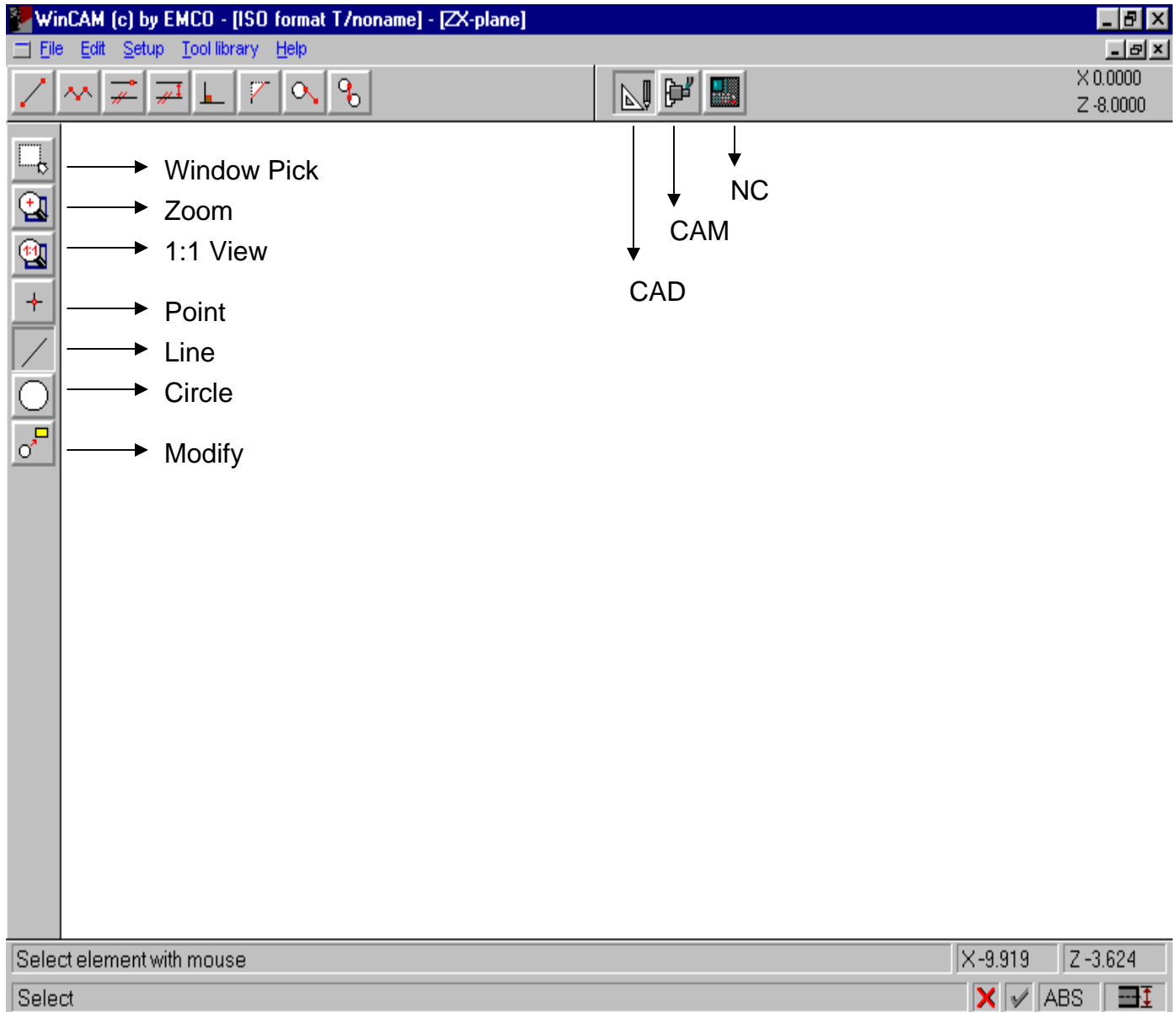
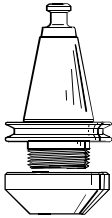
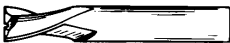


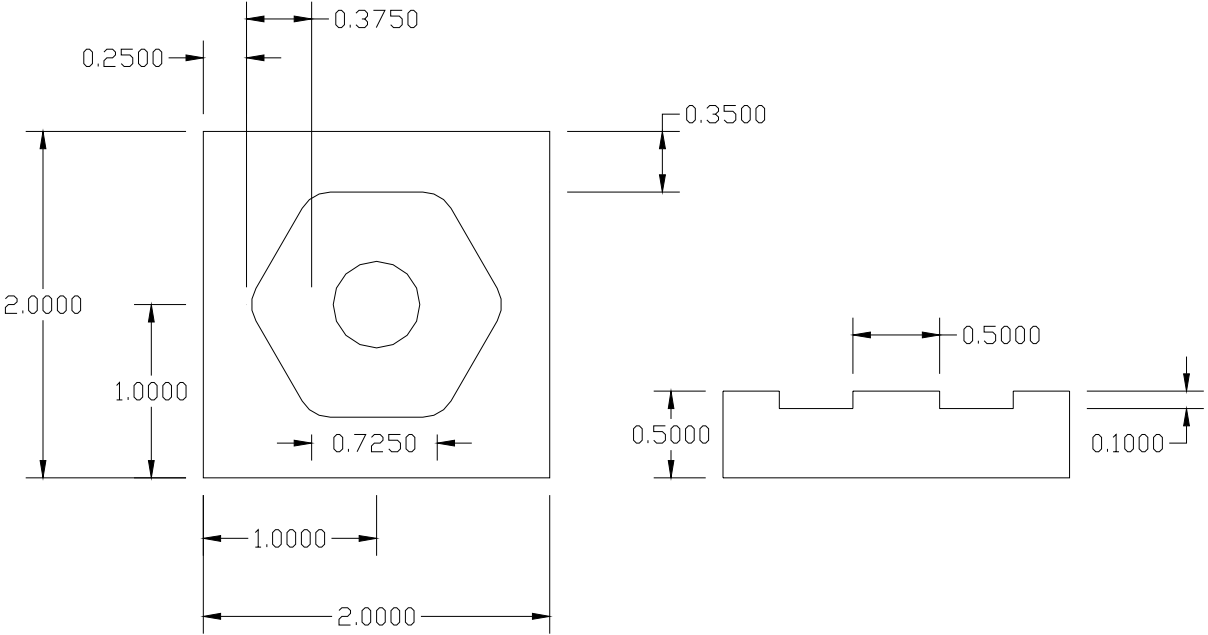
# WinCAM Milling Level 1

WinCAM is an icon driven system with three basic parts:  
Cad, Cam and Machine. In this picture you can see the



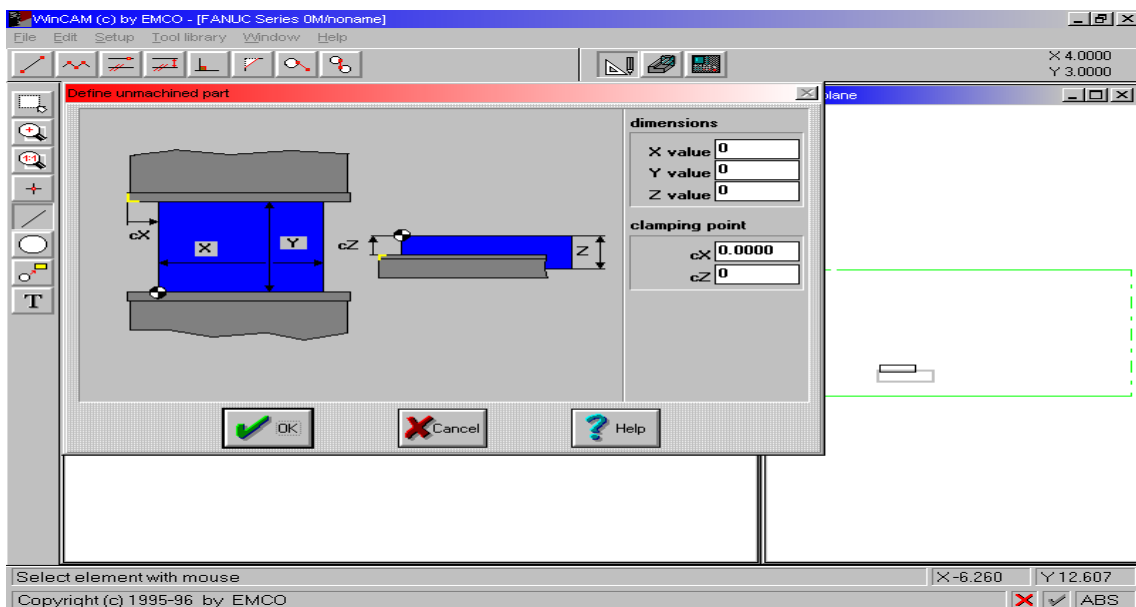
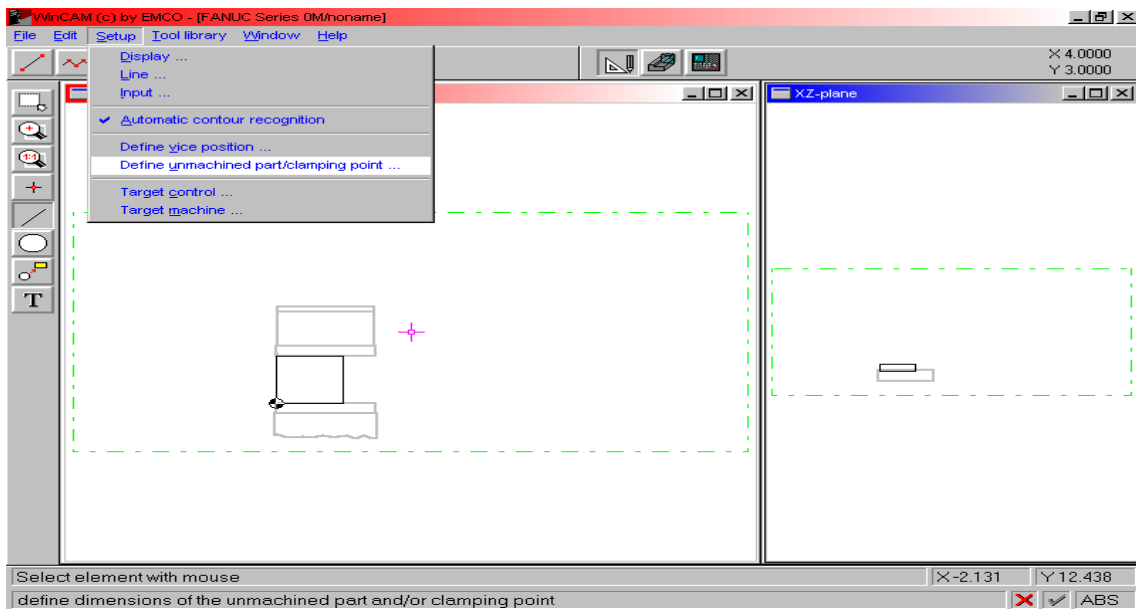
<b>F1Z 010</b>	<b><u>Collet holder</u></b>	For ESX-25 collets	
225 100	<b>(9.0-10.0mm)Ø 3/8"</b>	<b>ESX 25 COLLETS</b>	
764 308	Acc. to DIN 327, shape B cutting-Ø10 mm / shank-Ø10mm	<b><u>Slot end mill, HSS</u></b>	


