

REPLACEMENT PARTS FOR EVAPORATIVE COOLING MODULE

MODEL REC



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IMPORTANT

- Always include complete model and serial number so that any specification change can be considered for parts replacement. It can save time and expense.
- In keeping with our policy of continuous product improvement, we reserve the right to alter any information shown here.
- Order by Part Number (PN) not by option designation.

WE RESERVE THE RIGHT TO SUBSTITUTE FUNCTIONAL REPLACEMENTS.

UNIT APPLICABILITY

NOTE: This manual does not include replacement parts for the optional evaporative cooling module on PREEVA® models. Refer to the replacement parts manual (form P-PREEVA, PN 263985) for evaporative cooling replacement parts for PREEVA® models (PDH, PEH, PXH, RDH, REH, RHH, RXH, SDH, and SHH).

The evaporative cooling module (model REC) may be factory-attached to a unit's inlet air opening or it may be factory-assembled and shipped-separate for field installation (see [Figure 1](#)). Refer to the following for unit applicability:

Factory-attached to inlet air opening:

- Obsolete direct-fired makeup air models ADF and ADFH (unit sizes 300 and 500)
- Obsolete models AHCA, PCCA, and RGB
- Obsolete blower cabinet model RBA
- Model RPB

Factory-assembled and shipped-separate for field installation:

- Obsolete direct-fired makeup air models ADF and ADFH (unit sizes 700 and 1200)
- Obsolete packaged indirect-fired models PGBL and RGBL
- Packaged indirect-fired models RPBL and SSCBL
- Obsolete blower cabinet model RBL

NOTES:

- Unit size 360 of model REC is comprised of two size 180 modules.
- Option ECD1 = AquaSaver® timed control system.
- Option ECD2 = recirculating pump and float control system.

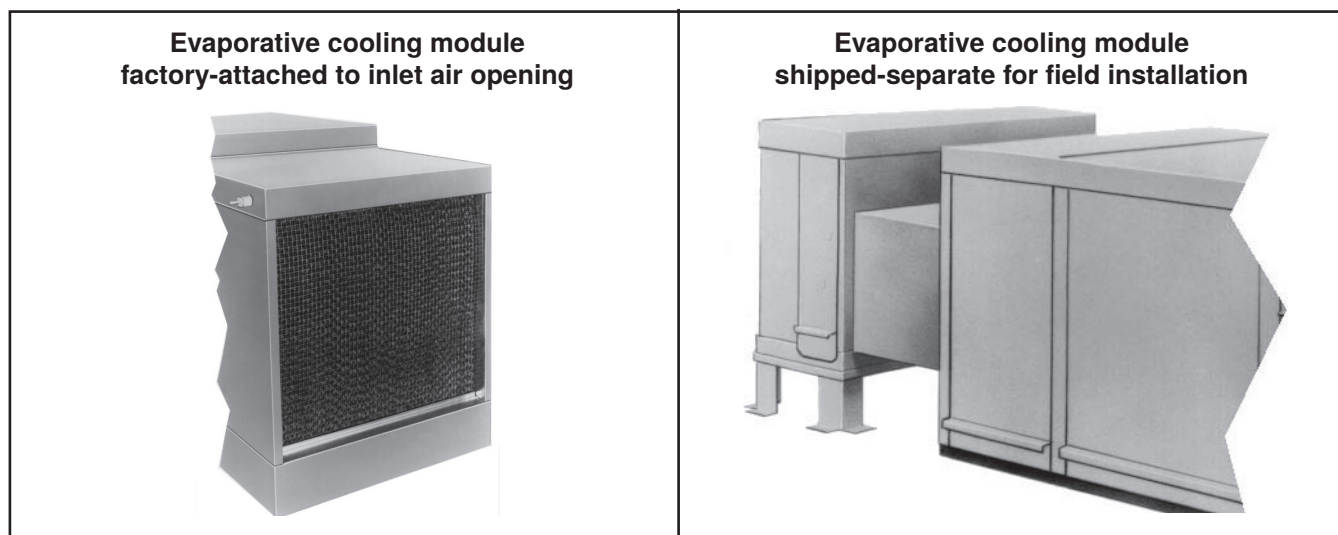


Figure 1. Installation Options

COOLING MEDIA

NOTE: IMPORTANT: The cooling media are made up of two different sheets of cooling material. Each sheet has its own unique angle. When replacing the media, **BE CERTAIN** that the 45° angle (see [Figure 2](#)) slopes downward toward the incoming outside air. Check the media for the flow direction, which is written on the side. If the media is not installed properly, water blow-off from the media pads will occur.

