



Estructuras del Programa fresadora CNC

Estructura de un programa sin ciclos

N10 G90 G80 G49 G40 G21 G17

N20 G91 G28 Z0.

N30 T01 M06

N40 S2000 M03

N50 G90 G54

N60 G00 X... Y....

N70 G43 H1 Z25. M08

N80 G00 Z0.

N90 G01 Z-.... F500.

N100 G01 G41/G42 D12 X.... Y....

N

N

N

N

} Perfil a mecanizar N

N140 G01 G40 X.... Y....

N150 G00 Z25. M09

N160 M05

N170 G91 G28 Z0.

N180 G91 G28 X0. (opcional por si existe una hta. larga)

N190 T02 M06

N200 S2000 M03

N210 G90 G54

N220 G00 X... Y....

N230 G43 H2 Z25. M08

N240 G00 Z0.

N250 G01 Z-.... F500.

N260 G01 G41/G42 D12 X.... Y....

N
N
N
N

} Perfil a mecanizar N

N300 G01 G40 X.... Y....

310 G00 Z25. M09

N320 M05

N330 G91 G28 Z0.

N340 G91 G28 Y0.

N350 M30/M02

Estructura de un programa con ciclos

N10 G90 G80 G49 G40 G21 G17

N20 G91 G28 Z0.

N30 T01 M06

N40 S2000 M03

N50 G90 G54

N60 G00 X... Y....

N70 G43 H1 Z25. M08

N80 G00 Z5.

N100 G98/G99 G81 X... Y... Z... R... F.... (G81 ciclo de punzonado)

X... Y...

X... Y...

X... Y...

G80

N150 G00 Z25. M09

N160 M05

N170 G91 G28 Z0.

N180 G91 G28 X0. (opcional por si existe una hta. larga)

N190 T02 M06

N200 S2000 M03

N210 G90 G54

N230 G43 H2 Z25. M08

N240 G00 Z0.

N100 G98/G99 G83 X... Y... Z... R... Q... F.... (G83 ciclo de taladrado)

X... Y...

X... Y...

X... Y...

G80

N310 G00 Z25. M09

N320 M05

N330 G91 G28 Z0.

N340 G91 G28 Y0.

N350 M30/M02

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Estructura de un programa con subprogramas

Programa principal

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O204

N10 G90 G80 G49 G40 G21 G17

N15 G91 G28 Z0.

N20 T01 M06 (FRESA Ø 20MM)

N25 S2000 M03

N26 G90 G54

N27 G00 X-83. Y0.

N28 G43 H1 Z25. M08

N29 G00 Z0.

N30 G01 Z-1. F1300

N35 G01 X-63.5 Y0.

N40 G01 X-63.5 Y-45.25

N45 G01 X63.5 Y-45.25

N50 G01 X63.5 Y45.25

N55 G01 X-63.5 Y45.25

N60 G01 X-63.5 Y-3.25

N65 G01 X53.5 Y-3.25

N70 G01 X53.5 Y3.25

N75 G01 X-63.5 Y3.25

N80 G00 Z3.

N85 G00 X-21.25 Y60.

N90 G00 Z-1.

N95 G01 X-21.25 Y0.

N100 G00 Z3.

N105 G00 X21.25 Y60.

N110 G00 Z-1.

N115 G01 X21.25 Y0.

N120 G91 G28 Z0.

N125 T02 M06 (FRESA Ø 14MM)

N130 S2500 M03

N135 G90 G54

N136 G00 X-42.5 Y63.

N137 G43 H1 Z25. M08

N138 G00 Z0.

N140 M98 P010205

N145 G90 G00 X0. Y63.

N150 G00 Z0.

N155 M98 P010205

N160 G90 G00 X42.5 Y63.

N165 G00 Z0.

N170 M98 P010205

N175 G90 G00 X-30. Y-63.

N180 G00 Z0.

N185 M98 P010206

N190 G90 G00 X30. Y-63.

N195 G00 Z0.

N200 M98 P010206

N210 G90 G00 Z25. M09

N220 M05

N230 G91 G28 Z0.

N240 G91 G28 Y0.

N250 M30/M02

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Subprograma del cuadrado

%

O205

N5 G91 G01 Z-1. F1300.

N10 G01 G41 X0. Y-28.75 D12

N15 G01 X10. Y0.