**PART SIZE = “2 X 2 X .5” OF 2024-T4 ALUMINUM**

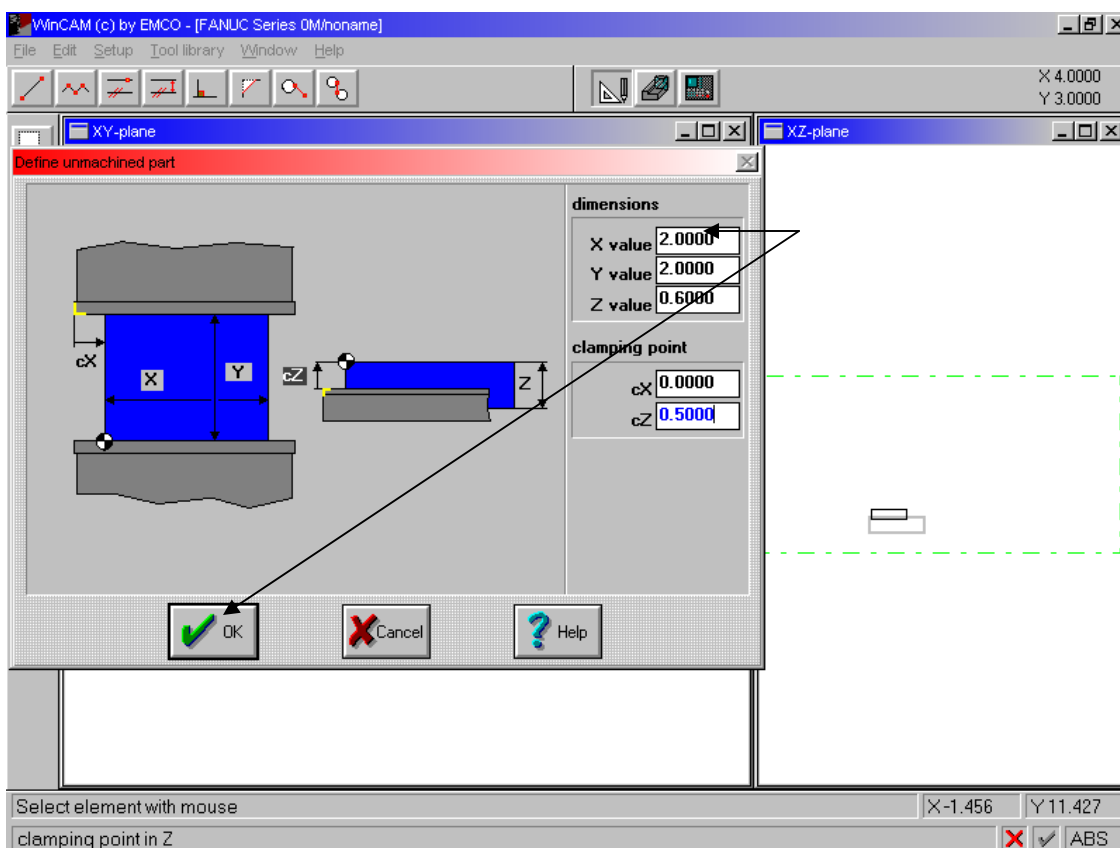


# WinCAM Mill Step by Step CAD Setup


1. LEFT CLICK ON **SETUP** (THE TOP BAR OF THE SCREEN)
2. CLICK ON DEFINE **UNMACHINED PART/CLAMPING POINT**

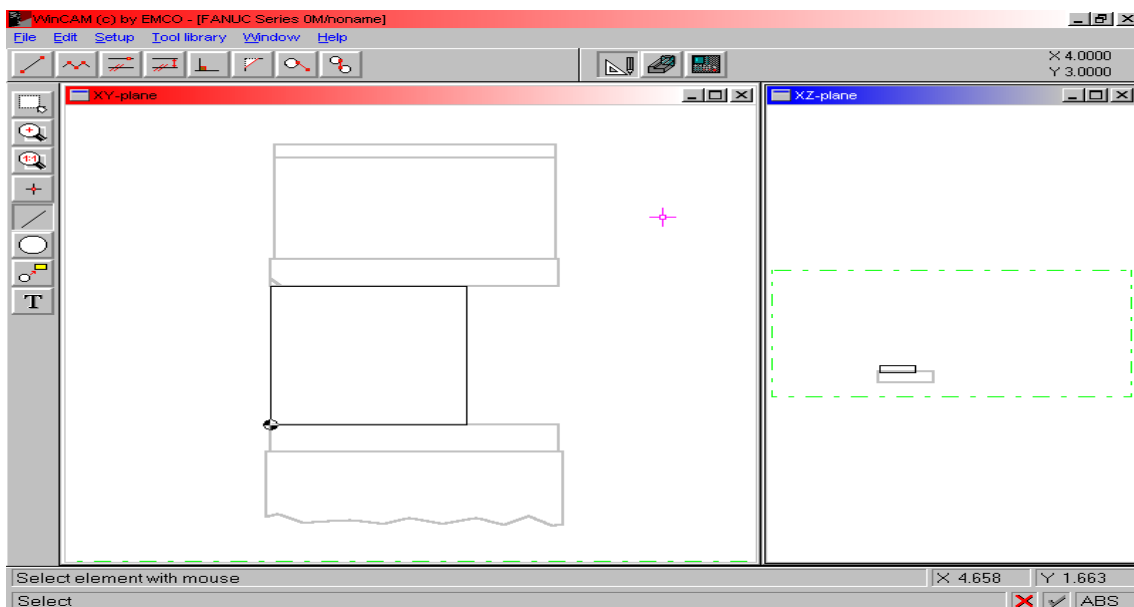
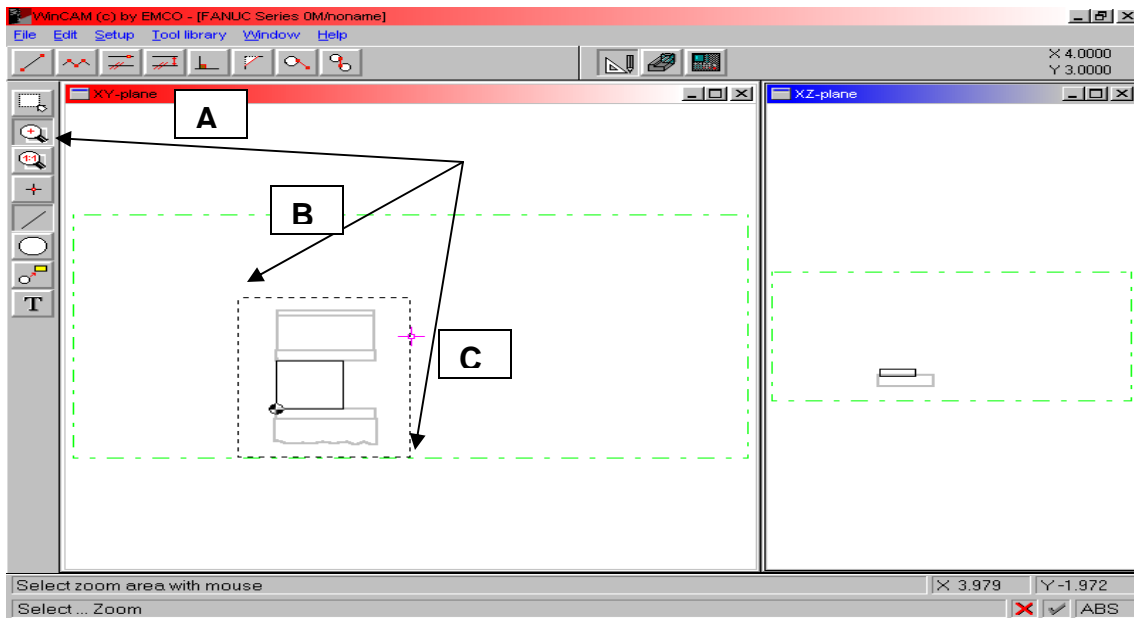



3. UNDER DIMINSIONS HIGHLIGHT
4. TYPE **2.** (LENGTH OF THE PART); THEN PRESS TAB
5. TYPE **2.** IN THE **Y** VALUE BOX (WIDTH) THEN PRESS TAB
6. TYPE **.5** IN THE **Z** VALUE BOX (HEIGHT) THEN PRESS TAB
7. TYPE **0.** IN THE **cX** VALUE BOX (AMOUNT OF STOCK STICKING IN OR OUT OF THE VISE) THEN PRESS TAB
8. TYPE **.4** IN THE **cZ** VALUE (STOCK ABOVE THE VISE)
9. CLICK OK 

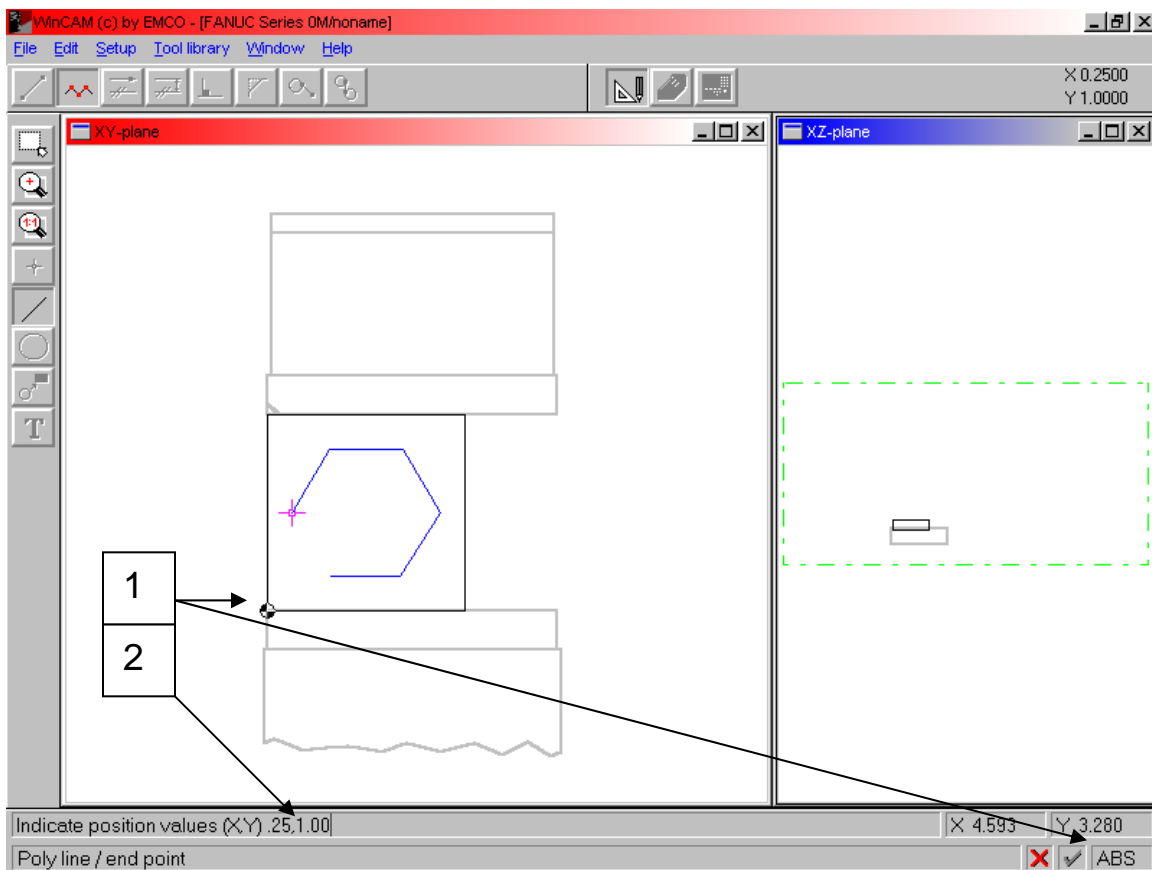


**NOTE: PLACE THE MOUSE POINTER OVER ANY ICON AND WINCAM AUTOMATICALLY IDENTIFY THE ICON AT THE LOWER LEFT OF THE SCREEN.**

10. CLICK ON THE **ZOOM DRAWING ELEMENT** ICON  (A)
11. PLACE THE **MOUSE POINTER** OR + SIMBOL TO THE UPPER LEFT SIDE OF THE VISE (B)
12. CLICK & HOLD THE **LEFT** MOUSE BUTTON & DRAG TO THE BOTTOM RIGHT SIDE OF THE VISE (C)
13. LET GO OF MOUSE; YOUR VEIWF WILL ENLARGE




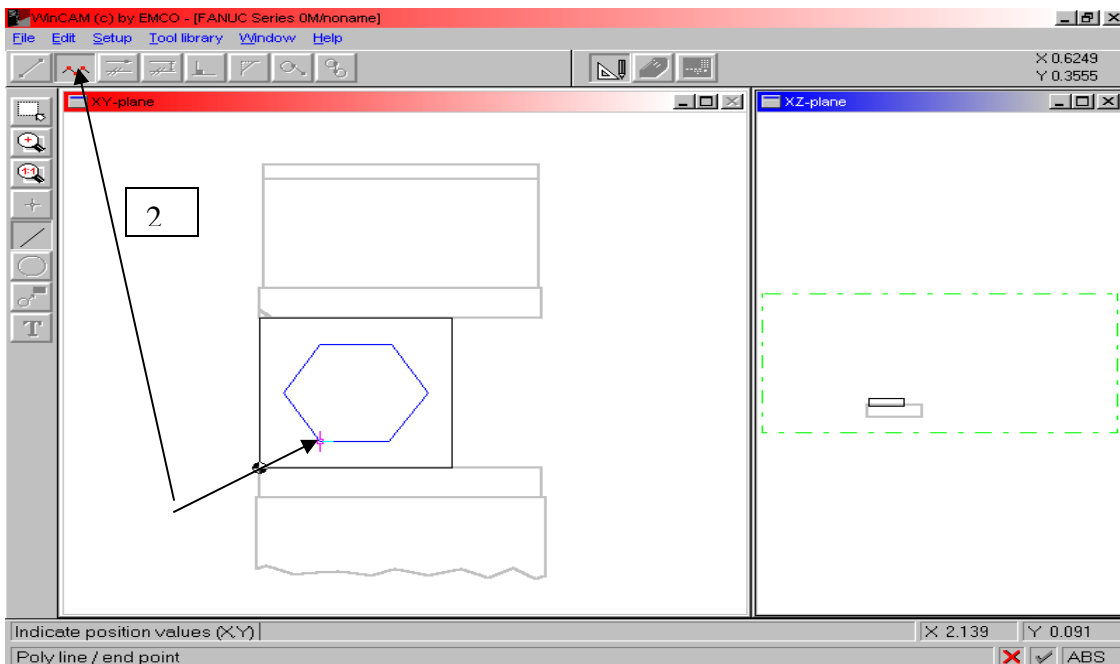
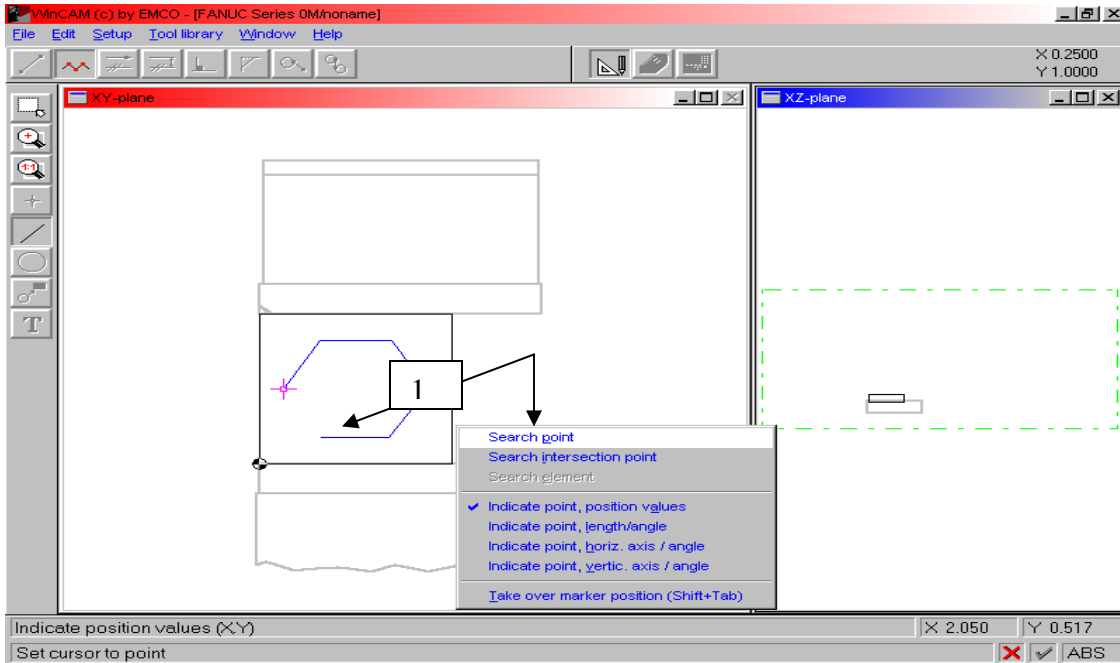
14. CLICK ON THE **POLYLINE** ICON  (MULTIPLE LINE)
15. TYPE **.625, .350** FOR THE START POINT / THEN PRESS **ENTER** ON THE PC KEYBOARD
16. TYPE **1.35, .350** FOR THE NEXT POINT / PRESS **ENTER**
17. TYPE **1.75, 1.00** FOR THE NEXT POINT / PRESS **ENTER**
18. TYPE **1.375, 1.65** FOR THE NEXT POINT / PRESS **ENTER**
19. TYPE **.625, 1.65** FOR THE NEXT POINT / PRESS **ENTER**
20. TYPE **.25, 1.00** FOR THE ENDING POINT / PRESS **ENTER**



#### NOTES:

- 1: CORDINATES ARE ABSOLUTE FROM REFERENCE POINT
- 2: ALL VALUES TYPED IN ARE LOCATED AT LOWER LEFT OF THE SCREEN

21. CLICK ON THE **RIGHT** MOUSE BUTTON
22. **HIGHLIGHT SEARCH POINT** THEN **LEFT** CLICK
23. CLICK ON THE OTHER SIDE OF THE ENDING LINE SEGMENT (1)
24. CLICK ON **POLYLINE** ICON  THIS DESELECTS POLYLINE (2)



