Adjustable Housing
Mpact’s proprietary adjustable housing allows for easy field adjustment:

- 4-3/4" model: 0-4 degrees in 19 increments

The tool’s tensile strength matches or surpasses the rest of the motor, providing un-compromised integrity in the downhole motor. The adjustable housing features a wear pad approximately 120° around the adjusting ring right at the bend point. Regardless of the bend angle setting, the wear pad will always be opposite the high side of the bend. Mpact offers an integral, differentiated wear-pad design to reduce wear and extend tool life.

Universal Joints
Mpact’s universal joints have proven very reliable with an extremely long life. Eccentric motion of the rotor is connected to concentric rotation in the bearing assembly by a drive shaft fitted at each end. The design utilizes a sealed and pressure balanced universal joint to extend service life.

- Material is high strength alloy steel for extended life
- Tool designs include fatigue strength features for increased strength
- Specifically designed transfer bearings for high torque capacity
- Temperature rating – 400° F

Bearing Assembly
Mpact’s bearing assembly is oil lubricated, sealed, and pressure balanced. The method of pressure balancing assures zero pressure-drop across the seals, allowing the seals to act only as a barrier between the oil and the drilling fluid. The maximum recommended pressure drop across the bit is 1500 PSI (10,335 Kpa). The radial bearing is designed to accommodate a larger diameter drive shaft allowing it to withstand extreme radial and torsional loads. Proprietary, custom designed thrust bearings are used to increase load capacity. It is not necessary to balance bit weight and pump-open force due to the axial bearing capacity of the assembly. Mpact’s bearing assemblies utilize high-temperature seals and other premium components as standard features, to insure reliability and extended life.

- Proprietary seal design to extend bearing life
- High strength materials for quality assurance
- One piece mandrel, eliminates an additional threaded connection and removes two failure points
- Large diameter housing to increase fatigue strength
- Custom designed thrust bearings to increase load capacity
- Tapered, shouldered thread designs to reduce stress in connections
- Temperature rating – 400° F
- Internal “catch device” to prevent lost-in-hole occurrences
- Redundant radial bearings to support high bending loads
- Large thru hole to provide maximize flow to the bit
- Rig serviceable slick sleeve or screw-on stabilizer

Stabilization
Motors are available with threaded bearing housing to accept straight or helical blade stabilizers or eccentric pads. Stabilizers can be installed at the top of the motor for steerable motor assemblies. The lower stabilizer can be provided in various diameters to meet Customer’s needs.

Premium Power Sections
All Mpact Motors utilize premium elatomeric materials for increase power and reliability. These elastomers also provide improved mechanical properties when subjected to oil-based drilling fluids, and are specifically formulated to improve performance in higher temperatures drilling applications.

Rotor Catch
Mpact’s proprietary rotor catch design provides extension into the top sub, decreasing chances of Lost-in-Hole occurrences.