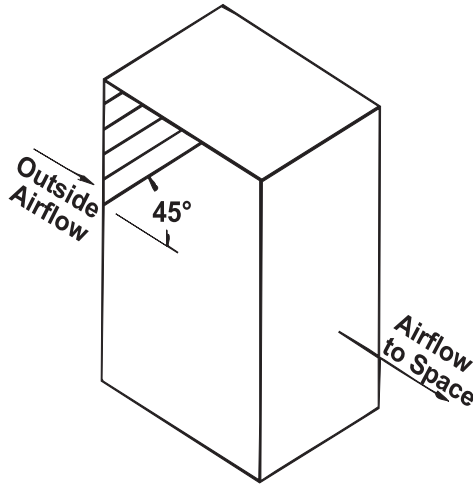


Figure 2. Cooling Media Airflow Direction

Table 1. Cooling Media					
REC Unit Size	Model (Unit Size)	RDF Cabinet Size (Heat Size) Used with	Media Fiber Type	Media Size (Inches)	PN (Quantity)
40	RGB and RPB (075, 100, and 125)	1 (20)	Cellulose	2-3/8 × 24 × 6	105986 (1)
				2-3/8 × 24 × 12	106022 (1)
				12 × 24 × 6	105985 (2)
				12 × 24 × 12	106021 (2)
			Glass	2-3/8 × 24 × 6	106038 (1)
				2-3/8 × 24 × 12	106030 (1)
				12 × 24 × 6	106037 (2)
				12 × 24 × 12	106029 (2)
50	RGB and RPB (150 and 175) RBA ADF (300)	1 (40)	Cellulose	7-7/8 × 24 × 6	105987 (1)
				7-7/8 × 24 × 12	106023 (1)
				12 × 24 × 6	105985 (2)
				12 × 24 × 12	106021 (2)
			Glass	7-7/8 × 24 × 6	106039 (1)
				7-7/8 × 24 × 12	106031 (1)
				12 × 24 × 6	106037 (2)
				12 × 24 × 12	106029 (2)
60	RGB and RPB (200 and 225) AHCA and PCCA (cabinet A on all unit sizes)	—	Cellulose	1-3/8 × 24 × 6	105988 (1)
				1-3/8 × 24 × 12	106024 (1)
				12 × 24 × 6	105985 (3)
				12 × 24 × 12	106021 (3)
			Glass	1-3/8 × 24 × 6	106040 (1)
				1-3/8 × 24 × 12	106032 (1)
				12 × 24 × 6	106037 (3)
				12 × 24 × 12	106029 (3)

COOLING MEDIA—CONTINUED

Table 1. Cooling Media—Continued					
REC Unit Size	Model (Unit Size)	RDF Cabinet Size (Heat Size) Used with	Media Fiber Type	Media Size (Inches)	PN (Quantity)
70	RGB and RPB (250 and 300) ADF (500)	1 (50 and 60)	Cellulose	9-5/8 × 24 × 6	105989 (1)
				9-5/8 × 24 × 12	106025 (1)
				12 × 24 × 6	105985 (3)
				12 × 24 × 12	106021 (3)
			Glass	9-5/8 × 24 × 6	106041 (1)
				9-5/8 × 24 × 12	106033 (1)
				12 × 24 × 6	106037 (3)
				12 × 24 × 12	106029 (3)
80	RGB and RPB (350) AHCA and PCCA (cabinet B all unit sizes)	—	Cellulose	2-7/8 × 24 × 6	105990 (1)
				2-7/8 × 24 × 12	106026 (1)
				12 × 24 × 6	105985 (4)
				12 × 24 × 12	106021 (4)
			Glass	2-7/8 × 24 × 6	106042 (1)
				2-7/8 × 24 × 12	106034 (1)
				12 × 24 × 6	106037 (4)
				12 × 24 × 12	106029 (4)
90	RGB and RPB (400)	—	Cellulose	8-5/8 × 24 × 6	105991 (1)
				8-5/8 × 24 × 12	106027 (1)
				12 × 24 × 6	105985 (4)
				12 × 24 × 12	106021 (4)
			Glass	8-5/8 × 24 × 6	106043 (1)
				8-5/8 × 24 × 12	106035 (1)
				12 × 24 × 6	106037 (4)
				12 × 24 × 12	106029 (4)
180	RGLB, RPBL, PGBL, and SSCBL (all) RBL ADF and ADFH (700 and 1200)	2 (80 and 120) 3 (up to 17,730 cfm)	Cellulose	8-5/8 × 48 × 6	107191 (1)
				8-5/8 × 48 × 12	107195 (1)
				12 × 48 × 6	107190 (4)
				12 × 48 × 12	107194 (4)
			Glass	8-5/8 × 48 × 6	107200 (1)
				8-5/8 × 48 × 12	107202 (1)
				12 × 48 × 6	107199 (4)
				12 × 48 × 12	107201 (4)
360	—	3 (11,000–28,000 cfm)	Cellulose	8-5/8 × 48 × 6	107191 (2)
				8-5/8 × 48 × 12	107195 (2)
				12 × 48 × 6	107090 (8)
				12 × 48 × 12	107194 (8)
			Glass	8-5/8 × 48 × 6	107200 (2)
				8-5/8 × 48 × 12	107202 (2)
				12 × 48 × 6	107199 (8)
				12 × 48 × 12	107201 (8)

CONTROL COMPONENTS

NOTE: Depending on when the evaporative cooling module was manufactured, the junction box/pump/float switch assembly will resemble one of the configurations shown in [Figure 3](#). The float switch used on units manufactured *before* SEP 2002 is replaced using a field-replacement kit (PN 213779).

