

High Capacity, High Efficiency Evaporative Cooling for Garden Centers and Greenhouse Applications

Features

- Available in 4 sizes from 9,100 to 18,800 cfm delivery air @ 0.0" W.G.
- Factory tested and shipped ready to operate, including factory wired components
- ETL listed and labeled in accordance with U.L. standards
- Copper-wound, heavy duty ball bearing motors
- One capacitor-run, high capacity pump provides complete media saturation
- Self-aligning, heavy duty, greaseable, pillow block, ball type fan bearings
- Fan performance is factory set to job specific specifications
- Premium 8" thick cross fluted 80% efficient media
- Lifting sky hooks
- The most up-to-date propeller type axial fan affords maximum air delivery while minimizing horsepower
- Heavy gauge, hot dipped galvanized steel construction
- Epoxy powder base paint finish baked on at 375°
- Rugged cabinet assembly with double thick steel corners
- Easily accessible external distributor clean-outs
- Side access media removal
- Adjustable motor sheave for air flow adjustment

• 600 Series

- **UMP-644**
-Side Discharge
- **UMP-644x2**
-Side Discharge

Available Options

- Class II, U.L. 900 media
- Pre-wired control packages
- Distribution flush system
- Freeze protection
- Self-tensioning belt
- Installation accessories
- Fused and non-fused disconnects

Resources Available for This Product

- Catalog By Mail
- Catalog Online



United Metal Products

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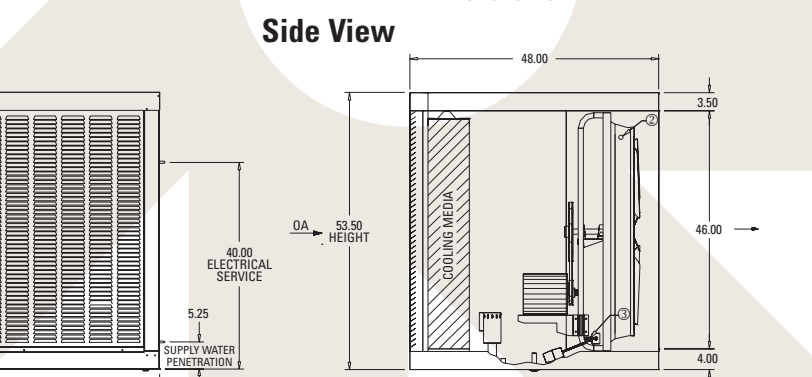
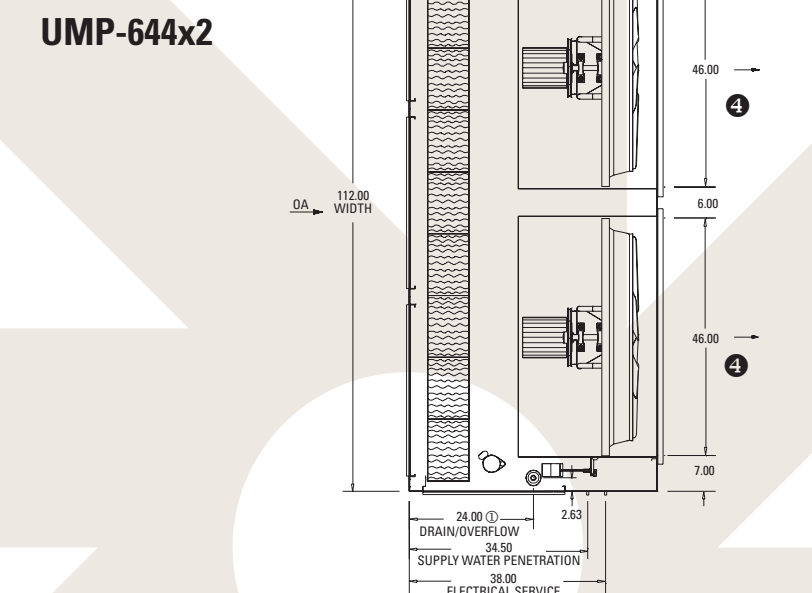
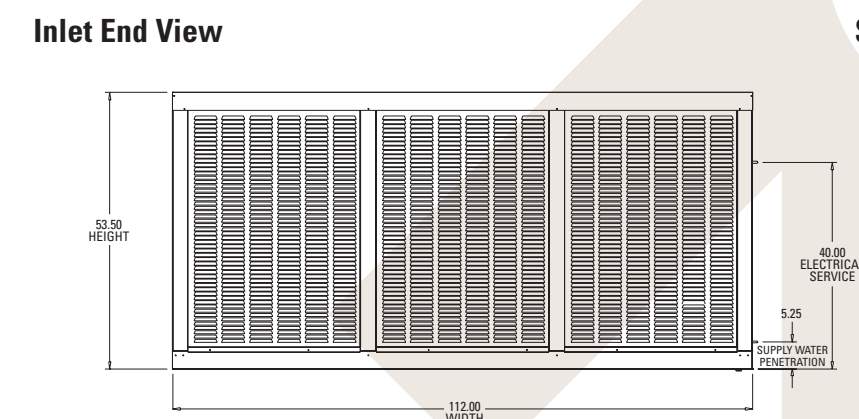
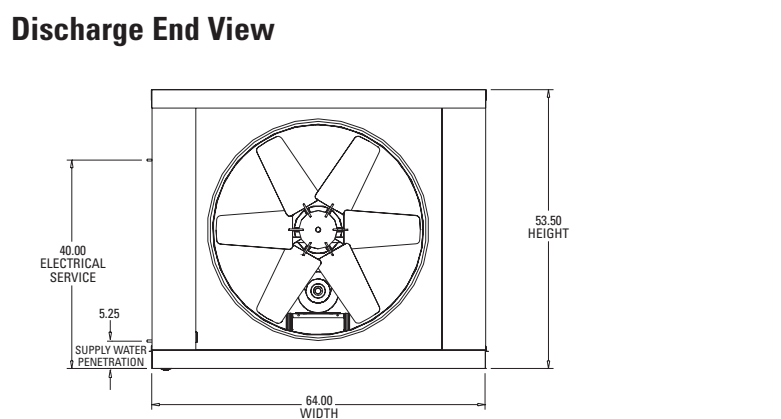
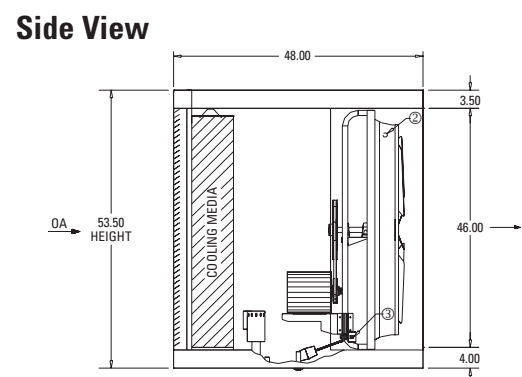
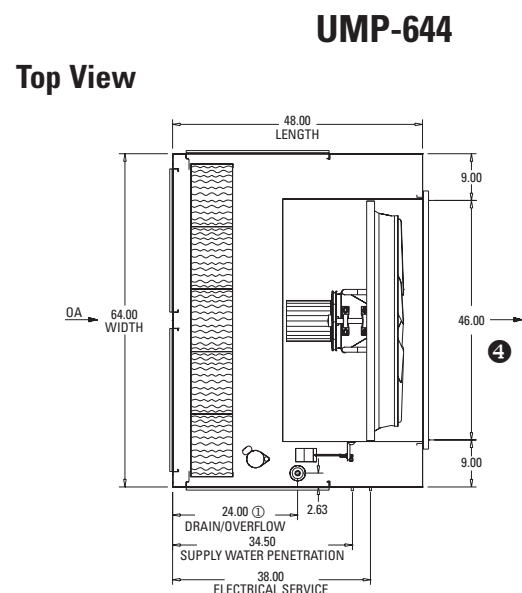
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Patent #4774030 or other patents pending

