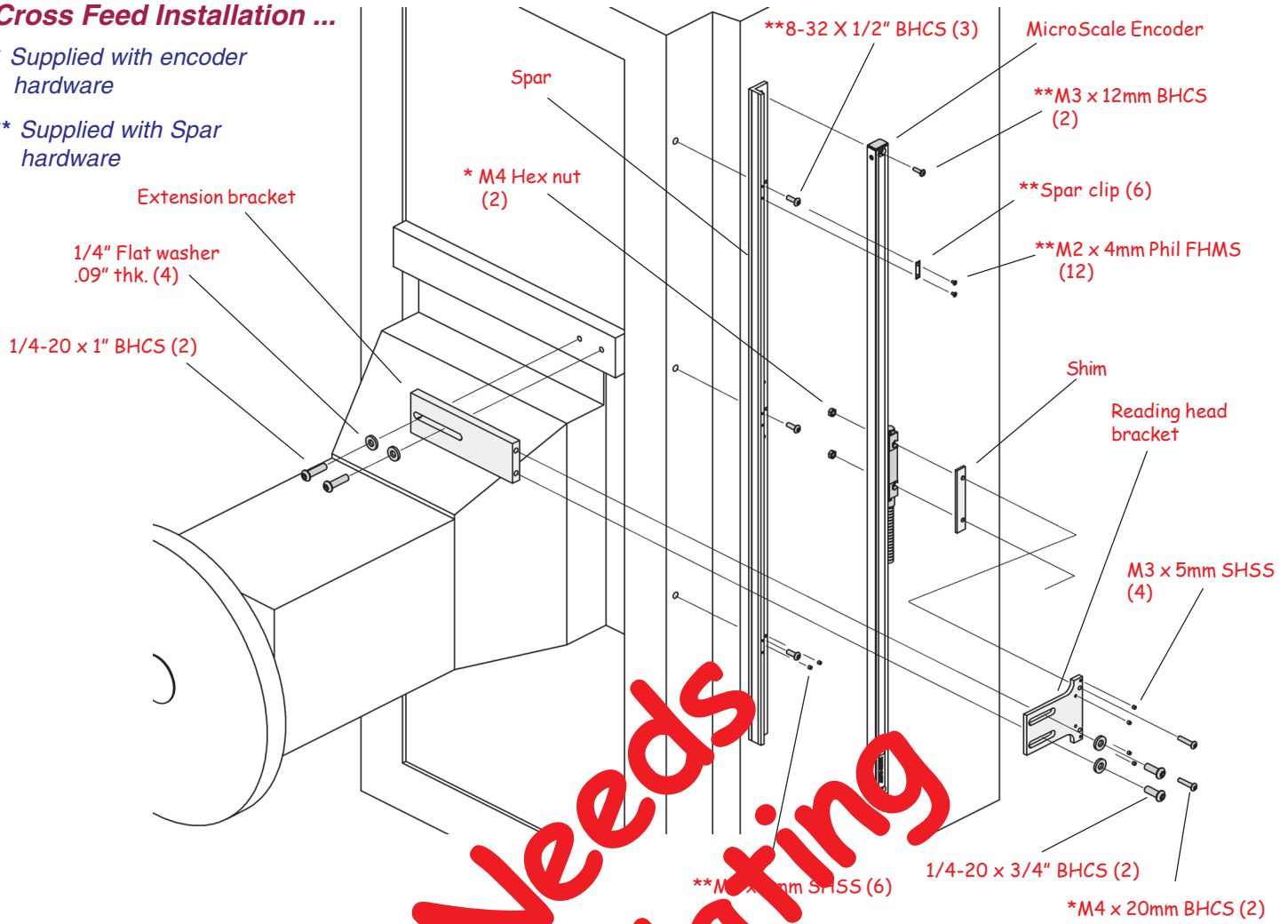


## Cross Feed Installation ...

\* Supplied with encoder hardware

\*\* Supplied with Spar hardware



These are instructions for installing the MicroScale encoder using the bottom mount reading head bracket.

### Before proceeding:

- Please read the instructions completely.
- Insure that the correct length encoder is being used for the total axis travel.
- Keep the reading head centered during the installation.
- Clean all mounting surfaces.
- Save the shipping brackets with the Encoder Reference Manual after the installation is completed.

