



Black Gator® Rotational Alignment Sub



The Black Gator® Rotational Alignment Sub (RAS) is a quick and easy way to orientate your well completion assembly within the completion string. A typical example would be the orientation between upper and lower Y-Tools in a dual electrical submersible pump (ESP) completion.

The RAS is lockable to left- and right-hand rotation in 6-degree increments. 30 self-meshing clutch teeth orient the tubing hanger to the body. No power tongs are required to torque the mechanism into the locked position. The RAS uses bidirectional V-stack seals for redundancy, providing a leak-proof connection between the production tubing and production casing. Where height adjustment is also required, the Black Gator® Tubing Adjustable Union (TAU) should be used.

FEATURES

- Available in 3-1/2" and 4-1/2" tubing sizes
- Compact design
- Robust clutch design
- Quick orientation in 6-degree increments
- Locked to right- and left-hand rotation

SPECIFICATIONS

- Low alloy or 13Cr metallurgy
- Viton®, AFLAS® or HNBR elastomers or non-elastomeric stacks available for high-temperature applications
- 6,500 psi MWP limited by elastomers
- Matched tubing tensile and compression ratings

Part Number	Tubing Connections	OD (in.)	ID (in.)
RU13-0050	4-1/2" 12.6# VAMTOP	5.860	3.913
RU13-0100	3-1/2" 9.2# VAMTOP	5.000	2.959