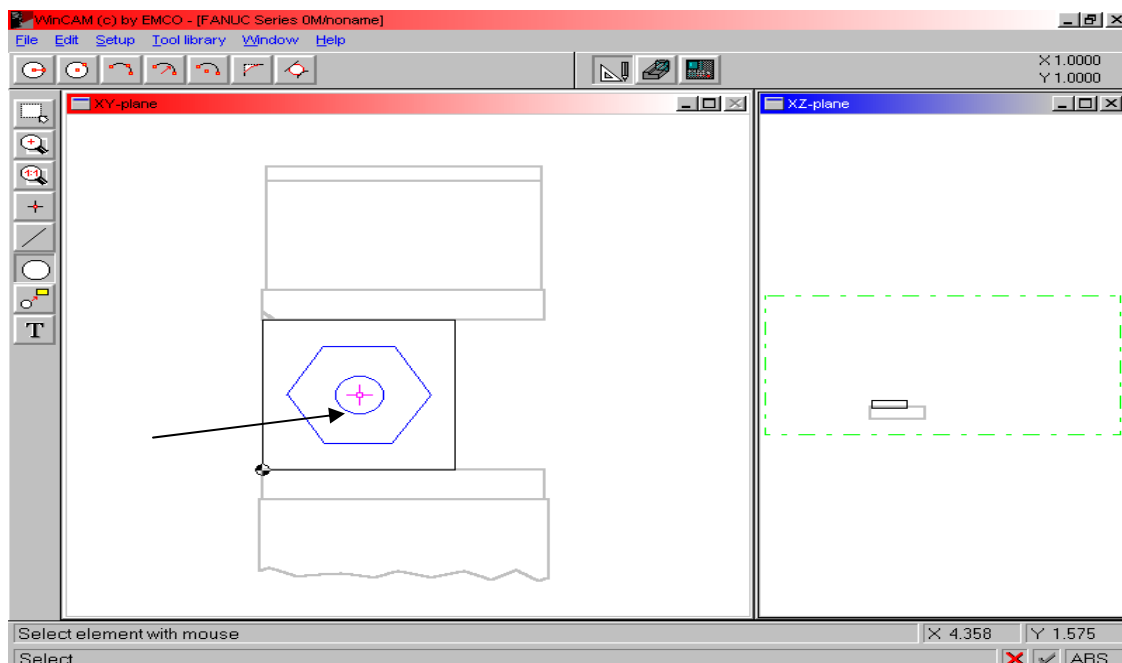
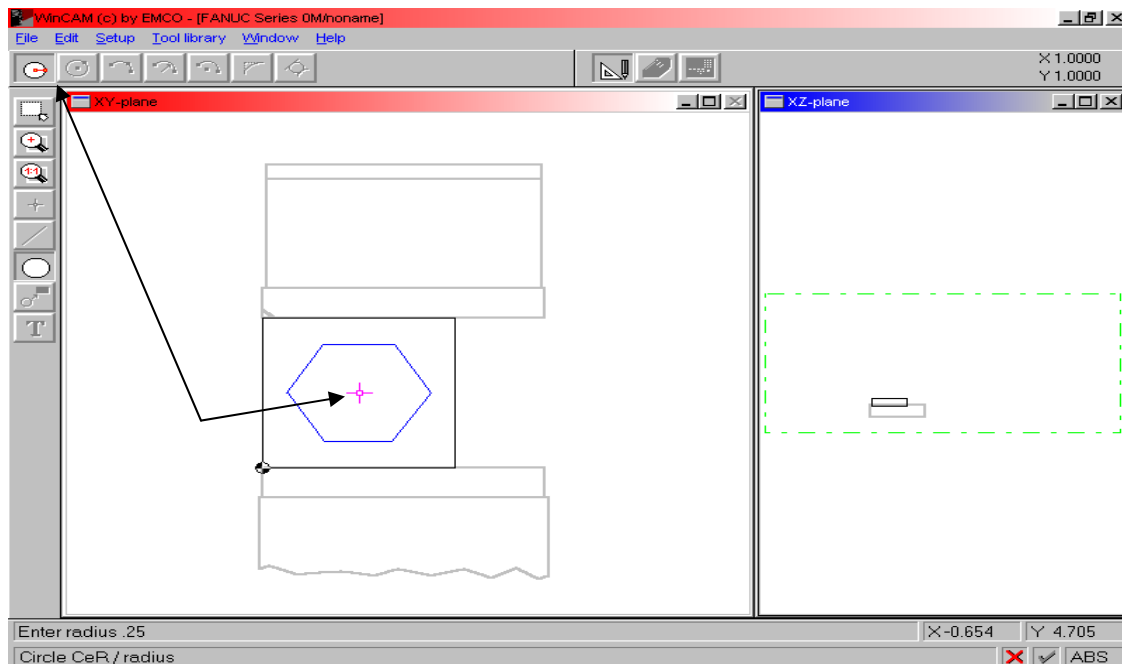


25. CLICK ON **CIRCLE** ICON 

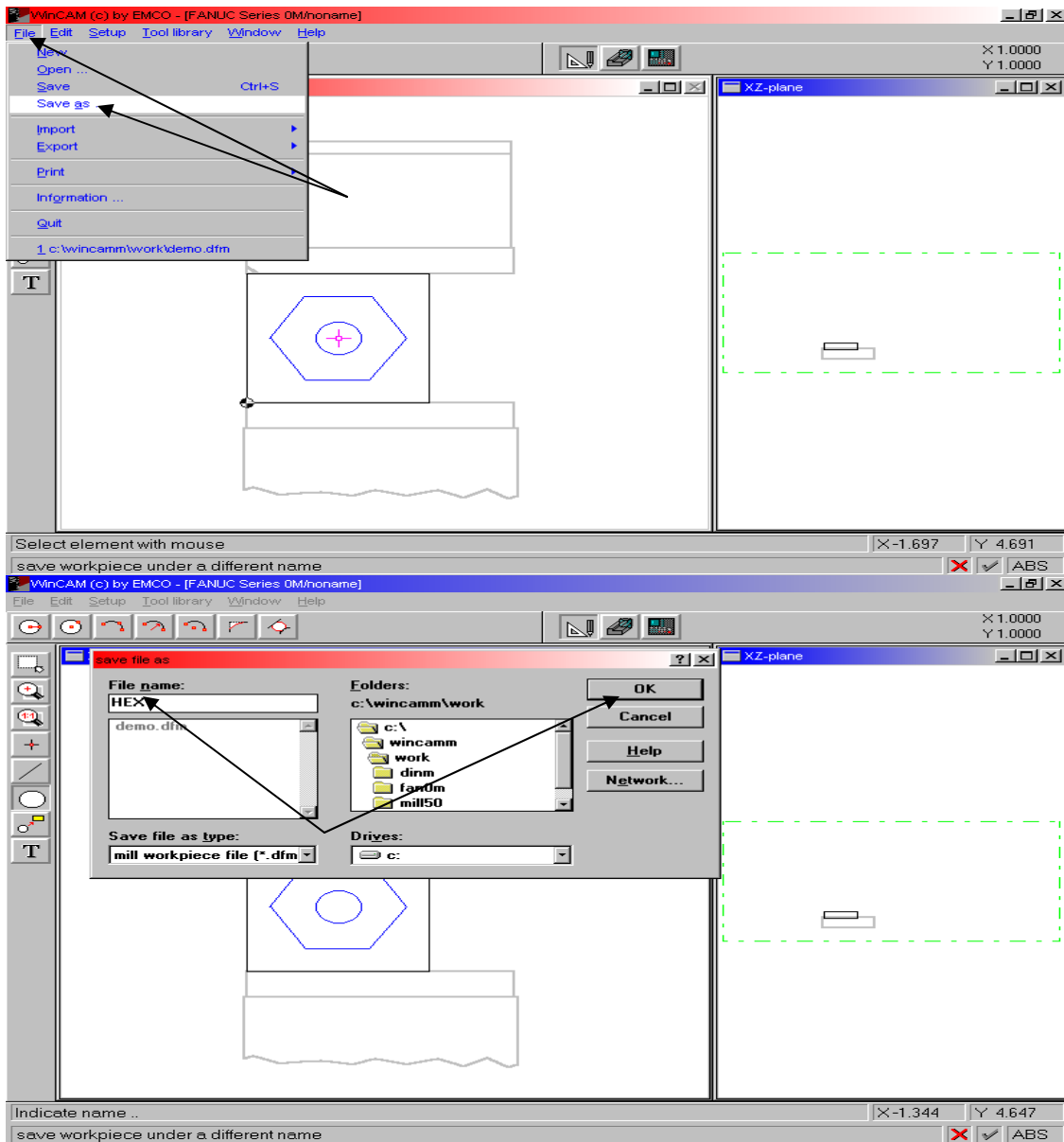
26. CLICK ON **CIRCLE WITH CENTER AND RADIUS** ICON 

27. TYPE **1.0,1.0** LOCATES CENTER OF THE PART / THEN PRESS ENTER

28. TYPE **.25** FOR THE RADIUS OF THE CIRCLE / THEN PRESS ENTER



1. CLICK ON **FILE** (TOP LEFT OF THE SCREEN)
2. CLICK ON **SAVE AS**
3. TYPE **HEX**
4. CLICK **OK**



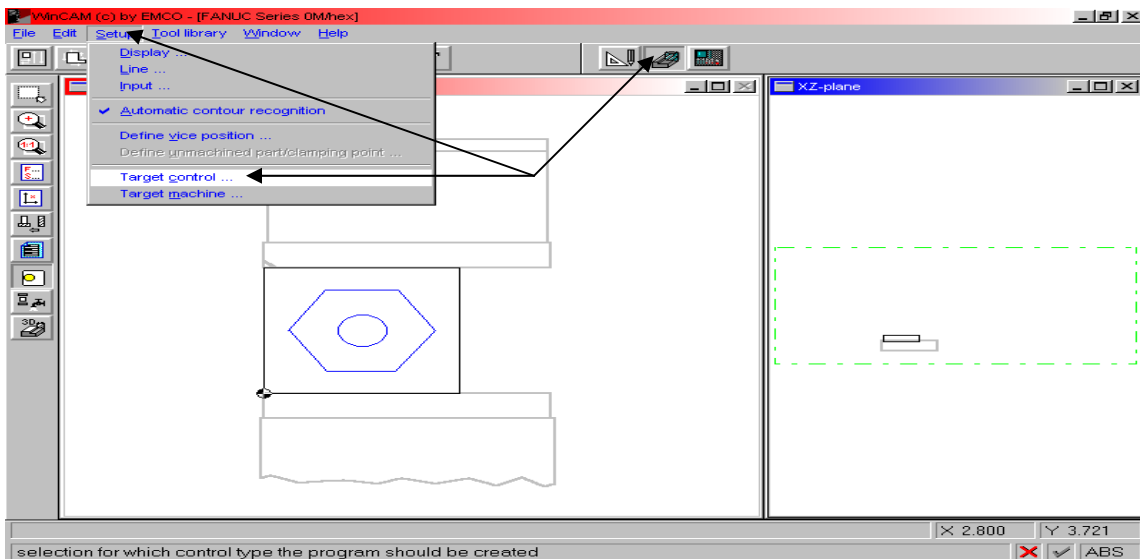
You have just completed the CAD portion  
of the Step by Step guide, go to the next  
page for CAM

# WinCAM Mill Step by Step CAM Setup

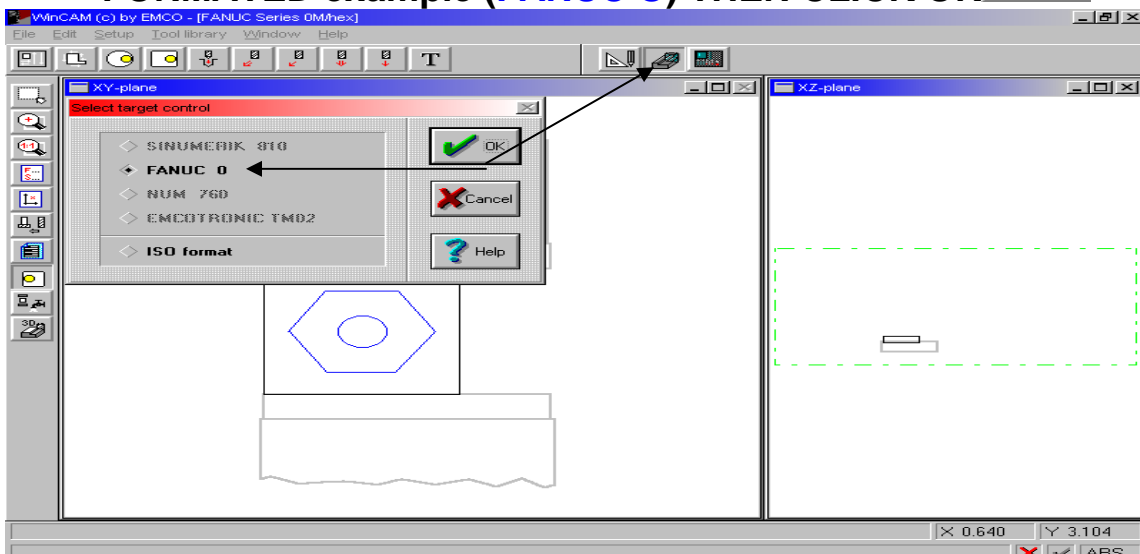
1. CLICK ON **CAM** ICON (UPPER MIDDLE OF SCREEN)   
THIS SWITCHES MODES TO COMPUTER AIDED MACHINING

Note: Only use steps (2, 3 & 4) if you purchased the option(s) for Siemens, Fanuc, Num 760 or Emcotronic TM02

