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;example program of how to use a tangential knive with USBCNC software
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;if there are any questions info@damencnc.com
;http://damencnc.com/en/tools/tangential-knife---accessories/tangential-knife/37
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;GENERATED BY USBCNC DXF EasyCAM-2
;MOP ENGRAVE
;===========
;zSafe  = 3.0000
;zStart = 0.0000
;zFinal = -1.0000
;zInc = 1.0000
;feedRate = 4000.0000
;plungeRate = 500.0000
;speed = 10000.0000
;sDirection = CCW
;toolNumber = 1
;laserMode = Off

;feedRate
#1 = 4000.0000
;PlungeRate
#2 = 500.0000


tanknife on
;The tanknife command is used to turn on the tangential knive feature
;in USBCNC. The great thing about this, is that you can use normal
; XYZ G-code and the software calculates the correct C position from this
; data, no extra CAM software is required.


G64 P0.1

N0001 M6 T1
N0002 M3
;We assume the oscillation knive is switched on by the m3 command
;If you are using our RTR controllers, plug the oscillation powersupply into our
Tool
;output, on the back of the RTR controller.

N0003 G0 X95.0000 Y100.0000 Z3.0000
N0004 F[#2] G1 Z-1.0000
N0005 F[#1] G2 X95.0000 Y100.0000 I5.0000 J0.0000
N0006 G0 Z3.0000

;Arc entry move
N0007 G0 X56.5487 Y111.7039 Z3.0000
N0008 F[#2] G1 Z-1.0000
N0009 F[#1] G3 X56.5487 Y88.2961 I43.4513 J-11.7039
N0010 F[#1] G3 X72.0824 Y82.8068 I9.6559 J2.6009
N0011 F[#1] G1 X88.0211 Y94.3870
N0012 F[#1] G3 X90.0668 Y98.8241 I-2.9389 J4.0451
N0013 F[#1] G2 X90.0668 Y101.1759 I14.9538 J1.1759
N0014 F[#1] G3 X88.0211 Y105.6130 I-4.9846 J0.3920
N0015 F[#1] G1 X72.0824 Y117.1932
N0016 F[#1] G3 X56.5487 Y111.7039 I-5.8779 J-8.0902
N0017 G0 Z3.0000

;Entry move
N0018 G0 X112.4799 Y130.3192 Z3.0000
N0019 F[#2] G1 Z-1.0000
N0020 F[#1] G1 X106.3919 Y111.5820
N0021 F[#1] G3 X107.3449 Y106.7900 I4.7553 J-1.5451
N0022 F[#1] G2 X108.7273 Y104.8872 I-11.4067 J-9.7410
N0023 F[#1] G3 X112.9904 Y102.5000 I4.2630 J2.6128
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N0024 F[#1] G1 X132.6917 Y102.5000
N0025 F[#1] G3 X142.0322 Y116.0714 I0.0000 J10.0000
N0026 F[#1] G3 X128.2735 Y135.0087 I-42.0322 J-16.0714
N0027 F[#1] G3 X112.4799 Y130.3192 I-6.2830 J-7.7797
N0028 G0 Z3.0000

;Entry move
N0029 G0 X107.7247 Y131.8642 Z3.0000
N0030 F[#2] G1 Z-1.0000
N0031 F[#1] G1 X101.6366 Y113.1271
N0032 F[#1] G2 X98.0489 Y109.8104 I-4.7553 J1.5451
N0033 F[#1] G3 X95.8121 Y109.0837 I3.5026 J-14.5853
N0034 F[#1] G2 X90.9600 Y109.6581 I-1.9131 J4.6195
N0035 F[#1] G1 X75.0213 Y121.2383
N0036 F[#1] G2 X75.4418 Y137.7080 I5.8779 J8.0902
N0037 F[#1] G2 X97.7038 Y144.9414 I24.5582 J-37.7080
N0038 F[#1] G2 X107.7247 Y131.8642 I0.5103 J-9.9870
N0039 G0 Z3.0000

;Entry move
N0040 G0 X112.9904 Y97.5000 Z3.0000
N0041 F[#2] G1 Z-1.0000
N0042 F[#1] G1 X132.6917 Y97.5000
N0043 F[#1] G2 X142.0322 Y83.9286 I0.0000 J-10.0000
N0044 F[#1] G2 X128.2735 Y64.9913 I-42.0322 J16.0714
N0045 F[#1] G2 X112.4799 Y69.6808 I-6.2830 J7.7797
N0046 F[#1] G1 X106.3919 Y88.4180
N0047 F[#1] G2 X107.3449 Y93.2100 I4.7553 J1.5451
N0048 F[#1] G3 X108.7273 Y95.1128 I-11.4067 J9.7410
N0049 F[#1] G2 X112.9904 Y97.5000 I4.2630 J-2.6128
N0050 G0 Z3.0000

;Entry move
N0051 G0 X101.6366 Y86.8729 Z3.0000
N0052 F[#2] G1 Z-1.0000
N0053 F[#1] G1 X107.7247 Y68.1358
N0054 F[#1] G2 X97.7038 Y55.0586 I-9.5106 J-3.0902
N0055 F[#1] G2 X75.4418 Y62.2920 I2.2962 J44.9414
N0056 F[#1] G2 X75.0213 Y78.7617 I5.4574 J8.3796
N0057 F[#1] G1 X90.9600 Y90.3419
N0058 F[#1] G2 X95.8121 Y90.9163 I2.9389 J-4.0451
N0059 F[#1] G3 X98.0489 Y90.1896 I5.7394 J13.8586
N0060 F[#1] G2 X101.6366 Y86.8729 I-1.1675 J-4.8618
N0061 G0 Z3.0000
N0062 G0 X50.0000 Y100.0000 Z3.0000
N0063 F[#2] G1 Z-1.0000
N0064 F[#1] G2 X50.0000 Y100.0000 I50.0000 J0.0000
N0065 G0 Z3.0000

tanknife off
;If you are using the machine also for milling. Then you can turn off the
tangential knive
;mode with this command tanknife off
;when using it only for cutting, you could always leave it on

N0066 M30
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