2	D8400	7/8"	B90	B96	291	299	308	316	325	333	342	350	359	367	376	384	3DI-50	3DI-70
2	D8450	7/8"	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-52	3DI-72
3	D8450	1-1/8	B92	B100	347	356	364	373	381	390	398	407	415	424	432	441	3DI-56	3DI-75
5	D8550	1-1/8	B93	B100	403	412	420	429	437	446	454	463	471	480	488	497	3DI-60	3DI-80
7-1/2	D8600	1-3/8	B95	B101	459	468	476	485	493	502	510	519	527	536	544	553	3DI-65	3DI-86

* When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

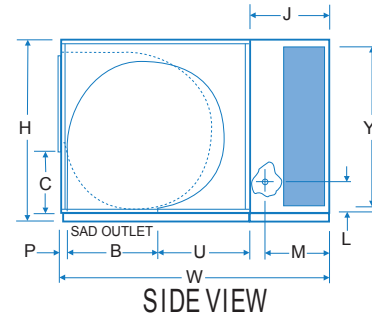
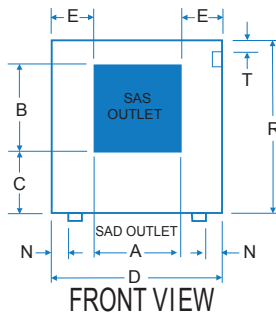
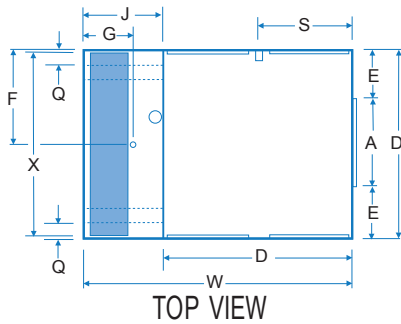
SIZING TABLES

OUTDOOR DRY BULB TEMP.		2 H.P. MOTOR / CFM-SP*			3 H.P. MOTOR / CFM-SP*			5 H.P. MOTOR / CFM-SP*			7-1/2 H.P. MOTOR / CFM-SP*		
		11405 / 0	9276 / .5	7017 / 1.0	13057 / 0	11153 / .5	9361 / 1.0	15480 / 0	13810 / .5	12361 / 1.0	17719 / 0	16214 / .5	14937 / 1.0
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
		75	65	55	75	65	55	75	65	55	75	65	55
85	LAT	77	69	61	77	68	60	77	69	61	77	70	62
	GPH	11	22	33	9	18	27	13	26	38	11	22	33
95	LAT	79	71	63	78	70	62	79	71	63	80	72	64
	GPH	23	33	45	18	27	36	26	38	51	34	51	68
105	LAT	81	73	-	80	72	-	81	73	-	82	74	-
	GPH	33	45	-	27	36	-	38	51	-	48	63	-
115	LAT	83	74	-	82	73	-	83	75	-	84	77	-
	GPH	45	56	-	36	46	-	51	64	-	68	85	-

*Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT=Cooler Discharge Temperature.



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (SAS)	U (SAD)	P (SAD)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
54	66 - 5/8	48 - 1/4	26 - 7/8	26 - 7/8	16 - 13/16	19 - 5/32	2 - 7/32	10 - 11/16	24 - 1/8	12 - 1/2	18 - 1/2	48	46 - 3/8	5 - 7/8	14 - 5/8	23 - 1/8	5 - 5/32	4 - 3/4	4 - 3/4	52

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

1 Pump Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	SAS150B
DOWN DISCHARGE BLOWER MODULE	SAD150B
WET MODULE	SAS/SAD150W

SPECIFICATIONS

PERFORMANCE

Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)

MAX B.H.P.	OPER. WGT.	SAD MODEL BELT	SAS MODEL BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"	
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM
3/4	584	B90	B96	7072	275	6622	287	6203	298	5769	308	5298	321	4777	336	4201	355	3607	378	3041	402	2522	424	2040	443
1	593	B90	B96	7783	302	7372	314	6987	324	6602	333	6199	343	5764	355	5285	369	4764	386	4231	406	3699	427	3199	448
1-1/2	608	B90	B96	8910	346	8548	356	8205	365	7870	374	7533	382	7182	391	6812	401	6416	412	5993	424	5537	439	5067	456
2	612	B90	B96	N/A	N/A	9476	390	9159	399	8855	406	8555	414	8244	421	7924	430	7592	438	7236	448	6866	459	6470	471
3	624	B92	B100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9315	486	9032	493	8741	500	8436	509