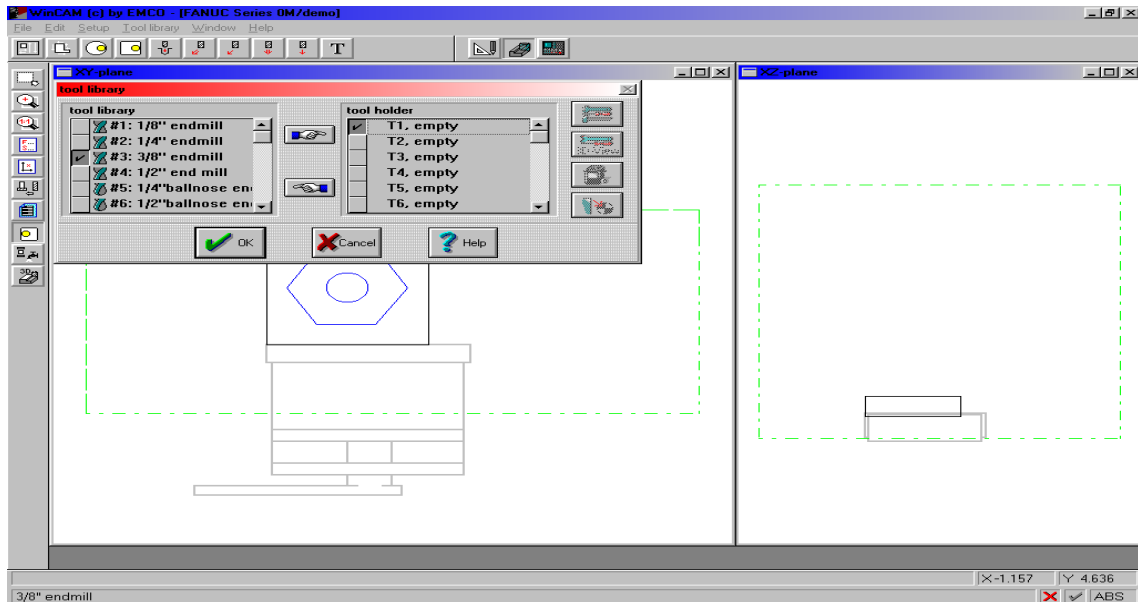
2. CLICK ON **SETUP** (TOP LEFT OF THE SCREEN)
3. CLICK ON **TARGET CONTROL**



4. CLICK ON THE **POST** FOR THE PROGRAM TO BE FORMATED example (**FANUC 0**) THEN CLICK OK 

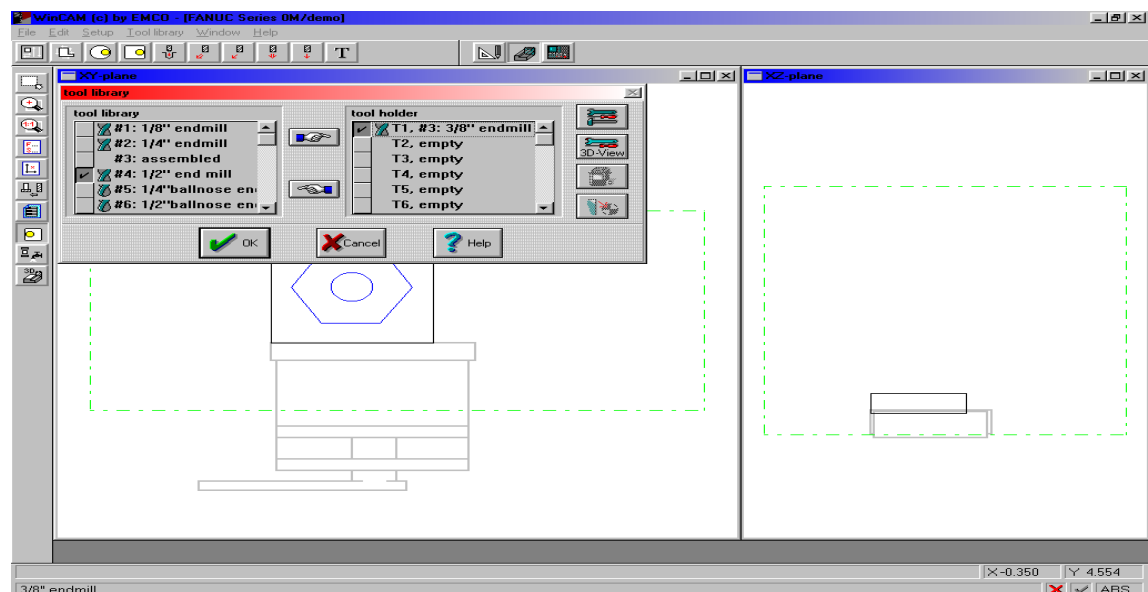


5. CLICK ON **TOOL LIBRARY** (TOP LEFT OF THE SCREEN)
6. CLICK THE GRAY BOX ☒ **#3: 3/8" endmill** (UNDER TOOL LIBRARY)
7. CLICK THE GRAY BOX ☒ **T1, empty** (UNDER TOOL HOLDER)



8. CLICK ON THE **TRANSFER** ICON  (THIS PLACES TOOL IN TOOL HOLDER)

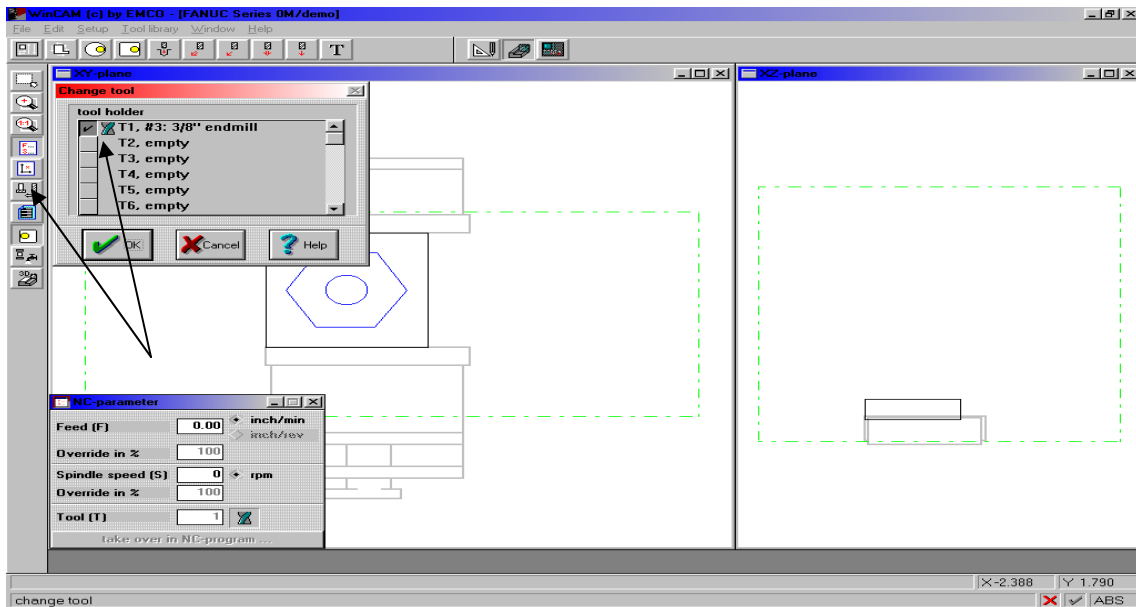
9. CLICK OK 



10. CLICK ON THE **TOOL CHANGE** ICON 

11. CLICK ON THE GRAY BOX  T1, #3: 3/8" endmill / THEN

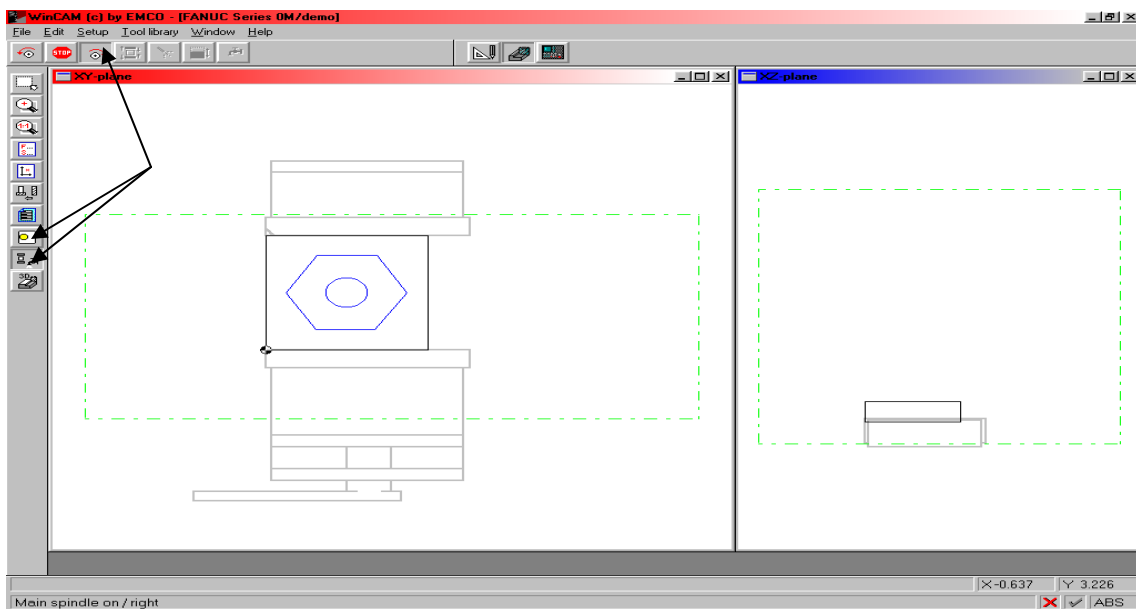
CLICK OK 



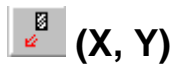
12. CLICK ON THE **PERIPHERY** ICON 

13. CLICK ON **MAIN SPINDLE ON RIGHT**  (M03)

14. CLICK ON **MACHINE** ICON 



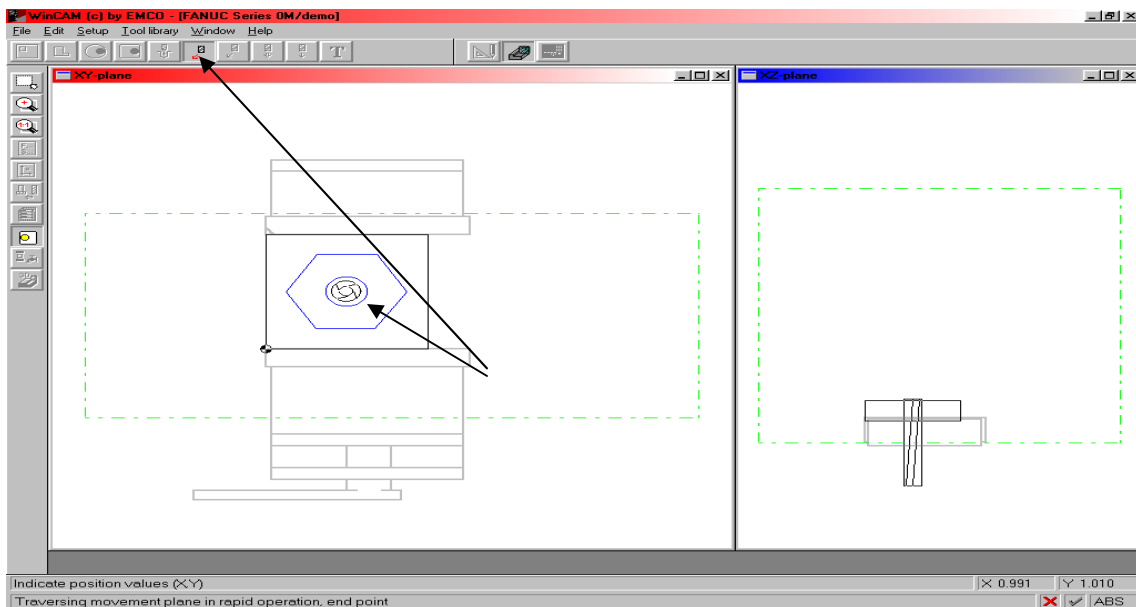
15. CLICK ON **MOVEMENT IN RAPID MOTION IN PLANE** ICON



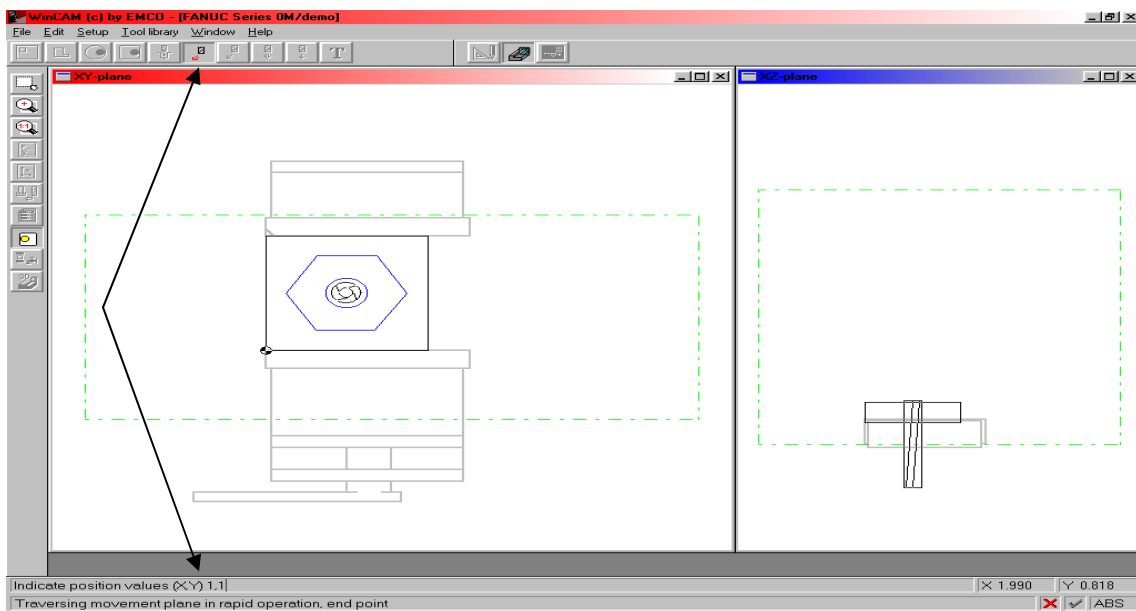
16. PLACE THE **MOUSE** IN THE CENTER OF THE PART /

**LEFT** CLICK OR YOU CAN TYPE IN 1,1 THEN ENTER

17. THE TOOL WILL LOOK AS IF IT IS THROUGH THE PART



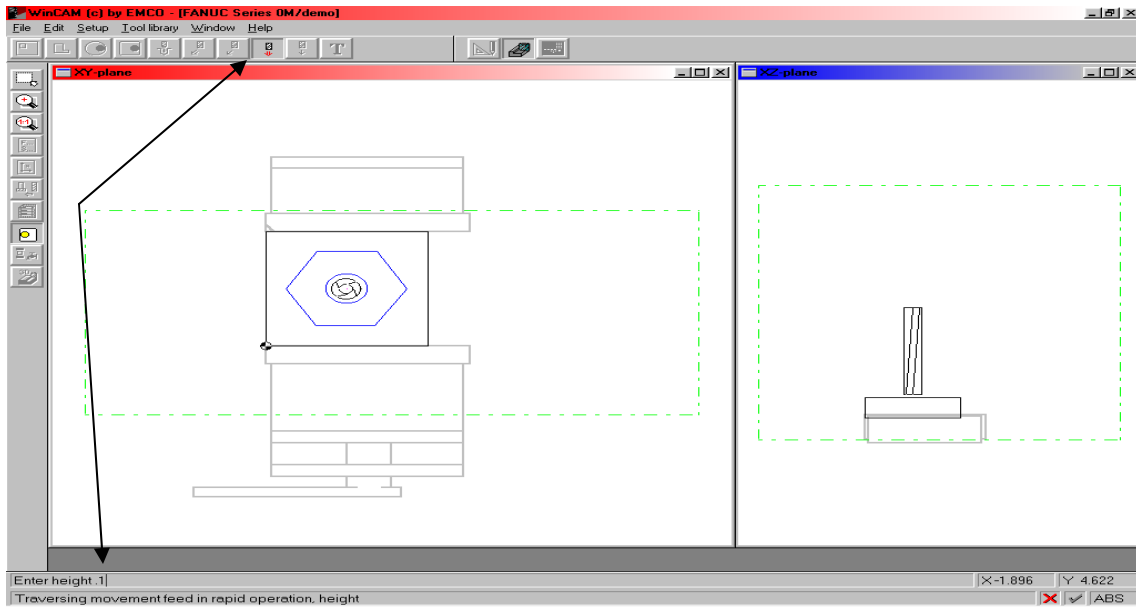
OR



18. CLICK ON **MOVEMENT IN RAPID MOTION IN FEED**

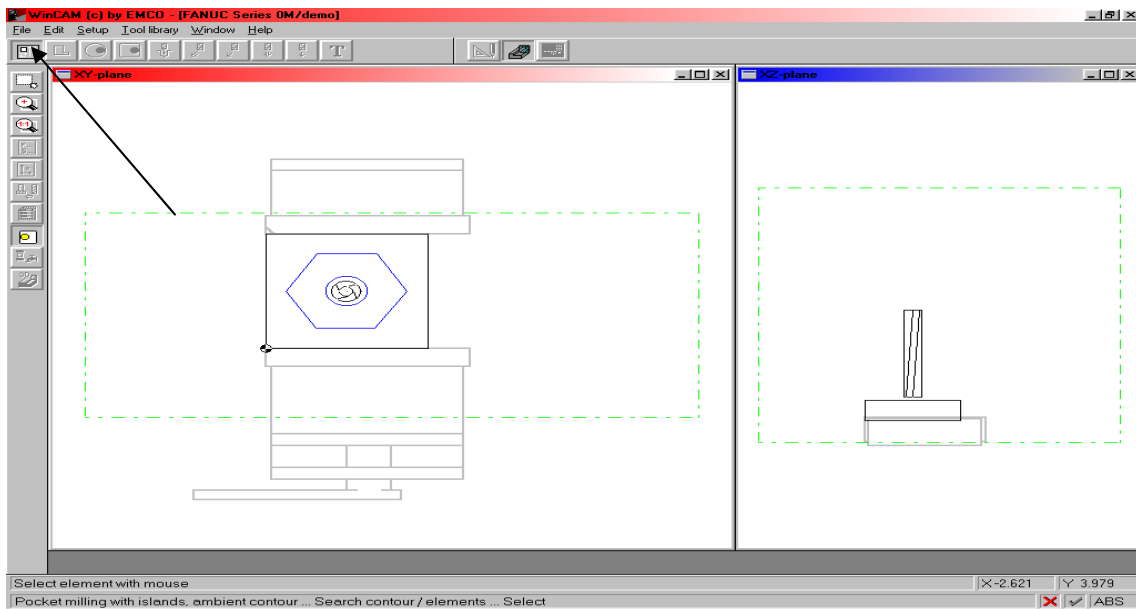
**DIRECTION** ICON  (G0 in Z)

