



Forced Draft Axial Fan Design Features - PMCB Models

Energy Efficient for Lowest Operating Cost

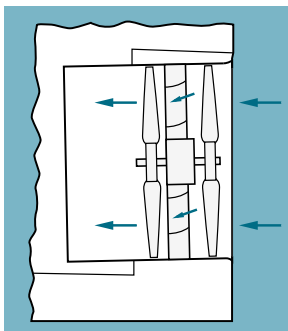
Cut Operating kW up to 50%

The Power-Mizer models use effective axial flow fans which can reduce power requirements by up to 50%. This results in significant energy savings.



Vane Axial Fan Assembly

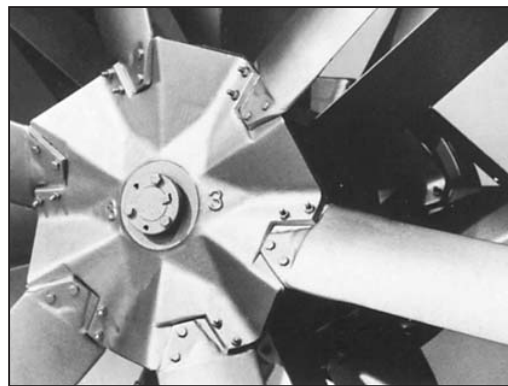
The PMCB models utilize two stage vane-axial fans for highly efficient operation. The fans are installed in a closely fitted cowl with a venturi inlet and advanced design guide vanes between stages, which help direct the flow and increase efficiency.



Two Stage Fan

Cast Aluminum Alloy Fans

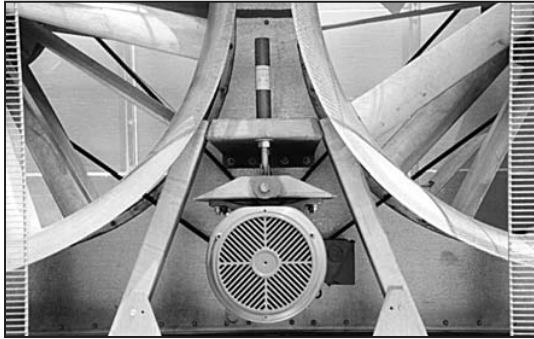
The fans are heavy-duty cast aluminum alloy that are virtually corrosion free.



Vane-Axial Fan

PMCB Fan Motor Mount

EVAPCO's tandem TEFC motor mount assembly allows for two fans to be operated with one motor for simplicity. Routine maintenance is easily performed. If redundancy is a concern, individual fan motor drives are available as an option on PMCB models.



Tandem Fan Drive Motor Mount

Accessibility

The fan section is completely open and accessible at waist level where each part may be carefully checked by simply removing the safety screens.

Bearing grease fittings are extended to the outside of the unit to ease of lubrication.

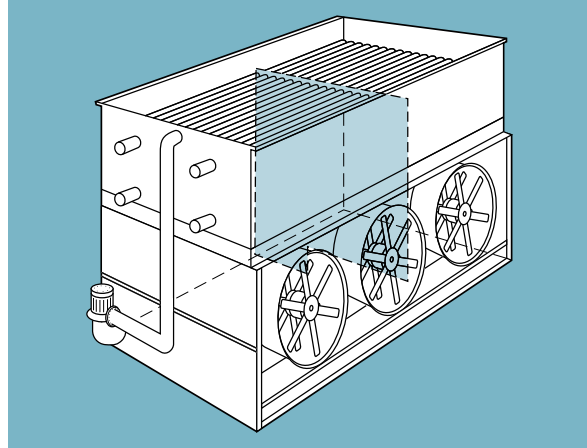
The basin is also open and easy to access for inspection or cleaning. There is a depressed sump area to catch the dirt accumulated and it may be easily flushed out with a hose through the access door on either end.



Vane-Axial Fan

Internal Baffles

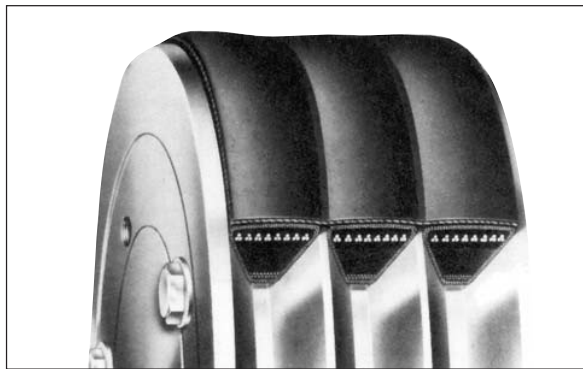
As a standard feature, all EVAPCO condensers with multiple motors are provided with an internal baffle system which extends from the pan bottom vertically through the coil bundle. This allows the user to cycle fan motors independently to match system load without the harmful effects of air by-pass.