Model #	Industry Standard Rating	AIR DELIVERY IN CUBIC FEET PER MINUTE (CFM)								ELECTRICAL SPECIFICATIONS						FAN UNIT				Evaporative Media	Weights ③					
		Inches Static Pressure (W.G.) ①								Fan Motor ②			Pump			Fan (s)		Drives		Qty.-Depth x Width x Height	Shipping	Operate				
		0 CFM RPM	0.1 CFM RPM	0.2 CFM RPM	0.3 CFM RPM	0.4 CFM RPM	HP	Max BHP	Volt/Phase 115/208/230 1 Phase Amps	Volt/Phase 208/230/460 3 Phase Amps	GPH @ 5' Head	Volt/Phase 115 1 Phase Amps	Dia.	Max RPM	Motor Pulley(s) O.D.	Fan Pulley(s) O.D.	Belt	Shaft								
UMP-644 Side	10,000	9,167	378	6,511	378	4,768	378	2,123	378	--	--	1/2	.58	8.4 / 4.8 / 4.2	2.3 / 2.1 / 1.15	450	1.7	42"	690	3.75"	14.25"	A57	1"	5 - 8" x 12" x 44"	478	778
	12,000	10,485	485	8,545	485	7,140	485	5,821	485	4,082	485	1	1.15	13.0 / 6.3 / 6.5	3.6 / 3.8 / 1.9	450	1.7	42"	690	3.75"	11.25"	A48	1"	5 - 8" x 12" x 44"	480	780
UMP-644x2 Side	16,000	16,500	340	11,080	340	6,813	340	2,995	340	--	--	(2) 1/2	(2) .58	(2) 8.4 / 4.8 / 4.2	(2) 2.3 / 2.1 / 1.15	820	2.3	42"	690	3.75"	14.25"	A57	1"	9 - 8" x 12" x 44"	906	1416
	21,000	18,850	437	15,115	437	11,046	437	8,372	437	--	--	(2) 3/4	(2) .86	(2) 10.6 / 6.0 / 5.3	(2) 3.0 / 3.4 / 1.7	820	2.3	42"	690	3.75"	11.25"	A48	1"	9 - 8" x 12" x 44"	910	1420

* Performance rating include the effects of the evaporative media, inlet louver, motor and drives in the airstream.
 * Performance shown is for installation Type B: Free Inlet, Ducted Outlet
 * Power rating (BHP) does not include drive losses.