19. TYPE IN **.100** FOR THE HIEGHT (ABOVE THE PART)



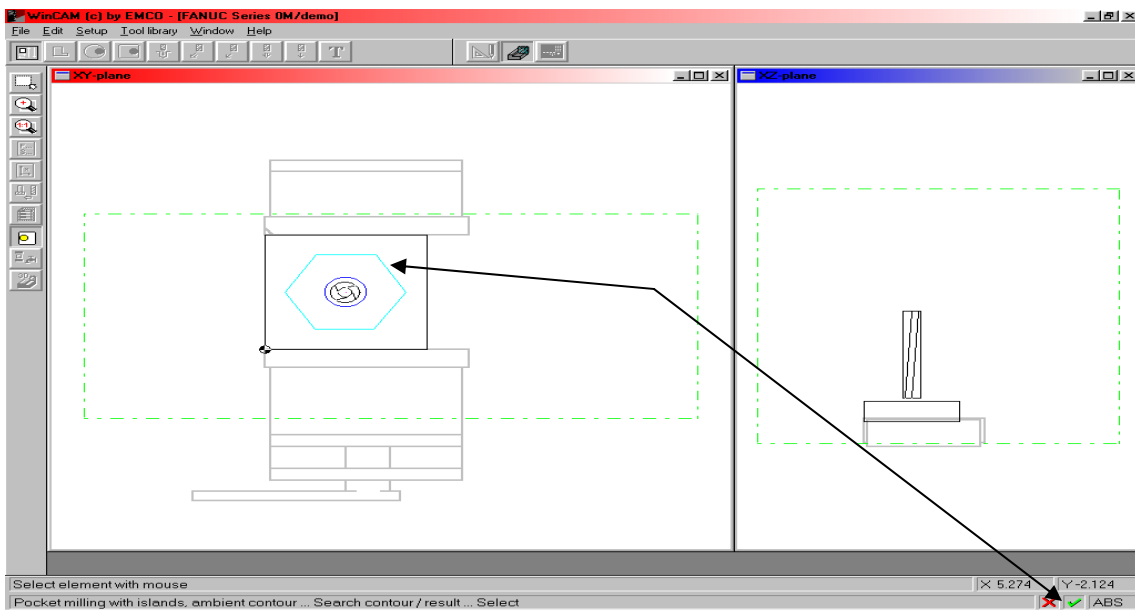
20. PRESS **ENTER** ON PC KEYBOARD

21. CLICK ON **POCKET MILLING WITH ISLAND** ICON 



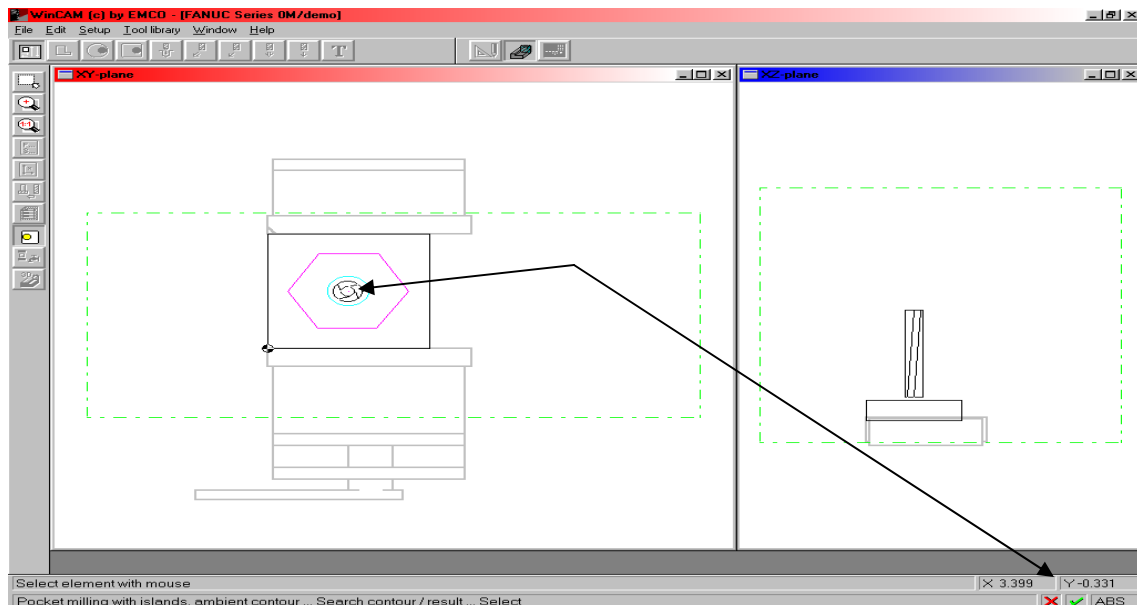
22. CLICK ON THE **HEX**

23. CLICK THE **GREEN** CHECK MARK ☒ (BOTTOM RIGHT)



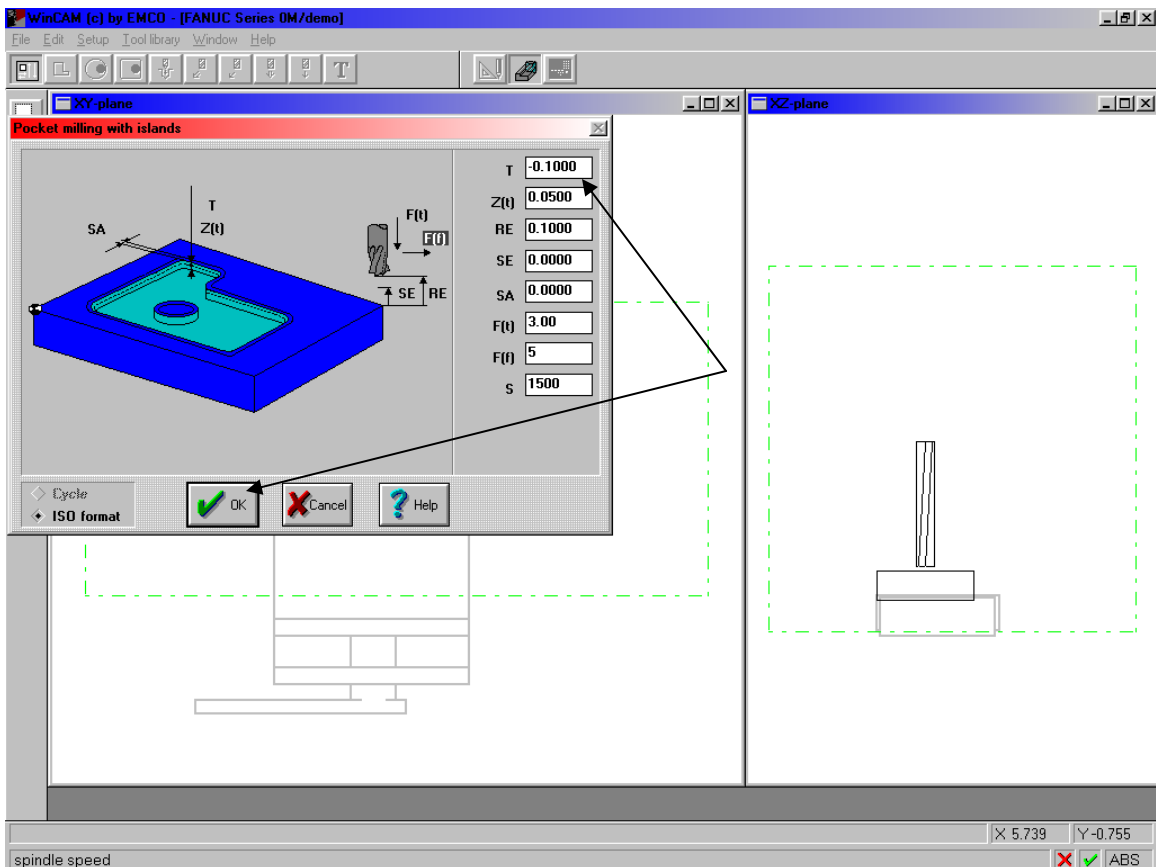
24. CLICK ON THE **CIRCLE** (MIDDLE OF THE PART)

25. CLICK THE **GREEN** CHECK MARK ☒ 2 TIMES (THIS IS COMFERMATION OF THE SELECTED ITEM)





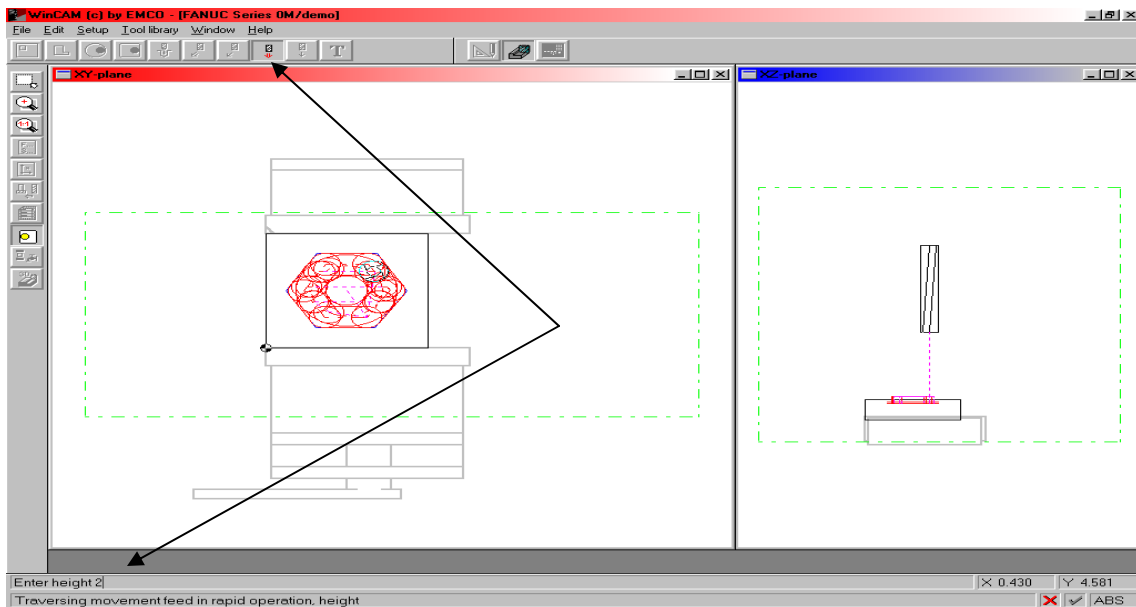
26. DOUBLE CLICK ON THE **T** = DEPTH (WHITE AREA)
27. TYPE IN **-.1** / THEN PRESS TAB
28. TYPE IN **.05** IN **Z(t)** FOR ADVANCE DEPTH / PRESS TAB
29. TYPE IN **.1** IN **RE** FOR RETURN PLANE / PRESS TAB
30. TYPE IN **0** IN **SE** FOR START PLANE / PRESS TAB
31. TYPE IN **0** IN **SA** FOR FINISH OFFSET / PRESS TAB
32. TYPE IN **3** IN **F(t)** FOR Z FEED (FEED PER MINUTE) /  
PRESS TAB
33. TYPE IN **5** IN **F(f)** FOR X,Y FEED (FEED PER MINUTE) /  
PRESS TAB
34. TYPE IN **1500** IN **S** FOR SPINDLE SPEED (DIRECT RPM)
35. CLICK ON **OK**