Performance certified for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models SAS/SAD 150 include the effects of an 8 inch thick evaporative media on the inlet. When the Cooler Model No., Motor H.P., & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
3/4	1	115/208-230	1	13.8/7.6-6.9	5/8	24	110455	1-1/2	1	200	3	6.9	7/8	40	110463-92
3/4	2	230	1	6.9	5/8	29	110456	1-1/2	1	230/460	3	6/3	7/8	40	110463-9
3/4	1	208-230/460	3	3.5-3.2/1.6	5/8	20	110461	2	1	115/208-230	1	24/13.2-12	5/8	49	110460-1
1	1	115/230	1	16/8	5/8	28	110457	2	1	200	3	7.8	7/8	44	110464-92
1	2	230	1	8	5/8	29	110458	2	1	230/460	3	6.8/3.4	7/8	44	110464-9
1	1	200	3	4.8	7/8	34	110462-92	3	1	200	3	11	1-1/8	83	110465-92
1	1	230/460	3	4.2/2.1	7/8	34	110462-9	3	1	230/460	3	9.6/4.8	1-1/8	83	110465-9
1 1/2	1	115/208-230	1	20/11-10	5/8	41	110459-1								

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	SAD MODEL BELT	SAS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN												CHAMPION-SAD PULLEY-BELT KIT NO.	CHAMPION-SAS PULLEY-BELT KIT NO.
					12	11	10	9	8	7	6	5	4	3	2	1		
3/4, 1	8350K	5/8*	B90	B96	253	261	269	278	287	296	304	313	321	330	338	347	3DI-130	3DI-165
3/4, 1, 1-1/2, 2	8450K	5/8*	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-135	3DI-170
2	8550	5/8	B90	B96	403	412	420	429	437	446	454	463	471	480	488	497	3DI-156	3DI-186
1	8350	7/8*	B90	B96	253	261	269	278	287	296	304	313	321	330	338	347	3DI-140	3DI-175
1, 1-1/2, 2	8450K	7/8*	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-145	3DI-180
1-1/2, 2	8550	7/8	B90	B96	403	412	420	429	437	446	454	463	471	480	488	497	3DI-155	3DI-185
3	8550	1-1/8	B92	B100	403	412	420	429	437	446	454	463	471	480	488	497	3DI-161	3DI-190