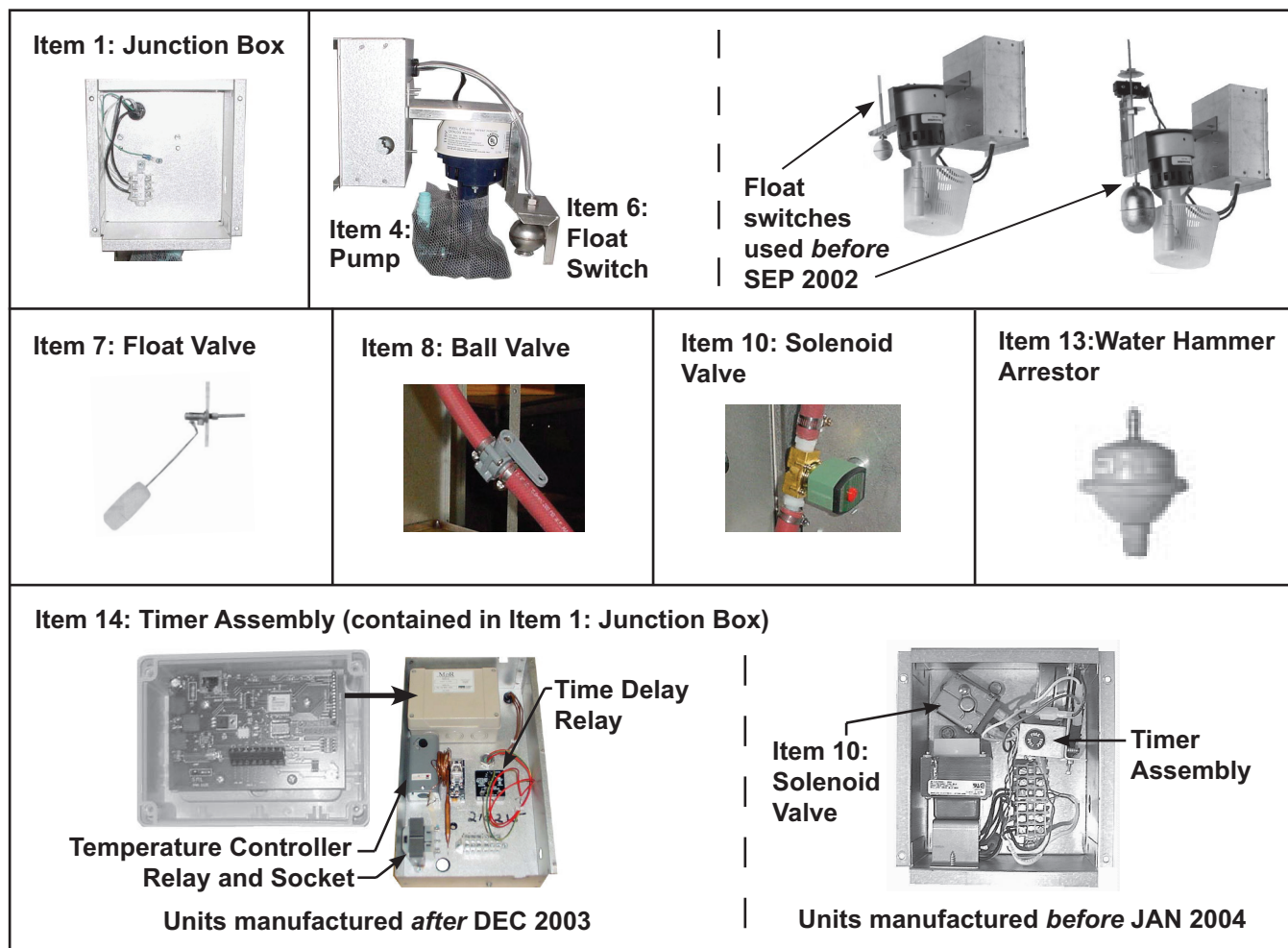


Figure 3. Control Components (Refer to [Table 2](#))

