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## LAMPIRAN

### Program NC

#### Program Center Drill Only

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|--|---------------------|------------------------------|
| 1. M06 T21                             | 22. G90 X67. Y-52.  | 42. G90 X82. Y-97.           |
| 2. G00 G90 G54<br>G17 G80 M03<br>S1500 | 23. G90 X82. Y-52.  | 43. G90 X67. Y-97.           |
| 3. X22. Y-22.                          | 24. G90 X97. Y-52.  | 44. G90 X52. Y-97.           |
| 4. G43 H21<br>Z100. M08                | 25. G90 X112. Y-52. | 45. G90 X37. Y-97.           |
| 5. G98 G81 Z-4.<br>Q4. R0. F75         | 26. G90 X112. Y-67. | 46. G90 X22. Y-97.           |
| 6. G90 X37. Y-22.                      | 27. G90 X97. Y-67.  | 47. G90 X22. Y-112.          |
| 7. G90 X52. Y-22.                      | 28. G90 X82. Y-67.  | 48. G90 X37. Y-112.          |
| 8. G90 X67. Y-22.                      | 29. G90 X67. Y-67.  | 49. G90 X52. Y-112.          |
| 9. G90 X82. Y-22.                      | 30. G90 X52. Y-67.  | 50. G90 X67. Y-112.          |
| 10. G90 X97. Y-22.                     | 31. G90 X37. Y-67.  | 51. G90 X82. Y-112.          |
| 11. G90 X112. Y-22.                    | 32. G90 X22. Y-67.  | 52. G90 X97. Y-112.          |
| 12. G90 X112. Y-37.                    | 33. G90 X22. Y-82.  | 53. G90 X112. Y-112.         |
| 13. G90 X97. Y-37.                     | 34. G90 X37. Y-82.  | 54. G00 G90 G80<br>Z200. M05 |
| 14. G90 X82. Y-37.                     | 35. G90 X52. Y-82.  | 55. G00 G91 G28<br>Y0.       |
| 15. G90 X67. Y-37.                     | 36. G90 X67. Y-82.  | 56. M30                      |
| 16. G90 X52. Y-37.                     | 37. G90 X82. Y-82.  |                              |
| 17. G90 X37. Y-37.                     | 38. G90 X97. Y-82.  |                              |
| 18. G90 X22. Y-37.                     | 39. G90 X112. Y-82. |                              |
| 19. G90 X22. Y-52.                     | 40. G90 X112. Y-97. |                              |
| 20. G90 X37. Y-52.                     | 41. G90 X97. Y-97.  |                              |
| 21. G90 X52. Y-52.                     |                     |                              |

### Program Chamfer Only

1. M06 T23
2. G00 G90 G54  
G17 G80 M03  
S1000
3. X22. Y-22.
4. G43 H23  
Z100. M08
5. G98 G81 Z-  
3.5 Q3.5 R0.  
F75
6. G90 X37. Y-  
22.
7. G90 X52. Y-  
22.
8. G90 X67. Y-  
22.
9. G90 X82. Y-  
22.
10. G90 X97. Y-  
22.
11. G90 X112. Y-  
22.
12. G90 X112. Y-  
37.
13. G90 X97. Y-  
37.
14. G90 X82. Y-  
37.
15. G90 X67. Y-  
37.
16. G90 X52. Y-  
37.
17. G90 X37. Y-  
37.
18. G90 X22. Y-  
37.
19. G90 X22. Y-  
52.
20. G90 X37. Y-  
52.
21. G90 X52. Y-  
52.
22. G90 X67. Y-  
52.
23. G90 X82. Y-  
52.
24. G90 X97. Y-  
52.
25. G90 X112. Y-  
52.
26. G90 X112. Y-  
67.
27. G90 X97. Y-  
67.
28. G90 X82. Y-  
67.
29. G90 X67. Y-  
67.
30. G90 X52. Y-  
67.
31. G90 X37. Y-  
67.
32. G90 X22. Y-  
67.
33. G90 X22. Y-  
82.
34. G90 X37. Y-  
82.
35. G90 X52. Y-  
82.
36. G90 X67. Y-  
82.
37. G90 X82. Y-  
82.
38. G90 X97. Y-  
82.
39. G90 X112. Y-  
82.
40. G90 X112. Y-  
97.
41. G90 X97. Y-  
97.
42. G90 X82. Y-  
97.
43. G90 X67. Y-  
97.
44. G90 X52. Y-  
97.
45. G90 X37. Y-  
97.
46. G90 X22. Y-  
97.
47. G90 X22. Y-  
112.
48. G90 X37. Y-  
112.
49. G90 X52. Y-  
112.
50. G90 X67. Y-  
112.
51. G90 X82. Y-  
112.
52. G90 X97. Y-  
112.
53. G90 X112. Y-  
112.
54. G00 G90 G80  
Z200. M05
55. G00 G91 G28  
Y0.
56. M30