### First Steps ...

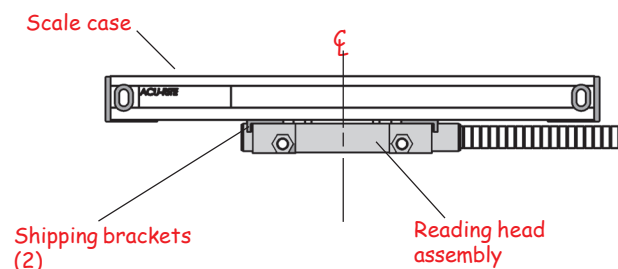
#### Machine

- ✓ Move the axis to its center of travel.
- ✓ Mark the axis so that it can be re-centered easily.

Unpack encoder in a safe, convenient location.

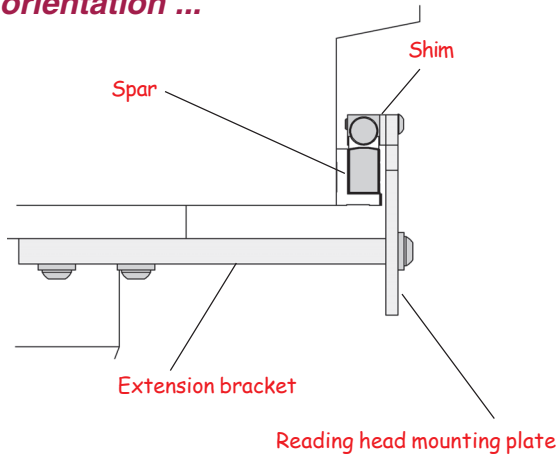
- ✓ Do not remove the reading head shipping brackets until instructed.

### Center reading head ...



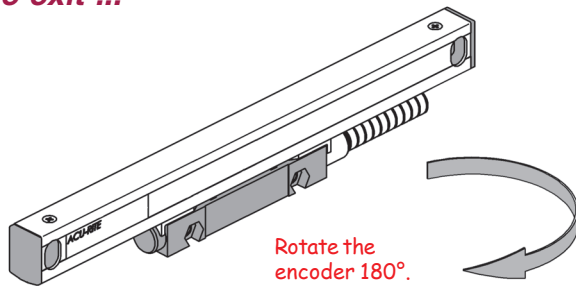
- Center the reading head on the scale case by sliding the head and shipping brackets together along the scale case.
- Insure shipping brackets stay fully engaged.

## Encoder orientation ...



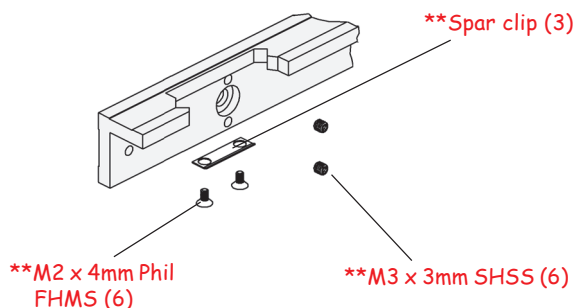
- These instructions will guide you through installing the encoder as shown, viewed from the top of the column.

## Cable exit ...



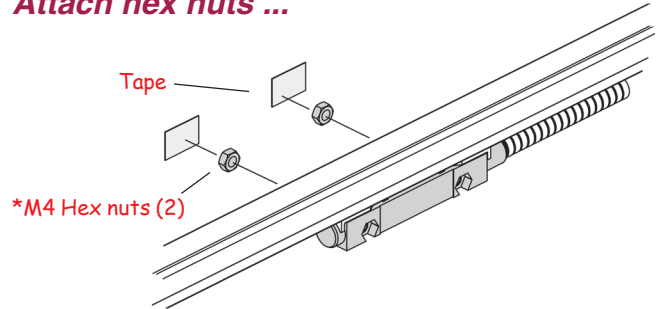
- Determine the cable exit direction before installing the encoder.
- To change the cable exit direction, rotate the encoder 180°. Encoder can be mounted from either side.

## Spar clips - Lower ...



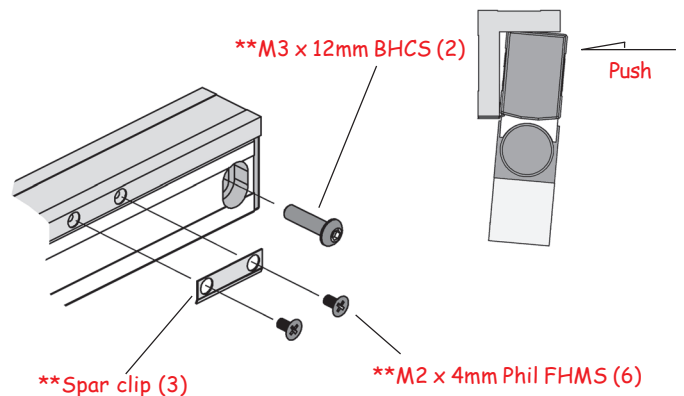
- Install two \*\*M3 x 3mm SHSS at each mounting hole location, and set flush with the back surface of the spar.
- Attach the spar clips to the lower leg of the spar only.

