

Bedienungsanleitung GCode

Aufgabe:

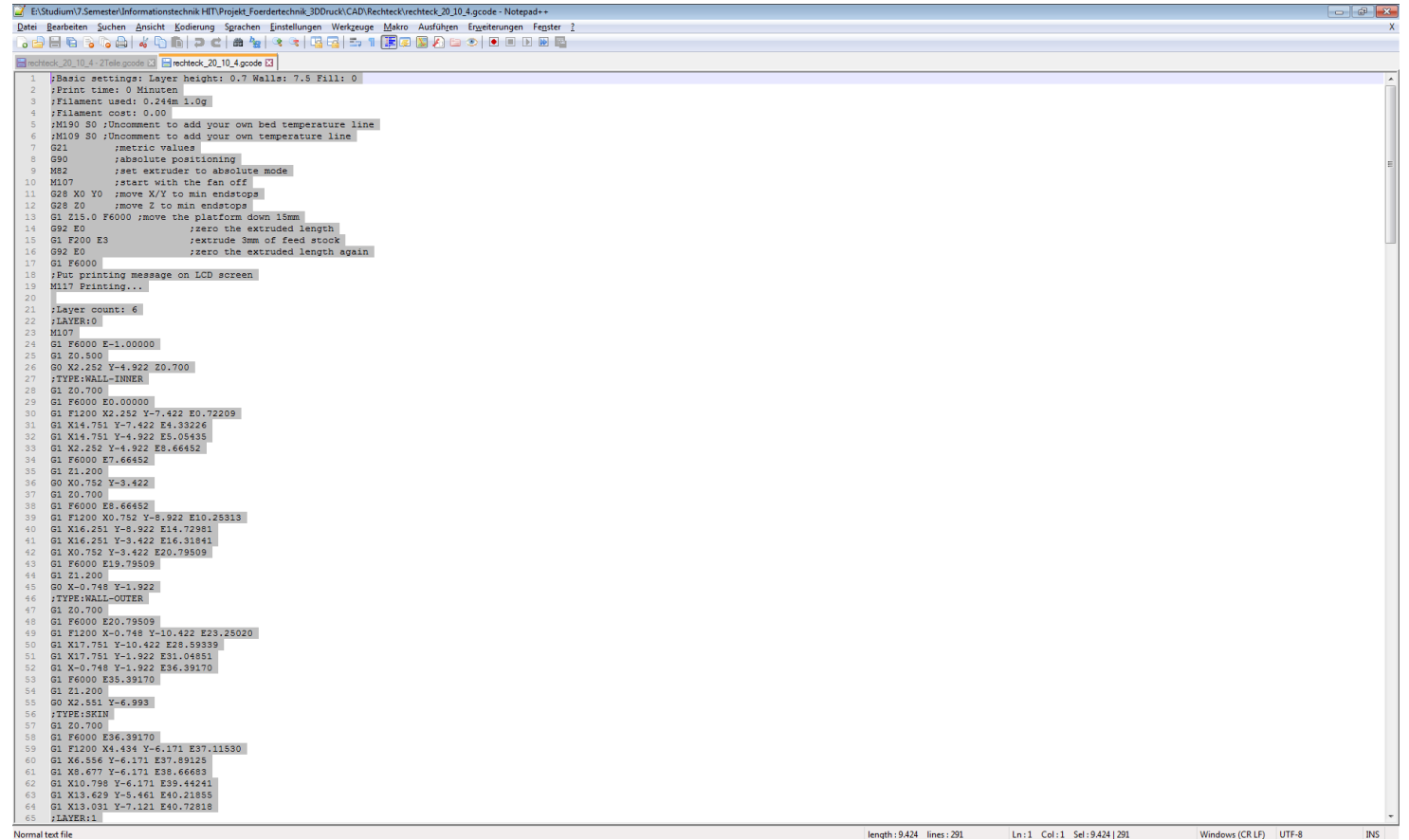
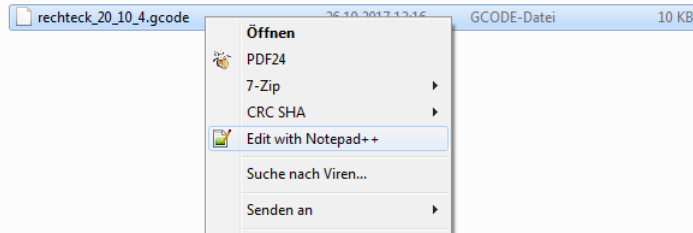
Den vorhandenen GCode einer Druckdatei für mehrere Druckvorgänge auf dem Förderband zu nutzen und somit einen Druckvorgang mehrerer Teile ohne weiteren Eingriff zu ermöglichen.