### Program Drill Ø7

1. M06 T22
2. G00 G90 G54  
G17 G80 M03  
S750
3. X112. Y-112.
4. G43 H22  
Z100. M08
5. G98 G83 Z-  
13. Q1. R2.  
F75
6. G90 X97. Y-  
112.
7. G90 X82. Y-  
112.
8. G90 X67. Y-  
112.
9. G90 X52. Y-  
112.
10. G90 X37. Y-  
112.
11. G90 X22. Y-  
112.
12. G90 X22. Y-  
97.
13. G90 X37. Y-  
97.
14. G90 X52. Y-  
97.
15. G90 X67. Y-  
97.
16. G90 X82. Y-  
97.
17. G90 X97. Y-  
97.
18. G90 X112. Y-  
97.
19. G90 X112. Y-  
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20. G90 X97. Y-  
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21. G90 X82. Y-  
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22. G90 X67. Y-  
82.
23. G90 X52. Y-  
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24. G90 X37. Y-  
82.
25. G90 X22. Y-  
82.
26. G90 X22. Y-  
67.
27. G90 X37. Y-  
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28. G90 X52. Y-  
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29. G90 X67. Y-  
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30. G90 X82. Y-  
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31. G90 X97. Y-  
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32. G90 X112. Y-  
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33. G90 X112. Y-  
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34. G90 X97. Y-  
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35. G90 X82. Y-  
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36. G90 X67. Y-  
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37. G90 X52. Y-  
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38. G90 X37. Y-  
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39. G90 X22. Y-  
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40. G90 X22. Y-  
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41. G90 X37. Y-  
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42. G90 X52. Y-  
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43. G90 X67. Y-  
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44. G90 X82. Y-  
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45. G90 X97. Y-  
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46. G90 X112. Y-  
37.
47. G90 X112. Y-  
22.
48. G90 X97. Y-  
22.
49. G90 X82. Y-  
22.
50. G90 X67. Y-  
22.
51. G90 X52. Y-  
22.
52. G90 X37. Y-  
22.
53. G90 X22. Y-  
22.
54. G00 G90 G80  
Z200. M05
55. G00 G91 G28  
Y0.
56. M30
57. %

**Program Pahat Khusus**

1. M06 T24
2. G00 G90 G54 G17 G80  
M03 S1500
3. X22. Y-22.
4. G43 H24 Z100. M08
5. G98 G83 Z-13. Q3. R4. F75
6. G90 X37. Y-22.
7. G90 X52. Y-22.
8. G90 X67. Y-22.
9. G90 X82. Y-22.
10. G90 X97. Y-22.
11. G90 X112. Y-22.
12. G90 X112. Y-37.
13. G90 X97. Y-37.
14. G90 X82. Y-37.
15. G90 X67. Y-37.
16. G90 X52. Y-37.
17. G90 X37. Y-37.
18. G90 X22. Y-37.
19. G90 X22. Y-52.
20. G90 X37. Y-52.
21. G90 X52. Y-52.
22. G90 X67. Y-52.
23. G90 X82. Y-52.
24. G90 X97. Y-52.
25. G90 X112. Y-52.
26. G90 X112. Y-67.
27. G90 X97. Y-67.
28. G90 X82. Y-67.
29. G90 X67. Y-67.
30. G90 X52. Y-67.
31. G90 X37. Y-67.
32. G90 X22. Y-67.
33. G90 X22. Y-82.
34. G90 X37. Y-82.
35. G90 X52. Y-82.
36. G90 X67. Y-82.
37. G90 X82. Y-82.
38. G90 X97. Y-82.
39. G90 X112. Y-82.
40. G90 X112. Y-97.
41. G90 X97. Y-97.
  42. G90 X82. Y-97.
  43. G90 X67. Y-97.
  44. G90 X52. Y-97.
  45. G90 X37. Y-97.
46. G90 X22. Y-97.
47. G90 X22. Y-112.
48. G90 X37. Y-112.
49. G90 X52. Y-112.
50. G90 X67. Y-112.
51. G90 X82. Y-112.
52. G90 X97. Y-112.
53. G90 X112. Y-112.
54. G00 G90 G80 Z200. M05
55. G00 G91 G28 Y0.
56. M30
  
