MedTorque receives patent for TRI-GEAR™ ratcheting technology
Innovative design demonstrates unique solution for orthopedic surgical applications

December 6th, 2016

Kenosha, WI – MedTorque, Inc. announced today that it has been awarded US patent #9,511,484 for its TRI-GEAR™ ratcheting technology. This unique mechanism is utilized in the ratchet products designed and manufactured by MedTorque for use in orthopedic and spinal surgeries.

The advantage of TRI-GEAR™ ratcheting technology lies in the axial alignment of its ratcheting gears. When compared to traditional pawl-type mechanisms found on competing ratchet products, the axial-alignment of the gear set on TRI-GEAR™ provides engagement on the entire face of the mating gears. This increased engagement reduces stress on individual teeth resulting in a more robust design.

The axial alignment also allows for optimization of size. “We are finding that customers who have size constraints on their tightening instruments – and have found traditional ratcheting screwdrivers to be too large for their applications – are really impressed with how small we are able make some of our ratchets because of the TRI-GEAR™ design,” stated Chad Ryshkus, Director of Marketing & Product Development. “TRI-GEAR™ ratcheting technology is not bound by the diameter restrictions like those of a pawl-type ratchet which requires its paws be located radially out from the gear.”

The TRI-GEAR™ ratchet mechanisms come in three size configurations:

- **Micro-Mini**: About the size of a fingertip, this ratchet is ideal for those applications where fine precision and control are required in a small package.
- **Ultra-Mini**: Small, yet robust, the ultra-mini size packs a punch when mated with one of MedTorque’s Petite Axial or Jeweler handles.
- **Standard**: The largest ratchet in the TRI-GEAR™ family, this mechanism fits any MedTorque handle from the Mini Axial up to the Large T-Handle.

The components in the TRI-GEAR™ ratchets have been standardized to be used across various styles of handles and quick connect couplings. This allows for ease of assembly which leads to extremely competitive lead times. MedTorque's TRI-GEAR™ ratchets are available in multiple handle styles and can be customized with color, logos or artwork.

About MedTorque, Inc.

MedTorque is a technology-based precision machining company. MedTorque designs, manufactures and markets customized, highly-engineered component parts, instruments and complex assemblies that require the highest levels of tolerance for the world's leading medical device OEM's.

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