Ablauf:

1. GCode durch CURA erzeugen
2. GCode in Notepad++ öffnen und den gesamten GCode mittels „*Strg + a*“ und „*Strg + c*“ kopieren.
3. Mittels einem Semikolon „*;*“ vor dem Befehl „*M84 ;steppers off*“ in der 2. letzten Zeile, diese auskommentieren.
4. Pause von 5sec mittels des Codes „*G4 P5000*“ nach dem Befehl „*;*CURA PROFILE_STRING[...]“ einfügen.
5. Mittels „*Strg + v*“ den kopierten GCode nach dem Pausebefehl einfügen.
6. Geänderten GCode auf dem Wechseldatenträger speichern und drucken.

1) GCode durch CURA erzeugen


2) GCode in Notepad++ öffnen und den gesamten GCode mittels „Strg + a“ und „Strg + c“ kopieren.



```
1 ;Basic settings: Layer height: 0.7 Walls: 7.5 Fill: 0
2 ;Print time: 0 Minuten
3 ;Filament used: 0.244m 1.0g
4 ;Filament cost: 0.00
5 ;M190 S0 ;Uncomment to add your own bed temperature line
6 ;M109 S0 ;Uncomment to add your own temperature line
7 G21 ;metric values
8 G90 ;absolute positioning
9 M82 ;set extruder to absolute mode
10 M107 ;start with the fan off
11 G28 X0 Y0 ;move X/Y to min endstops
12 G28 Z0 ;move Z to min endstops
13 G1 Z15.0 F6000 ;move the platform down 15mm
14 G92 E0 ;zero the extruded length
15 G1 F200 E3 ;extrude 3mm of feed stock
16 G92 E0 ;zero the extruded length again
17 G1 F6000
18 ;Put printing message on LCD screen
19 M117 Printing...
20
21 ;Layer count: 6
22 ;LAYER:0
23 M107
24 G1 F6000 E-1.00000
25 G1 Z0.500
26 G0 X2.252 Y-4.922 Z0.700
27 ;TYPE:WALL-INNER
28 G1 Z0.700
29 G1 F6000 E0.00000
30 G1 F1200 X2.252 Y-7.422 E0.72209
31 G1 X14.751 Y-7.422 E4.33226
32 G1 X14.751 Y-4.922 E5.05435
33 G1 X2.252 Y-4.922 E8.66452
34 G1 F6000 E7.66452
35 G1 Z1.200
36 G0 X0.752 Y-3.422
37 G1 Z0.700
38 G1 F6000 E8.66452
39 G1 F1200 X0.752 Y-8.922 E10.25313
40 G1 X16.251 Y-8.922 E14.72981
41 G1 X16.251 Y-3.422 E16.31841
42 G1 X0.752 Y-3.422 E20.79509
43 G1 F6000 E19.79509
44 G1 Z1.200
45 G0 X-0.748 Y-1.922
46 ;TYPE:WALL-OUTER
47 G1 Z0.700
48 G1 F6000 E20.79509
49 G1 F1200 X-0.748 Y-10.422 E23.25020
50 G1 X17.751 Y-10.422 E28.59339
51 G1 X17.751 Y-1.922 E31.04551
52 G1 X-0.748 Y-1.922 E36.39170
53 G1 F6000 E35.39170
54 G1 Z1.200
55 G0 X2.451 Y-6.993
56 ;TYPE:SKIN
57 G1 Z0.700
58 G1 F6000 E36.39170
59 G1 F1200 X4.434 Y-6.171 E37.11530
60 G1 X6.556 Y-6.171 E37.89125
61 G1 X8.677 Y-6.171 E38.66683
62 G1 X10.798 Y-6.171 E39.44241
63 G1 X13.429 Y-5.461 E40.21855
64 G1 X13.031 Y-7.121 E40.72818
65 ;LAYER:1
```