57. %

### **Program Metode 1**

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X22. Y-22.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X22. Y-22.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X22. Y-22.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X52. Y-22.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X52. Y-22.  
G43 H22 Z50. M08

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X67. Y-22.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X67. Y-22.  
G43 H22 Z50. M08

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X82. Y-22.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X37. Y-22.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
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G43 H22 Z50. M08  
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M06 T23  
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X37. Y-22.  
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G98 G83 Z-13. Q1. R2. F75  
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M06 T23  
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G98 G83 Z-13. Q1. R2. F75  
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M06 T22  
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X82. Y-22.  
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M06 T23  
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M06 T22  
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M06 T21  
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M06 T22



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M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X52. Y-52.

G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X67. Y-52.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X67. Y-52.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X67. Y-52.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X82. Y-52.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X82. Y-52.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X82. Y-52.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X97. Y-52.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75

G00 G90 G80 Z100. M05

M06 T22

G00 G90 G54 G17 G80 M03 S750

X97. Y-52.

G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75

G00 G90 G80 Z100. M05

M06 T23

G00 G90 G54 G17 G80 M03 S1000

X97. Y-52.

G43 H23 Z50. M08

G98 G81 Z-3.5 Q3.5 R0. F100

G00 G90 G80 Z100. M05

M06 T21

G00 G90 G54 G17 G80 M03 S1500

X112. Y-52.

G43 H21 Z50. M08

G98 G81 Z-4. Q4. R0. F75

G00 G90 G80 Z100. M05

M06 T22

G00 G90 G54 G17 G80 M03 S750

X112. Y-52.

G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75

G00 G90 G80 Z100. M05

M06 T23

G00 G90 G54 G17 G80 M03 S1000

X112. Y-52.

G43 H23 Z50. M08

G98 G81 Z-3.5 Q3.5 R0. F100

G00 G90 G80 Z100. M05

M06 T21

G00 G90 G54 G17 G80 M03 S1500

X112. Y-67.

G43 H21 Z50. M08

G98 G81 Z-4. Q4. R0. F75

G00 G90 G80 Z100. M05

M06 T22

G00 G90 G54 G17 G80 M03 S750

X112. Y-67.

G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75

G00 G90 G80 Z100. M05

M06 T23

G00 G90 G54 G17 G80 M03 S1000

X112. Y-67.

G43 H23 Z50. M08

G98 G81 Z-3.5 Q3.5 R0. F100

G00 G90 G80 Z100. M05

M06 T21

G00 G90 G54 G17 G80 M03 S1500

X97. Y-67.

G43 H21 Z50. M08

G98 G81 Z-4. Q4. R0. F75

G00 G90 G80 Z100. M05

M06 T22

G00 G90 G54 G17 G80 M03 S750

X97. Y-67.

G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75

G00 G90 G80 Z100. M05

M06 T23

G00 G90 G54 G17 G80 M03 S1000

X97. Y-67.

G43 H23 Z50. M08

G98 G81 Z-3.5 Q3.5 R0. F100

G00 G90 G80 Z100. M05

M06 T21

G00 G90 G54 G17 G80 M03 S1500

X82. Y-67.

G43 H21 Z50. M08

G98 G81 Z-4. Q4. R0. F75

G00 G90 G80 Z100. M05

M06 T22

G00 G90 G54 G17 G80 M03 S750

X82. Y-67.

G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75

G00 G90 G80 Z100. M05

M06 T23

G00 G90 G54 G17 G80 M03 S1000

X82. Y-67.