- ① The UMP-600 Series fan type evaporative coolers are only designed for straight side duct or non ducted applications. External static pressure ranges of 0.0" to 0.2". Higher ESP are only shown to demonstrate fan characteristics and performance with loaded media. For ducted applications with external static pressures exceeding 0.2" a UMP-800 or 900 series blower model is recommended.
 - ② Only motors with 1 HP or less are provided with integral thermal protection. Motors 1.5 HP or greater require a separate motor overload device. Amperage ratings shown is nameplate data. Consult factory for overload and control options.
 - ③ Weights are in pounds and include motors, pumps and drives. Operating weights include saturated media and assumes 2.5" depth of water in sump. Weights exclude optional accessories such as curb, diffuser and controls.
 - ④ Minimum duct sizing should equal discharge dimension. Consult factory for special applications.
- ① 3/4" Male hose thread
 ② 7/8" Electrical service entrance
 ③ 3/8" Compression fitting connection made inside unit.
- NOTE: Minimum 50 p.s.i. of water pressure required for float.**





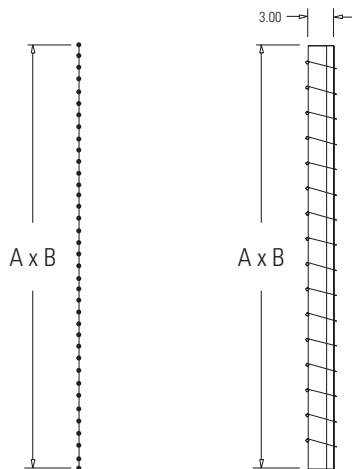
UMP-600 Optional Accessories

Description	Part #	Material / Finish	Pressure Drop @ 800 FPM	A	B	Weight in Lbs.
UMP-644 Safety Grill	10604	Galv. / Beige	.01"	45.00"	45.00"	14
UMP-644 Auto Damper Diffuser	80662	Aluminum	.07"	46.00"	46.00"	30
UMP-644x2 Safety Grill	(2) 10604	Galv. / Beige	.01"	45.00"	45.00"	(2) 14
UMP-644x2 Auto Damper Diffuser	80664	Aluminum	.07"	46.00"	46.00"	(2) 30

SAFETY GRILL

AUTO DAMPER DIFFUSER

* Accessories can be factory mounted in fan opening upon request

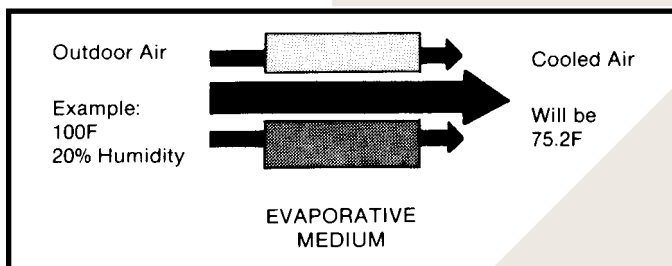


Principles of Evaporative Air Cooling

Evaporative air cooling is a dynamic space conditioning tool, characterized by low energy consumption and associated operating economy. There are two basic principles on which its effectiveness is based: (1) adiabatic heat transfer, to lower the temperature of outside air; (2) forced movement of a high volume of this cooled outside air through the area to be cooled.

HOW AN EVAPORATIVE COOLER COOLS

1. Adiabatic heat transfer: nature's cooling mechanism. Evaporating water cools the air by converting the air's "sensible" heat - heat we can feel with our senses - to "latent" heat that we **don't** feel suspended in the vaporized moisture. An ordinary **dry bulb** thermometer measures the heat people feel. A thermometer with a wet wick can measure the combined effect of both sensible **and** latent heat. As air becomes saturated with water vapor, the wet bulb reading remains constant; hence, the term "adiabatic" (without heat loss or gain). Yet sensible heat, as it's converted to insensible latent heat, **drops, lowering the dry bulb temperature that people can feel.**
2. Moving a high volume of air, the effective temperature of the evaporatively cooled air is reduced still further by the effect of air movement (velocity).



Moreover, the introduction of a high volume of fresh, filtered air provides complete and continual ventilation of the conditioned space.