*When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

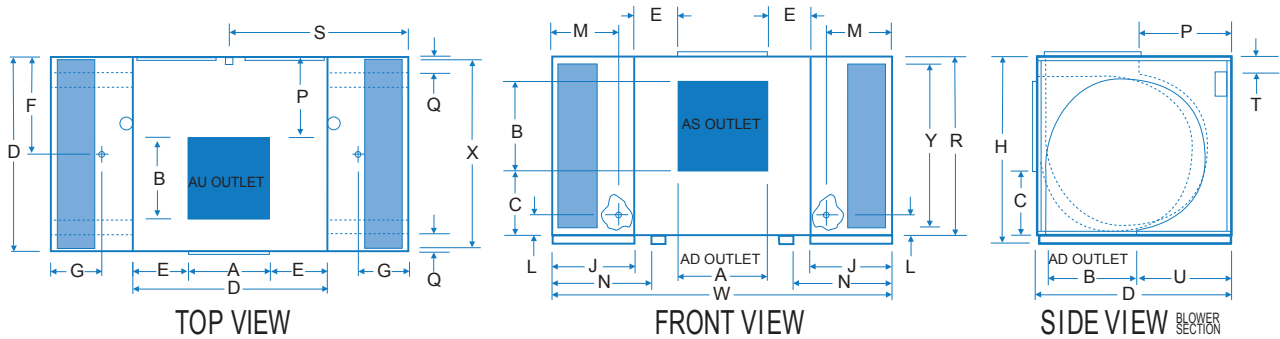
SIZING TABLES

OUTDOOR DRY BULB TEMP.	3/4 H.P. MOTOR / CFM-SP*			1 H.P. MOTOR / CFM-SP*			1-1/2 H.P. MOTOR / CFM-SP*			2 H.P. MOTOR / CFM-SP*			3 H.P. MOTOR / CFM-SP*		
	7072 / 0	4777 / .5	2040 / 1.0	7783 / 0	5764 / .5	3199 / 1.0	8910 / 0	7182 / .5	5067 / 1.0	9476 / 1	8244 / .5	6470 / 1.0	9315 / .7	8436 / 1.0	
	OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
85	LAT	77 69 61	77 68 60	76 68 59	77 69 62	77 69 61	76 68 59	78 70 62	77 69 61	77 68 60	77 70 62	77 70 62	77 69 61	- - -	77 70 62
	GPH	7 14 21	5 9 14	2 5 7	8 15 23	6 11 17	3 7 10	8 17 25	7 14 20	5 9 14	9 17 26	8 15 23	6 12 18	- - -	77 70 62
95	LAT	79 71 63	78 70 62	78 69 61	79 72 64	79 71 62	78 69 61	80 72 64	79 71 63	79 70 62	80 72 64	80 72 64	79 71 63	- - -	80 72 64
	GPH	14 21 28	9 14 18	5 7 9	15 23 30	11 17 22	7 10 14	17 25 34	14 20 27	9 14 19	17 26 34	15 23 31	12 18 24	- - -	80 72 64
105	LAT	81 73 -	80 72 -	79 71 -	82 74 -	81 72 -	79 71 -	82 74 -	81 73 -	80 72 -	82 74 -	82 74 -	81 73 -	- - -	82 74 -
	GPH	21 28 -	14 18 -	7 9 -	23 30 -	17 22 -	10 14 -	25 34 -	20 27 -	14 19 -	26 34 -	23 31 -	18 24 -	- - -	82 74 -
115	LAT	83 75 -	82 73 -	81 72 -	84 76 -	82 74 -	81 72 -	84 77 -	83 75 -	82 73 -	84 77 -	84 76 -	83 75 -	- - -	84 77 -
	GPH	28 35 -	18 23 -	9 11 -	30 38 -	22 28 -	14 17 -	34 42 -	27 34 -	19 23 -	34 43 -	31 39 -	24 30 -	- - -	84 76 -

*Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT=Cooler Discharge Temperature.



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (AS)	U (AD)	P (AU)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
54	93.1/4	48.1/4	26.7/8	26.7/8	16.13/16	19.5/32	N/A	10.11/16	24.1/8	16.1/2	22.1/2	48	46.3/8	5.7/8	18.5/8	45.1/2	5.5/32	27.1/4	4.3/4	52

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

2 Pumps Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	AS150B
DOWN DISCHARGE BLOWER MODULE	AD150B
WET MODULE	AS/AD15012W

SPECIFICATIONS PERFORMANCE Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)

MAX B.H.P.	OPER. WGT	AD BELT	AS BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"	
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM
2	967	B90	B96	11375	303	10905	314	10482	324	10079	335	9678	346	9265	356	8830	368	8366	380	7867	394	7325	409	6753	426
3	980	B92	B100	13020	346	12604	356	12225	365	11865	375	11514	384	11165	393	10807	403	10440	413	10058	423	9651	433	9220	445
5	996	B93	B100	15438	410	15084	419	14749	427	14434	435	14133	443	13838	450	13540	458	13246	466	12899	474	12640	482	12328	490
7-1/2	1032	B95	B101	17672	470	17360	477	17060	484	16777	491	16505	498	16242	505	15983	512	15724	519	15463	526	15207	532	14947	539

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models AS/AD 15012 include the affects of an 12 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P. , & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
2	1	115/208-230	1	24/13.2-12	5/8	49	110460-1	3	1	230/460	3	9.6/4.8	1-1/8	83	110465-9
2	1	200	3	7.8	7/8	44	110464-92	5	1	200	3	17.5	1-1/8	87	110466-92
2	1	230/460	3	6.8/3.4	7/8	44	110464-9	5	1	230/460	3	15.2/7.6	1-1/8	87	110466-9
3	1	200	3	11	1-1/8	83	110465-92	7-1/2	1	200	3	25	1-3/8	121	110470-92
								7-1/2	1	230/460	3	22/11	1-3/8	121	110470-9

