

Oldham couplings for food and beverage equipment

Marlborough, Massachusetts, September 2022. Oldham couplings are an ideal coupling for food and beverage equipment due to their misalignment accommodation, zero-backlash properties, and balanced design. Ruland manufactures hubs in aluminum for general purpose applications and 303 stainless steel for high corrosion and temperature applications, giving designers an off-the-shelf coupling suitable for various servo-driven applications such as connecting a motor to a ball screw, lead screw or gearbox.

Oldham couplings are comprised of two hubs that mate to a center disk. This three-piece design allows food and beverage equipment designers to customize oldham couplings with a clamp or set screw hub with inch, metric, keyed, and keyless bores. They have a balanced design for reduced vibration at speeds up to 6,000 rpm and operate with low bearing loads, protecting these sensitive components from premature failure. In addition, Ruland uses a proprietary hub machining process that leaves a smoother surface for interaction between the hub and disk, resulting in longer life and reduced downtime.

The oldham disk is available in acetal for zero-backlash and high torque capacity, PEEK for high temperature and corrosion resistance, and nylon for dampening and noise reduction. In the event of failure or wear, the disk is replaceable, restoring the original performance characteristics of the coupling. Oldham couplings also act as a mechanical fuse during torque overload situations, with the disk breaking cleanly and stopping power transmission.

The use of 303 stainless steel combined with a PEEK disk allows designers to use standard oldham couplings in a wider variety of servo-driven applications. Stainless steel hubs have hardware of like material to maintain consistent corrosion resistance. Ruland adds a proprietary surface treatment to hardware to prevent galling.

Ruland oldham couplings are available in bore sizes from 1/8 inch to 1-1/4 inch and 3 mm to 32 mm. Disks can be manufactured with a center hole to allow further shaft penetration or slots for retention hardware to attach the disk to a hub so it can stay in place during disassembly.

Oldham couplings are carefully manufactured in Ruland's factory in Marlborough, Massachusetts under strict controls using proprietary processes. 3D CAD files, full product specifications, and additional technical information are available on www.ruland.com.

Pictures:

Pic 1: Stainless steel oldham couplings are well suited for food and beverage equipment with high temperatures or caustic washdowns

Pic 2: Oldham couplings are ideal for applications with high parallel misalignment

About Ruland:

Ruland Manufacturing Co., Inc. is a privately owned family company founded in 1937. Ruland has carefully and responsibly manufactured high performing shaft collars, rigid couplings, and motion control couplings for the past 40 years. Ruland's product line was recently expanded to include a variety of machine components from select manufacturers that align with Ruland's performance and quality standards.

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TPR International would be grateful for a copy of the publication with this article.