Cutting Sample

PET bottle threads

50mm x 50mm x 100mm

CAM-TOOL
CAD/CAM System for Molds & Dies

Cutting processes

Material: Aluminum (A7075)

This sample is threads part of PET bottle.
Roughing process was machined with 3 axis machining, Second roughing process was machined with 3+2 axis machining.
Semi Finishing process was machined with Simultaneous 4 axis machining for rotating work with 0.5R Ball end mill.
Simultaneous 5 axis module converts tool path into simultaneous after generating 3 dimensional tool paths even for an undercut shape. Simultaneous 5 axis module enables to reduce setup time and programming time.

NO.	Process	Tool Dia. (mm)	XY step (mm)	Z step (mm)	Stock (mm)	Speed (r.p.m)	Feed (mm/min)	Cutting time (hh:mm)
1	Rough	Φ10R0.8	4	0.5	0.1	13,000	2,688	00:30
2	Second Rough(B90C0)	Φ2R1	0.9	0.3	0.1	15,000	1,200	00:21
3	Second Rough(B90C180)	Φ2R1	0.9	0.3	0.1	15,000	1,200	00:21
4	Second Rough(B90C270)	Φ2R1	0.9	0.3	0.1	15,000	1,200	00:21
5	Second Rough(B90C90)	Φ2R1	0.9	0.3	0.1	15,000	1,200	00:21
6	Semi Finish(5X)	Φ2R1	(0.00125)	—	0.05	15,000	1,800	01:43
7	Finish(5X)	Φ2R1	(0.00125)	—	0	15,000	1,800	00:45
8	Finish(5X)	φ1R0.5	(0.00063)	—	0.05	15,000	500	00:04
9	Finish(5X)	Φ1R0.5	(0.00063)	—	0	15,000	1,800	01:36
10	Finish(5X)	φ1R0.5	(0.00063)	—	0	15,000	500	00:04
			( ) Cusp height				Cutting time	6:06

切削サンプル

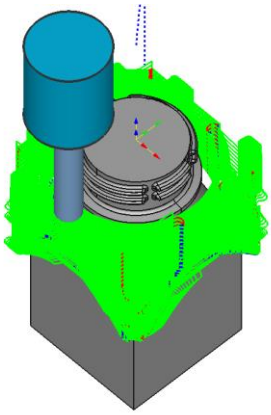
[ペットボトルねじ]

50mm x 50mm x 100mm

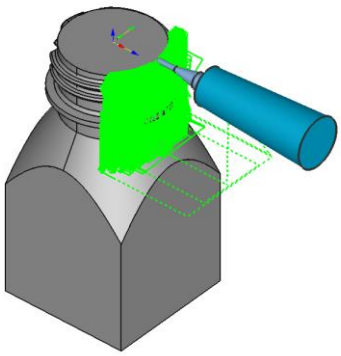
CAM-TOOL
CAD/CAM System for Molds & Dies

データ作成・加工概要

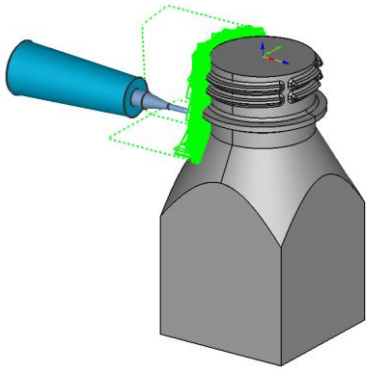
[1.Rough] Z-level Rough Cutting with Multiple Tools　Φ10R0.8



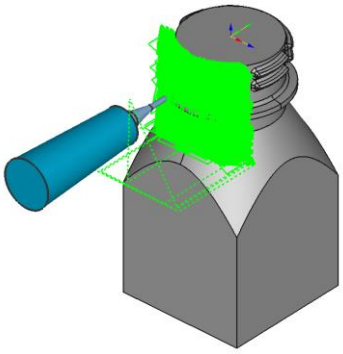
[2.Second Rough] Z-level Rough Cutting with Multiple Tools　Φ2R1
Tilt 90 deg Rot 0 deg



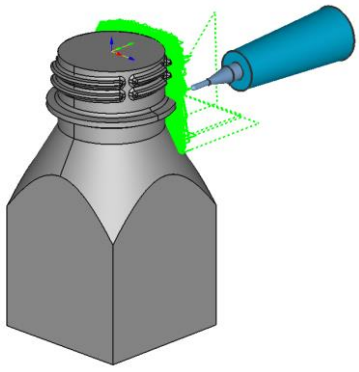
[3.Second Rough] Z-level Rough Cutting with Multiple Tools　Φ2R1
Tilt 90 deg Rot 180 deg



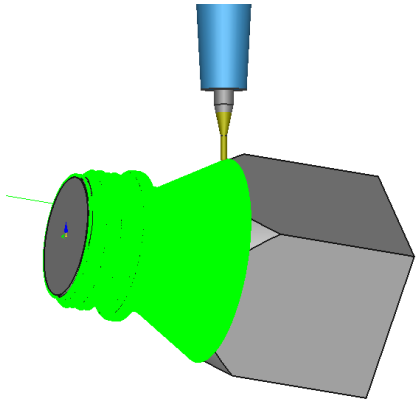
[4.Second Rough] Rough Cutting with Multiple Tools　Φ2R1
Tilt 90 deg Rot 270 deg



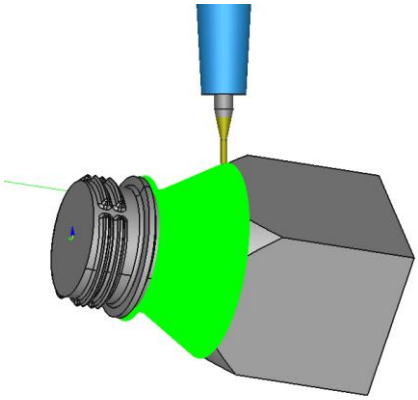
[5.Second Rough] Z-level Rough Cutting with Multiple Tools　Φ2R1
Tilt 90 deg Rot 90 deg



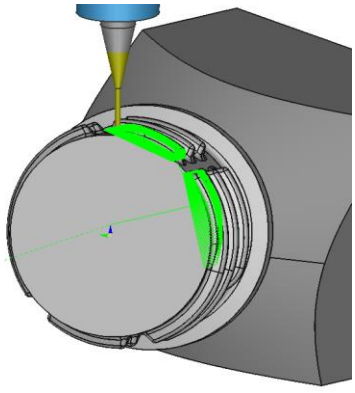
[6.Semi Finish]
Z-level Finishing-5X　Φ2R1



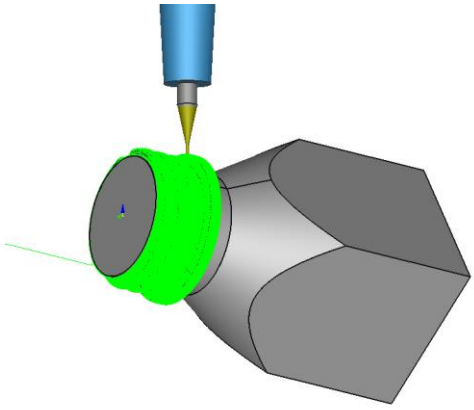
[7.Finish]
Z-level Finishing-5X　Φ2R1



[8,10.Finish]
CL+ Check (5Axis Conversion)
Φ1R0.5



[9.Finish]
Z-level Finishing-5X Φ1R0.5



GRAPHIC PRODUCTS INC.
http://www.graphicproducts.co.jp

2009.11 Rev1.0