

Řídicí programy pro obrábění segmentů kol záchranářského robota Orpheus

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Vrtání děr ϕ 6 mm

[zpět](#)

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0 BEGIN PGM 91 MM
1 BLK FORM 0.1 Z X+0 Y-115 Z-50
2 BLK FORM 0.2 X+200 Y+115 Z+0
3 TOOL DEF 1 L+0 R+3
4 TOOL CALL 1 Z S4000
5 L X+0 Y+0 Z+35 R0 FMAX M3 M8
6 CYCL DEF 200 VRTANI ~
  Q200 = 15 ;BEZPEC. VZDALENOST ~
  Q201 = -29 ;HLOUBKA ~
  Q206 = 300 ;POSUV NA HLOUBKU ~
  Q202 = 15 ;HLOUBKA PRISUVU ~
  Q210 = 0 ;CAS.PRODLEVA NAHORE ~
  Q203 = +0 ;SOURADNICE POVRCHU ~
  Q204 = 35 ;2. BEZPEC.VZDALENOST
7 L X+52 Y+0 Z+35 R0 FMAX
8 CYCL CALL
9 L X+51.56 Y-6.97 R0 FMAX
10 CYCL CALL
11 L X+50.19 Y-13.6 R0 FMAX
12 CYCL CALL
13 L X+56.26 Y-18.01 R0 FMAX
14 CYCL CALL
15 L X+62.33 Y-22.42 R0 FMAX
16 CYCL CALL
17 L X+68.39 Y-26.82 R0 FMAX
18 CYCL CALL
19 L X+74.46 Y-31.23 R0 FMAX
20 CYCL CALL
21 L X+80.53 Y-35.64 R0 FMAX
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22 CYCL CALL
23 L X+86.6 Y-40.05 R0 FMAX
24 CYCL CALL
25 L X+92.66 Y-44.46 R0 FMAX
26 CYCL CALL
27 L X+98.73 Y-48.87 R0 FMAX
28 CYCL CALL
29 L X+104.8 Y-53.27 R0 FMAX
30 CYCL CALL
31 L X+110.87 Y-57.68 R0 FMAX
32 CYCL CALL
33 L X+116.93 Y-62.09 R0 FMAX
34 CYCL CALL
35 L X+123 Y-66.5 R0 FMAX
36 CYCL CALL
37 L X+129.07 Y-70.91 R0 FMAX
38 CYCL CALL
39 L X+135.14 Y-75.32 R0 FMAX
40 CYCL CALL
41 L X+141.2 Y-79.72 R0 FMAX
42 CYCL CALL
43 L X+147.27 Y-84.13 R0 FMAX
44 CYCL CALL
45 L X+152.57 Y-79.42 R0 FMAX
46 CYCL CALL
47 L X+155.88 Y-72.69 R0 FMAX
48 CYCL CALL
49 L X+158.91 Y-65.82 R0 FMAX
50 CYCL CALL
51 L X+161.63 Y-58.83 R0 FMAX
52 CYCL CALL
53 L X+164.04 Y-51.72 R0 FMAX
54 CYCL CALL
55 L X+166.14 Y-44.52 R0 FMAX
56 CYCL CALL
57 L X+167.92 Y-37.23 R0 FMAX
58 CYCL CALL
59 L X+169.39 Y-29.87 R0 FMAX
60 CYCL CALL
61 L X+170.53 Y-22.45 R0 FMAX
62 CYCL CALL
63 L X+171.35 Y-14.99 R0 FMAX
64 CYCL CALL
65 L X+171.84 Y-7.5 R0 FMAX
66 CYCL CALL
67 L X+172 Y+0 R0 FMAX
68 CYCL CALL
69 L X+171.84 Y+7.5 R0 FMAX
70 CYCL CALL
71 L X+171.35 Y+14.99 R0 FMAX

72 CYCL CALL
73 L X+170.53 Y+22.45 R0 FMAX
74 CYCL CALL
75 L X+169.39 Y+29.87 R0 FMAX
76 CYCL CALL
77 L X+167.92 Y+37.23 R0 FMAX
78 CYCL CALL
79 L X+166.14 Y+44.52 R0 FMAX
80 CYCL CALL
81 L X+164.04 Y+51.72 R0 FMAX
82 CYCL CALL
83 L X+161.63 Y+58.83 R0 FMAX
84 CYCL CALL
85 L X+158.91 Y+65.82 R0 FMAX
86 CYCL CALL
87 L X+155.88 Y+72.69 R0 FMAX
88 CYCL CALL
89 L X+152.57 Y+79.42 R0 FMAX
90 CYCL CALL
91 L X+147.27 Y+84.13 R0 FMAX
92 CYCL CALL
93 L X+141.2 Y+79.72 R0 FMAX
94 CYCL CALL
95 L X+135.14 Y+75.32 R0 FMAX
96 CYCL CALL
97 L X+129.07 Y+70.91 R0 FMAX
98 CYCL CALL
99 L X+123 Y+66.5 R0 FMAX
100 CYCL CALL
101 L X+116.93 Y+62.09 R0 FMAX
102 CYCL CALL
103 L X+110.87 Y+57.68 R0 FMAX
104 CYCL CALL
105 L X+104.8 Y+53.27 R0 FMAX
106 CYCL CALL
107 L X+98.73 Y+48.87 R0 FMAX
108 CYCL CALL
109 L X+92.66 Y+44.46 R0 FMAX
110 CYCL CALL
111 L X+86.6 Y+40.05 R0 FMAX
112 CYCL CALL
113 L X+80.53 Y+35.64 R0 FMAX
114 CYCL CALL
115 L X+74.46 Y+31.23 R0 FMAX
116 CYCL CALL
117 L X+68.39 Y+26.82 R0 FMAX
118 CYCL CALL
119 L X+62.33 Y+22.42 R0 FMAX
120 CYCL CALL
121 L X+56.26 Y+18.01 R0 FMAX