CONTROL COMPONENTS—CONTINUED

Table 2. Control Components											
Item No.	Component	Description	Option	REC Unit Size							
				40	50	60	70	80	90	180	360
				Model (Unit or Cabinet Size)							
				RGB/RPB (75/100/125)	ADF (300) RBA RGB/ RPB (150/175)	AHCA/ PCCA (Cabinet A All Unit Sizes) RGB/RPB (200/225)	ADF (500) RGB/ RPB (250/300)	AHCA/ PCCA (Cabinet B All Unit Sizes) RGB/RPB (350)	RGB/ RPB (400)	RGBL/ RPBL/ PGBL/ SSCBL (All) RBL ADF/ ADFH (700/1200)	RDE (3)
					PN						
1	Junction box	AL STL	ECD1	205127							
		SST		205128							
		AL STL	ECD2	105926							
		SST		194206							
2	Terminal block (not shown)		ECD1 and ECD2	144972							
3	Transformer (not shown)	208V	ECD2	194536							
		575V/3PH/60Hz		105202							
4	Pump	115V, units with 6-inch media		105928			107186				
		208/230V, units with 6-inch media		106926			107197				
		115V, units with 12-inch media		107186							
		208/230V, units with 12-inch media		107197							
5	Pump support (not shown)		ECD2	133486							
6	Float switch			213779 (units manufactured before SEP 2002)							
				201446 (units manufactured after AUG 2002)							
7	Float valve	RM150		42928							
8	Ball valve	5/8-inch × 5/8-inch barb	ECD1 and ECD2	207468							
9	Rubber hose, 1-inch od, 200 psi (not shown)*	22 inches long		207463							
		8 inches long		207464							
		15 inches long		207465							
		28 inches long		207504							
		36 inches long		207505							
10	Solenoid valve	1/2-inch	ECD1	166457 (units manufactured before JAN 2004)							
11	Fuse (not shown)	2.5A		205045 (units manufactured after DEC 2003)							
				61542 (units manufactured before JAN 2004)							
12	Fuseholder (not shown)			60241 (units manufactured before JAN 2004)							
13	Water hammer arrestor			166464							
14	Timer assembly	Microprocessor (AquaSaver®)		205044 (units manufactured after DEC 2003)							

*Order by length needed.

*Order by length needed.

OPTIONAL FILL/DRAIN AND FREEZE-PROTECTION KITS

NOTE: Optional fill/drain (option CT1, CT2, or CT3) and freeze-protection (option CT5 or CT6) kits are shown in [Figure 4](#). Components are listed in [Table 3](#) and operational sequences are listed in [Table 4](#).