G43 H23 Z50. M08

G98 G81 Z-3.5 Q3.5 R0. F100

G00 G90 G80 Z100. M05

M06 T21

G00 G90 G54 G17 G80 M03 S1500

X67. Y-37.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X67. Y-67.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X67. Y-67.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X52. Y-67.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X52. Y-67.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X52. Y-67.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X37. Y-67.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X37. Y-67.  
G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X37. Y-67.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X22. Y-67.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X22. Y-67.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X22. Y-67.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X22. Y-82.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X22. Y-82.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
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X22. Y-82.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
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X37. Y-82.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
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X37. Y-82.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
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M06 T23  
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X37. Y-82.  
G43 H23 Z50. M08  
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G00 G90 G80 Z100. M05

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X52. Y-82.  
G43 H22 Z50. M08  
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X52. Y-82.  
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M06 T22

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X67. Y-82.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
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M06 T23  
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X67. Y-82.  
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G00 G90 G80 Z100. M05

M06 T21  
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X82. Y-82.  
G43 H21 Z50. M08  
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M06 T22  
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M06 T22  
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M06 T23  
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X112. Y-82.  
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M06 T21  
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X112. Y-97.  
G43 H21 Z50. M08  
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M06 T22  
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X112. Y-97.  
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M06 T23  
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X112. Y-97.  
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M06 T21  
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X97. Y-97.  
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M06 T22  
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X97. Y-97.  
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M06 T23  
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X97. Y-97.  
G43 H23 Z50. M08  
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G00 G90 G80 Z100. M05

M06 T21  
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X82. Y-97.  
G43 H21 Z50. M08  
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M06 T22  
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X82. Y-97.  
G43 H22 Z50. M08  
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M06 T23  
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X82. Y-97.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X67. Y-97.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X67. Y-97.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X67. Y-97.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
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M06 T21  
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X52. Y-97.  
G43 H21 Z50. M08  
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M06 T22  
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X52. Y-97.  
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M06 T23  
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X52. Y-97.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X37. Y-97.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X37. Y-97.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X37. Y-97.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500

X22. Y-97.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X22. Y-97.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X22. Y-97.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X22. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X22. Y-112.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
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X22. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
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X37. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
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X37. Y-112.  
G43 H22 Z50. M08

G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
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X37. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
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X52. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
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X52. Y-112.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X52. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X67. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X67. Y-112.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X67. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X82. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X82. Y-112.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X82. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X97. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S750  
X97. Y-112.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X97. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X112. Y-112.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22

G00 G90 G54 G17 G80 M03 S750  
X112. Y-112.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q1. R2. F75  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X112. Y-112.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05  
G00 G91 G28 Y0.  
M30  
%



## Program Metode 2

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X22. Y-22.

G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S825  
X22. Y-22.

G43 H22 Z50. M08  
G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X22. Y-22.

G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X37. Y-22.

G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S825  
X37. Y-22.

G43 H22 Z50. M08  
G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X37. Y-22.

G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X52. Y-22.

G43 H21 Z50. M08

G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S825  
X52. Y-22.

G43 H22 Z50. M08  
G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
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X52. Y-22.

G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
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X67. Y-22.

G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
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X67. Y-22.

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G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
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G00 G90 G80 Z100. M05

M06 T21  
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G00 G90 G80 Z100. M05

M06 T23  
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G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
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G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
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G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

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G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

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G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

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G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

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G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

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G00 G90 G80 Z100. M05

M06 T22  
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G98 G81 Z-4. Q4. R0. F75  
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M06 T22  
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G98 G83 Z-13. Q2. R3. F82.5  
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G00 G90 G80 Z100. M05

M06 T22  
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G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
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X22. Y-82.  
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G98 G81 Z-3.5 Q3.5 R0. F100  
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X37. Y-82.  
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X112. Y-82.

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G00 G90 G80 Z100. M05

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X112. Y-97.

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G98 G81 Z-4. Q4. R0. F75

G00 G90 G80 Z100. M05

M06 T22

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X112. Y-97.

