

Titan Hydro-Lock Sleeve

Assembly & Operation Safety Instructions

Titan sleeves are some of the finest available in the industry and built to last for many years of continuous use. Our hydro-sleeves are designed to precisely center cutting straight bore tools or saw blades on woodworking machine spindle. They also can eliminate bore clearance and excessive radial run-out in straight bore cutting tools.

Titan hydro-sleeves will improve tool cutting accuracy, reduce tool vibrations, improve wood surface finishes, and extend tool life. These hydro-sleeves are made from heat-treat hardened high strength alloy steels that are precisely honed and ground to tight tolerances for excellent performance. Titan sleeves are designed and tested to exceed normal operational use and include Swiss grease pressure fittings rated to 1,000 bar (14,000psi).



Assembly & User Instruction Guide:

- 1) Install saws, spacers, cutter-heads etc. onto the shank of the hydro-sleeve so that the sleeve capacity is full and so the retaining nut tightens against the tooling securely. Do not tighten the three nut set screws until step #2 below (it can prevent the tool from centering correctly on the sleeve).
- 2) Place the hydro-sleeve on a grinding arbor and pressurize the sleeve to about 250 to 300 bar to center the tooling on the hydro-sleeve shank. Be sure the pressure release valve set screw is tight. Now tighten the three setscrews on the nut into the tooling to ensure the tooling is secure. For thin kerf saws we recommend you use drive bolts (3/8"NC) to secure the saws and spacers from spinning on the hydro-sleeve shank if a jamb up should occur. To remove the sleeve release the pressure by loosening the pressure release valve set screw – wipe away excessive grease.
- 3) Install the hydro-sleeve on the machine spindle; be sure the spindle is clean and free of grease. If the hydro-sleeve won't fit onto the spindle, be sure you loosen the pressure release valve set screw to remove any pressure contained in the sleeve from warming. The sleeve can be mounted in any position so long as it is captured by a safety lock collar or two lock rings if you mount it away from the base of the spindle. Pressurize the hydro-sleeve using a high pressure grease pump to the 350 to 400 bar, or the pressure indicated on the sleeve. Be sure to re-check the pressure at least once per day.



We recommend you use grease that is top rated (NLGI Grade 2 or 3) for high temperature (over 350° F) and high pressure. Jet Lube EP lithium complex grease (0° to 550°F) is offered in 14 oz (400g) plastic tubes to fit the Abnox Wanner high pressure grease pump – order using part # M-06-F.

We recommend the hydro-sleeve is pressurized on the grinding arbor then re-sharpening the tool to receive the maximum benefit of the hydro-sleeve and to improve tools cutting concentricity.



Call for Safety Lock collars

Safety Instructions:

- 1) Maximum RPM is 9000 rpm for hydro-lock sleeves.
- 2) Be sure to check the pressure in the sleeve at regular intervals, once a day in the morning when the temperature is cool to ensure pressure is maintained.
- 3) Always use a back up safety lock collar to lock and drive the hydro-sleeve in the unlikely event of a pressure loose.
- 4) Be sure the spindle diameter is not worn undersize. Spindle diameters must be maintained to with no more than .0015” wear to ensure proper hydro-sleeve grip on the spindle. Avoid mounting the bore of the sleeve over keyways and threads which can deform the bore of the sleeve.
- 5) Never pressurize any hydro-sleeve without first placing it on a full size spindle or grinding arbor.