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	AD MODEL BELT	AS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN												CHAMPION-AD PULLEY-BELT KIT NO.	CHAMPION-AS PULLEY-BELT KIT NO.
					12	11	10	9	8	7	6	5	4	3	2	1		
2	D8400	5/8*	B90	B96	291	299	308	316	325	333	342	350	359	367	376	384	3DI-51	3DI-71
2	D8450	5/8*	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-53	3DI-73
2	D8400	7/8*	B90	B96	291	299	308	316	325	333	342	350	359	367	376	384	3DI-50	3DI-70
2	D8450	7/8*	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-52	3DI-72
3	D8450	1-1/8	B92	B100	347	356	364	373	381	390	398	407	415	424	432	441	3DI-56	3DI-75
5	D8550	1-1/8	B93	B100	403	412	420	429	437	446	454	463	471	480	488	497	3DI-60	3DI-80
7-1/2	D8600	1-3/8	B95	B101	459	468	476	485	493	502	510	519	527	536	544	553	3DI-65	3DI-86

*When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

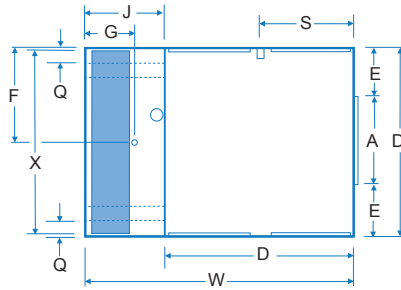
SIZING TABLES

OUTDOOR DRY BULB TEMP.		2 H.P. MOTOR / CFM-SP*			3 H.P. MOTOR / CFM-SP*			5 H.P. MOTOR / CFM-SP*			7 H.P. MOTOR / CFM-SP*		
		11375/0	9265/.5	6753/1.0	13020/0	11165/.5	9220/1.0	15438/0	13838/.5	12328/1.0	17672/1.1	16242/.5	14947/1.0
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
85	LAT GPH	76 67 58	76 67 58	76 67 57	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 59	76 67 59	76 67 58
		12 25 37	10 20 30	8 15 23	14 28 42	12 24 36	10 20 30	16 33 49	15 30 45	13 27 40	17 33 50	17 35 32	16 32 48
95	LAT GPH	77 68 59	77 68 59	77 67 58	77 68 59	77 68 59	77 68 59	77 68 60	77 68 59	77 68 59	77 69 60	77 69 60	77 68 60
		25 37 49	20 30 40	15 23 30	28 42 56	24 36 48	20 30 40	33 49 66	30 45 59	27 40 53	33 50 67	33 52 69	32 48 64
105	LAT GPH	78 69 -	78 68 -	77 68 -	78 69 -	78 69 -	79 69 -	78 70 -	78 69 -	78 69 -	79 70 -	79 70 -	78 70 -
		37 49 -	30 40 -	23 30 -	42 56 -	36 48 -	30 40 -	49 66 -	45 59 -	40 53 -	50 67 -	52 69 -	48 64 -
115	LAT GPH	79 70 -	79 70 -	78 69 -	79 70 -	79 70 -	79 70 -	80 71 -	79 70 -	79 70 -	80 71 -	80 71 -	80 71 -
		49 61 -	40 51 -	30 38 -	56 70 -	48 60 -	40 50 -	66 82 -	59 74 -	53 67 -	67 83 -	69 87 -	64 80 -

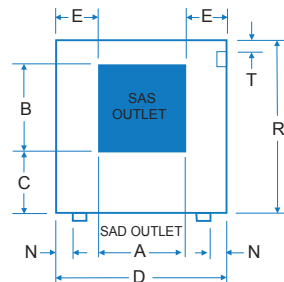
*Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

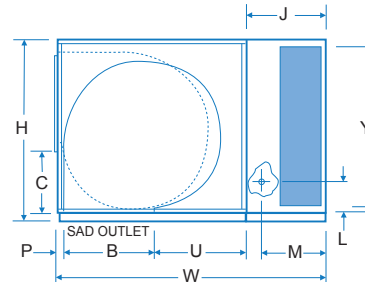
LAT=Cooler Discharge Temperature.



TOP VIEW



FRONT VIEW



SIDE VIEW

DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (AS)	U (AD)	P (AU)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
54	70 - 5/8	48 - 1/4	26 - 7/8	26 - 7/8	16 - 13/32	19 - 5/32	2 - 7/32	10 - 11/16	24 - 1/8	16 - 1/2	22 - 1/2	48	46 - 3/8	5 - 7/8	18 - 5/8	23 - 1/8	5 - 5/32	4 - 3/4	4 - 3/4	52

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

1 Pump Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	SAS150B
DOWN DISCHARGE BLOWER MODULE	SAD150B
WET MODULE	SAS/SAD15012W

SPECIFICATIONS PERFORMANCE Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)