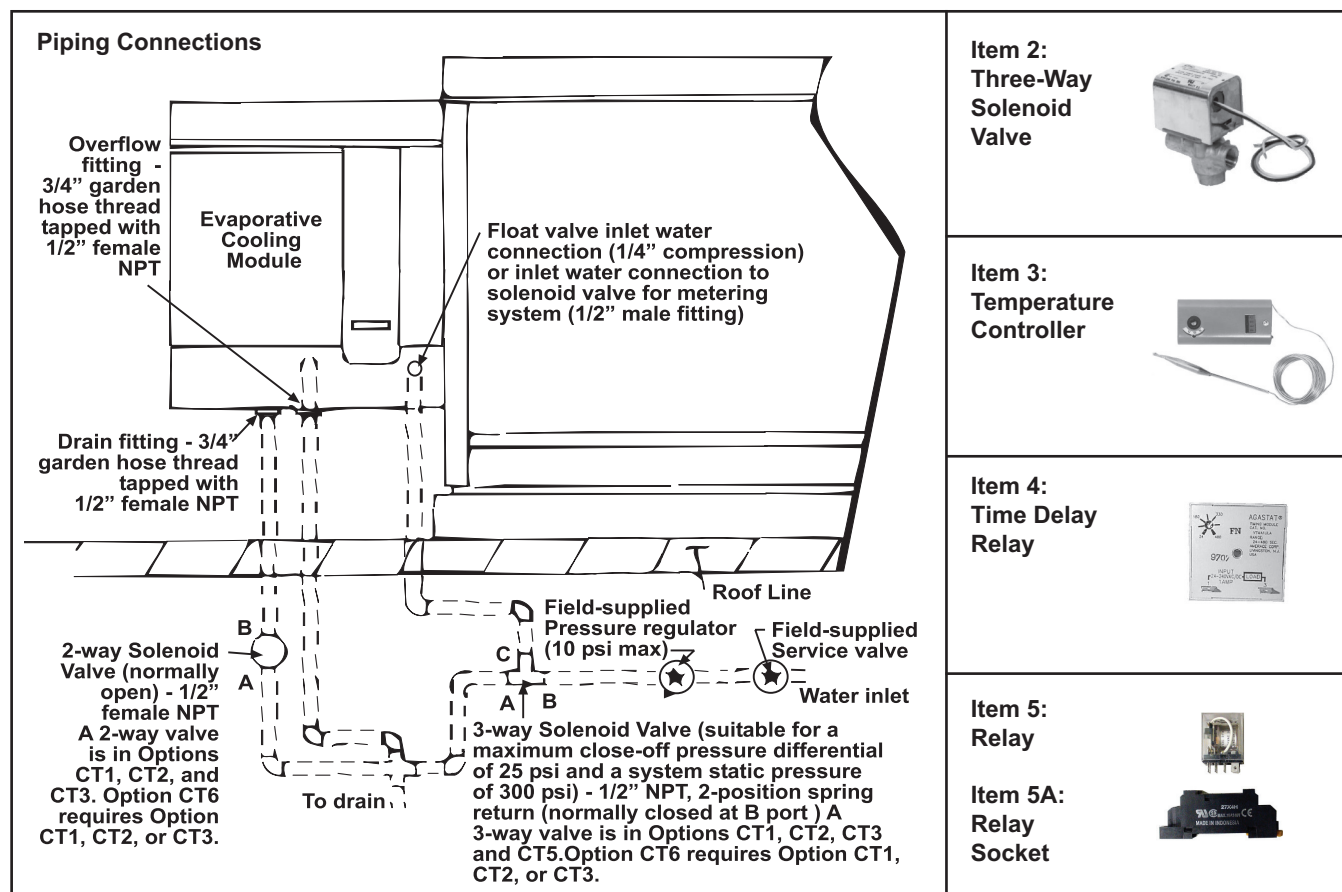


Figure 4. Fill/Drain and Freeze-Protection Kits (Refer to [Table 3](#))

Table 3. Fill/Drain and Freeze-Protection Kit Components				
Item No.	Component	Voltage	Option	PN
1	Two-way solenoid valve (field-installed)*	115V	CT1	50032
		208V	CT2	50297
		230V	CT3	50299
2	Three-way solenoid valve (field-installed)	115V	CT1	50033
		208V	CT2	50296
		230V	CT3	50298
		24V	CT5	178677
3	Temperature controller**	—	CT5 or CT6	126170
4	Time delay relay**		CT5	89661
5	Relay**		CT5	211411
5A	Relay socket**		CT5	211415

*Not shown.

**Also shown in [Figure 3](#).

OPTIONAL FILL/DRAIN AND FREEZE-PROTECTION KITS—CONTINUED

Table 4. Operational Sequences for Fill/Drain and/or Freeze-Protection Kits				
Application	Fill/Drain Kit Option	Freeze-Protection Kit Option	Sequence	
			Step	Description
Float and pump system with fill/drain kit	CT1, CT2, or CT3	—	1	Call for cooling
			2	Two-way valve is energized and closes B to A
			3	Three-way valve is energized opening B to C and closing A to C
			4	During no call for cooling, valves return to normal state
AquaSaver® timed water system with freeze-protection kit	—	CT5	1	Call for cooling
			2	Three-way valve is energized opening B to C and closing A to C
			3	If Outside Air Temperature (OAT) drops below freeze-protection controller setting, three-way valve is de-energized and AquaSaver® 24V solenoid valve remains energized for 8 minutes to allow complete system water drainage
			4	During no call for cooling, three-way valve returns to normal state
Float and pump system with fill/drain kit and freeze-protection kit	CT1, CT2, or CT3	CT6	1	Call for cooling
			2	Two-way valve is energized and closes B to A
			3	Three-way valve is energized opening B to C and closing A to C
			4	If OAT drops below freeze-protection controller setting, valves return to normal state
			5	During no call for cooling, valves return to normal state

INTAKE SCREENS, MOISTURE ELIMINATOR PADS, AND WATER SPRINKLER PIPE ASSEMBLIES

NOTE: If evaporative cooler was manufactured *before* DEC 2000, contact the Factory for replacement sprinkler parts.