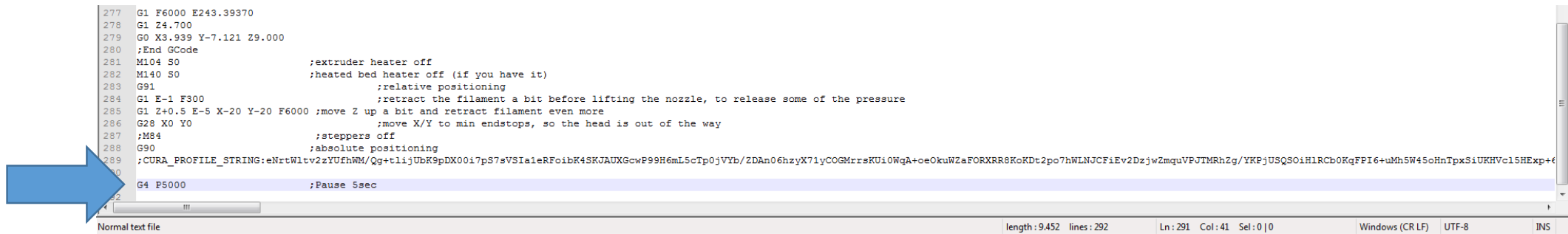
3) Mittels einem Semikolon „;“ vor dem Befehl „M84 ;steppers off“ in der 2. letzten Zeile, diese auskommentieren.

```
267 ;TYPE:SKIN
268 G1 Z4.200
269 G1 F6000 E240.04901
270 G1 F3000 X12.535 Y-6.171 E240.78595
271 G1 X10.413 Y-6.171 E241.56189
272 G1 X8.292 Y-6.171 E242.33788
273 G1 X6.171 Y-6.171 E243.11387
274 G1 X3.356 Y-5.477 E243.88988
275 G1 X3.939 Y-7.121 E244.39370
276 M107
277 G1 F6000 E243.39370
278 G1 Z4.700
279 G0 X3.939 Y-7.121 Z9.000
280 ;End GCode
281 M104 S0 ;extruder heater off
282 M140 S0 ;heated bed heater off (if you have it)
283 G91 ;relative positioning
284 G1 E-1 F300 ;retract the filament a bit before lifting the nozzle, to release some of the pressure
285 G1 Z+0.5 E-5 X-20 Y-20 F6000 ;move Z up a bit and retract filament even more
286 G28 X0 Y0 ;move X/Y to min endstops, so the head is out of the way
287 M84 ;steppers off
288 G90 ;absolute positioning
289 ;CURA_PROFILE_STRING:eNrtWltv2zYUfhWM/Qg+clijUbK9pDX00i7pS7sVSIa1eRfoibK4SKJAUxGcwP99H6mL5cTp0jVYb/ZDAn06hzyX71yCOGMrrsKUI0WqA
290
291
```



```
276 M107
277 G1 F6000 E243.39370
278 G1 Z4.700
279 G0 X3.939 Y-7.121 Z9.000
280 ;End GCode
281 M104 S0 ;extruder heater off
282 M140 S0 ;heated bed heater off (if you have it)
283 G91 ;relative positioning
284 G1 E-1 F300 ;retract the filament a bit before lifting the nozzle, to release some of the pressure
285 G1 Z+0.5 E-5 X-20 Y-20 F6000 ;move Z up a bit and retract filament even more
286 G28 X0 Y0 ;move X/Y to min endstops, so the head is out of the way
287 ;M84 ;steppers off
288 G90 ;absolute positioning
289 ;CURA_PROFILE_STRING:eNrtWltv2zYUfhWM/Qg+clijUbK9pDX00i7pS7sVSIa1eRfoibK4SKJAUxGcwP99H6mL5cTp0jVYb/ZDAn06hzyX71yCOGMrrsKUI0WqA+oeO
290
291
```