MAX B.H.P.	OPER. WGT.	SAD MODEL BELT	SAS MODEL BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"	
				CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM
3/4	645	B90	B96	6997	267	6539	278	6087	289	5603	301	5051	315	4415	332	3717	353	3058	376	2497	398	2013	419	1571	436
1	649	B90	B96	7702	294	7286	303	6876	314	6450	324	5994	336	5477	349	4893	364	4260	383	3637	404	3085	425	2609	444
1-1/2	665	B90	B96	8817	336	8455	345	8091	353	7734	363	7359	372	6961	382	6525	393	6050	405	5527	419	4976	435	4425	453
2	669	B90	B96	N/A	N/A	9375	378	9044	386	8719	394	8389	402	8043	411	7683	420	7293	430	6869	440	6416	452	5932	465
3	681	B92	B100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9377	466	9070	474	8751	482	8407	490	8046	499

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models SAS/SAD 15012 include the effects of an 12 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P., & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.
H.P.	SPEED							H.P.	SPEED						
3/4	1	115/208-230	1	13.8/7.6-6.9	5/8	24	110455	1-1/2	1	200	3	6.9	7/8	40	110463-92
3/4	2	230	1	6.9	5/8	29	110456	1-1/2	1	230/460	3	6/3	7/8	40	110463-9
3/4	1	208-230/460	3	3.5-3.2/1.6	5/8	20	110461	2	1	115/208-230	1	24/13.2-12	5/8	49	110460-1
1	1	115/230	1	16/8	5/8	28	110457	2	1	200	3	7.8	7/8	44	110464-92
1	2	230	1	8	5/8	29	110458	2	1	230/460	3	6.8/3.4	7/8	44	110464-9
1	1	200	3	4.8	7/8	34	110462-92	3	1	200	3	11	1-1/8	83	110465-92
1	1	230/460	3	4.2/2.1	7/8	34	110462-9	3	1	230/460	3	9.6/4.8	1-1/8	83	110465-9
1 1/2	1	115/208-230	1	20/11-10	5/8	41	110459-1								

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector.

SHEAVE SELECTION

MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	SAD MODEL BELT	SAS MODEL BELT	BLOWER RPM/MOTOR SHEAVE 1/2 TURN DOWN												CHAMPION-SAD PULLEY-BELT KIT NO.	CHAMPION-SAS PULLEY-BELT KIT NO.
					12	11	10	9	8	7	6	5	4	3	2	1		
3/4, 1	8350K	5/8*	B90	B96	253	261	269	278	287	296	304	313	321	330	338	347	3DI-130	3DI-165
3/4, 1, 1 1/2, 2	8450K	5/8*	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-135	3DI-170
2	8550	5/8	B90	B96	403	412	420	429	437	446	454	463	471	480	488	497	3DI-156	3DI-186
1	8350	7/8*	B90	B96	253	261	269	278	287	296	304	313	321	330	338	347	3DI-140	3DI-175
1, 1 1/2, 2	8450K	7/8*	B90	B96	347	356	364	373	381	390	398	407	415	424	432	441	3DI-145	3DI-180
1 1/2, 2	8550	7/8	B90	B96	403	412	420	429	437	446	454	463	471	480	488	497	3DI-155	3DI-185
3	8550	1 1/8	B92	B100	403	412	420	429	437	446	454	463	471	480	488	497	3DI-161	3DI-190