Table 5. Intake Screens, Moisture Eliminator Pads, and Water Sprinkler Pipe Assemblies									
Component	Description	REC Unit Size							
		40	50	60	70	80	90	180	360
		Model (Unit or Cabinet Size)							
		RGB/RPB (75/100/125)	ADF (300) RBA RGB/RPB (150/175)	AHCA/ PCCA (Cabinet A All Unit Sizes) RGB/RPB (200/225)	ADF (500) RGB/RPB (250/300)	AHCA/ PCCA (Cabinet B All Unit Sizes) RGB/RPB (350)	RGB/RPB (400)	RGBL/ RPBL/ PGBL/ SSCBL (All) RBL ADF/ ADFH (700/1200)	RDF (3)
		PN (Quantity)*							
Intake screen**	1/2-inch × 1/2-inch mesh	105978	105979	105980	105981	105982	105983	107189	107189 (2)
Retainer angle, intake screen**	Aluminized Steel (AL STL)	111098 (2)							111098 (4)
	Stainless Steel (SST)	147041 (2)							147041 (4)
Moisture eliminator pad	Optional (AL STL)	106044	106045	106046	106047	106048	106049	106049 (2)	106049 (4)
	Optional (SST)	194626	194627	194628	194629	194630	194622	164622 (2)	194622 (4)
Rack, top and bottom	Eliminator pad (AL STL)	106064 (2)	106065 (2)	106066 (2)	106067 (2)	106068 (2)	106069 (2)	106069 (3)	106069 (6)
	Eliminator pad (SST)	147070 (2)	147071 (2)	147072 (2)	147073 (2)	147074 (2)	147075 (2)	147075 (3)	147075 (6)
Top/bottom angle	Eliminator pad rack (AL STL)	106071 (2)	106072 (2)	106073 (2)	106074 (2)	106075 (2)	106076 (2)	106076 (3)	106076 (6)
	Eliminator pad rack (SST)	147076 (2)	147077 (2)	147078 (2)	106079 (2)	147080 (2)	147081 (2)	147081 (3)	147081 (6)
Clamp	Eliminator pad (AL STL)	—						107248 (4)	107248 (8)
	Eliminator pad (SST)	—						147082 (4)	147082 (8)

*Quantity is one (1) unless otherwise indicated.

**Shown in [Figure 5](#).

Table 5. Intake Screens, Moisture Eliminator Pads, and Water Sprinkler Pipe Assemblies—Cont.

Component	Description	REC Unit Size							
		40	50	60	70	80	90	180	360
		Model (Unit or Cabinet Size)							
		RGB/RPB (75/100/125)	ADF (300) RBA RGB/RPB (150/175)	AHCA/ PCCA (Cabinet A All Unit Sizes) RGB/RPB (200/225)	ADF (500) RGB/RPB (250/300)	AHCA/ PCCA (Cabinet B All Unit Sizes) RGB/RPB (350)	RGB/RPB (400)	RGBL/ RPBL/ PGBL/ SSCBL (All) RBL ADF/ ADFH (700/1200)	RDF (3)
			PN (Quantity)*						
Water sprinkler pipe assembly	Single, 6-inch media, pump and float control	207214	207215	207216	207217	207218	207219	207219 (2)	
	Single, 6-inch media, AquaSaver® control	205144	205145	205146	205147	205148	205149	205149 (2)	
	Double, 12-inch media, pump and float control	207220	207221	207222	207223	207224	207225	207225 (2)	
	Double, 12-inch media, AquaSaver® control	207226	207227	207228	207229	207230	207231	207231 (2)	
*Quantity is one (1) unless otherwise indicated.									

*Quantity is one (1) unless otherwise indicated.

