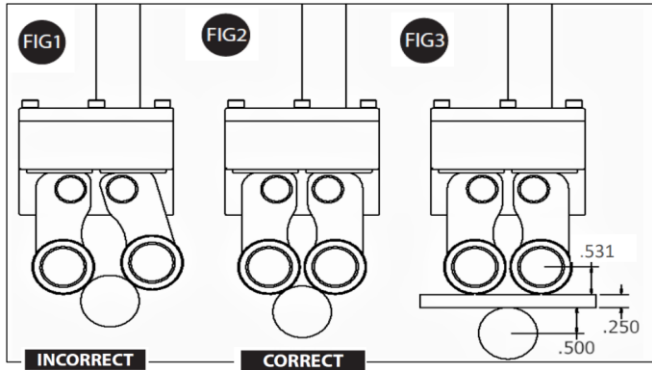


# EZ-PULLER

ACCUDYNE

## EP-12045 Setup Instructions



### Setup Instructions

1. Center the tool in the tool holder on the turret, see figures 1 & 2. The EZ-Puller needs to be within .004" of centerline.
2. Make sure the bar stock is supported inside the spindle with the properly sized spindle liner.
3. See figure 3 for an example of setting tool length offset. In figure 3 we are using a bar 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 (.531"); 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.
4. 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 locating.
5. ALWAYS prove out your program in front of the material before running your EZ-Puller.
6. NEVER run the spindle of your machine while setting up your EZ-Puller or when it is engaged with the material.
7. NEVER leave the tool engaged on the material for extended periods of time, as it will cause damage to the urethane springs.
8. 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 less 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 depends 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 engagement feed rate of 100 IPM. Accudyne Products sells three springs in 95A durometer standard, 80A medium, and 70A 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.

Stock DIA (in)	DIA X-offset (in)	Stock DIA (mm)	DIA X-offset (mm)
0.093	0.002	2.5	0.08
0.125	0.006	3	0.13
0.250	0.021	6.5	0.568
0.375	0.043	10	1.172
0.500	0.070	12	1.592
0.625	0.102	16	2.606
0.750	0.140	20	3.852
0.875	0.184	22	4.568
1.000	0.234	25	5.76
1.125	0.290	28	7.104
1.250	0.354	32	9.146
1.375	0.426	35	10.88
1.500	0.506	38	12.802
1.625	0.596	42	15.692
1.750	0.696	45	18.134
1.875	0.808	48	20.844
2.000	0.932	50	22.822
2.047	0.982	52	24.954

## 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 2.047", 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-.982 ← 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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