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G00 G90 G80 Z100. M05

M06 T23



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G00 G90 G80 Z100. M05

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G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
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G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
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G00 G90 G80 Z100. M05

M06 T21  
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X82. Y-97.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S825  
X82. Y-97.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
G00 G90 G54 G17 G80 M03 S1000  
X82. Y-97.  
G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05

M06 T21  
G00 G90 G54 G17 G80 M03 S1500  
X67. Y-97.  
G43 H21 Z50. M08  
G98 G81 Z-4. Q4. R0. F75  
G00 G90 G80 Z100. M05

M06 T22  
G00 G90 G54 G17 G80 M03 S825  
X67. Y-97.  
G43 H22 Z50. M08  
G98 G83 Z-13. Q2. R3. F82.5  
G00 G90 G80 Z100. M05

M06 T23  
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X67. Y-97.  
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G00 G90 G80 Z100. M05

M06 T21  
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G00 G90 G80 Z100. M05

M06 T22  
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G00 G90 G80 Z100. M05

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X52. Y-97.  
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X97. Y-112.  
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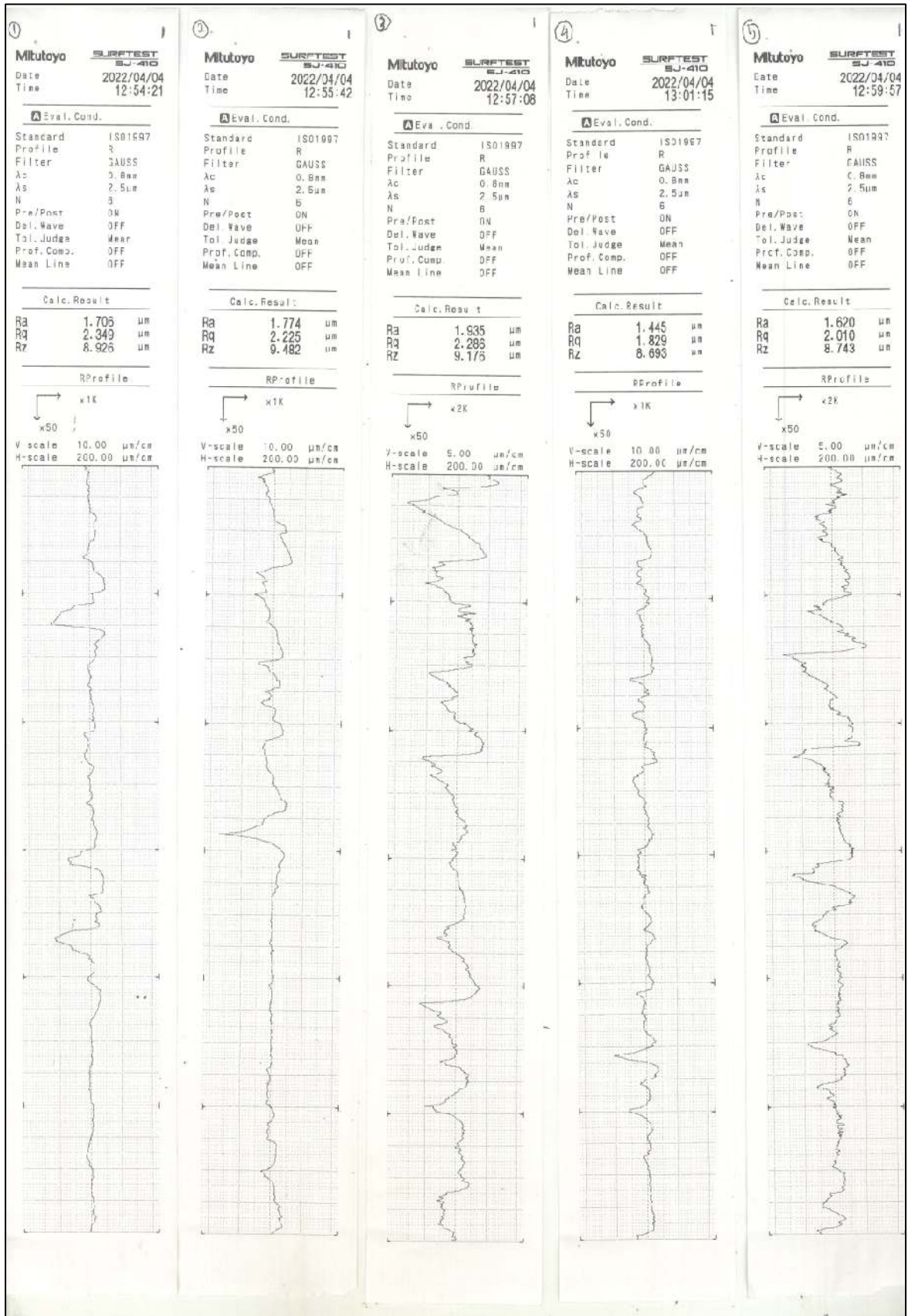
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G98 G83 Z-13. Q2. R3. F82.5  
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G43 H23 Z50. M08  
G98 G81 Z-3.5 Q3.5 R0. F100  
G00 G90 G80 Z100. M05  
G00 G91 G28 Y0.