Internal Baffles

Power-Band Drive

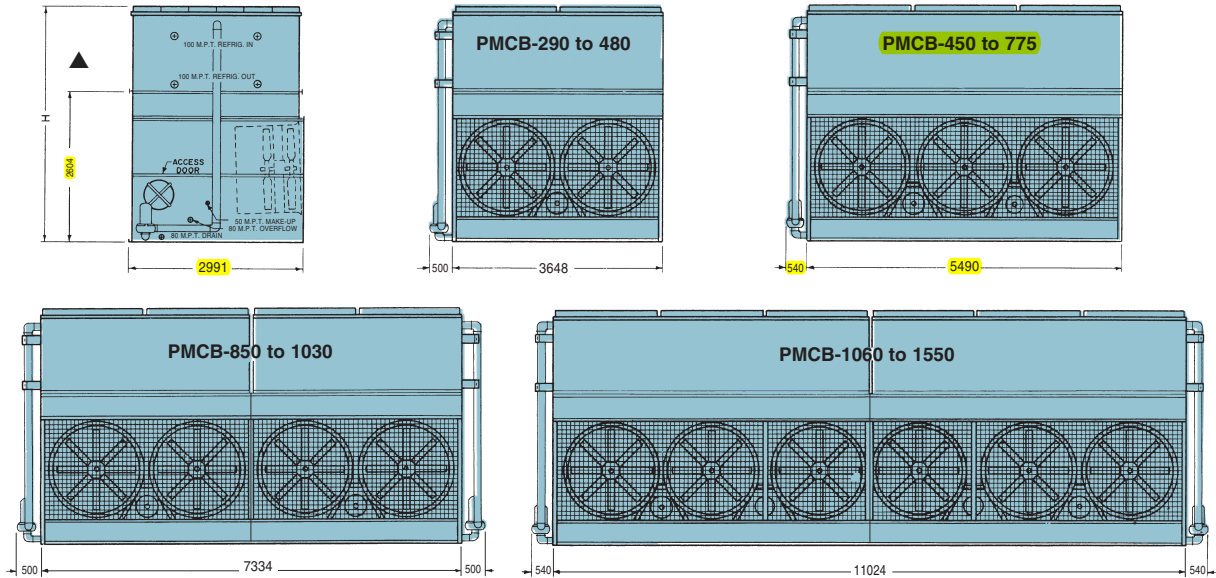
The Power-Band drive is a solid backed belt system that has a high lateral rigidity. This eliminates the problem of mismatched belts and prevents belts from jumping pulleys, a common problem with other designs.



Power-Band

Engineering Dimensions & Data

Power Mizer Models PMCB 290 to 1550



▲ NOTE: Coil connection(s) and other unit dimensions may vary to match application requirements and/or shipping regulations. Consult the EVAPCO plant or certified drawings for detailed information.