*When selecting 1 H.P. motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

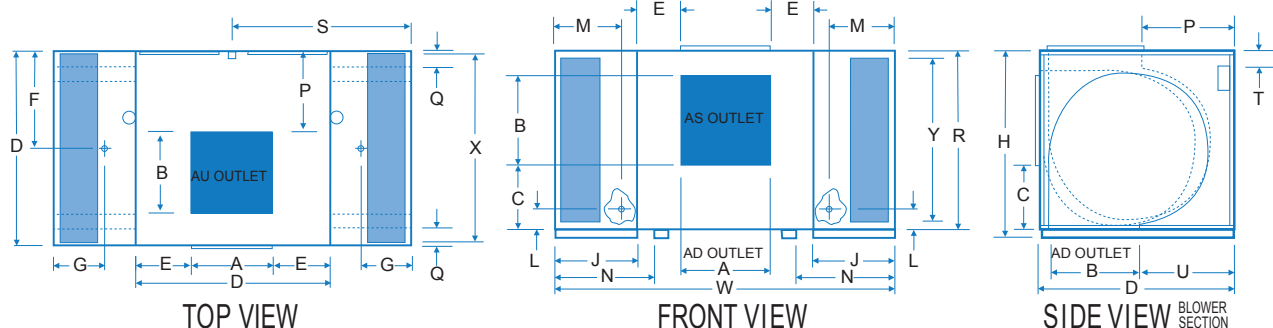
SIZING TABLES

OUTDOOR DRY BULB TEMP.		3/4 H.P. MOTOR / CFM-SP*			1 H.P. MOTOR / CFM-SP*			1-1/2 H.P. MOTOR / CFM-SP*			2 H.P. MOTOR / CFM-SP*			3 H.P. MOTOR / CFM-SP*		
		6997 / 0	4415 / .5	1571 / 1.0	7702 / 0	5477 / .5	2609 / 1.0	8817 / 0	6961 / .5	4425 / 1.0	9375 / 1	8043 / .5	5932 / 1.0	9377 / .6	8046 / 1.0	
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
85	LAT	76 67 58	76 67 58	76 66 56	77 67 58	76 67 58	76 66 57	76 67 59	76 67 58	76 67 58	76 67 59	76 67 58	76 67 58	- - -	76 67 59	76 67 58
	GPH	8 15 23	4 9 13	2 4 5	8 16 25	6 12 18	3 6 9	9 19 28	7 15 22	5 10 15	10 20 30	9 17 26	6 13 19	- - -	10 20 30	9 17 26
95	LAT	77 68 59	77 68 59	76 66 56	77 68 60	77 68 59	76 67 58	77 68 60	77 68 59	77 68 59	77 68 59	77 68 60	77 68 59	- - -	77 69 60	77 68 60
	GPH	15 23 30	10 14 19	4 5 7	16 25 33	12 18 24	6 9 12	19 28 37	15 22 30	10 15 19	20 30 41	17 26 34	13 19 26	- - -	20 30 41	17 26 34
105	LAT	78 69 -	78 69 -	76 66 -	78 70 -	78 69 -	78 68 -	79 70 -	78 69 -	78 69 -	79 70 -	78 70 -	78 69 -	- - -	79 70 -	78 70 -
	GPH	23 30 -	14 19 -	5 7 -	25 33 -	18 24 -	9 12 -	28 37 -	22 30 -	15 19 -	30 41 -	26 34 -	19 26 -	- - -	30 41 -	26 34 -
115	LAT	79 70 -	79 70 -	76 67 -	80 71 -	79 70 -	78 68 -	80 71 -	79 70 -	79 70 -	80 17 -	80 71 -	79 70 -	- - -	80 71 -	80 71 -
	GPH	30 38 -	19 24 -	7 9 -	33 41 -	24 30 -	12 15 -	37 47 -	30 37 -	19 24 -	41 51 -	34 43 -	26 32 -	- - -	41 51 -	34 43 -

*Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT = Cooler Discharge Temperature.



DIMENSIONAL DATA*

CABINET			DUCT OPENING		DUCT LOCATION				DRAIN LOCATION		WET MODULE	MEDIA DIMENSION		WATER SERVICE		ELECTRIC SERVICE		SKID LOCATIONS		
H	W	D	A	B	C (AS)	U (AD)	P (AU)	E	F	G	J	X	Y	L	M	S	T	N	Q	R
59 -1/4	105 -1/4	60 -1/4	31 -3/4	31 -7/8	18 -11/16	25 -1/8	24 -29/32	14 -1/4	30 -1/8	16 -1/8	22 -1/2	60	51 -3/8	5 -7/8	18 -5/8	51 -1/8	5 -5/32	4 -3/4	4 -3/4	57 -1/4

* All measurements in inches.

PUMP P/N	VOLT	AMPS	WATTS	GPM (5FT. HEAD)
110467	115	1.0	73	4.6
110468	230	0.58	77	4.6

1 Pump Required.

BLOWER AND WET MODULE PART NUMBERS

SIDE DISCHARGE BLOWER MODULE	AS200B
DOWN DISCHARGE BLOWER MODULE	AD200B
UP DISCHARGE BLOWER MODULE	AU200B
WET MODULE	AS/AD/AU20012W

