3000series
GEAREDUCER

engineering data
and specifications

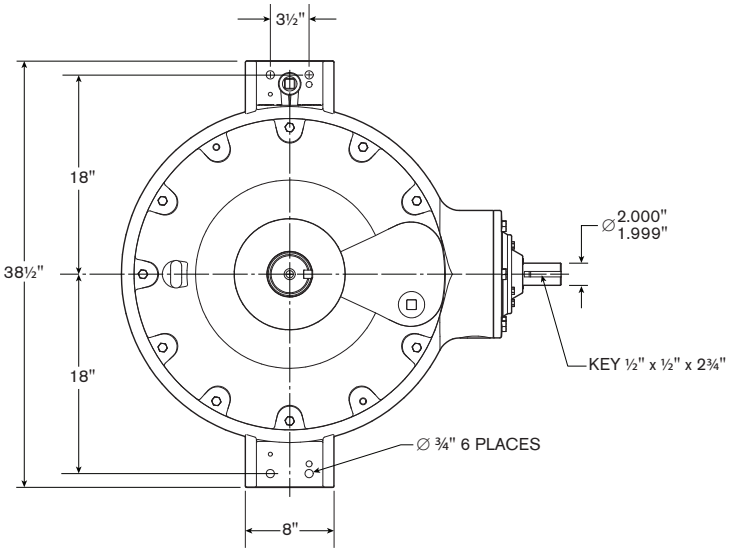
3000 Geareducer® Gear Drive

The Marley 3000 series Geareducer is designed and manufactured specifically for cooling towers in HVAC and industrial applications. In form and function, this gear drive goes beyond the AGMA (American Gear Manufacturers Association) requirements to maximize air movement through the cooling tower and to minimize maintenance.

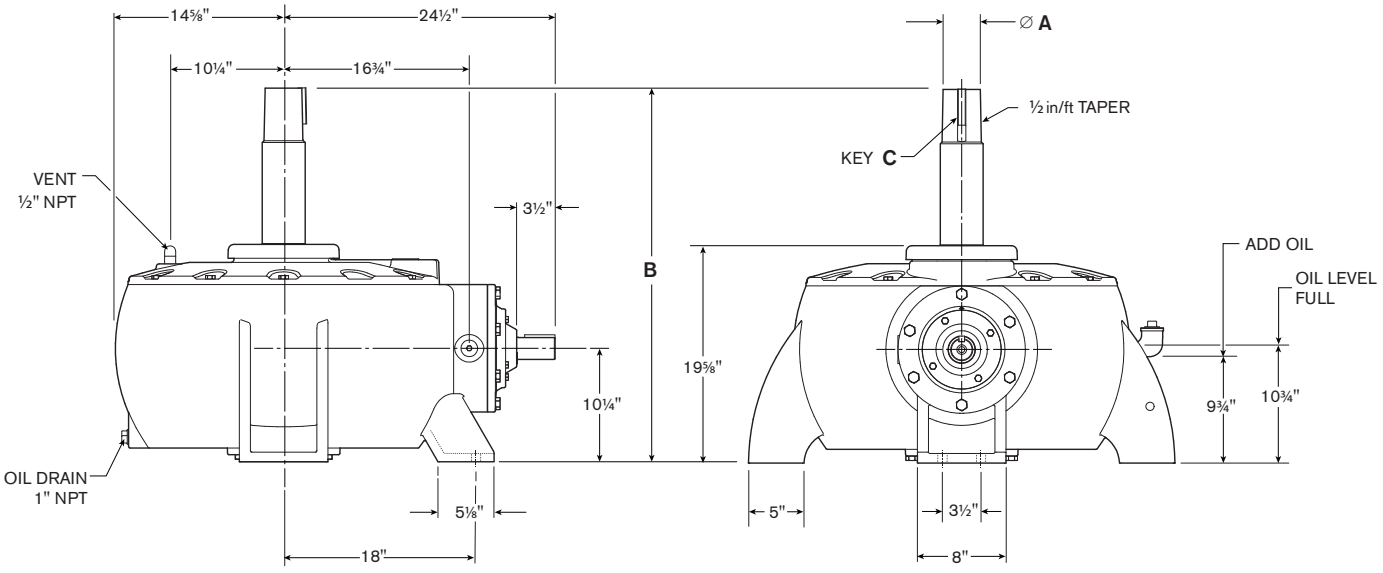


Oil Capacity: 16.5 USG **Weight:** 1250 lb

Note: Bolt-down hardware based on specific support structure by others.



Shaft Type	A	B	C
Standard	3.900" 3.898"	25 ¾"	1" x 1" x 4 ¼"
CC2 (Tall)	3.350" 3.348"	33 ¾"	¾" x ¾" x 3 ¼"
Extended	3.900" 3.898"	33 ¾"	1" x 1" x 4 ¼"



MARLEY®

Reduction	Output RPM		Input hp Limitations per AGMA 2.0 SF	
	1775 RPM	1475 RPM	1775 RPM	1475 RPM
5.06	351	292	150	125
5.44	326	271	150	125
6.14	289	240	150	125
6.85	259	215	150	125
7.91	224	186	150	125
8.80	202	168	131	110
9.60	185	154	113	94

Specifications

The gear reducer's primary function is to reduce the speed of the electric motor to optimize fan performance. The Geareducer also provides primary support to the fan, anchors it against lateral movement, withstands shock loads at start-up and speed changes and minimizes power transmission losses and noise generation.

Gear reducer assemblies shall be single-reduction right angle units utilizing spiral bevel gear sets. Gear reducers shall meet or exceed the requirements of CTI STD-111 and AGMA Std. 6013-A06, and service factor at applied horsepower shall not be less than 2.0. Gear reducers shall be designed to meet thermal heat rejection requirements and maintain safe operating temperatures at their rated capacity without the need for oil coolers or input shaft cooling fans. Heavy duty housings shall be epoxy-coated, ASTM Class 20, grey cast iron and provide sufficient strength and rigidity to maintain gear alignment and provide smooth, quiet operation under maximum operating loads. Bearings shall be tapered roller type. L_{10A}. Bearing life of all bearings must exceed 100,000 hours at the maximum rated speed and power.

Gears and bearings shall be splash-lubricated in a bath of oil which complies with the OEM's recommendations, and units shall be capable of operating in either forward or reverse with equal lubrication capability. Gear reduction units using external oil pumps shall not be permitted.

The gear materials shall be AISI 8620 steel, with case-hardened teeth that have been surface ground to the final profile or lapped in matched sets. Gear tooth finish shall be AGMA class 9 or better. The spiral bevel pinion gear shall be integral with the shaft. Keyed or splined attachment of pinions to their shafts is not allowed. The input shaft shall utilize a single lip type oil seal and the output shaft shall utilize a labyrinth closure to retain lubricant and exclude contaminants.

The assembly design shall utilize metallic shims to achieve and maintain ideal gear setting and bearing adjustment throughout the life of the unit. Assemblies shall be run-in with torque and fan shaft thrust and adjusted at the factory. The interior surfaces shall be coated with a rust-proofing oil prior to shipment.

SPX COOLING TECH, LLC
7401 WEST 129 STREET
OVERLAND PARK, KS 66213 USA
913 664 7400 | spxcooling@spx.com
spxcooling.com

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In the interest of technological progress, all products are subject to design and/or material change without notice.

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