## Attach hex nuts ...



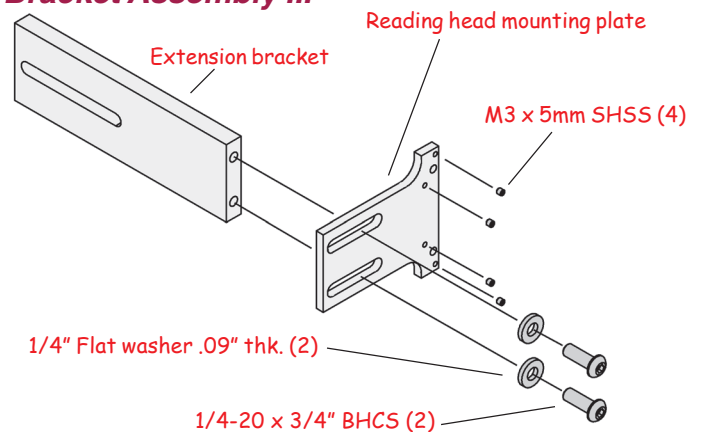
- Insert the two hex nuts into the retaining sockets in the back side of the reading head.
- Use masking tape to hold the hex nuts in place.

## Encoder / Spar Assy ...

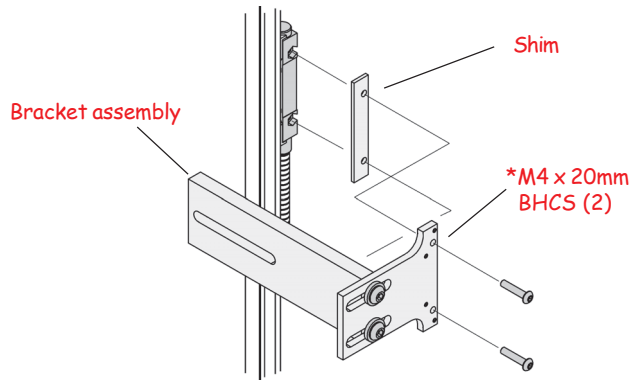


- Place the lower back edge of the scale case onto the bottom spar clips. Push on the front upper edge of the encoder to seat the scale case in the spar.
- Attach the front center spar clip and secure in place.
- Attach one end of the scale case to the spar with the \*\*M3 x 12mm BHCS.

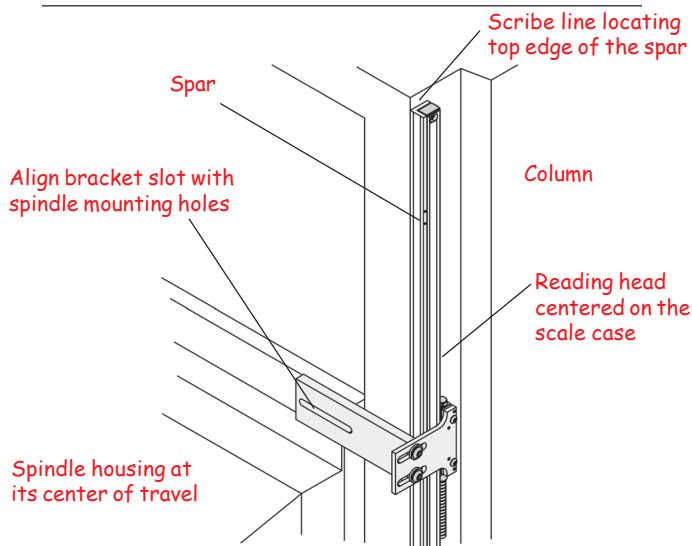
## Bracket Assembly ...



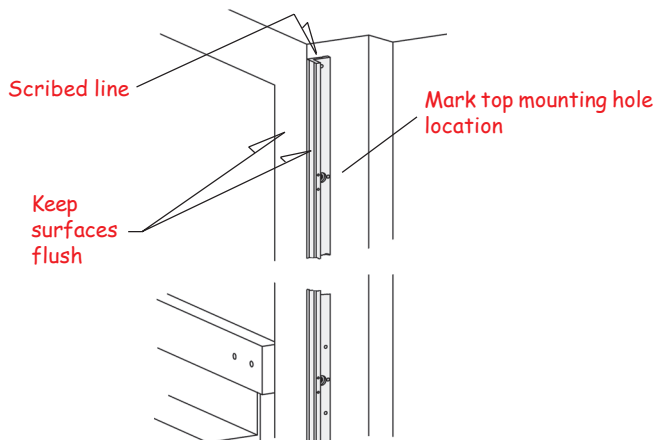
- Insert the four leveling screws into the reading head plate, and set flush to the back side.
- Loosely assemble the brackets together.