TABLE 10 Engineering Data

UNIT NO.	FANS		WEIGHTS (KG)			R-717 Operating Charge	SPRAY PUMP		REMOTE SUMP		HEIGHT (mm)
	kW	m ³ /s	Shipping	Operating	Heaviest Section†		kW	l/s	Liters Req'd**	Conn. Size	
PMCB-290	7,5	29,4	5840	8405	3870	150	4,0	43,2	1590	250	3817
330	5,5	26,7	6755	9410	4870	200	4,0	43,2	1590	250	4033
350	7,5	29,1	6795	9450	4870	200	4,0	43,2	1590	250	4033
385	7,5	28,5	7750	10510	5870	250	4,0	43,2	1590	250	4249
390	11,0	32,0	6865	9515	4870	200	4,0	43,2	1590	250	4033
415	15,0	34,9	6915	9570	4870	200	4,0	43,2	1590	250	4033
425	11,0	31,2	7820	10580	5870	250	4,0	43,2	1590	250	4249
455	15,0	34,2	7875	10630	5870	250	4,0	43,2	1590	250	4249
480	18,5	36,1	7940	10695	5870	250	4,0	43,2	1590	250	4249
PMCB-450	7,5 & 4,0	45,5	8630	12330	5615	222	5,5	65,0	2347	300	3817
585	7,5 & 4,0	43,7	11600	15615	8475	372	5,5	65,0	2347	300	4249
630	15,0 & 7,5	53,2	10300	14155	7030	300	5,5	65,0	2347	300	4033
645	11,0 & 5,5	48,1	11685	15700	8475	372	5,5	65,0	2347	300	4249
690	15,0 & 7,5	51,6	11755	15765	8475	372	5,5	65,0	2347	300	4249
725	18,5 & 11,0	54,2	12000	16010	8475	372	5,5	65,0	2347	300	4248
755	18,5 & 11,0	53,8	13330	17505	9920	450	5,5	65,0	2347	300	4465
775	22,0 & 11,0	55,2	13575	17750	9920	450	5,5	65,0	2347	300	4465
PMCB-850	(2)11,0	62,4	15640	21160	5870	500	(2)4,0	86,4	3217	(2) 250	4249
910	(2)15,0	68,4	15750	21260	5870	500	(2)4,0	86,4	3217	(2) 250	4249
950	(2)15,0	67,2	17625	23385	6870	600	(2)4,0	86,4	3217	(2) 250	4465
960	(2)18,5	72,2	15880	21390	5870	500	(2)4,0	86,4	3217	(2) 250	4249
1000	(2)18,5	70,8	17750	23510	6870	600	(2)4,0	86,4	3217	(2) 250	4465
1030	(2)22,0	72,8	17895	23655	6870	600	(2)4,0	86,4	3217	(2) 250	4465
PMCB-1060	(2) 7,5 & (2) 4,0	87,6	20280	27990	7030	600	(2)5,5	130,0	6132	(2) 300	4033
1175	(2) 11,0 & (2) 5,5	98,6	20455	28165	7030	600	(2)5,5	130,0	6132	(2) 300	4033
1260	(2) 15,0 & (2) 7,5	106,4	20600	28310	7030	600	(2)5,5	130,0	6132	(2) 300	4033
1380	(2) 15,0 & (2) 7,5	103,2	23510	31530	8475	744	(2)5,5	130,0	6132	(2) 300	4249
1510	(2) 18,5 & (2) 11,0	107,6	26660	35010	9920	900	(2)5,5	130,0	6132	(2) 300	4465
1550	(2) 22,0 & (2) 11,0	110,4	27150	35500	9920	900	(2)5,5	130,0	6132	(2) 300	4465

**Liters shown is water in suspension in unit and piping. Allow for additional water in bottom of remote sump to cover pump suction and strainer during operation. (300 mm would normally be sufficient.)

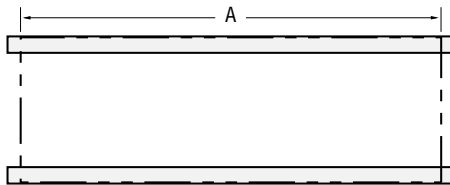
† Heaviest section is the coil section.
Refrigerant charge is shown for R-717. Multiply by 1,93 for R-22 and 1,98 for R-134a.
Dimensions are subject to change. Do not use for pre-fabrication.

Steel Support

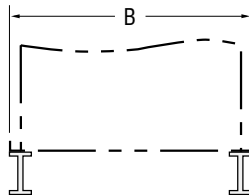
The recommended support for EVAPCO condensers is structural "I" beams located under the outer flanges and running the entire length of the unit. Mounting holes, 19mm in diameter are located in the bottom channels of the pan section to provide for bolting to the structural steel. (Refer to certified drawings from the factory for bolt hole locations.)

Beams should be level to within 3mm per 2m before setting the unit in place. Do not level the unit by shimming between it and the "I" beams as this will not provide proper longitudinal support.

Plan Views



End Elevations



LRC DIMENSIONS

Models		A	B
LRC	25 to 72	3083	1029
LRC	76 to 114	3731	1540
	108 to 183	4636	1540
	190 to 246	5553	1540
LRC	188 to 269	4629	2388
	249 to 379	5553	2388

LSCB DIMENSIONS

Models		A	B
LSCB	36 to 80	1826	1235
	90 to 120	2724	1235
	135 to 170	3651	1235
LSCB	185 to 250	3645	1664
	280 to 385	5490	1664
LSCB	281 to 386	3651	2388
	410 to 560	5486	2388
	581 to 770	7341	2388
	820 to 1120	11011	2388
LSCB	400 to 515	3648	2991
	550 to 805	5493	2991
	800 to 1030	7334	2991
	1100 to 1610	11024	2991