CABINET COMPONENTS

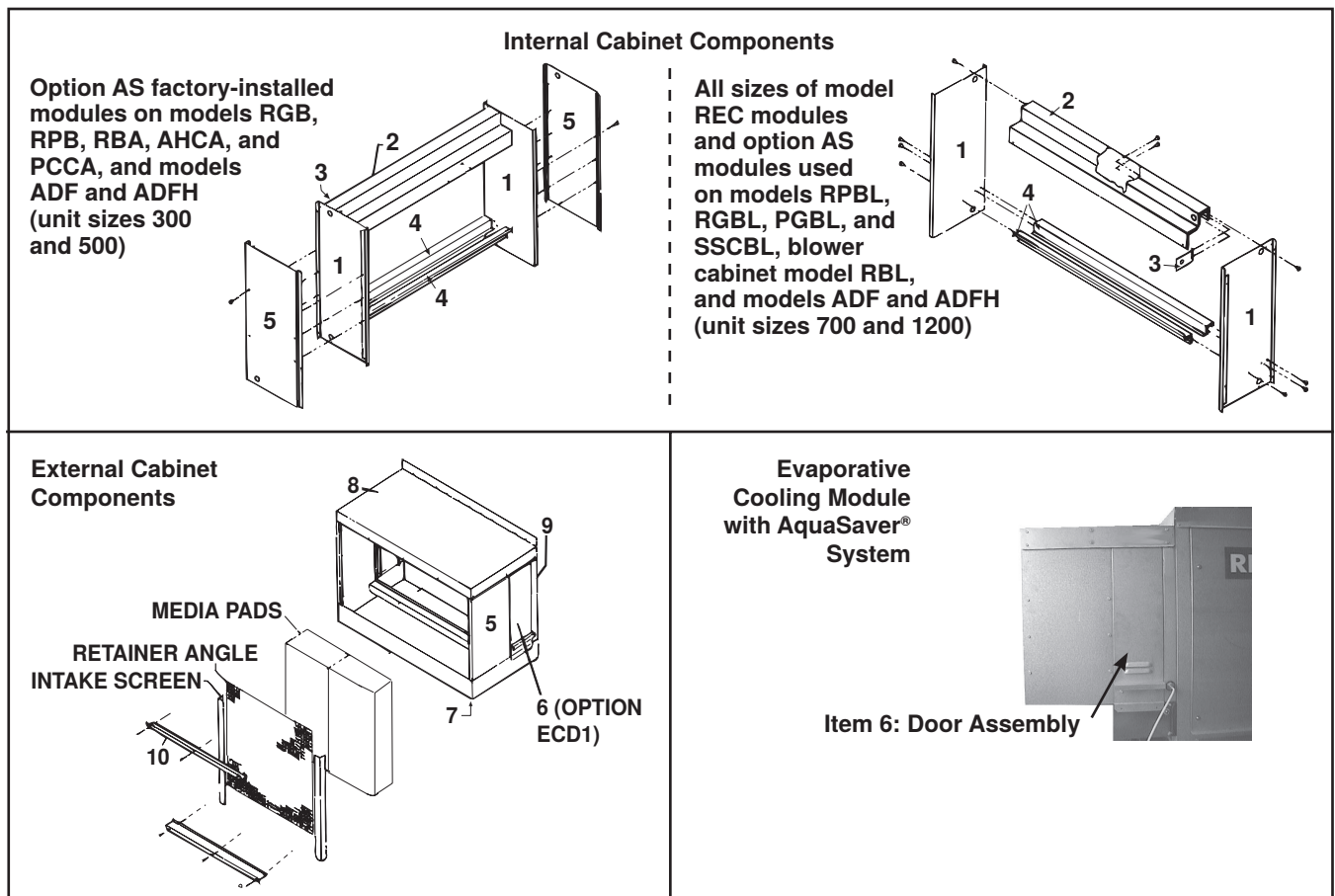


Figure 5. Cabinet Components (Refer to [Table 6](#))

CABINET COMPONENTS—CONTINUED

Table 6. Cabinet Components

Item No.	Component	Description	REC Unit Size							
			40	50	60	70	80	90	180*	360*
			Model (Unit or Cabinet Size)							
			RGB/RPB (75/100/125)	ADF (300) RBA RGB/RPB (150/175)	AHCA/ PCCA (Cabinet A All Unit Sizes) RGB/RPB (200/225)	ADF (500) RGB/RPB (250/300)	AHCA/ PCCA (Cabinet B All Unit Sizes) RGB/RPB (350)	RGB/RPB (400)	RGBL/ RPBL/ PGBL/ SSCBL (All) RBL ADF/ADFH (700/1200)	RDF (3)
1	Side panel	Inner (AL STL)	105906 (2)						107181 (2)	
		Inner (SST)	147005 (2)						147006 (2)	
2	Water diffuser	6-inch media (AL STL)	105907	105908	105909	105910	105911	105912	105912	
		6-inch media (SST)	147007	147008	147009	147010	147011	147012	147012	
		12-inch media (AL STL)	106014	106015	106016	106017	106018	106019	106019	
		12-inch media (SST)	147083	147084	147085	147086	147087	147088	147088	
3	Sprinkler support***	6-inch media (AL STL)	204771 (2)						—	
		6-inch media (SST)	205026 (2)							
		12-inch media (AL STL)	204772 (2)							
		12-inch media (SST)	205027 (2)							
	Plate*	Sprinkler (SST)	207201 (used on units with either AL STL or SST cabinet)							
4	Support rail	Media (AL STL)	105914 (2)	105915 (2)	105916 (2)	105917 (2)	105918 (2)	105919 (2)	105919 (2)	
		Media (SST)	147014 (2)	147015 (2)	147016 (2)	147017 (2)	147018 (2)	147019 (2)	147019 (2)	
5	Leg	Rear (AL STL)	105920 (2)						107182 (2)	
		Rear (SST)	147020 (2)						147021 (2)	
6	Door assembly with louvers	Option ECD1 (AL STL)	166569						166570	
			105921							
		Option ECD1 (SST)	194596						194589	
			194571							
		Option ECD2 (AL STL)	105921 (2)						107183 (2)	
Option ECD2 (SST)	194571 (2)						194205 (2)			
7	Bottom pan	SST	105951	105952	105953	105954	105955	105956	105956	
8	Top	AL STL	106078*	106079*	106080*	106081*	106082*	107187*		
			105957***	105958***	105959***	105960***	105961***	105962***	—	
		SST	147027*	147028*	147029*	147030*	147031*	147032*		
			147119***	147120***	147121***	147122***	147123***	147124***	—	
9	Leg	Front (AL STL)	105963 (2)						107313 (2)	
		Front (SST)	147033 (2)						147034 (2)	
10	Media keeper rails	6-inch media (AL STL)	105964 (2)	105965 (2)	105966 (2)	105967 (2)	105968 (2)	105969 (2)	105969 (2)	
		6-inch media (SST)	147035 (2)	147036 (2)	147037 (2)	147038 (2)	147039 (2)	147040 (2)	147040 (2)	
		12-inch media (AL STL)	105992 (2)	105993 (2)	105994 (2)	105995 (2)	105996 (2)	105997 (2)	105997 (2)	
		12-inch media (SST)	147090 (2)*	147091 (2)*	147092 (2)*	147093 (2)*	147094 (2)*	147905 (2)*		
			147014 (2)***	147015 (2)***	147016 (2)***	147017 (2)***	147018 (2)***	147019 (2)***	—	
11	Drain	Cooler (not shown)	257554 (2)							
12	Angle	Duct connection (not shown)	106095*	106096*	106097*	106098*	106099*	106100*	111501	