- Temporarily attach the bracket assembly to the reading head with the shim.

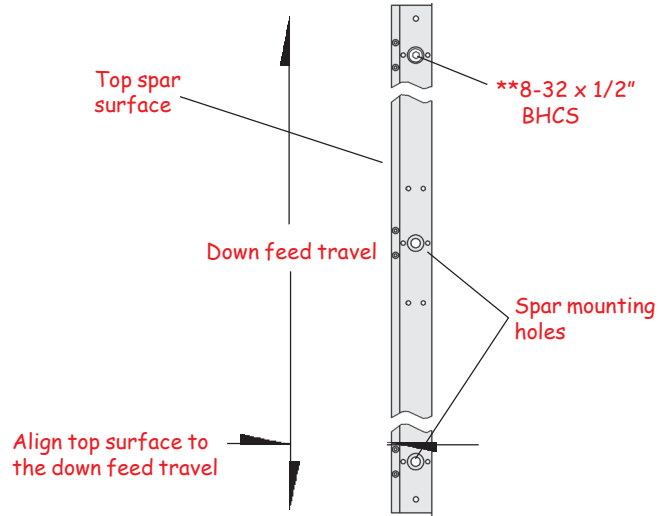


- With the spindle housing at its center of travel, position the spar on the column, and the bracket assembly to the housing.
- Insure the reading head is centered on the scale case, and scribe a mark locating the top of the spar on the column. Remove the assembly from the machine.

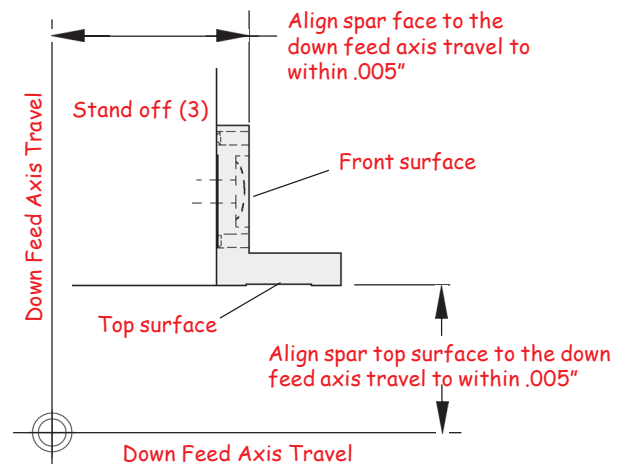


- Remove the bracket assembly from the reading head, and the encoder from the spar.

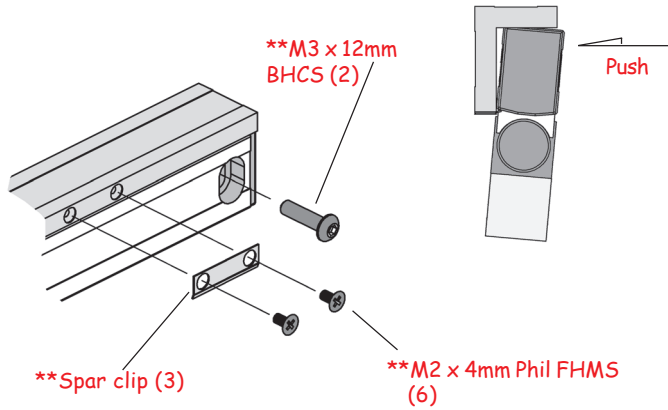
- Position the spar to the scribed line and flush with the column surface. Mark the top end mounting hole location to the column.
- Drill and tap location for a 8-32 x 1/2" deep.



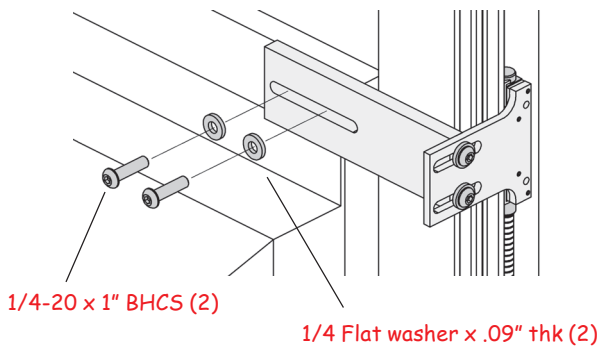
- Temporarily fasten the spar to the column.
- Align the top surface of the spar to within .005" TIR of the spindle down feed travel.
- Transfer punch the remaining mounting holes and remove the spar.
- Drill and tap hole locations for an 8-32 x 1/2" deep.