4) Pause von 5sec mittels des Codes „G4 P5000“ nach dem Befehl „;CURA PROFILE_STRING[...]“ einfügen.



```
277 G1 F6000 E243.39370
278 G1 Z4.700
279 G0 X3.939 Y-7.121 Z9.000
280 ;End GCode
281 M104 S0 ;extruder heater off
282 M140 S0 ;heated bed heater off (if you have it)
283 G91 ;relative positioning
284 G1 E-1 F300 ;retract the filament a bit before lifting the nozzle, to release some of the pressure
285 G1 Z+0.5 E-5 X-20 Y-20 F6000 ;move Z up a bit and retract filament even more
286 G28 X0 Y0 ;move X/Y to min endstops, so the head is out of the way
287 ;M84 ;steppers off
288 G90 ;absolute positioning
289 ;CURA_PROFILE_STRING:eNrtWltv2zYUfhWM/Qg+tlIjUbK9pDX0017pS7sVSIa1eRfoibK4SKJAUXGwP99H6mL5cTp0jVYb/ZDAn06hzyX71yCOGMrrsKUI0WqA+oeOkuWZaFORXRR8KoKDt2po7hWLNJCFiEv2DzjwZmqvVPJTMrh2g/YKPjUSQSOiH1RCb0KqFFI6+uMh5W4SoHnTpxSiUKHVc15HExp+e
290
291 G4 P5000 ;Pause 5sec
292
```

Alternativ kann auch dieser Code eingefügt werden:

```
;----- Ende erster Druck -----
;Druck 1 Ende - mach eine Pause für 5sec um das Förderband zu bewegen - Starte neuen Druck
G4 P5000
;----- Start neuer Druck -----
```