PMCB DIMENSIONS

Models		A	B
PMCB	175 to 240	3648	1927
	250 to 375	5493	1927
PMCB	290 to 480	3648	2991
	450 to 775	5490	2991
	850 to 1030	7334	2991
	1060 to 1550	11024	2991
PMCB	435 to 580	3651	3620
	600 to 885	5490	3620
	1015 to 1120	7341	3620
	1110 to 1120	11024	3620

Evaporative Condenser Specifications

Furnish and install as shown on the plan an Evapco Evaporative Condenser Model _____ having condensing capacity of _____ kW heat rejection operating with _____ Refrigerant at _____ °C condensing temperature and _____ °C design wet bulb temperature.

Casing and Fan Section

The casing and fan section shall be constructed of Z-725 galvanized steel for long life and durability. Fan section shall include fans, motors and drives. The entire drive system (including fans, motors, pulleys and belts) shall be located in the dry entering airstream.

Cold Water Basin *(only for LRC)*

The complete cold water basin shall be constructed of Type 304 stainless steel for long life and durability. Standard cold water basin accessories shall include Type 304 stainless steel overflow, drain, anti-vortexing hood, strainers and brass make-up valve with unsinkable, foam filled plastic float. A circular access door shall be located above the basin to allow easy access to the pan interior.

The outlet shall be Type 304 stainless steel beveled for welding or a threaded connection.

Model LSCB & LRC - Centrifugal Fans/Drives

Fans shall be forwardly curved centrifugal type of hot-dip galvanized construction. The fans shall be factory installed into the pan-fan section, and statically and dynamically balanced for vibration free operation. Fans shall be mounted on either a solid steel shaft or a hollow steel shaft with forged bearing journals. The fan shaft shall be supported by heavy-duty, self-aligning bearings with cast-iron housings and lubrication fittings provided for maintenance.

The fan drive shall be V-belt type with taper lock pulleys designed for 150% of the motor nameplate kW. Drives are to be mounted and aligned at the factory.

Model PMCB - Power-Mizer Fans/Drives

Fans shall be vane-axial type constructed of cast aluminum alloy blades. They shall be arranged in a two-stage system installed in a closely fitted cowl with venturi air inlet and air stabilizing vanes. Fan shaft bearings shall be heavy-duty self-aligning ball type with grease fittings extended to the outside of the unit.

The fan drive shall be solid backed Power-Band constructed of neoprene with polyester cords and designed for 150% of motor nameplate kW. Drives are to be mounted and aligned at the factory.

Fan Motor

Fan motor(s) shall be _____ kW T.E.F.C. suitable for outdoor installation on _____ volts, _____ hertz, and _____ phase electrical service. Motor(s) shall be mounted on an adjustable base.

Heat Transfer Coil

The coil(s) shall be all prime surface steel, encased in steel framework with the entire assembly hot-dip galvanized after fabrication. Coil(s) shall be designed with sloping tubes for free drainage of liquid and air pressure tested under water in accordance with the "Pressure Equipment Directive" (PED) 97/23/EC.

Water Recirculation Pump

The pump shall be a close-coupled, centrifugal type with a mechanical seal. Pump motor shall be _____ kW T.E.F.C. design suitable for outdoor installation on _____ volts, _____ hertz, and _____ phase electrical service.

Water Distribution System

The system shall provide a water flow rate of not less than 4 l/s over each square meter of unit face area to ensure proper flooding of the coil. The spray header shall be constructed of polyvinyl chloride pipe for corrosion resistance. All spray branches shall be removable and include a threaded end plug for cleaning. The water shall be distributed over the entire coil surface by precision molded from heavy-duty, glass reinforced nylon spray nozzles for long life and 100% corrosion resistance (34 mm diameter orifice and 38 mm clearance between the nozzle bottom and water diverter plate) with an internal sludge ring to eliminate clogging. Nozzles shall be threaded into the spray header to provide easy removal for maintenance.

Eliminators

The eliminators shall be constructed of inert polyvinyl chloride that has been specially treated to resist UV degradation. Assembled in easily handled sections, the eliminators shall incorporate three changes in air direction to assure removal of entrained moisture from the discharge airstream. The maximum drift rate shall not exceed 0.001% of the recirculated water rate.

Finish

The casing and fan section shall be constructed of Z-725 heavy gauge mill hot-dip galvanized steel. During fabrication, all panel edges shall be coated with a 95% pure zinc compound.