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## Swivel Kit Interchangeability

### Background

Weir SPM offers replacement swivel kits for all swivel assemblies. These kits allow for a quality rebuild of all Weir SPM swivel assemblies. In addition, the kits serve as OEM replacements for all FMC swivel assemblies. This is due to full interchangeability of the components. Below is a summary:

- Weir SPM has been offering OEM replacement kits since 1990.
- Each kit contains all necessary components to rebuild the Weir SPM swivel, and the equivalent FMC swivel.
- Interchangeability of parts has been verified by extensive measurements, and testing. This includes third party analysis, destructive testing, and field-testing.
- All components are designed for long life (see material specifications below).
- All components offer field performance equal or exceeding FMC products. DNV Type Approval and PED (CE) certification for all pressure bearing kit components.

### Documentation

#### Material Specifications

All Weir SPM swivel kit components have been produced to the most exacting standards. Below is a summary of the critical components:

#### O-Rings

These items serve as a seal for lubricants, and to divert fluid (from a leaking main seal) to the “weep” hole.

- Manufactured in compliance with ASTM D148.
- 90 durometer.
- Acrylonitrile-Butadiene material for excellent resistance to oils and greases.

#### Swivel Seal Rings

These items serve as pressure bearing seals between the male and female swivel interface.

- Designed to withstand the extreme challenges of well service industry.
- Manufactured to rigorous standards using high tensile strength material.
- Performance tested per ASTM D-2137 at -40°C.
- Heat aging per ASTM D-865 at 125°C.



- Compression set per ASTM D-395 with 25% compression at 100°C.
- Oil aging per ASTM D471 (No. 1 and No. 3 oil) at 150°C.

#### Swivel Balls

These items serve to resist axial separation loads (between male and female swivel interface), and to accommodate rotation of the connections.

- Designed for extreme ruggedness. Able to withstand the abrasive environment typical of the well service industry.
- Precision ground and polished from Grade 200 S2 Tool Steel to exacting tolerances.
- Hardness of 55 – 58 Rc.
- Yield strength of 290,000 psi.

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# Weir SPM: Product Bulletin

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## Ball Plugs

This item serves to contain the swivel balls within the ball race.

- Machined from impact resistant material.
- UV and chemical resistant.
- Allows for easy replacement of swivel balls.

## Summary

Weir SPM has offered quality OEM replacement swivel components since 1990. Our products have an excellent track record, and are well received by the industry. In addition, extensive testing has verified that all components are interchangeable and offer performance equal or greater than FMC. Contact Weir SPM Engineering for additional technical information regarding swivel components.

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