N20 G01 X0. Y-20.

N25 G01 X-20. Y0.

N30 G01 X0. Y20.

N35 G01 X12. Y0.

N40 G01 G40 X-2. Y28.75

N45 G00 Z5.

N50 M99

%

Subprograma del oblongo

%

O206

N5 G91 G01 Z-1. F1300.

N10 G01 G42 X0. Y28.75 D12

N15 G01 X12.5 Y0.

N20 G03 X0. Y20. R10.

N25 G01 X-25. Y0.

N30 G03 X0. Y-20. R10.

N35 G01 X15. Y0.

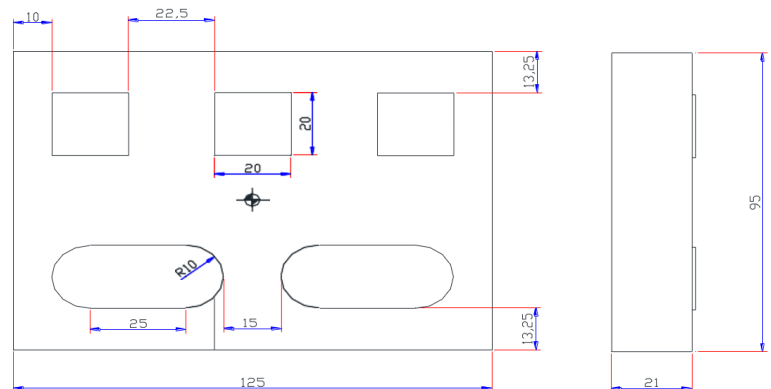
N40 G01 G40 X-2.5 Y-28.75

N45 G00 Z5.

N50 M99

%

Ejercicio # 6
Sub. Programas - Hta. de Desbaste y Acabado



Ejemplo #2

Programa principal y subprograma

%O1302

G90 G80 G49 G40 G21 G17

G28 G91 Z0.0

T01 M06

G54 G90

S4000 M3

G00 X0. Y0.

G00 G43 H01 Z50.

G00 X-70. Y70.

G00 Z0.

M98 P120001

G00 Z5.

G00 X70. Y-22.

G00 Z0.

M98 P060002

G00 Z5.

G00 X-70. Y-16.98

G00 Z0.

M98 P120003

G00 Z50.

G91 G28 Z0.

T02 M06

S4000 M03

G00 G90 G54 X-70. Y70.

G00 G43 H2 Z5.

G01 Z-6. F1440.

G01 G41 D12 X-70. Y45.

G01 X29. Y45.

G02 X45. Y29. I0. J-16.

G01 X45. Y-22.

G02 X13.08 Y-20.39 I-16. J0.

G03 X-22. Y17. I-33.83 J3.41

G02 X-22. Y45. I0. J14.

G01 G40 X-22. Y70.

G00 Z5.

G00 X-70. Y16.98

G00 Z-6.

G01 G41 D12 X-31.75 Y-16.98

G02 X-31.75 Y-16.98 I-11 J0.

G01 G40 X-70. Y-16.98 M09

G00 Z5.

G91 G28 Z0.

G91 G28 Y0.

M02

%

%O0001

G91 G01 Z-.5 F3000 M08

G90 G41 D11 G01 X-70. Y 45.

G01 X29. Y45.

G02 X45. Y29. I0. J-16.

G01 X45. Y-38.

G01 X-36. Y-38.

G01 X-36. Y70.

G01 G40 X-70. Y70.M09

M99

%O0002

G91 G01 Z-.5 F3000 M08

G90 G41 D11 G01 X45. Y 22.

G02 X13.08 Y-20.39 I-16. J0.

G03 X-22. Y17. I-33.83 J3.41

G02 X-22. Y45.I0. J14.

G01 G40 X-22. Y70.

G91 Z-.5

G90 G01 G42 D11 X-22 Y45.

G03 X-22. Y17. I0. J-14.

G02 X13.08 Y-20.39 I1.25 J-34.

G03 X45. Y-22. I15.92 J-1.61

G01 G40 X70. Y-22. M09

M99

%O0003

G91 G01 Z-.5 F3000 M08

G90 G41 D11 G01 X-31.75 Y -16.98

G02 X-31.75 Y-16.98 I11. J0.

G01 G40 X-70. Y-16.98 M09

M99

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