36. CLICK ON **MOVEMENT IN RAPID MOTION IN FEED**

**DIRECTION** ICON  (G0 in Z)

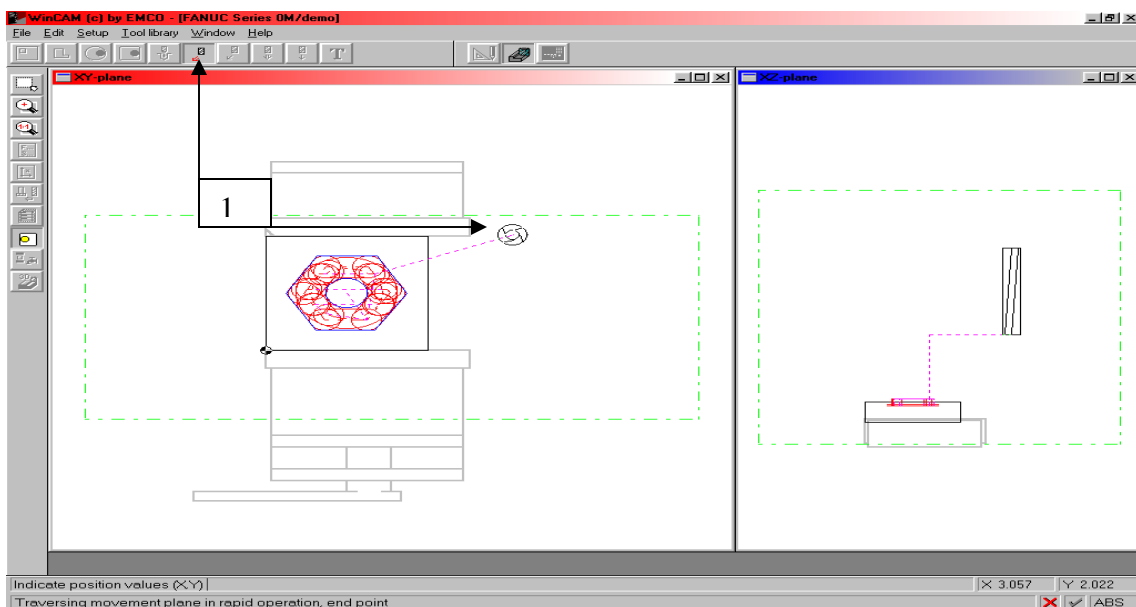
37. TYPE **2.** / PRESS ENTER



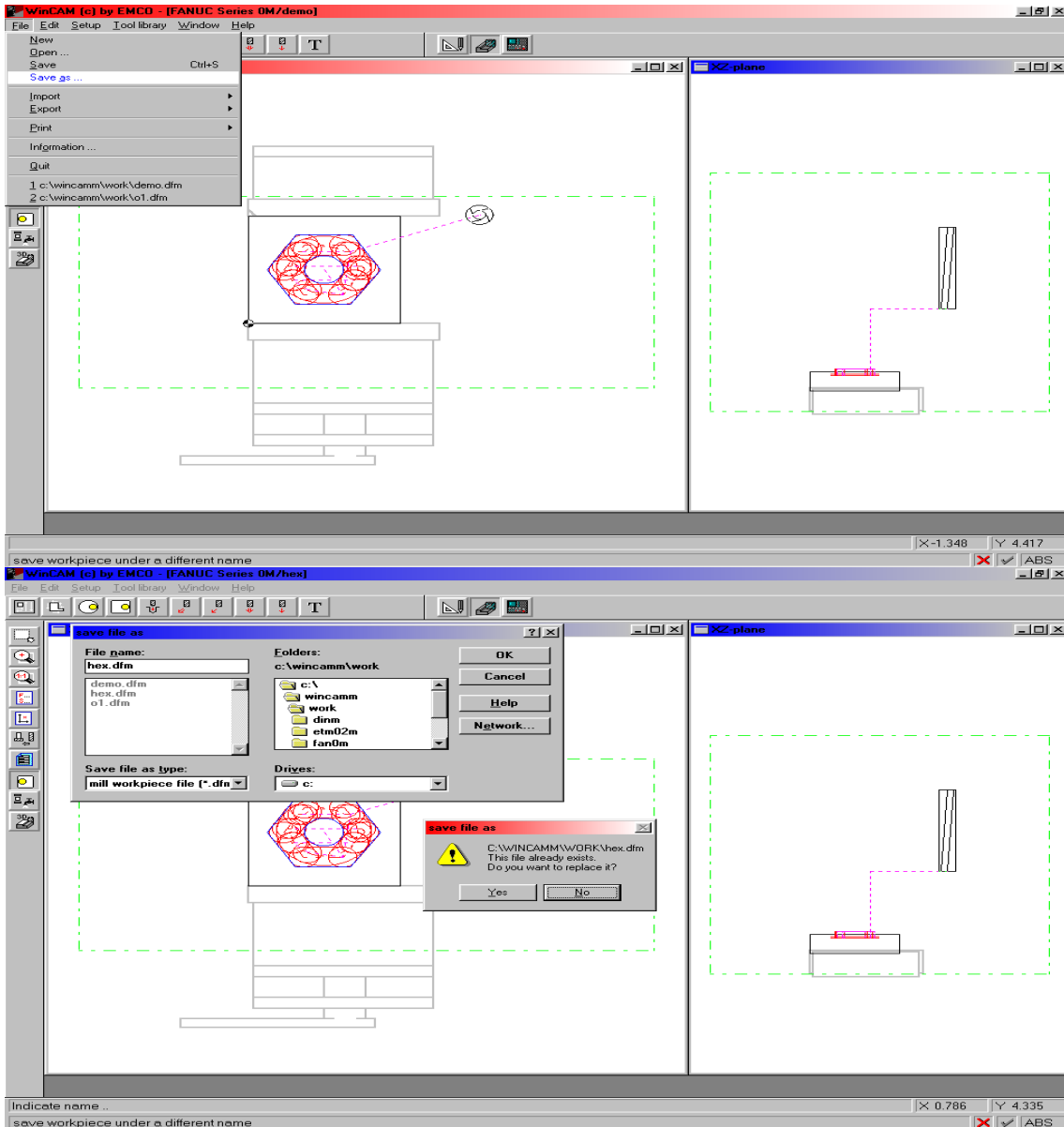
38. CLICK ON **MOVEMENT IN RAPID MOTION IN PLANE** ICON

 (G0 in X, Y)

39. MOVE THE **MOUSE** TO THE UPPER RIGHT CORNER OF THE **WISE** PART (1) / THEN LEFT CLICK



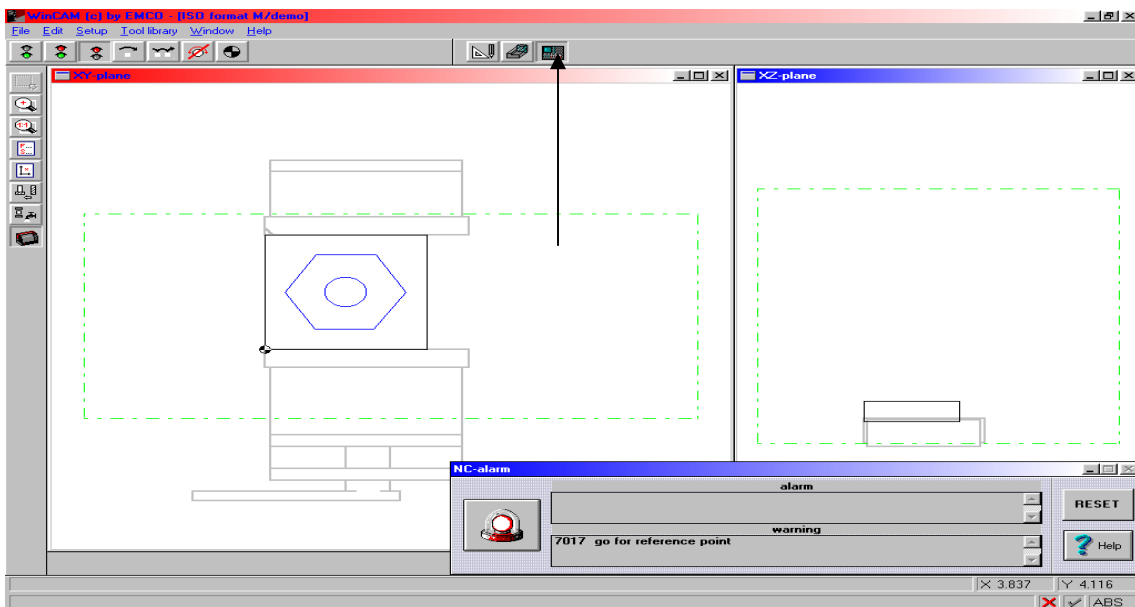
1. CLICK ON **FILE** (TOP LEFT OF THE SCREEN)
2. CLICK ON **SAVE AS**
3. CLICK ON **HEX.DFM**
4. CLICK YES TO FILE ALREADY EXISTS
5. CLICK OK



You have just completed the CAM portion  
of the Step-by-Step guide, go to the next  
page for Machine

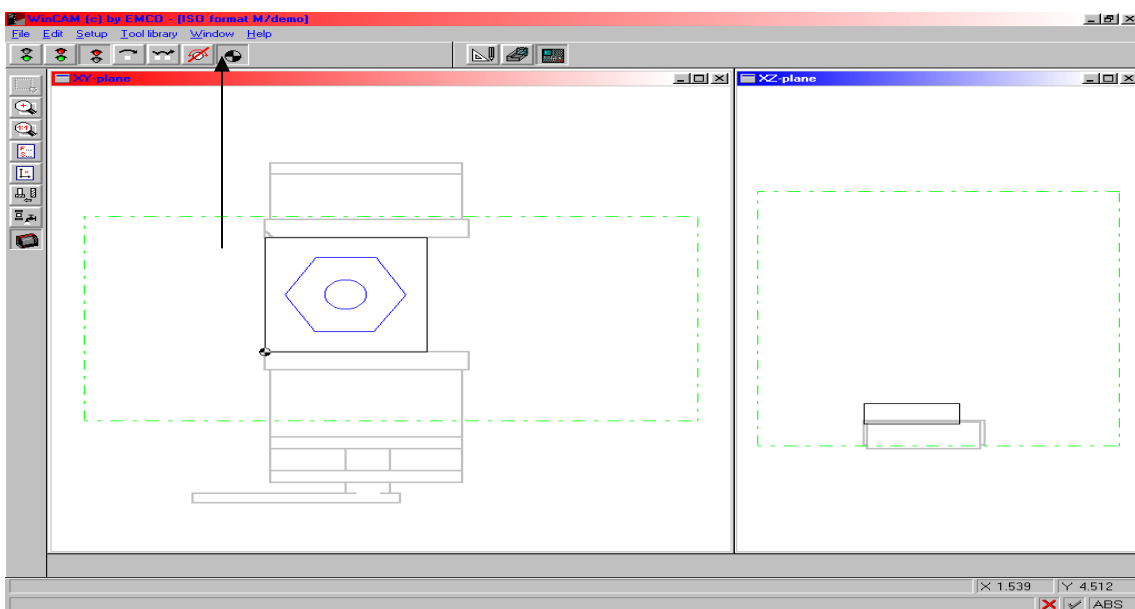
# WinCAM Mill Step by Step MACHINE Setup

1. CLICK ON **MACHINE ICON**  (NC)



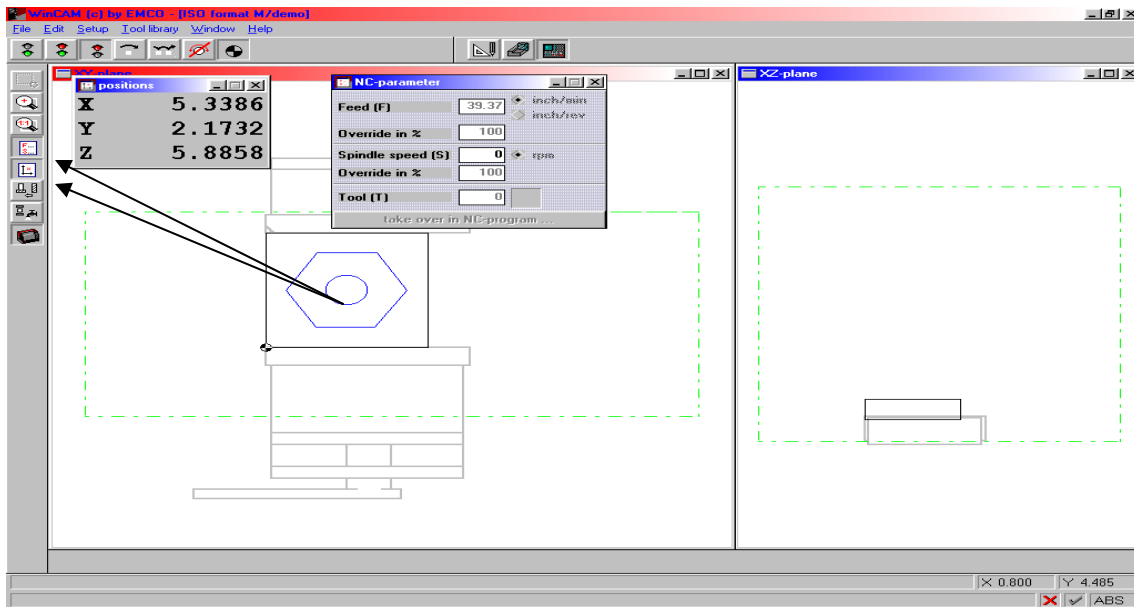
Note: Make sure Door is closed

2. CLICK ON **REFERENCE ICON** 

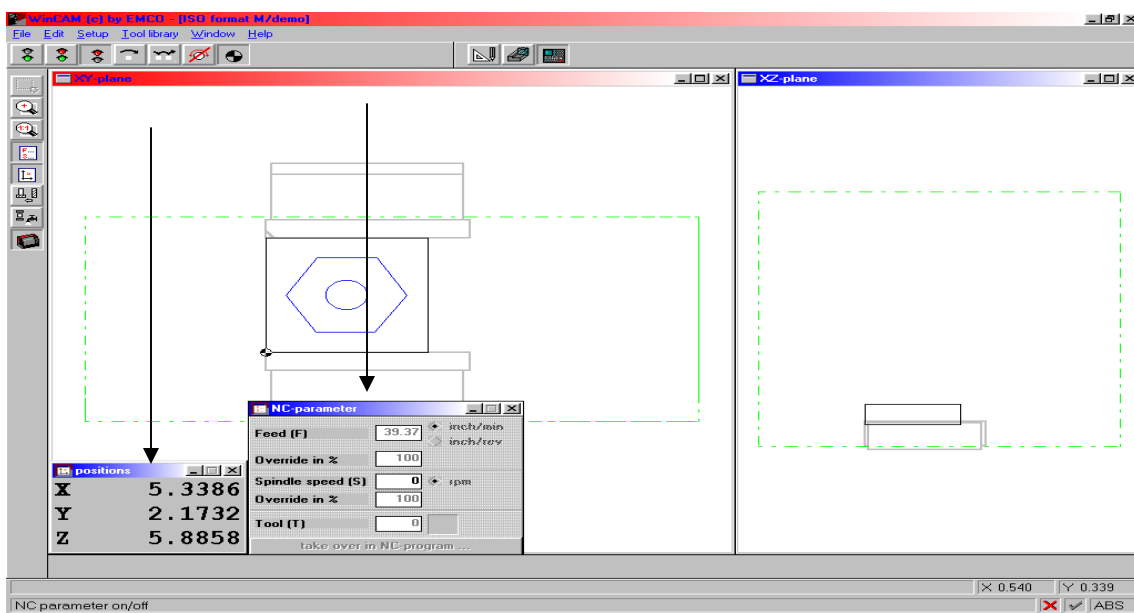


3) CLICK ON **NC PARAMETERS ON/OFF**  & **POSITION**

**DISPLAY ON/OFF** 



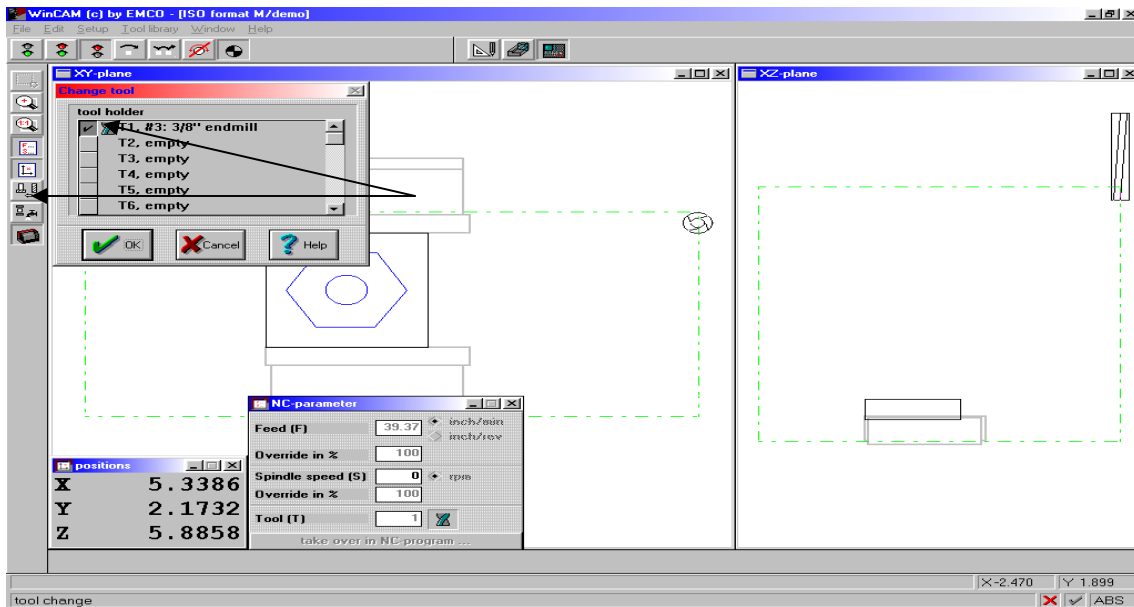
4) MOVE BOTH SCREENS TO A VEIWABLE POSITION BY  
CLICKING IN THE GRAY BAR AND DRAGGING THE  
WINDOW TO A NEW POSITION



