HP7000 FAN

THE FACTS

PREMIUM MATERIAL

Marley® HP7000 Fan minimum material grades are suitable for most cooling tower applications. Others require optional upgrades just to meet our minimum material grades (i.e. aluminum blade clamps to iron, and galvanized hardware to stainless).

PERFORMANCE

Marley HP7000:

- Performs 3% better in CFM than others to increase cooling tower capacity or
- Requires 9% less power to deliver equivalent CFM, which can result in $12,000 less in annual energy costs*

LOWER MAINTENANCE COSTS

Paint, leading edge overlays, and patching are not required due to:

- Incorporated pigmented resin for superior UV protection
- Molded in 1/8" thick nylon barrier strip along the leading edge

MORE DURABLE / LONGER LIFE

HP7000 blades are 30-50% stronger than others in buckling strength and the shank diameter is 36% larger than others. This can be crucial in high wind load areas or in common plenum applications. Turbulent air in the fan cylinder could deform other blade designs. Stronger blades help prevent a complete mechanical failure.

VALUE ADDED OPTIONS

Triple-epoxy coated hub assemblies to premium stainless hub plates or hardware.

REFERENCE:

* Based on 200 hp vs. 182 hp or 13.42 kW difference x $0.10 per kW/hr x 8,760 annual operating hours = $11,758.20 in energy savings

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THE COMPARISON

MARLEY® HP7000		HUDSON TUF-LITE
100% stainless steel hardware with galvanized hub plates and epoxy coated cast iron blade clamps standard	**PREMIUM MATERIALS**	Hudson Tuf-Lite II® uses galvanized steel hardware and aluminum* blade clamps standard**
3% more cooling capacity or 9% less power needed	**PERFORMANCE** (BASED ON ACTUAL TEST RESULTS)***	Hudson Tuf-Lite II is less efficient and needs more horsepower, this translates into increased energy costs (up to $12,000 annually)
1250 lb	**BUCKLING LOAD**	Hudson Tuf-Lite III–850 lb Hudson Tuf-Lite II–900 lb Hudson Tuf-Lite I®–800 lb
36% larger shank diameter (HP7000 is 8-1/2") for superior strength – Tested to withstand 73% greater shank bending resistance than Tuf-Lite II	**STRENGTH**	Smaller shank diameter (Hudson Tuf-Lite II – 6-1/4")
Incorporates pigmented resin throughout the blade skin, along with multiple veil layers on both top and bottom surfaces for complete UV resistance	**UV PROTECTION**	Uses only paint for UV protection, which can flake off over time and expose the blade's structural fibers to harmful UV rays
Molded-in nylon barrier strip resulting in 75%† better erosion rate	**EROSION RESISTANCE** (BASED ON ACTUAL TEST RESULTS)	Hudson Tuf-Edge that is used in Tuf-Lite II and III blades has higher erosion rate

REFERENCE:

* Aluminum is considered unacceptable in many power, geothermal, and chemical processes

** Upgrading a Hudson Tuf-Lite II to iron clamps and stainless hardware to match Marley standards requires significant cost increases ($2,800 per fan assembly–based on 336" diameter 8-blade Tuf-Lite III® pricing)

*** Based on test results comparing aerodynamic efficiency between the Marley HP7000 and Hudson Tuf-Lite II fans at SPX CT Development Center, as well as actual field application

† CTI TP97-06 Paper: The Influence of Materials of Construction on Leading Edge Erosion of Fiberglass Fan Blades Used on Cooling Towers