122 CYCL CALL
123 L X+50.19 Y+13.6 R0 FMAX
124 CYCL CALL
125 L X+51.56 Y+6.79 R0 FMAX
126 CYCL CALL
127 L X+51.56 Y+6.79 Z+35 R0 FMAX
128 L X+0 Y+0 Z+35 R0 FMAX M30
129 END PGM 91 MM

Frézování můstků mezi vrtanými otvory frézou $\phi 10\text{mm}$

[zpět](#)

0 BEGIN PGM 92 MM
1 BLK FORM 0.1 Z X+0 Y-115 Z-50
2 BLK FORM 0.2 X+200 Y+115 Z+0
3 TOOL DEF 1 L+0 R+5
4 TOOL CALL 1 Z S3500
5 L X+0 Y+0 Z+35 R0 FMAX M3 M8
6 CYCL DEF 200 VRTANI ~
Q200 = 15 ;BEZPEC. VZDALENOST ~
Q201 = -24 ;HLOUBKA ~
Q206 = 250 ;POSUV NA HLOUBKU ~
Q202 = 25 ;HLOUBKA PRISUVU ~
Q210 = 0 ;CAS.PRODLEVA NAHORE ~
Q203 = +0 ;SOURADNICE POVRCHU ~
Q204 = 35 ;2. BEZPEC.VZDALENOST
7 L X+52 Y+0 Z+35 R0 FMAX
8 CYCL CALL
9 L X+50.19 Y-13.6 R0 FMAX
10 CYCL CALL
11 L X+62.33 Y-22.42 R0 FMAX
12 CYCL CALL
13 L X+74.46 Y-31.23 R0 FMAX
14 CYCL CALL
15 L X+86.6 Y-40.05 R0 FMAX
16 CYCL CALL
17 L X+98.73 Y-48.87 R0 FMAX
18 CYCL CALL
19 L X+110.87 Y-57.68 R0 FMAX
20 CYCL CALL
21 L X+123 Y-66.5 R0 FMAX
22 CYCL CALL
23 L X+135.14 Y-75.32 R0 FMAX
24 CYCL CALL
25 L X+147.27 Y-84.13 R0 FMAX
26 CYCL CALL
27 L X+155.88 Y-72.69 R0 FMAX
28 CYCL CALL
29 L X+161.63 Y-58.83 R0 FMAX
30 CYCL CALL
31 L X+166.14 Y-44.52 R0 FMAX

32 CYCL CALL
33 L X+169.39 Y-29.87 R0 FMAX
34 CYCL CALL
35 L X+171.35 Y-14.99 R0 FMAX
36 CYCL CALL
37 L X+172 Y+0 R0 FMAX
38 CYCL CALL
39 L X+171.35 Y+14.99 R0 FMAX
40 CYCL CALL
41 L X+169.39 Y+29.87 R0 FMAX
42 CYCL CALL
43 L X+166.14 Y+44.52 R0 FMAX
44 CYCL CALL
45 L X+161.63 Y+58.83 R0 FMAX
46 CYCL CALL
47 L X+155.88 Y+72.69 R0 FMAX
48 CYCL CALL
49 L X+147.27 Y+84.13 R0 FMAX
50 CYCL CALL
51 L X+135.14 Y+75.32 R0 FMAX
52 CYCL CALL
53 L X+123 Y+66.5 R0 FMAX
54 CYCL CALL
55 L X+110.87 Y+57.68 R0 FMAX
56 CYCL CALL
57 L X+98.73 Y+48.87 R0 FMAX
58 CYCL CALL
59 L X+86.6 Y+40.05 R0 FMAX
60 CYCL CALL
61 L X+74.46 Y+31.23 R0 FMAX
62 CYCL CALL
63 L X+62.33 Y+22.42 R0 FMAX
64 CYCL CALL
65 L X+50.19 Y+13.6 R0 FMAX
66 CYCL CALL
67 L X+50.19 Y+13.6 Z+35 R0 FMAX
68 L X+0 Y+0 Z+35 R0 FMAX M30
69 END PGM 92 MM

Hrubování rádiusu R10

[zpět](#)