SPECIFICATIONS					PERFORMANCE																				Certified Air Delivery At .1" Increments Of External Static Pressure (Inches Static Pressure Water Gauge)																			
MAX B.H.P.	OPER. WGT.	AD BELT	AS BELT	AU BELT	0"		0.1"		0.2"		0.3"		0.4"		0.5"		0.6"		0.7"		0.8"		0.9"		1.0"																			
					CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM	CFM	RPM																
3	1249	B100	B112	B92	16267	276	15716	284	15200	292	14696	300	14190	308	13665	317	13110	325	12521	335	11886	346	11194	358	10450	371																		
5	1264	B100	B112	B92	19286	327	18820	334	18371	341	17943	348	17518	355	17092	361	16661	368	16211	375	15752	383	15272	390	14760	399																		
7-1/2	1297	B103	B112	B93	22077	374	21670	380	21270	387	20888	393	20514	399	20142	405	19769	410	19395	416	19015	422	18629	428	18229	435																		
10	1326	B103	B112	B93	24301	412	23929	417	23562	423	23204	429	22866	434	22528	440	22190	445	21852	450	21510	456	21171	461	20823	467																		

Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). Models AS/AD/AU 20012 include the effects of an 12 inch thick evaporative media on the inlet. When the Cooler Model No, Motor H.P. , & Blower Speed are determined from the SPECIFICATION table above, use this information to select the proper pulley-belt kit from the SHEAVE SELECTION table below.

MOTOR SPECIFICATIONS

BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART NO.	BLOWER MOTORS		VOLTS	PHASE	MOTOR AMPS*	SHAFT DIA.	MOTOR WGT(LB)	MOTOR PART
H.P.	SPEED							H.P.	SPEED						
3	1	200	3	11	1-1/8	83	110465-92	7-1/2	1	200	3	25	1-3/8	121	110470-92
3	1	230/460	3	9.6/4.8	1-1/8	83	110465-9	7-1/2	1	230/460	3	22/11	1-3/8	121	110470-9
5	1	200	3	17.5	1-1/8	87	110466-92	10	1	200	3	32	1-3/8	138	110482-92
5	1	230/460	3	15.2/7.6	1-1/8	87	110466-9	10	1	230/460	3	28/14	1-3/8	138	110482-9

*Amperage shown is from National Electrical Code. Use amperage shown on motor nameplate to determine motor protector. Pumps - 2 Required

SHEAVE SELECTION

SHEAVE SELECTION																				
MOTOR H.P.	MAUREY SHEAVE	SHEAVE BORE	AD MODEL BELT	AS MODEL BELT	AU MODEL BELT	BLOWER RPM/MOTOR SHEAVE												AD PULLEY-BELT KIT NO.	AS PULLEY-BELT KIT NO.	AU PULLEY-BELT KIT NO.
						7	6½	6	5½	5	4½	4	3½	3	2½	2				
3	D8350	1-1/8	B100	B112	B92	253	262	272	281	291	300	309	319	328	338	347	3DI-195	3DI-210	3DI-225	
5	D8400	1-1/8	B100	B112	B92	291	300	310	319	328	338	347	356	365	375	384	3DI-200	3DI-215	3DI-230	
7-1/2	D8450	1-3/8	B103	B112	B93	347	358	369	381	392	403	414	425	437	448	459	3DI-203	3DI-218	3DI-233	
10	D8550	1-3/8	B103	B112	B93	403	412	422	431	441	450	459	469	478	488	497	3DI-205	3DI-220	3DI-235	

*When selecting motor, be sure to select Pulley-Belt Kit with same pulley bore as shaft size of motor selected.

