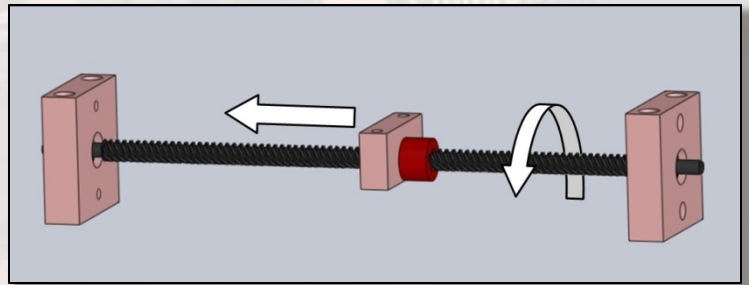
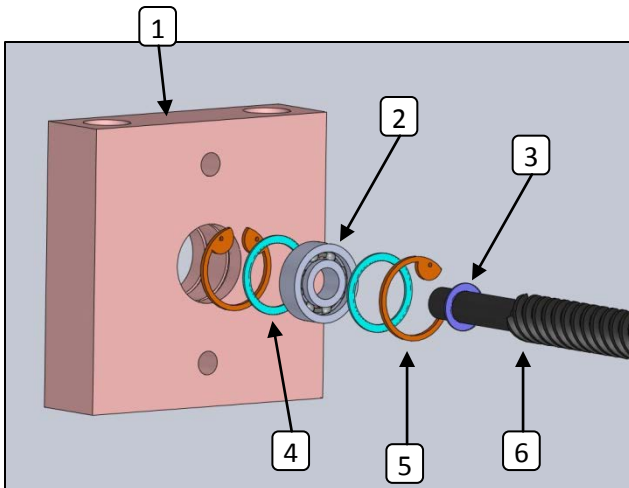


# Training: Issue 9, Lead Screw Assemblies

PIC Design offers all the components needed to construct simple, universal lead screw systems. The following examples explain the components and configurations most commonly used. Once you have a design chosen, PIC can machine the lead screw journals to match standard PIC bearings, housings and associated hardware.



## Simple End Support - One bearing at each end

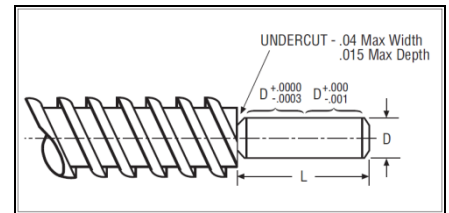


Only one end shown, above used at both ends

This type of simple support directs the thrust load from the lead screw on to snap rings installed in the bearing housing.

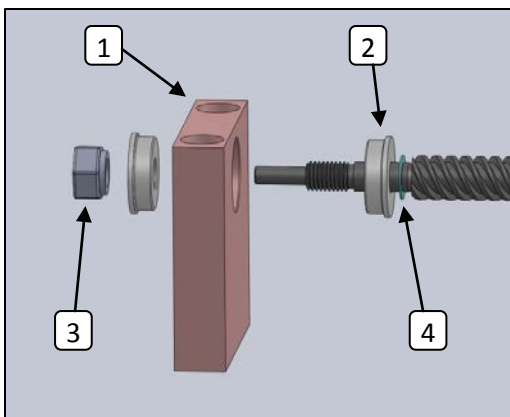
- |                               |                            |
|-------------------------------|----------------------------|
| 1. Housing Block (S10-10)     | 4. Bearing Spacer (B3-15)  |
| 2. Bearing (E1-9)             | 5. Retaining Ring (Z1-3)   |
| 3. Bearing Spacer (B8 series) | 6. Lead Screw (ARS4X-3708) |

PIC's catalog contains guidelines for designing your lead screw journals. Once your design is complete, submit your sketch to PIC for quote.



## Fixed End Support - Two bearings at one end

This type of support allows for pre-loading of the bearings on one end. Thrust load from the lead screw is transmitted to the bearing support through the bearing flanges. This type of configuration is used on PIC's LS9 and LS10 linear stages.



- |                           |                                 |
|---------------------------|---------------------------------|
| 1. Housing Block (S12-8)  | 3. Pre-load Nut (user supplied) |
| 2. Flanged Bearing (E2-9) | 4. Bearing Spacer (B8 series)   |

A fixed support on one end allows for several types of support on the other end (see right). PIC's catalog shows lead screw design limits based on screw dimensions and end support style.