5) CLICK ON **TOOL CHANGE ICON**



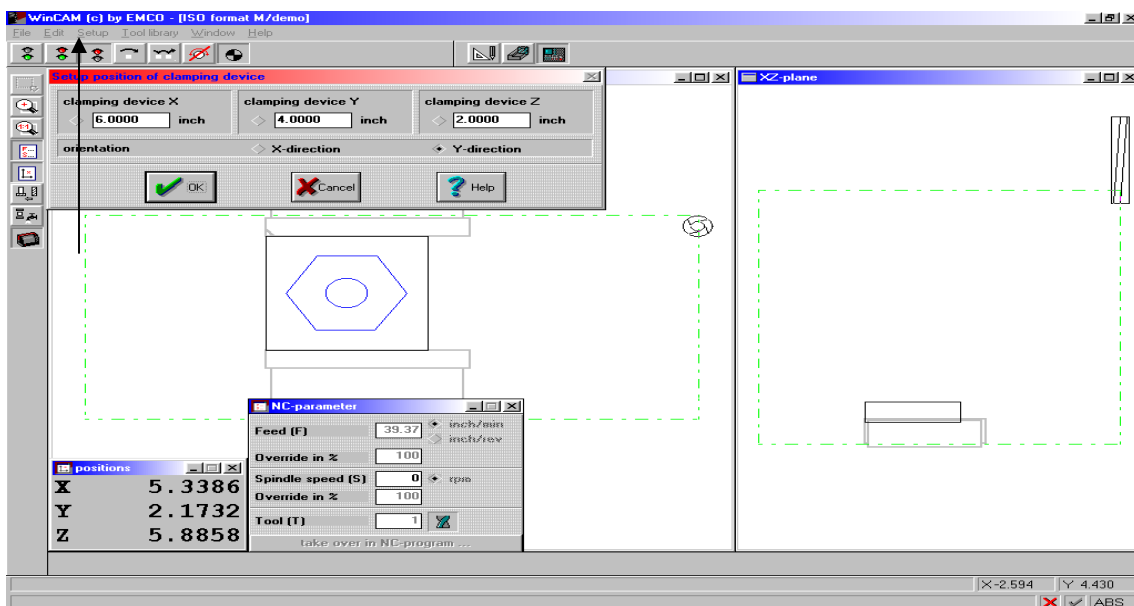
6) CLICK ☒ **T1, #3: 3/8" endmill** THEN CLICK **O.K.**



7) MOVE THE Z AXIS UP USING 8 ON # KEYS (**Put tool in**)

8) CLICK ON **SETUP**

9) CLICK ON **DEFINE VISE POSITION**



### **HINT 1**

**THE NUMBER KEYS ON THE NUMERIC KEYPAD WITH ARROWS MOVES THE AXIS IN THE X, Y OR Z PLANE**

**KEY (1) MOVES THE AXIS FORWARD (-Y)**

**KEY (2) MOVES THE SPINDLE AXIS DOWN (-Z)**

**KEY (4) MOVES THE AXIS LEFT (-X)**

**KEY (6) MOVES THE AXIS RIGHT (+X)**

**KEY (8) MOVES SPINDLE AXIS UP (+Z)**

**KEY (9) MOVES THE AXIS BACKWARDS (+Y)**

### **HINT 2**

**The plus key on the number Keypad increases the feed rate**

**The minus key decreases the feed rate**

**Press & hold CTRL Key with the plus Key this increases the spindle speed**

**Press & hold CTRL Key with the minus key this decreases the spindle speed**

Toggle Back

Esc

Mode

^

F3

F4

F5

F6

F7

F8

Output

Input

>

Display

Over Toggle

Turret

Air

Rotary

Jog

Jog

Spindle

Spindle

Vise

Vise

Door

~

1

2

3

4

5

6

7

8

9

0

,

.

Backspace

Cancel

Tab

Q

W

E

R

T

Y

U

I

O

P

Caps Lock

A

S

D

F

G

H

J

K

L

EOB

Shift

Z

X

C

V

B

N

M

Insert

Input

Ctrl

Alt

Space Bar

Alt

Ctrl

Alter

Delete

End

Page Up

Page Down

^

<

v

>

Number Keys

Num Lock

Dry Run

Skip

Y+

Y-

REF

ALL

X+

X-

Reset

Op Stop

SBL

+

-

NC

Start

or

(cycle start)

1. Any key with Gray highlight Press Ctrl + the key for that function

2. Some keys have two functions to them for 1st function just press the key

3. 2nd function will be Gray press Ctrl + the key for the function

4. Some automotive keys when you press them 1 time this will close/turn off press them again will open/turn on

5. F1 is a toggle key for the modes: Zero, Auto, Edit, MDI, Jog and F11 then F11 give Increment Step

6. F12 is a toggle key for the Display screens: Position, Program, Offsets, Parameter, Alarm and F12 then F11 then F3 gives Graph

7. F12 then F11 then F3 then F11 then F3 gives you 3D view

8. Press enter 2 times this is the same as pressing EOB insert

9. Alt + F4 will exit the software back to the desktop



10. The Top right corner will allow the screen to be minimized, restored and close just like a standard windows screen

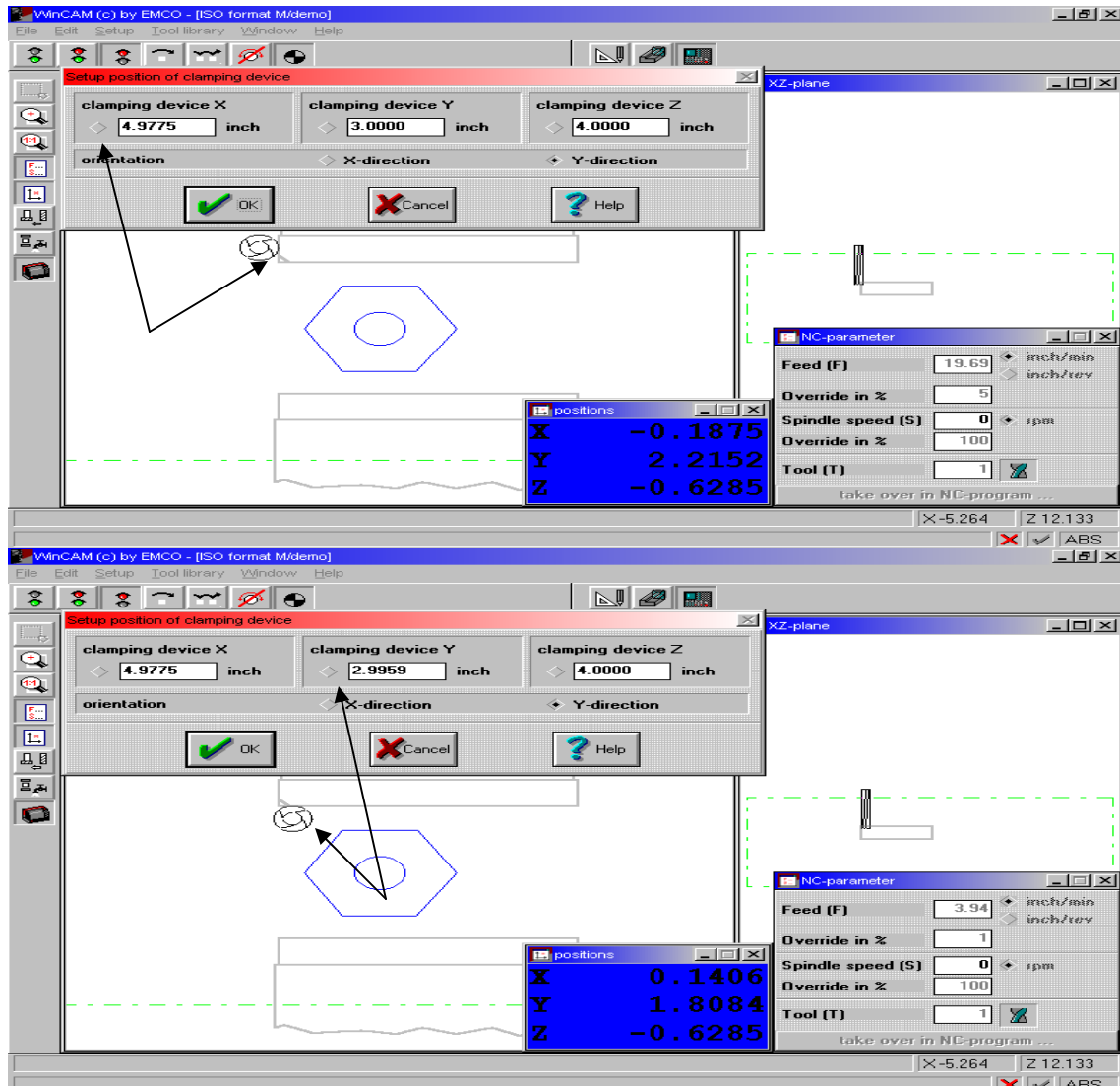
The machine functions are active only with NUM LOCK on



Keys are active they will move the axes if used as numbers. Use numbers on the keyboard.

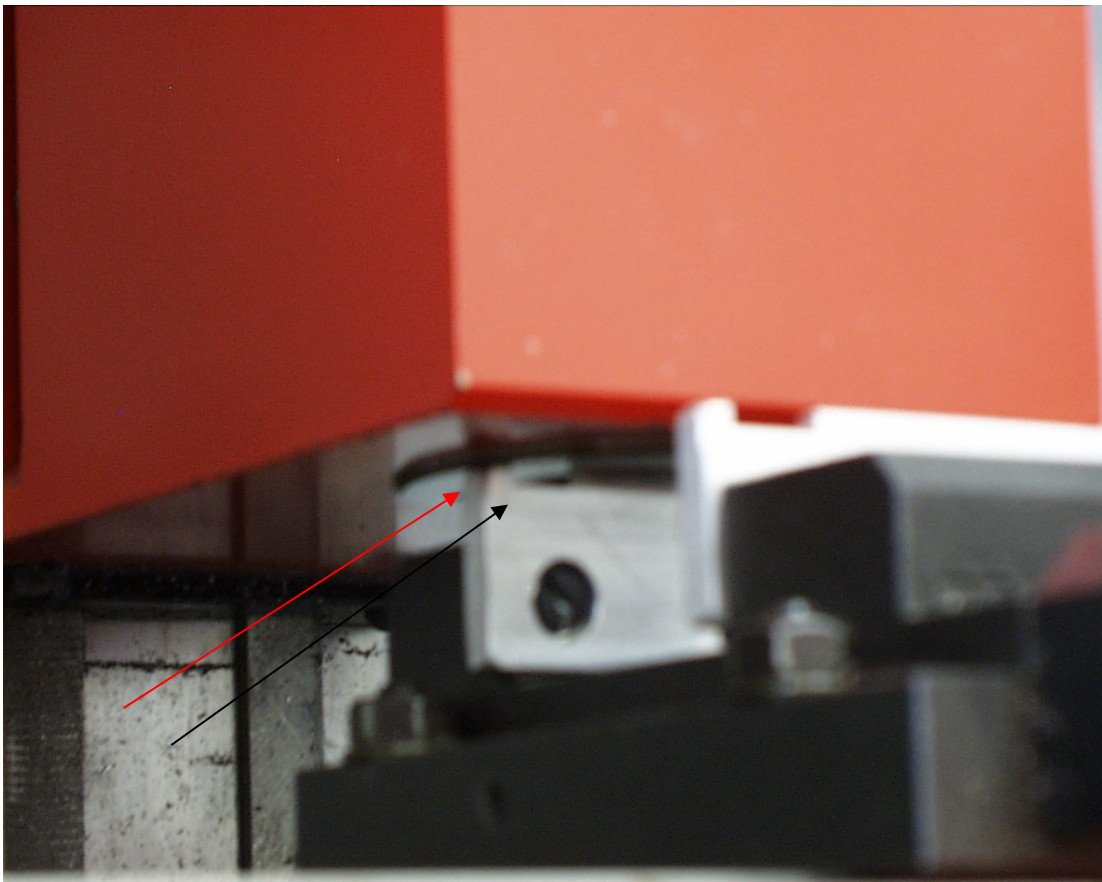
21




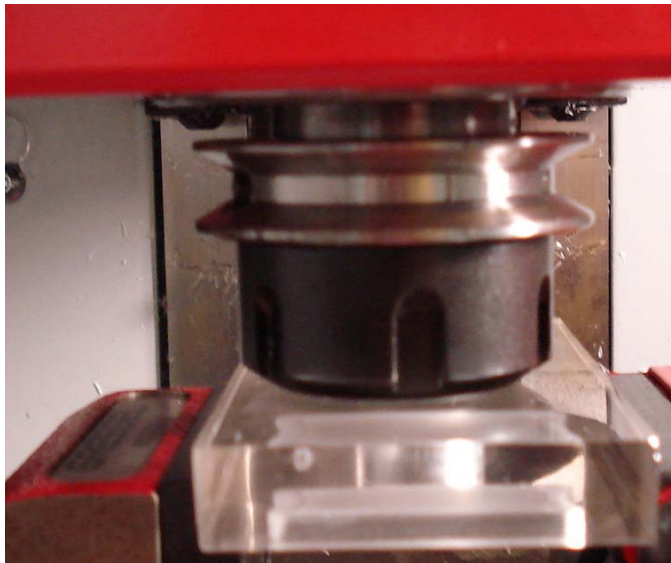
- 10) MOVE THE **TOOL** TO THE **WISE** & TOUCH **EDGE** OF THE **WISE** IN THE **X AXIS** DIRECTION
- 11) CLICK ON **CLAMPING DEVICE X DIAMOND** ICON  (THIS IS DISTANCE FROM MACHINE 0 TO WISE LOCATION IN X)
- 12) MOVE THE **TOOL** TO THE **WISE** & TOUCH FRONT **EDGE** OF THE **WISE** IN THE **Y AXIS** DIRECTION
- 13) CLICK ON **CLAMPING DEVICE Y DIAMOND** ICON  (THIS IS DISTANCE FROM MACHINE 0 TO WISE LOCATION IN Y)
- 14) THEN CLICK **OK**





