



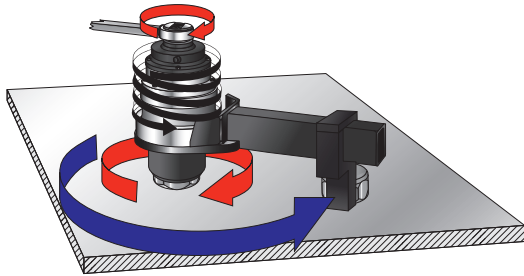
ANTI WIND-UP RATCHETS (AWUR)



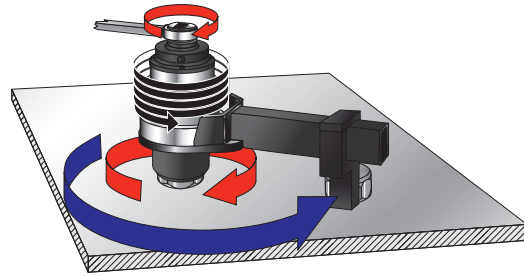
Norbar Anti Wind-Up Ratchets (AWUR)

Most multipliers with ratios of 15:1 and over are fitted with an Anti Wind-Up Ratchet. The multiplier can be thought of as a spring which must be fully wound before any tightening/untightening work can be applied to the bolt.

The AWUR ensures that the 'spring' stays wound and that any further torque input to the multiplier is applied directly to the bolt.



*Multiplier behaves like a very stiff 'spring'*

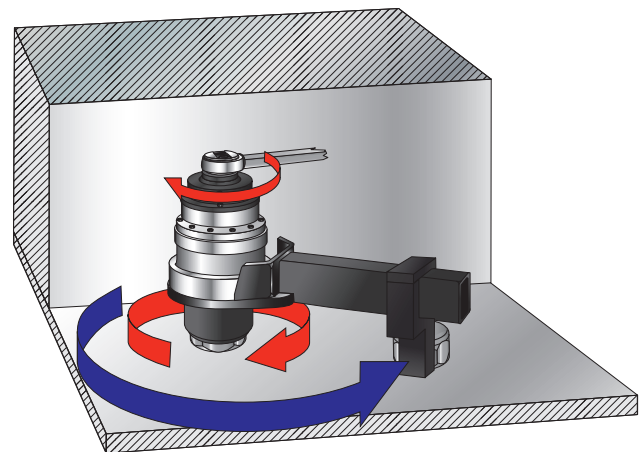


*Multiplier will achieve maximum torque only after the 'spring' has been taken up*



AWUR benefits include:

- 1. The torque input device cannot fly backwards against the direction of operation if it is suddenly released.
- 2. Without an Anti Wind-Up Ratchet, it will often be necessary to continue to make 360° sweeps with the torque input device otherwise the multiplier will 'unwind'. However, obstructions will often make this impossible (as demonstrated in this example).



*AWUR set to counter-clockwise operation*



*AWUR set to neutral*



*AWUR set to clockwise operation*