*Used on all sizes of model REC modules and option AS cooling modules on models RPBL, RGBL, PGBL, and SSCBL, blower cabinet model RBL, and models ADF and ADFH (unit sizes 700 and 1200).

**Quantity is one (1) unless otherwise indicated.

***Used on option AS factory-installed modules on models RGB, RPB, RBA, AHCA, PCCA, and unit sizes 300 and 500 of ADF and ADFH.

SUPPORT BASE COMPONENTS

NOTE: The support base is used on all sizes of model REC modules and option AS cooling modules on models RPBL, RGBL, PGBL, and SSCBL, blower cabinet model RBL, and models ADF and ADFH (unit sizes 700 and 1200).

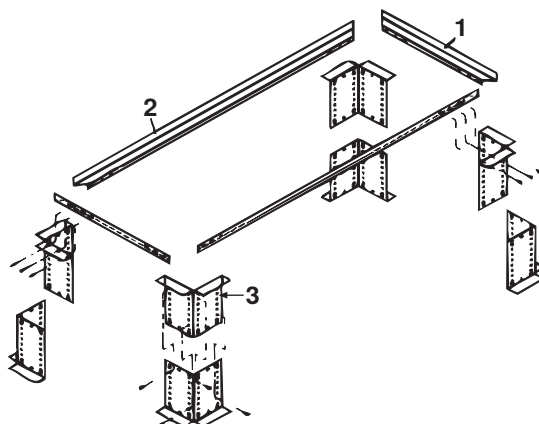


Figure 6. Support Base Components (Refer to [Table 7](#))

Table 7. Support Base Components										
Item No.	Component	Description	REC Unit Size							
			40	50	60	70	80	90	180	360
			Model (Unit or Cabinet Size)							
			RGB/RPB (75/100/125)	ADF (300) RBA RGB/RPB (150/175)	AHCA/ PCCA (Cabinet A All Unit Sizes) RGB/RPB (200/225)	ADF (500) RGB/RPB (250/300)	AHCA/ PCCA (Cabinet B All Unit Sizes) RGB/RPB (350)	RGB/RPB (400)	RGBL/ RPBL/ PGBL/ SSCBL (All) RBL ADF/ADFH (700/1200)	RDF (3)
			PN (Quantity)							
1	Support	Side	107227 (2)							
2		Front/rear	106086 (2)	106087 (2)	106088 (2)	106089 (2)	106090 (2)	107235 (2)		
3	Leg	Support	107236 (8)							
4	Screw*	#10 × 1/2 L	11813 (as required)							
5	Bolt, hex head*	1/4-20	16246 (10)							
6	Nut*		10650 (10)							
*Not shown.										

TRANSITION DUCT COMPONENTS

NOTE: Transition ducts are used on BL models and on models ADF and ADFH (unit sizes 700 and 1200).

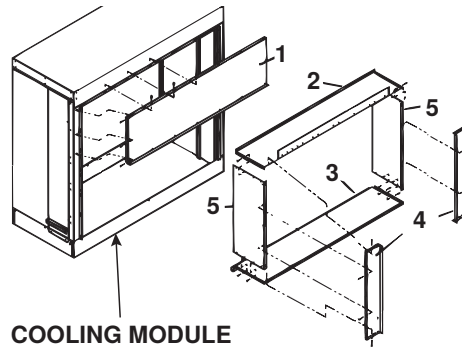


Figure 7. Transition Duct Components (Refer to Table 8)

Table 8. Transition Duct Components						
Item No.	Component	Description	BL Models			Models ADF and ADFH
			Unit Size			
			800/1200	600	1050	700/1200
			PN (Quantity)*			
—	Kit	Transition duct/base	107224	107225	107226	107224
1	Cover	Front top	107228			
2	Base	Top	107229			
3		Bottom	107230			
4	Extension	Duct	—	107233	120734	—
5	Base	Side	107231 (2)			
*Quantity is one (1) unless otherwise indicated.						

