

EZ-PULLER



EP-12044 Setup Instructions

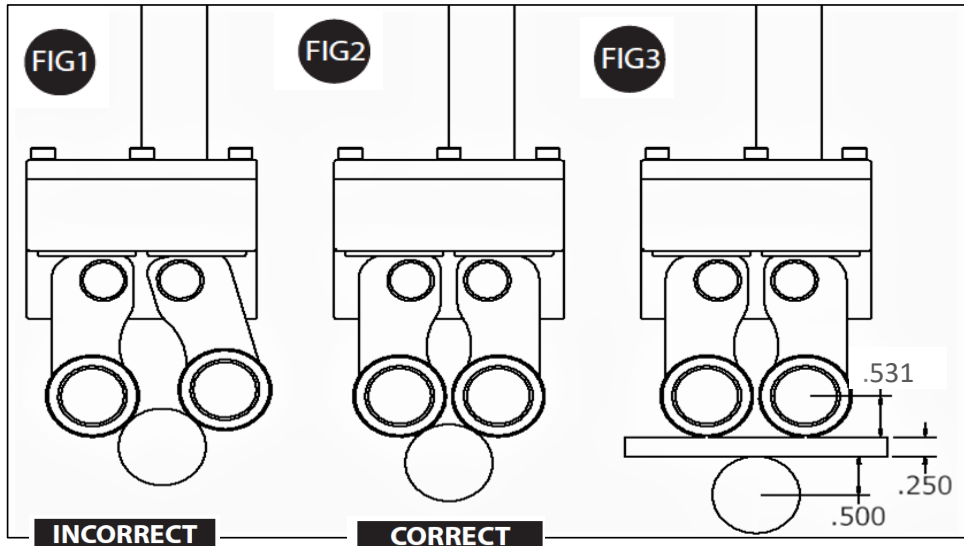


TABLE-1

Stock DIA (in)	DIA X-offset (in)	Stock DIA (mm)	DIA X-offset (mm)
0.093	0.004	2.362	0.102
0.125	0.006	3.175	0.152
0.250	0.026	6.350	0.660
0.375	0.052	9.525	1.321
0.500	0.084	12.700	2.134
0.625	0.122	15.875	3.099
0.750	0.168	19.050	4.267
0.875	0.224	22.225	5.690
1.000	0.286	25.400	7.264
1.125	0.358	28.575	9.093
1.250	0.440	31.750	11.176
1.375	0.532	34.925	13.513
1.500	0.638	38.100	16.205
1.625	0.760	41.275	19.304
1.750	0.900	44.450	22.860

Setup Instructions

- Center the tool in the tool holder on the turret, see figures 1 & 2.
The EZ-Puller needs to be within .004" of centerline.
- Make sure the bar is supported inside the spindle with the properly sized spindle liner.
- See figure 3 for an example of setting tool length offset. In figure 3 we are using a stock diameter of 1.000" and a .250" piece of flat stock for locating. Hand jog the X-axis until the flat stock slides between the bar stock and the grippers with minimal friction. Add the radius of the stock, the thickness of the flat stock and radius of the grippers (.530"); then multiply that number by 2. This is the distance from the centerline of the grippers to the centerline of the spindle. Once the tool offset is entered, it will not need to be reset as long as the tool is not relocated.
- Refer to table 1 for programming the destination in the X-axis for various bar sizes. Also see the example program on the back of this sheet.
- ALWAYS prove out your program in front of the material before running your EZ-Puller.
- NEVER exceed 300 IPM when engaging or pulling stock.
- NEVER run the spindle of your machine while setting up your EZ-Puller or when it is engaged with the material.
- NEVER leave the tool engaged on the material for extended periods of time, as it will cause damage to the urethane springs.
- NEVER exceed the capacity of the tool.

PROGRAMMING INSTRUCTIONS

1. When writing the master program, this is the program that calls up the main program, make sure that your L count calculation is correct. An incorrect L count can lead to bar ends being left in the grippers. If the bar end is not removed from the grippers, you will experience a crash. It is recommended that you start off by leaving one extra piece in your L count until you are comfortable with the bar length and L count.
2. Bars should slide freely in the collet or chuck. When using a chuck, you will have the best results if the chuck opens just enough for the bar to slide freely through the jaws.
3. Your EZ-Puller can leave marks on the outside diameter of the bar. The depth of the marks depend on the material hardness and number of teeth engaged with the material. The more teeth that are engaged, the smaller the marks will be. If the O.D. of the bar is a stock finish that will be unacceptable with large gripper marks it is recommended to use a softer spring and slower engagement feed rate of 50 to 100 IPM. Accudyne Products sells four springs in 95A durometer standard, 80A medium, 70A light and 60A very light. Another option to try that has been successful is z engagement of the material, using only three teeth or .140", then chamfering, minimizing or facing off the marked region after the pull.

BAR PULLER SAMPLE PROGRAM

THIS PROGRAM EXAMPLE IS FOR REFERENCE ONLY AND MAY REQUIRE MODIFICATION TO SUIT YOUR MACHINE SPECIFICATIONS AND WORK APPLICATION. THIS PROGRAM IS MADE FOR A BAR DIAMETER OF 1.75", A 0.125" PART OFF TOOL, AND A WORK PIECE LENGTH OF 1.00".

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%  
O01001  
(TOOL - 1 OFFSET - 1)  
G20 M05          ← G20-MODAL INCH SYSTEM, M05-SPINDLE STOP  
G00 T 0101 M09   ← G00-RAPID, T0101-INDEX TOOL AND OFFSET, M09-COOLANT OFF  
  
G54 X6. Z6.      ← G54-WORK SHIFT, X & Z CLEARANCE PLANE  
G98 G17 Z-1.375 F300.  G98-FEED I.P.M. Z=LENGTH OF PART+WIDTH OF  
PART OFF +.25 LENGTH OF GRIP  
  
X-.900          ← GRIP STOCK, REFER TO TABLE 1 FOR X DIMENSION  
M11             ← M11-CHUCK OPEN  
G4 P200         ← G4-DWELL .2 SECONDS  
W1.1625        ← INCREMENTAL Z MOVE=LENGTH OF PART+PART OFF  
TOOL+MATERIAL TO FACE-GRIPPER ENGAGEMENT  
  
M10            ← M10-CHUCK CLOSE  
G4 P200         ← G4-DWELL .2 SECONDS  
G00 G99 X6.     ← G00-RAPID TOOL OFF BAR STOCK, G99-RETURN  
FEED TO I.P.R.  
  
G0 Z1.          ← G0-MOVE TO SAFE INDEX POSITION  
G28 U0.W0.     ← CANCEL TOOL OFFSET, MACHINE HOME  
M99            ← M99-RETURN TO MAIN PROGRAM  
%
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