0 BEGIN PGM 93 MM
1 BLK FORM 0.1 Z X+0 Y-120 Z-50
2 BLK FORM 0.2 X+200 Y+120 Z+0
3 TOOL DEF 1 L+0 R+10
4 TOOL CALL 1 Z S2400
5 L X+0 Y+0 Z+35 R0 FMAX M3 M8
6 L X+75 Y+0 Z+35 R0 FMAX
7 L X+75 Y+0 Z-11 R0 F250
8 L X+49.64 Y+0 Z-11 R0 F250

9 CR X+47.46 Y-14.53 R+49.64 DR- F250
10 L X+149.94 Y-88.99 Z-11 R0 F250
11 CR X+174.36 Y+0 R+174.36 DR+
12 CR X+149.94 Y+88.99 R+174.36 DR+
13 L X+47.46 Y+14.53 Z-11 R0 F250
14 CR X+49.64 Y+0 R+49.64 DR-
15 L X+75 Y+0 Z-11 R0 F250
16 L X+75 Y+0 Z+35 R0 FMAX
17 L X+0 Y+0 Z+35 R0 FMAX M30
18 END PGM 93 MM

Hrubování segmentu frézou $\phi 10$

[zpět](#)

0 BEGIN PGM 94 MM
1 BLK FORM 0.1 Z X0 Y-115 Z-50
2 BLK FORM 0.2 X+200 Y+115 Z+0
3 TOOL DEF 1 L+0 R+5
4 TOOL CALL 1 Z S1000
5 L X+0 Y+0 Z+35 R0 F MAX M3 M8
6 L X+60 Y+0 Z+35 R0 F MAX
7 L X+60 Y+0 Z-26 R0 F 100
8 L X+52 Y+0 Z-26 R0 F 100
9 CR X+50.19 Y-13.6 R+52 DR- F 100
10 L X+149.22 Y-85.55 Z-26 R0 F 100
11 CR X+172 Y+0 R+172 DR+ F 100
12 CR X+149.22 Y+85.55 R+172 DR+ F 100
13 L X+50.19 Y+13.6 Z-26 R0 F 100
14 CR X+52 Y+0 R+52 DR- F 100
15 L X+60 Y+0 Z-26 R0 F 100
16 L X+60 Y+0 Z+35 R0 F 100
17 L X+0 Y+0 Z+35 R0 F MAX M30
18 END PGM 94 MM

Dokončování segmentu frézou $\phi 10$

[zpět](#)

0 BEGIN PGM 95 MM
1 BLK FORM 0.1 Z X+0 Y-120 Z-50
2 BLK FORM 0.2 X+200 Y+120 Z+0
3 TOOL DEF 1 L+0 R+5
4 TOOL CALL 1 Z S2000
5 L X+0 Y+0 Z+35 R0 FMAX M3 M8
6 L X+57 Y+0 Z+35 R0 FMAX
7 L X+57 Y+0 Z-26 R0 F250
8 L X+51 Y+0 Z-26 R0 F250
9 CR X+49.04 Y-14 R+51 DR- F250
10 L X+149.53 Y-87.01 Z-26 R0 F250
11 CR X+173 Y+0 R+173 DR+ F250
12 CR X+149.53 Y+87.01 R+173 DR+ F250
13 L X+49.04 Y+14 Z-26 R0 F250
14 CR X+51 Y+0 R+51 DR- F250

15 L X+57 Y+0 Z-26 R0 F250
16 L X+57 Y+0 Z+35 R0 FMAX
17 L X+0 Y+0 Z+35 R0 FMAX M30
18 END PGM 95 MM

Dokončování segmentu kulovou frézou $\phi 20$

[zpět](#)

0 BEGIN PGM 96 MM
1 BLK FORM 0.1 Z X+0 Y-120 Z-50
2 BLK FORM 0.2 X+200 Y+120 Z+0
3 TOOL DEF 1 L+0 R+10
4 TOOL CALL 1 Z S1000
5 L X+0 Y+0 Z+35 R0 FMAX M3 M8
6 L X+60 Y+0 Z+35 R0 FMAX
7 L X+60 Y+0 Z-15 R0 F250
8 L X+46 Y+0 Z-15 R0 F250
9 CR X+44.23 Y-12.63 R+46 DR- F250
10 CR X+46.1 Y-18.04 R+5 DR+ F250
11 L X+146.59 Y-91.05 Z-15 R0 F250
12 CR X+153.85 Y-89.52 R+5 DR+ F250
13 CR X+178 Y+0 R+178 DR+ F250
14 CR X+153.85 Y+89.52 R+178 DR+ F250
15 CR X+146.59 Y+91.05 R+5 DR+ F250
16 L X+46.1 Y+18.04 Z-15 R0 F250
17 CR X+44.23 Y+12.63 R+5 DR+ F250
18 CR X+46 Y+0 R+46 DR- F250
19 L X+60 Y+0 Z-15 R0 F250
20 L X+60 Y+0 Z+35 R0 FMAX
21 L X+0 Y+0 Z+35 R0 FMAX M30
22 END PGM 96 MM