M30  
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# Pengukuran Kekhalusan Permukaan Metode 1



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 Time 13:03:20

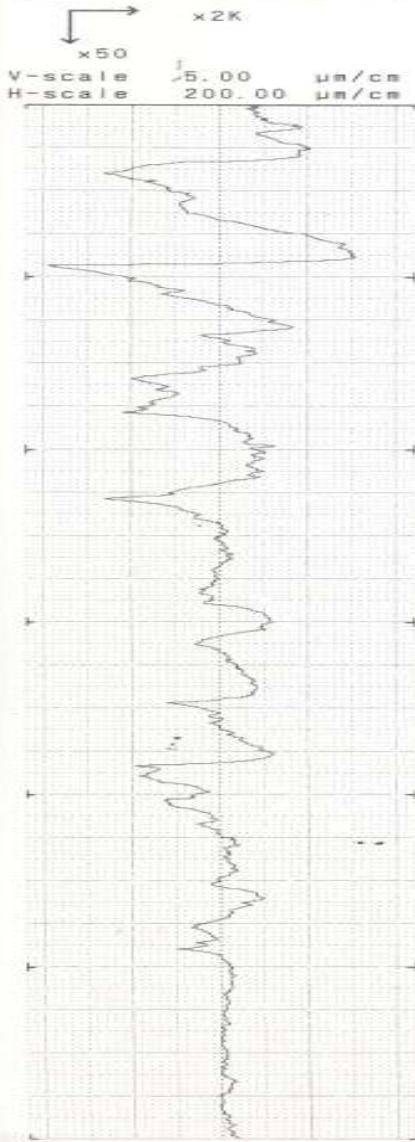
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Standard ISO1997  
 Profile R  
 Filter GAUSS  
 λc 0.8mm  
 λs 2.5um  
 N 6  
 Pre/Post ON  
 Del. Wave OFF  
 Tol. Judge Mean  
 Prof. Comp. OFF  
 Mean Line OFF

Calc. Result

Ra 1.712 um  
 Rq 2.070 um  
 Rz 8.549 um

RProfile



Mitutoyo SURFTTEST SJ-410  
 Date 2022/04/04  
 Time 13:07:14

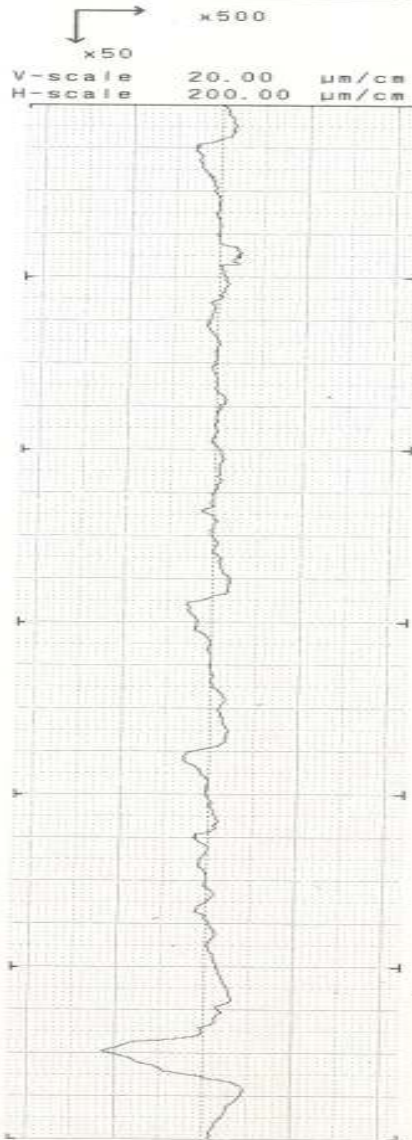
Eval. Cond.

