

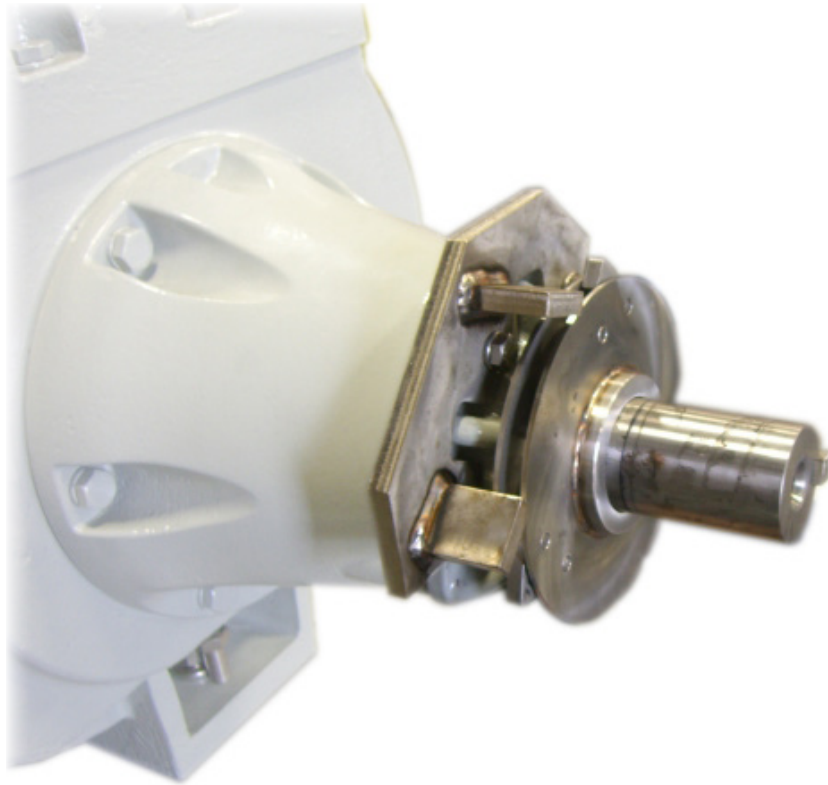


The Marley external Disc Anti-Reversing Device (ARD) backstop is a custom designed, welded stainless steel assembly that is bolted directly to a Marley Geareducer® with input shaft diameters from 1.125" up to 2.625". Specifically designed for all right-angle Geareducer models the Disc ARD prevents reverse rotation of the fan, Geareducer and motor and can be field installed.

This anti-reversing device prevents standby fans from reverse rotation when duty fans are operating. It also helps eliminate damaging and costly fan "reverse windmilling."

Under reverse rotation, the eccentric mass of the Disc ARD pawls extend away from the rotating disc and engages the stop bracket catch point, preventing the mechanical equipment from operating in reverse direction.

As with any type of backstop device for a cooling tower drive, the motor must never be operated in reverse. The installer must take precautions to ensure proper rotation direction of the motor prior to connecting the driveshaft or coupling.



Primary Elements:

Stop Bracket: Welded stainless steel bracket with two posts that bolts up to the stationary gearbox.

Rotor Assembly: The rotor assembly's primary construction consists of a hub with keyway, two frame plates and three pivoting pawls. The rotor is installed on the input shaft and positively engages a high-strength, steel key. It is secured in place by three set-screws arranged at 120° increments with one located over the key.

Functional Description:

The rotor assembly and stop bracket work together as a type of ratchet mechanism. When the motor is not energized, eccentric center of mass pawls pivot and extend outside the rotor frame plate perimeter. If rotating slowly in the unrestricted, forward direction, these pawls slide against the stop bracket posts and are pushed out of the way. Conversely, if rotating slowly in the reverse direction, a pawl will positively engage a post and prevent shaft rotation. When the motor

is energized, the high speed rotation causes a centrifugal force that acts to retract and hold the pawls within the rotor assembly thereby resulting in frictionless operation. The installer must take precautions to ensure proper rotation direction of the motor prior to connecting the driveshaft or coupling.

SPX COOLING TECHNOLOGIES, INC.

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

SP-ARD2 | ISSUED 09/2016

COPYRIGHT © 2016 SPX CORPORATION

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