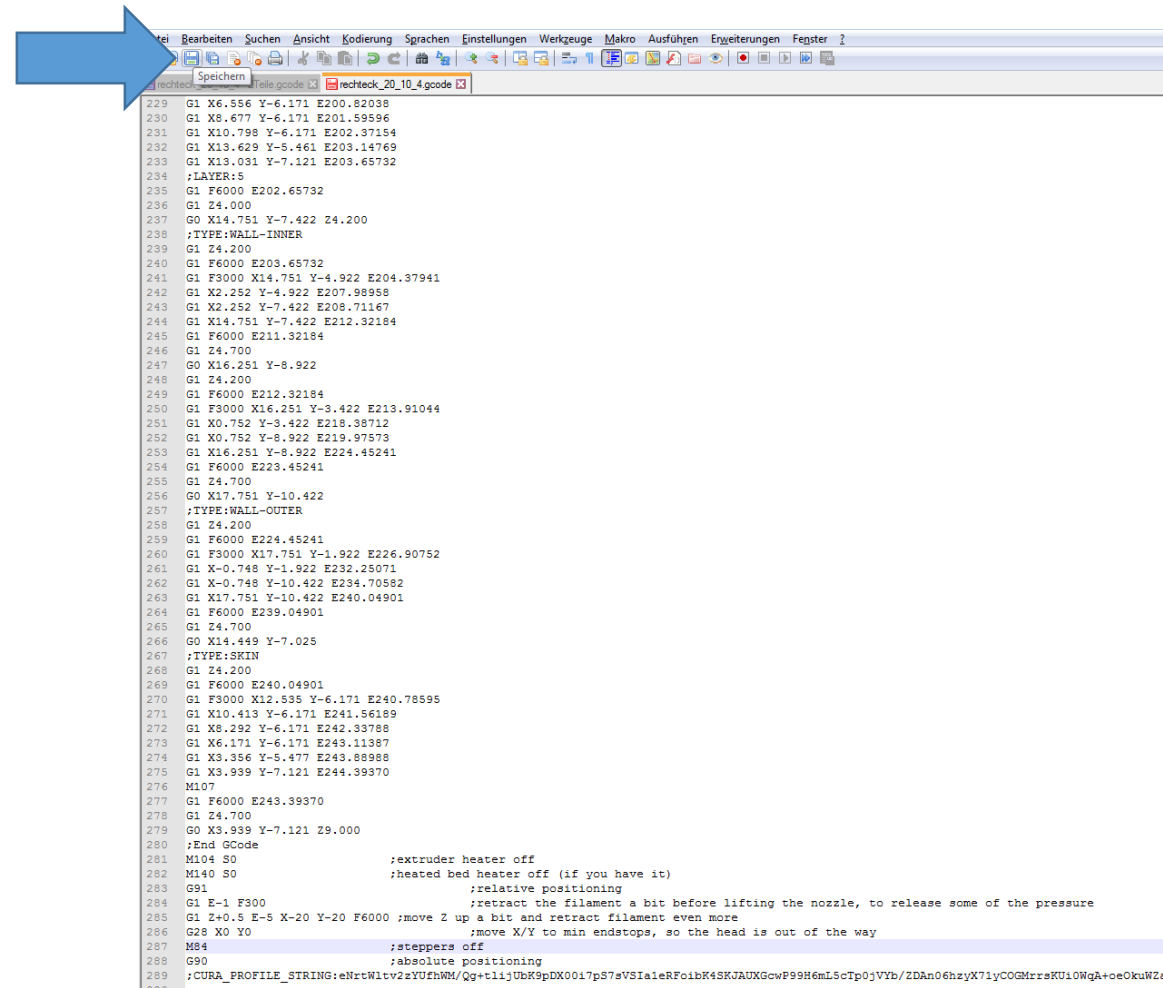
5) Mittels „Strg + v“ den kopierten GCode nach dem Pausebefehl einfügen.

Hier startet der neu eingefügte GCode und somit auch der Druck des 2. Bauteils



```
273 G1 X6.171 Y-6.171 E243.11387
274 G1 X3.356 Y-5.477 E243.88988
275 G1 X3.939 Y-7.121 E244.39370
276 M107
277 G1 F6000 E243.39370
278 G1 Z4.700
279 GO X3.939 Y-7.121 Z9.000
280 ;End GCode
281 M104 S0 ;extruder heater off
282 M140 S0 ;heated bed heater off (if you have it)
283 G91 ;relative positioning
284 G1 E-1 F300 ;retract the filament a bit before lifting the nozzle, to release some of the pressure
285 G1 Z+0.5 E-5 X-20 Y-20 F6000 ;move Z up a bit and retract filament even more
286 G28 X0 Y0 ;move X/Y to min endstops, so the head is out of the way
287 ;M84 ;steppers off
288 G90 ;absolute positioning
289 ;CURA_PROFILE_STRING:eNrtWltv2zYUfhWM/Qg+tl1jUbK9pDX00i7pS7sVSIa1eRfoibK4SKJAUxGcwP99H6mL5cTp0jVYb/ZDAn06hzyX71yCOGMrrsKUI0WqA+oeOkuWzaFORXRR8KoKDt
290
291 G4 P5000 ;Pause 5sec
292
293 ;Basic settings: Layer height: 0.7 Walls: 7.5 Fill: 0
294 ;Print time: 0 Minuten
295 ;Filament used: 0.244m 1.0g
296 ;Filament cost: 0.00
297 ;M190 S0 ;Uncomment to add your own bed temperature line
298 ;M109 S0 ;Uncomment to add your own temperature line
299 G21 ;metric values
300 G90 ;absolute positioning
301 M82 ;set extruder to absolute mode
302 M107 ;start with the fan off
303 G28 X0 Y0 ;move X/Y to min endstops
304 G28 Z0 ;move Z to min endstops
305 G1 Z15.0 F6000 ;move the platform down 15mm
306 G92 E0 ;zero the extruded length
307 G1 F200 E3 ;extrude 3mm of feed stock
308 G92 E0 ;zero the extruded length again
309 G1 F6000
310 ;Put printing message on LCD screen
311 M117 Printing...
312
313 ;Layer count: 6
314 ;LAYER:0
315 M107
316 G1 F6000 E-1.00000
317 G1 Z0.500
318 GO X2.252 Y-4.922 Z0.700
319 ;TYPE:WALL-INNER
320 G1 Z0.700
321 G1 F6000 E0.00000
322 G1 F1200 X2.252 Y-7.422 E0.72209
```