Standard ISO1997  
 Profile R  
 Filter GAUSS  
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 λs 2.5um  
 N 6  
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 Tol. Judge Mean  
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 Mean Line OFF

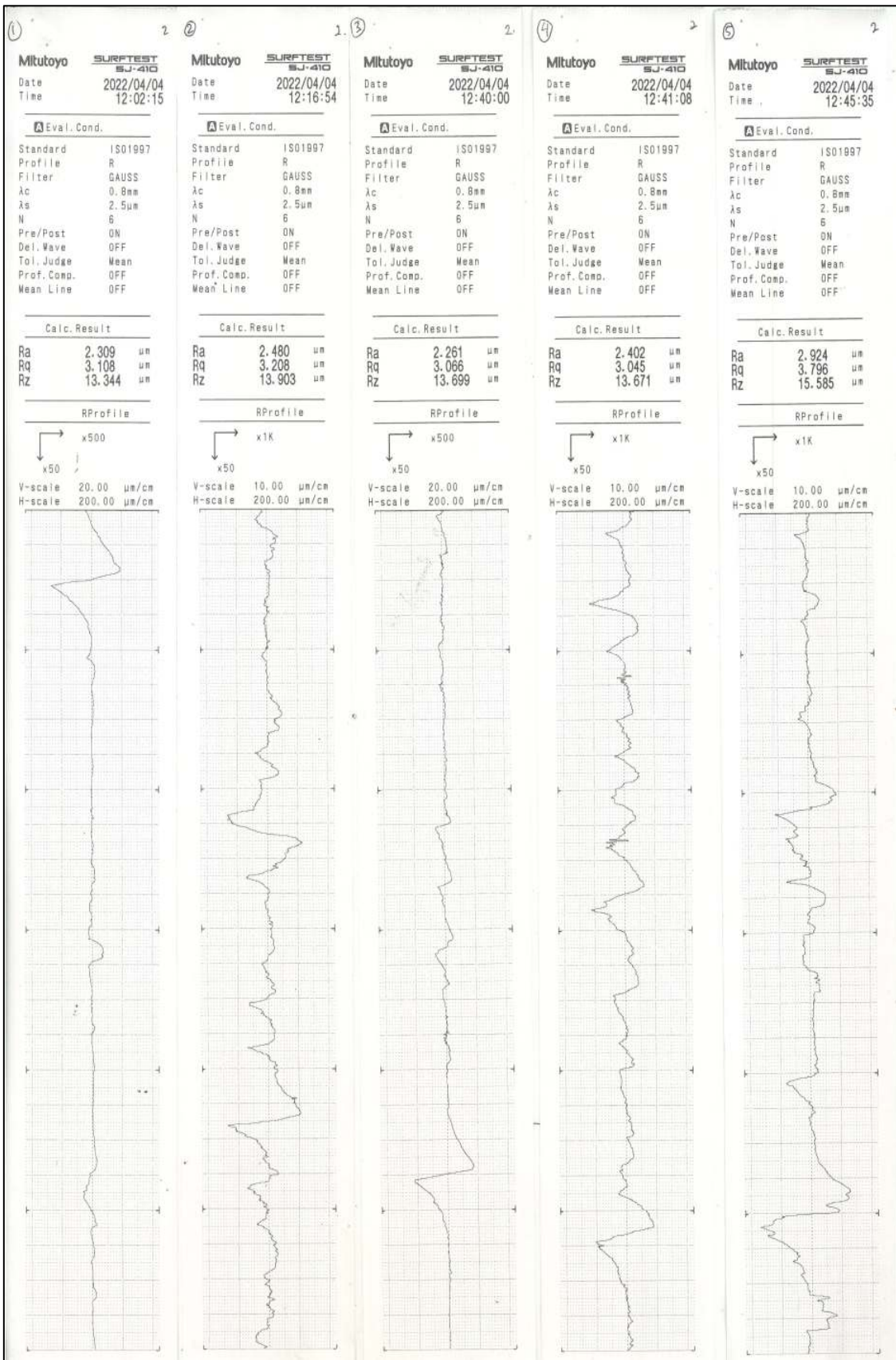
Calc. Result

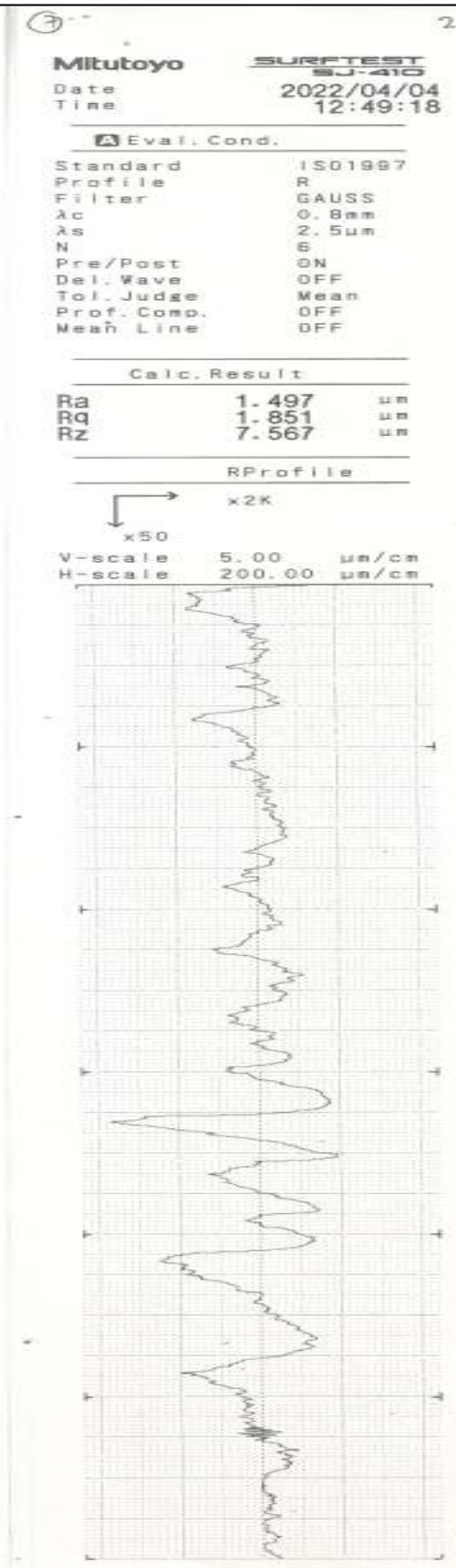
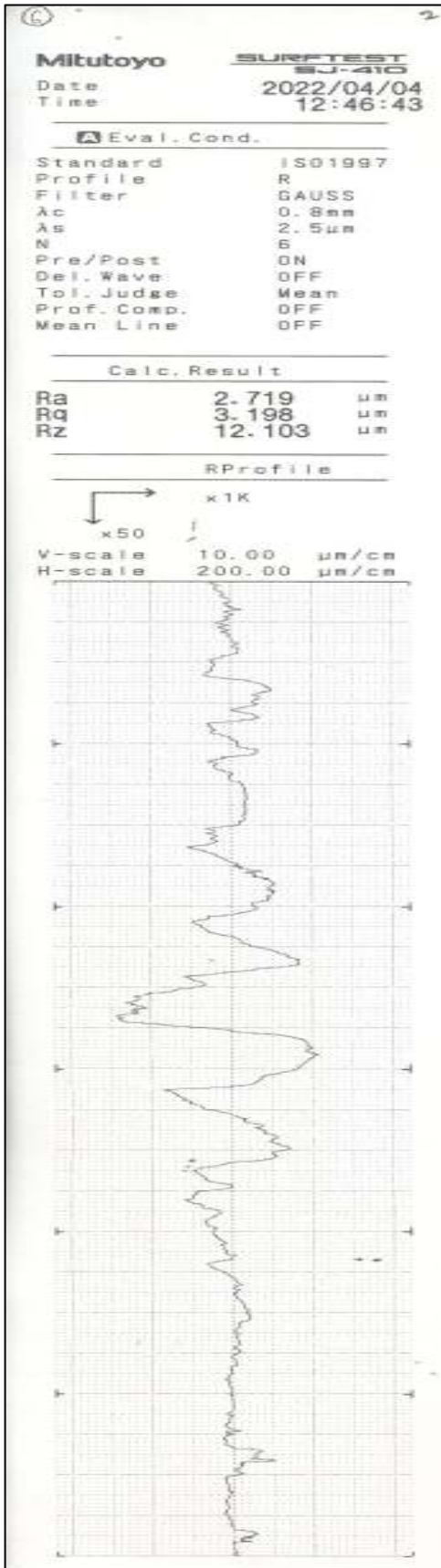
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 Rz 12.574 um

RProfile









### Pengukuran Kekhalusan Permukaan Metode 3