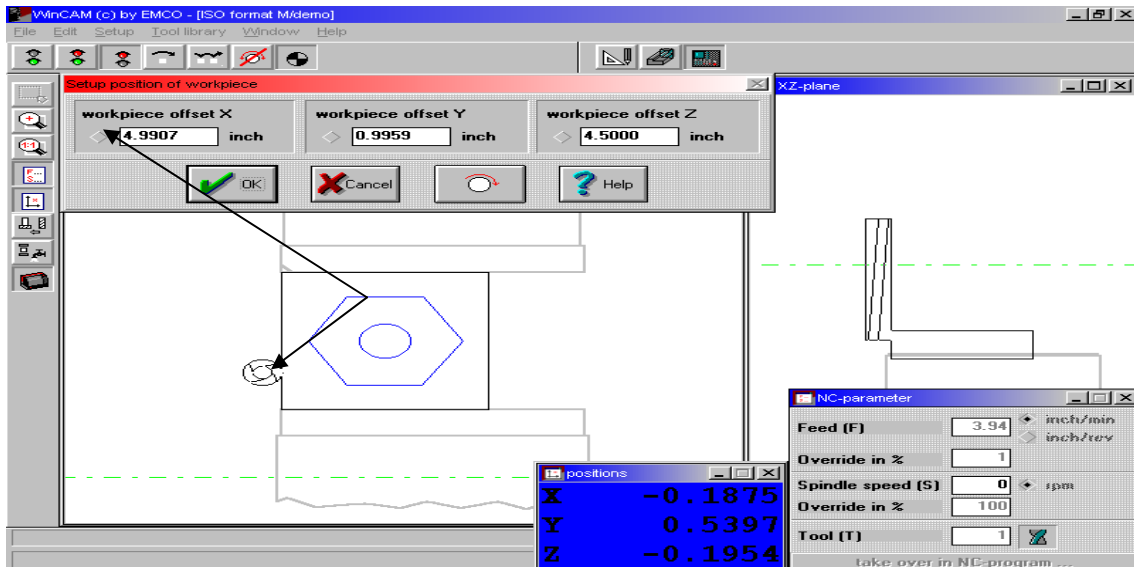
- 15) CLICK ON **TOOL CHANGE** ICON 
- 16) CLICK **T2 EMPTY** THEN CLICK **O.K.**
- 17) MOVE Z AXIS UP USING 8 ON # KEYS  
(**PLACE BLANK TOOL IN**)
- 18) CLICK ON **SETUP**
- 19) CLICK ON **DEFINE VISE POSITION**
- 20) MOVE THE **SPINDLE** TO THE **WISE** & TOUCH ON THE **TOP**  
OF THE **WISE** IN THE **Z AXIS** DIRECTION
- 21) CLICK ON **CLAMPING DEVICE Z DIAMOND** ICON  (THIS  
IS DISTANCE FROM MACHINE 0 TO VISE LOCATION IN Z)  
THEN CLICK **OK**
- 22) MOVE THE **Z AXIS** UP



- 23) CLICK ON **EDIT**
- 24) CLICK ON **MARK NC WORKPIECE**
- 25) MOVE THE **BLANK TOOL** TO THE **TOP** OF THE **WORKPIECE** & TOUCH IN THE **Z AXIS** DIRECTION
- 26) CLICK ON THE **WORKPIECE OFFSET Z DIAMOND** ICON   
(WRITE DOWN NUMBERS ON PIECE OF PAPER) CLICK **OK**

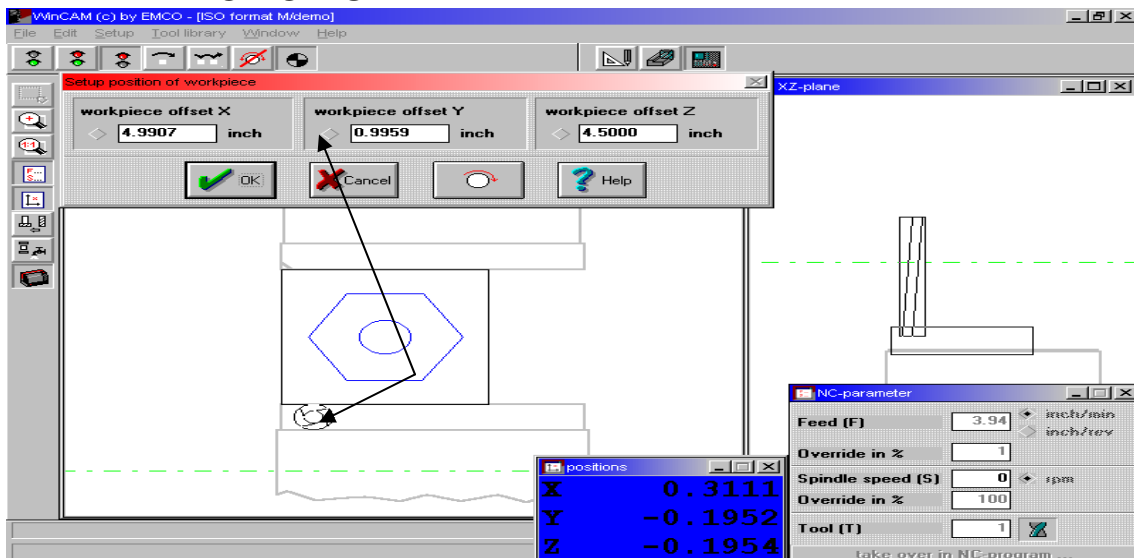


- 27) MOVE THE Z AXIS UP USING 8 ON THE # KEYS
- 28) **(PUT A 3/8 TOOL IN)**
- 29) CLICK ON **TOOL CHANGE** ICON 
- 30) CLICK GRAY BOX **T1, #3: 3/8" End Mill** THEN CLICK **O.K.**
- 31) CLICK ON **EDIT** CLICK ON **MARK NC WORKPIECE**
- 32) MOVE THE **TOOL** TO THE **WORKPIECE** & TOUCH **SIDE** OF **WORKPIECE** IN THE **X AXIS** DIRECTION
- 33) CLICK ON THE **WORKPIECE OFFSET X DIAMOND** ICON 



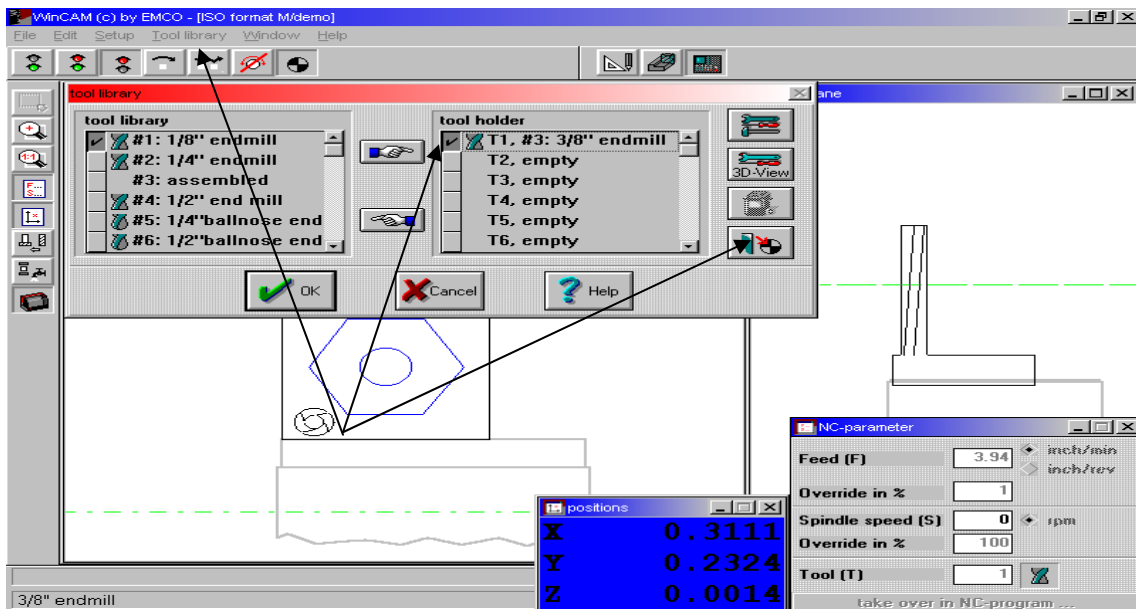
34) MOVE THE TOOL TO THE WORKPIECE & TOUCH FRONT OF WORKPIECE IN THE Y AXIS DIRECTION

35) CLICK ON WORKPIECE OFFSET Y DIAMOND ICON THEN CLICK OK

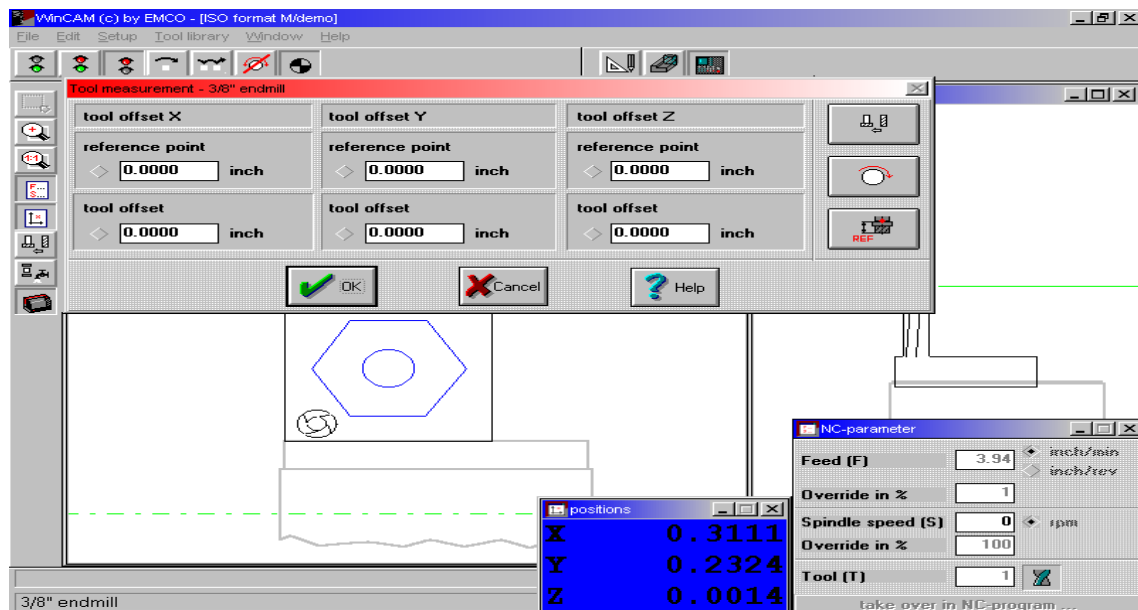



36) MOVE THE Z AXIS UP

37) CLICK ON TOOL LIBRARY CLICK ON T1 3/8 ENDMILL (UNDER TOOL HOLDER)

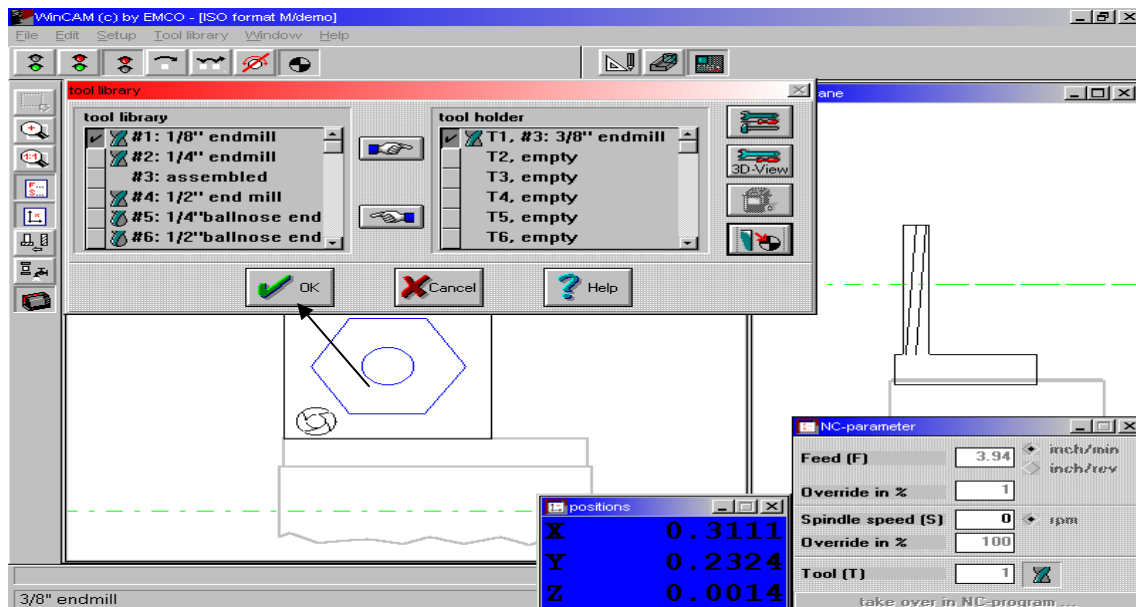
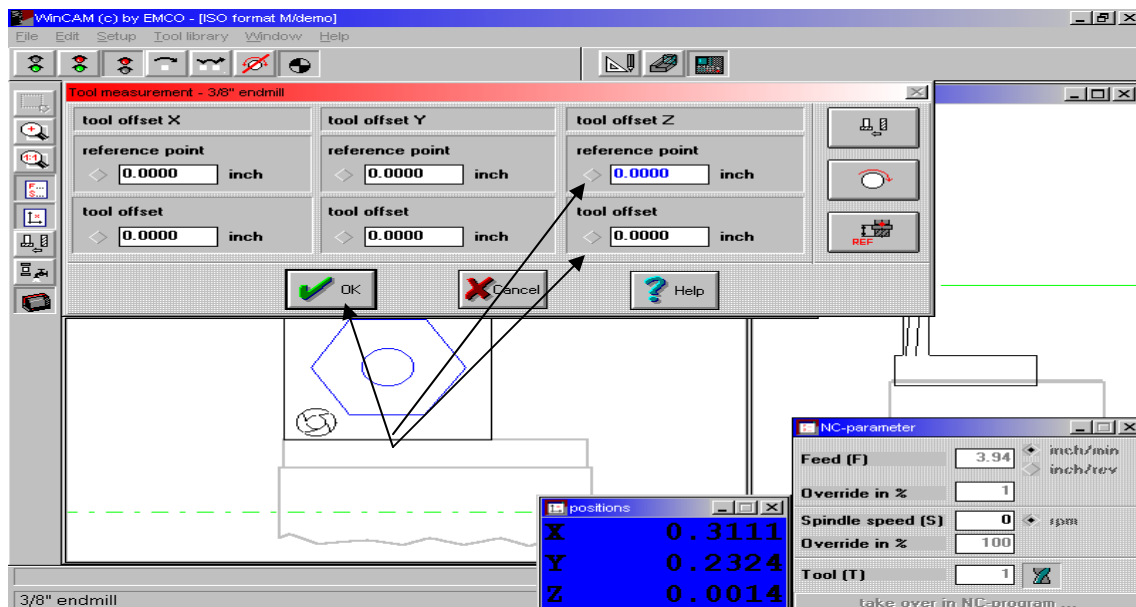


38) **CLICK ON**



- 39) HIGHLIGHT TOOL OFFSET Z REFERENCE POINT
- 40) TYPE NUMBERS IN FROM LINE 26
- 41) MOVE TOOL DOWN & TOUCH THE TOP OF THE WORKPIECE
- 42) CLICK ON THE TOOL OFFSET Z TOOL OFFSET DIAMOND ICON  CLICK OK 2 TIMES







DO STEPS 36- 42 FOR ANY OTHER TOOLS YOU WISH TO SET



NOW CLICK ON **START PROGRAM** (CYCLE START) **2 / 3**  
TIMES

**Make sure tool is in the spindle**

## NOTE

Start program _____	
Stop program (NC stop) _____	
Stop program (Reset) _____	
Skip Block (skip) _____	
Single block operation (single) _____	
Test run without main spindle (dry run) _____	
Go for Reference _____	