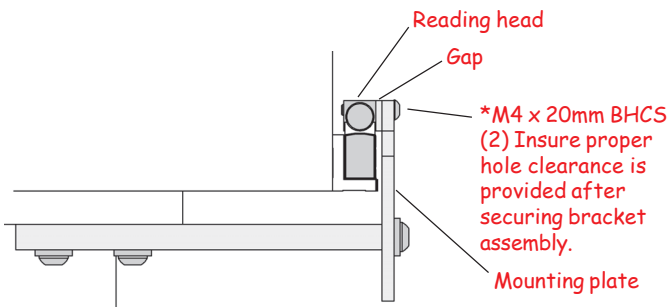
- Attach the spar to the column.
- Align the front surface of the spar to the down feed travel to within .005" TIR. Use the M3 spar set screws to aid with this alignment as required.
- Align the top surface of the spar to within .005" TIR to the spindle travel. Secure spar in place maintaining both alignments.



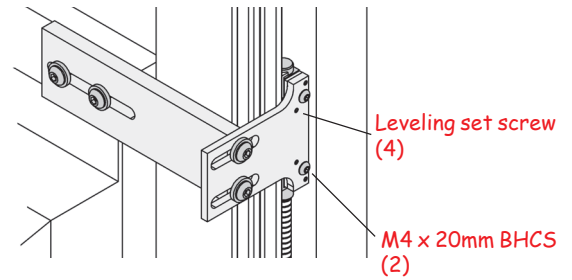
- Place the lower back edge of the scale case onto the bottom spar clips. Push on the front upper edge of the encoder to seat the scale case in the spar.
- Attach the front spar clips and secure in place.
- Attach one or both ends of the scale case to the spar.



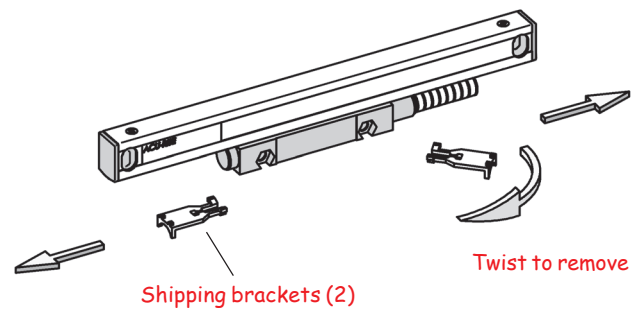
- Move the down feed to its center of travel.
- Attach the bracket assembly to the spindle housing.



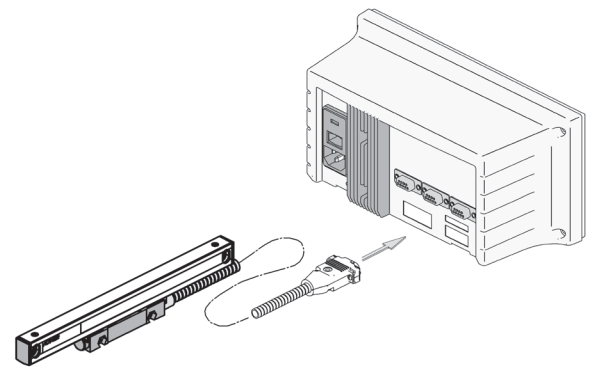
- Adjust the mounting plate clearance so that a gap of .010" exist.
- Align the bracket mounting holes to the reading head and insert the two \*M4 x 20mm BHCS. **Do Not Tighten.**
- Secure the bracket assembly in place.



- Set each leveling set screw by placing a .0015" -.003" feeler gage between the set screw and the shim.
- Adjust each set screw until a slight drag is felt on the feeler gage.
- **Evenly tighten** the two M4 BHCS.



- Slide the shipping brackets away from the reading head and twist to remove from the scale case. Save brackets with the reference manual.
- Move the axis through its full travel. Confirm that the assembly does not interfere with the machine movement.



- Route the cables providing sufficient slack loops for machine movement to the readout.
- Secure cable by fastening with clips or ties.
- Attach the linear encoder connectors to the readout.
- Complete the installation by following the steps in “Checking Your Installation” section in the encoder “Reference Manual”.