SNAIL HOUSING

Program	O3001
Work offset	G54
Version	3

CONTROL	FIRST TOOL	LATER IN PROGRAM	Z OFFSET AFTER MEASURING
Fanuc 0i-MC edit offset: OFFSET → WORK	**T14** 16 mm tipped cutter (16MM TIP CUTTER)	**Bullnose** after the 2nd pass	**−(reading − 0.2)** take off 0.2 less than the calipers show

A CLAMPING AND DATUM XY

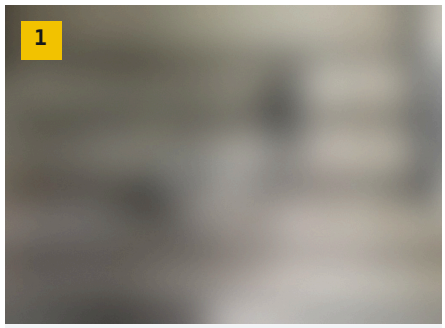
DATUM G54 · XY

Disc centre on the stud

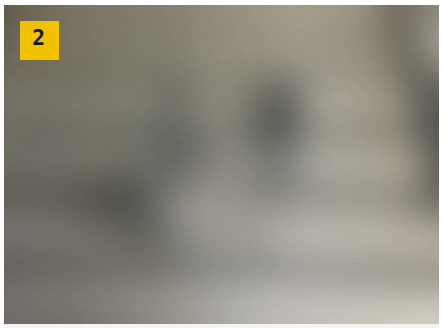
X −3 **always at the start**
take 3 off X, after picking up the disc centre

OFFSET → WORK → G54 · X → −3 → +INPUT

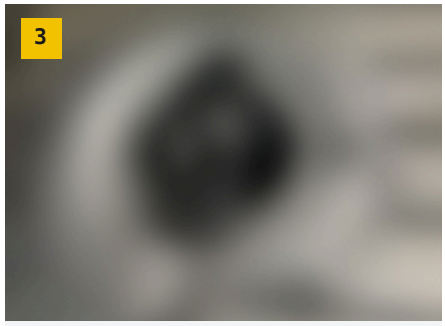




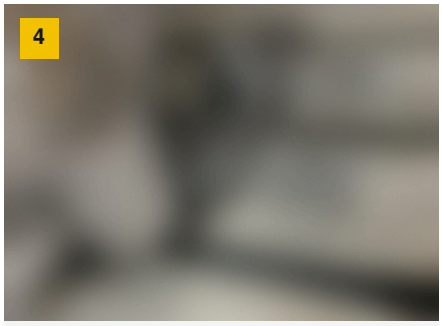
Disc on the table — datum XY at the centre of the disc, on the stud.



Centre stud — the casting goes on it by its bore.



Casting on the stud — clamp bar across the bore, flange nut.



Casting lug against the face of the clamp (on packers) — stops the casting rotating on the stud.

B SETTING Z — PAPER



T14 above the paper — set Z at this spot.

1. **Paper** in the place shown in the photo, under the T14 cutter.
2. Lower Z on the handwheel (HNDL), small steps when close to the paper. Check with the paper when the tool touches it.
3. Tool has touched the paper → **pull the paper out**.
4. **Set Z** (G54 Z) at this position.
5. **Write down the starting Z**

   OFFSET → WORK → G54 · Z

   Starting Z: _____ you go back to it in step 6 of every part

Remember: the offset from step 3 stays in G54 until you undo it. Without step 6 the next part gets its **1st pass deeper** by that offset.

CYCLE FOR EVERY PART

STEP BY STEP

Program	**O3001**
Offset	**G54 · Z**

1 1st pass

Run the program. Start: T14, 16 mm tipped cutter.

AUTO → CYCLE START

2 Measure with calipers and work out the offset

Take off **0.2 less** than the calipers show. Goal: the finished face as flat as possible, but **without cutting into the blasted surface next to it**.

Z OFFSET = −(reading − 0.2)	READING	2.1	1.5	1.25
	OFFSET	−1.9	−1.3	−1.05

3 Enter the offset in G54 Z

Cursor on Z in G54, type the value with the minus sign and add it with **+INPUT**.

OFFSET → WORK → G54 · Z → −1.9 → +INPUT

4 2nd pass

Program from the start with the new Z.

EDIT → PROGRAM → RESET → AUTO → CYCLE START

5 Continue the program — bullnose

After the 2nd pass the program carries on with the bullnose tool to the end of the program.

6 Back to the starting Z AT END OF PROGRAM

Type the full starting Z (p. 1, section B, step 5) and confirm with plain **INPUT** — it overwrites the value. Check on screen that G54 Z = starting Z.

OFFSET → WORK → G54 · Z → starting Z → INPUT

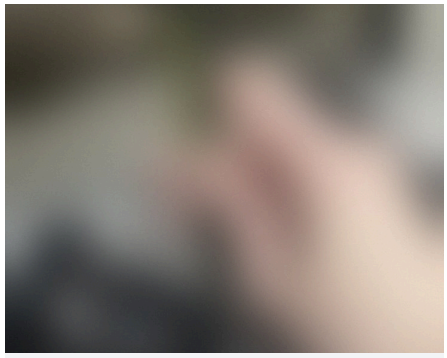
7 RESET → start a new part

Remove the part, load a new one (p. 1, photos 3–4) and go back to step 1.

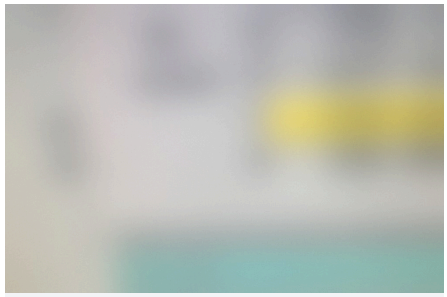
RESET → new part → step 1

INPUT OR +INPUT

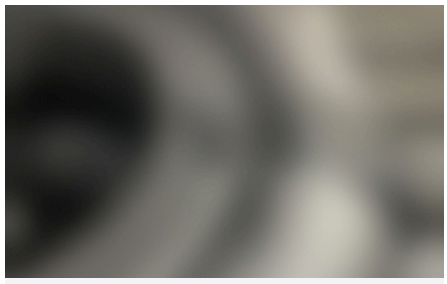
+INPUT	**adds** to the current value — step 3
INPUT	**overwrites** the value — step 6
−	minus on Z = tool lower, deeper



Step 2 — measuring with the calipers' depth rod.



Step 3 — cursor on G54 Z, −1.05 in the input line, now **+INPUT**.



Done — flat, blasted surface next to it untouched.

D LOG

PART	READING AFTER 1ST PASS	OFFSET −(READING − 0.2)	BACK TO STARTING Z ✓	NOTES
example	2.1	−1.9	✓	
			☐	
			☐	
			☐	
			☐	