SIZING TABLES

OUTDOOR DRY BULB TEMP.		3 H.P. MOTOR / CFM-SP*			5 H.P. MOTOR / CFM-SP*			7-1/2 H.P. MOTOR / CFM-SP*			10 H.P. MOTOR / CFM-SP*		
		16267 / 0	13655 / .5	10450 / 1.0	19286 / 0	17092 / .5	14760 / 1.0	22077 / 0	20142 / .5	18229 / 1.0	24301 / 1	22528 / .5	20823 / 1.0
		OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB			OUTDOOR WET-BULB		
85	LAT	75 65 58	76 67 57	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58	76 67 58
	GPH	18 36 54	15 31 46	12 24 35	21 42 63	19 38 56	17 33 49	24 48 72	22 44 66	20 40 60	27 53 79	25 49 74	23 46 68
95	LAT	77 68 59	77 68 59	77 67 58	77 68 59	77 68 59	77 68 59	77 68 59	77 68 59	77 68 59	77 68 59	77 68 59	77 68 59
	GPH	36 54 72	31 14 61	24 35 47	43 64 84	38 57 75	33 49 66	49 72 96	45 67 88	41 61 80	53 80 106	50 74 98	46 69 91
105	LAT	78 69 60	78 69 60	77 68 59	78 69 60	78 69 60	78 69 60	78 69 61	78 69 60	78 69 60	78 69 61	78 69 61	78 69 60
	GPH	54 72 90	46 61 76	36 47 59	64 85 106	57 76 94	50 66 82	73 97 120	67 89 110	61 81 100	80 106 132	74 99 123	69 92 114
115	LAT	79 70 61	79 70 60	78 69 60	79 70 61	79 70 61	79 70 61	79 71 62	79 70 61	79 70 61	79 71 62	79 71 62	79 70 61
	GPH	72 90 107	62 77 91	48 59 71	85 106 127	76 95 113	66 82 98	97 121 144	89 111 133	81 101 121	107 133 159	99 123 147	92 115 137

*Static pressure (inches of water).

GPH = Water consumption at design conditions, not including bleed-off amount. Amount of bleed-off will vary with different water sources, but an amount equal to 10% of water consumption at any design condition is considered sufficient for average water.

LAT = Cooler Discharge Temperature.



Champion Cooler Corporation certifies that the evaporative air coolers shown here 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 Certified Ratings Program.



Standard units are UL listed for installations with duct supplying air to a single room, area or space. When ordering UL Listed models which for installations with duct supplying air to multiple rooms or areas, add 'UL' to the end of the standard model number.

MasterCool® Industrial Coolers

★ **Exceptional Quality** ★ **Proven Reliability** ★ **Energy Efficient**

CONSTRUCTION:

Heavy gauge galvanized steel is used for cabinet panels and other load bearing components. Vacuum-formed ABS plastic water reservoirs and thick polystyrene evaporative media shields keep water from coming into contact with the steel cabinet for long-lasting durability.

EVAPORATIVE MEDIA:

The cellulose paper of the evaporative media is treated to ensure a high water absorption rate and to resist biological degradation.

FINISH:

All steel components (excluding the blower wheel, shaft, and pulley) are chemically treated and covered with an electrostatically-applied polyester finish at a thickness of 1 to 1.5 mil to protect the cooler from scratches and corrosion.

This finish meets or exceeds the following tests:

- | | |
|-------------------------------|--------------|
| • 1000 - Hour Salt Spray Test | ASTM B117 |
| • Abrasion resistance Test | ASTM 4060-84 |
| • Impact Resistance Test | ASTM D2794 |
| • 2400 - Hour Immersion Test | ASTM D870 |
| • Adhesion Test | ASTM D3359 |

LIMITED WARRANTY

This warranty is extended to the original purchaser of an evaporative cooler installed and used under normal conditions. It does not cover damages incurred from accident, neglect, or abuse by the owner. Champion Cooler does not authorize any person or representative to assume for the Corporation any other or different liability in connection with this product.

TERMS & CONDITIONS OF WARRANTY

This warranty includes lifetime limited coverage on water reservoir against any leakage due to defects in material. From date of installation, if any original component part provided by Champion Cooler fails due to defect in material or factory workmanship only, Champion Cooler will provide the replacement parts as follows:

- Cabinet components for one year from date of installation
- Evaporative media for two years from date of installation

EXCLUSIONS TO THIS WARRANTY

- Champion Cooler is not responsible for any incidental or consequential damage resulting from any malfunction.
- Champion Cooler is not responsible for any damage received from the use of water softeners, chemicals, descaling material, plastic wrap, or if a motor of a higher horsepower than what is shown on the serial plate is used in the unit.
- Champion Cooler is not responsible for the cost of service calls to diagnose cause of trouble, or labor charge to repair and/or replace parts.

HOW TO OBTAIN SERVICE UNDER THIS WARRANTY

Contact the Dealer where you purchased the evaporative cooler. If for any reason you are not satisfied with the response from the Dealer, write or call: Customer Service Department, Champion Cooler, 5800 Murray Street, Little Rock, AR 72209, 800-643-8341 or e-mail Champion at: info@championcooler.com. This limited warranty applies to the original purchaser only.

CSGB
May 2015



CHAMPION COOLER
5800 MURRAY ST.
LITTLE ROCK, AR 72209
www.championcooler.com

