

MARLEY REFLEX™ FAN CYLINDERS

THE FACTS

PERFORMANCE

Performs 1% better in CFM than others to increase cooling tower capacity -OR-

Requires 3% less power to deliver equivalent CFM, which can result in \$4,400 in annual energy cost savings

STRENGTH

Butt flange design requires fewer components to meet industry standards

- Spray layup process is the industry standard offering
- Resin transfer molding (RTM) manufacturing process provides even more strength due to additional fiberglass and elimination of air pockets

NO HARDWARE IN AIRSTREAM

All hardware connections are outside the cylinder which eliminate concern for fan interference

LOW PROFILE

Marley Reflex design allows 14' tall cylinders to perform equal to fan cylinders that are 18' tall

EASE OF ASSEMBLY

All segment connection hardware can be accessed from fan cylinder exterior due to butt flange design.

LARGE ACCESS DOORS

Marley Reflex access door is 6.75' tall x 6' wide to accommodate personnel and equipment entry and removal.

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THE COMPARISON

MARLEY® REFLEX™		MIDWEST FAN STACKS
1% more cooling capacity or 3% less power needed compared to flared cylinder designs of equal height*	PERFORMANCE	Flared cylinder design of same height is less efficient and needs more horsepower, this translates into increased energy costs (up to \$4,400 annually)*
Butt flange design is more rigid than lapped flange design	STRENGTH	Lapped flange connection is less rigid which requires additional stiffening bars
Smooth interior with no exposed hardware eliminates concerns of fan interference	FAN INTERFERENCE	Stiffening bars and bolt heads are located within cylinder interior, including the throat area. Impact with fan blade is a concern
14' tall Reflex shape has larger outlet area for its height allowing for a reduction in overall tower height while meeting performance of taller 18' height cylinders	LOW PROFILE	An 18' tall cylinder is needed to match the performance of the Marley Reflex 14' tall cylinder; taller height means more surface area for wind to catch, more weight, more hardware, harder to handle in field
Butt flange design allows bolt and nut access from exterior of cylinder only, and requires less hardware connections, thus reducing labor	EASE OF ASSEMBLY	Lapped flange requires a person on both the interior and exterior of the cylinder to properly tighten all the hardware and install the stiffening bars; 80% more fastener components required**
2.3 times larger access door area for easier equipment removal**	ACCESS DOORS	Smaller access door is more difficult to utilize effectively

REFERENCE:

*Based on 336" diameter x 14 ft. tall Midwest and Marley fan cylinders operating with 200 HP motor and 10-blade Hudson Tuf-Lite II fan. Marley Reflex cylinder drawing 192.10 HP while equivalent height Midwest fan stack draws 198.78 HP = 4.982 kW difference x \$0.10 per kW/hr x 8,760 annual operating hours = \$4,364.23 in energy savings.

**Comparison of Marley Reflex 336" diameter x 14 ft. tall cylinder and Midwest 336" diameter x 14 ft. tall stack (Item # 2814-1-200). Quantity 257 bolts for Marley cylinder vs. 405 bolts + 60 stiffening bars for Midwest stack. 465 pieces / 257 pieces = 80% more pieces with Midwest design. NOTE: Midwest also uses 15 segments vs. Marley 14 segments. 6'-9" door opening height x 6' width for Marley cylinder vs. 5'-8" x 3' width at throat for Midwest stack access door. 40.5 square feet / 16.98 square feet = 2.38 times larger access door with Marley design.