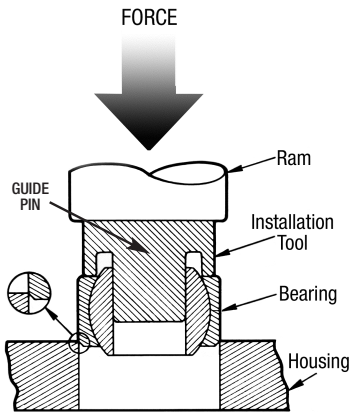


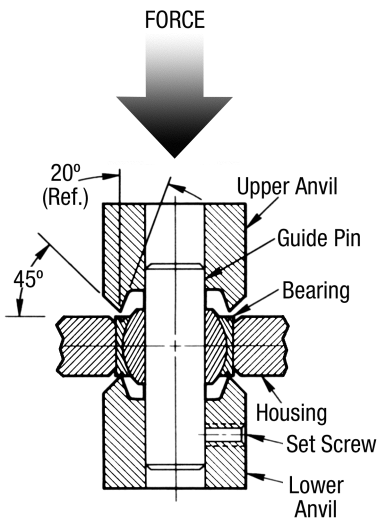
INSTALLATION OF SPHERICAL BEARINGS



Proper press-fitting of spherical bearings into a housing fixture will result not only in smooth bearing performance, but also in better wear characteristics leading to longer life. QA1 Engineering recommends strict adherence to the following installation procedures in order to assure optimal spherical bearing performance and wear.

The use of a hydraulic press to apply constant pressure is recommended. Any other shock-inducing device such as a hammer will result in damage and/or ultimate misfit. An installation tool such as that shown on the left is ideal. Here the guide pin aligns the ball's bore parallel to the race O.D., while all force is applied to the outer race surface only. A lead chamfer (inset) on the bearing and/or housing fixture is essential.

STAKING METHOD FOR V-GROOVED SPHERICAL BEARINGS



Customers may require a bearing with a specially formed "V"-shaped groove on the face of the outer race, allowing for staking of the bearing into a fixed outer housing. This is accomplished by forcing the metal on the outside of the groove onto the fixture's face or into its chamfer. The use of a hydraulic press for this operation is recommended, as is following the instructions for the initial installation of the bearing into the housing as described above.

QA1 Engineering recommends an upper and lower anvil method for installation. Anvils should be aligned as shown, with guide pin in position. This pin should ideally be secured in the lower anvil by means of a set screw. A test assembly should be undertaken to assure that required axial (thrust) load requirements of the final product are maintained. Avoid excessive pressure which can result in distortion leading to premature failure or malfunction. When the test requirements are met, the assembly should be rotated at 90° maximum intervals, with pressure re-applied, to assure uniformity of the metal swaging process.

NOTE: QA1 Spherical Bearings with staking groove are denoted with the letter "G" at the end of the part number as cataloged. *Example: WPB4TG*