

Ruland adds single beam couplings for light-duty precision systems

Ruland has expanded its zero-backlash beam coupling line with the introduction of MI-series single beam couplings, complementing its existing one-, four-, and six-beam styles. Designed for light-duty applications with low torque requirements—such as encoders, tachometers, and small analytical devices—these new couplings provide engineers with greater flexibility in precision motion systems.

Ruland's single beam couplings feature a single helical cut that allows for greater angular and axial misalignment than comparable multiple-beam designs. This makes them particularly suitable for systems where precise alignment is difficult to maintain. Their compact geometry and low bearing loads help protect delicate system components, extending equipment life and improving overall system reliability.

The MI-series is available in both clamp and set screw styles,

The new lineup of Ruland beam couplings, including single beam

with inch, metric, and inch-to-metric bore combinations ranging from 3/32 inch to 3/4 inch and 3 mm to 20 mm. All couplings have pure metric outer diameters and lengths to align with international design standards. In addition, hardware testing beyond DIN 912 12.9 standards ensures each coupling achieves maximum performance.

With this addition, Ruland's beam coupling line now offers outer diameters up to 50 mm, giving designers more

freedom to select the ideal coupling configuration—single, four, or six beam—based on their specific performance, misalignment, and space requirements.

Ruland single beam couplings are manufactured from high-grade 7075 aluminium bar stock sourced from North American mills, within the company's ISO 9001:2015 certified advanced manufacturing facility in Marlborough, Massachusetts. All Ruland couplings are RoHS3, REACH, and Conflict Minerals compliant, underscoring the company's commitment to quality and responsible manufacturing.

For further information please visit: www.acorn-ind.co.uk/ruland

Custom power unit brings precision and reliability to F1 maintenance

Rotec Hydraulics has engineered a custom Hydraulic Power Unit (HPU) and Flushing Rig for a global F1 team, tackling the challenge of delivering safe, precise, and reliable pressure while ensuring optimal system longevity.

Race car hydraulic systems demand meticulous maintenance, including regular flushing to prevent contamination - the primary cause of system failure. Traditional, bulky on-site equipment often leads to logistical issues and unwanted downtime. Rotec's solution merges two critical functions into one compact, portable unit.

The custom 3 kW HPU is designed to deliver 200 Bar of pressure at 8 Liters per Minute (LPM) to power race car hydraulic components. More crucially, it features an integrated flushing rig and particle counter, enabling technicians to maintain pristine oil cleanliness.

A key differentiator is the integration of remote diagnostics via Parker IQAN technology. The HPU utilises Bluetooth connectivity to allow remote monitoring and control via a tablet or smartphone.

This provides instant, detailed data on sensor and output states, including pressure, temperature, flow, and contamination levels.

Jesse Cherry, Business Development Manager at Rotec Hydraulics commented: "This project showcases Rotec's ability to deliver bespoke, high-performance hydraulic solutions that directly address challenges. We understood the critical need for a

reliable, safe, and mobile solution. The integration of remote diagnostics streamlines operations and provides a great benefit to our client."

The dual functionality, combined with remote diagnostic capabilities, transforms maintenance from reactive repairs to proactive system health management. This compact, manoeuvrable rig minimises maintenance time, boosts operational efficiency, and significantly reduces the risk of critical hydraulic failures - a crucial competitive edge in the high-stakes world of Formula 1.

For further information please visit: www.rotect.net