6) Geänderten GCode auf dem Wechseldatenträger speichern und drucken.



```
229 G1 X6.556 Y-6.171 E200.82038
230 G1 X8.677 Y-6.171 E201.59596
231 G1 X10.798 Y-6.171 E202.37154
232 G1 X13.629 Y-5.461 E203.14769
233 G1 X13.031 Y-7.121 E203.65732
234 ;LAYER:5
235 G1 F6000 E202.65732
236 G1 Z4.000
237 GO X14.751 Y-7.422 Z4.200
238 ;TYPE:WALL-INNER
239 G1 Z4.200
240 G1 F6000 E203.65732
241 G1 F3000 X14.751 Y-4.922 E204.37941
242 G1 X2.252 Y-4.922 E207.98958
243 G1 X2.252 Y-7.422 E208.71167
244 G1 X14.751 Y-7.422 E212.32184
245 G1 F6000 E211.32184
246 G1 Z4.700
247 GO X16.251 Y-8.922
248 G1 Z4.200
249 G1 F6000 E212.32184
250 G1 F3000 X16.251 Y-3.422 E213.91044
251 G1 X0.752 Y-3.422 E218.38712
252 G1 X0.752 Y-8.922 E219.97573
253 G1 X16.251 Y-8.922 E224.45241
254 G1 F6000 E223.45241
255 G1 Z4.700
256 GO X17.751 Y-10.422
257 ;TYPE:WALL-OUTER
258 G1 Z4.200
259 G1 F6000 E224.45241
260 G1 F3000 X17.751 Y-1.922 E226.90752
261 G1 X-0.748 Y-1.922 E232.25071
262 G1 X-0.748 Y-10.422 E234.70582
263 G1 X17.751 Y-10.422 E240.04901
264 G1 F6000 E239.04901
265 G1 Z4.700
266 GO X14.449 Y-7.025
267 ;TYPE:SKIN
268 G1 Z4.200
269 G1 F6000 E240.04901
270 G1 F3000 X12.535 Y-6.171 E240.78595
271 G1 X10.413 Y-6.171 E241.56189
272 G1 X8.292 Y-6.171 E242.33788
273 G1 X6.171 Y-6.171 E243.11387
274 G1 X3.356 Y-5.477 E243.88988
275 G1 X3.939 Y-7.121 E244.39370
276 M107
277 G1 F6000 E243.39370
278 G1 Z4.700
279 GO X3.939 Y-7.121 Z9.000
280 ;End GCode
281 M104 S0 ;extruder heater off
282 M140 S0 ;heated bed heater off (if you have it)
283 G91 ;relative positioning
284 G1 E-1 F300 ;retract the filament a bit before lifting the nozzle, to release some of the pressure
285 G1 Z+0.5 E-5 X-20 Y-20 F6000 ;move Z up a bit and retract filament even more
286 G28 X0 Y0 ;move X/Y to min endstops, so the head is out of the way
287 M84 ;steppers off
288 G90 ;absolute positioning
289 ;CURA_PROFILE_STRING:eNrtW1cv2zYUfhWM/Qg+tl1jUkR9pDX0017ps7sVSIa1eRfoibK4SKJAUxGcwP99H6mL5cTp0jVYb/ZDAn06hzyX71yCOGMrrsKU10WqA+eeOkuWzA
290
```