

DUNHAM BAR PULL SYSTEM
OPERATING INSTRUCTIONS
MACHINING INSTRUCTIONS (REF DWG MB636A)
DUNHAM BAR PULL GRIPPERS

OPERATING INSTRUCTIONS:

- 1 - Mount the Dunham Bar Pull Shank in the Boring Tool Holder on the Turret or Gang Tool platform. Mount the appropriate Dunham Bar Pull Adapter and appropriate Dunham Bar Pull Gripper onto the Dunham Bar Pull Shank.
- 2 - Insert Bar Stock through back of machine Spindle and/or Cylinder/Drawtube, and clamp the Bar Stock with Collet or Jaw Chuck.
- 3 - Face off minimum 1/4" of Bar Stock (using 'part off command' in CNC program) to qualify position and squareness of the bar stock.
- 4 - Index Turret or Gang Tool platform so Dunham Bar Pull Gripper is on Spindle centerline. Traverse Turret or Gang Tool platform toward Spindle for programmed distance, sliding Dunham Gripper over Bar Stock.
- 5 - Release clamping pressure (Collet or Jaw Chuck) from Bar Stock.
- 6 - Retract Turret or Gang Tool platform programmed distance so Bar Stock is positioned.
- 7 - Re-Clamp Bar Stock.
- 8 - Retract Turret or Gang Tool platform enough to clear Dunham Gripper from Bar Stock.
- 9 - Begin programmed machining cycle.
- 10 - Repeat Steps 4-9 until all of Bar Stock is used.

MACHINING DUNHAM BAR PULL GRIPPERS:

Dunham Bar Pull Grippers can be machined to pull a bar up to 1/16" larger than its original size.
An understanding of the gripper is important to machine properly.

The Dunham Bar Pull Gripper gripping diameter is at a 3.2° (3°-12') with the centerline of the part. Therefore, the gripper in its expanded position (over bar) has the complete gripping diameter making contact. This is what generates the holding power.

Machining instructions

- 1 - Hold part in chuck of engine lathe. Chuck only 3/8" of gripper body.
- 2 - Gripper body must not flex during machining operation. This can be prevented by securing a hose clamp (automotive screw type) around gripper fingers. Do not compress fingers, just secure.
- 3 - Set machine compound rest to cut at a 3.2° or 3°-12' with centerline of part.
- 4 - Cut bore .015" smaller than bar to be gripped. Do not enlarge gripping diameter more than .047".
Example: a 1" diameter gripper body will be opened up to grasp a 1-1/16" diameter bar.
Measured diameter = bar to be gripped - .015"
1.047" = 1.062" - .015"
Many small cuts are better than several large cuts.
- 5 - Turn a radius on the leading edge on gripper finger. Radius size is not critical but it must be sufficient to help lead gripper over bar.

MANUALS/BAR PULL OPERATING & MACHINING INSTRUCTIONS