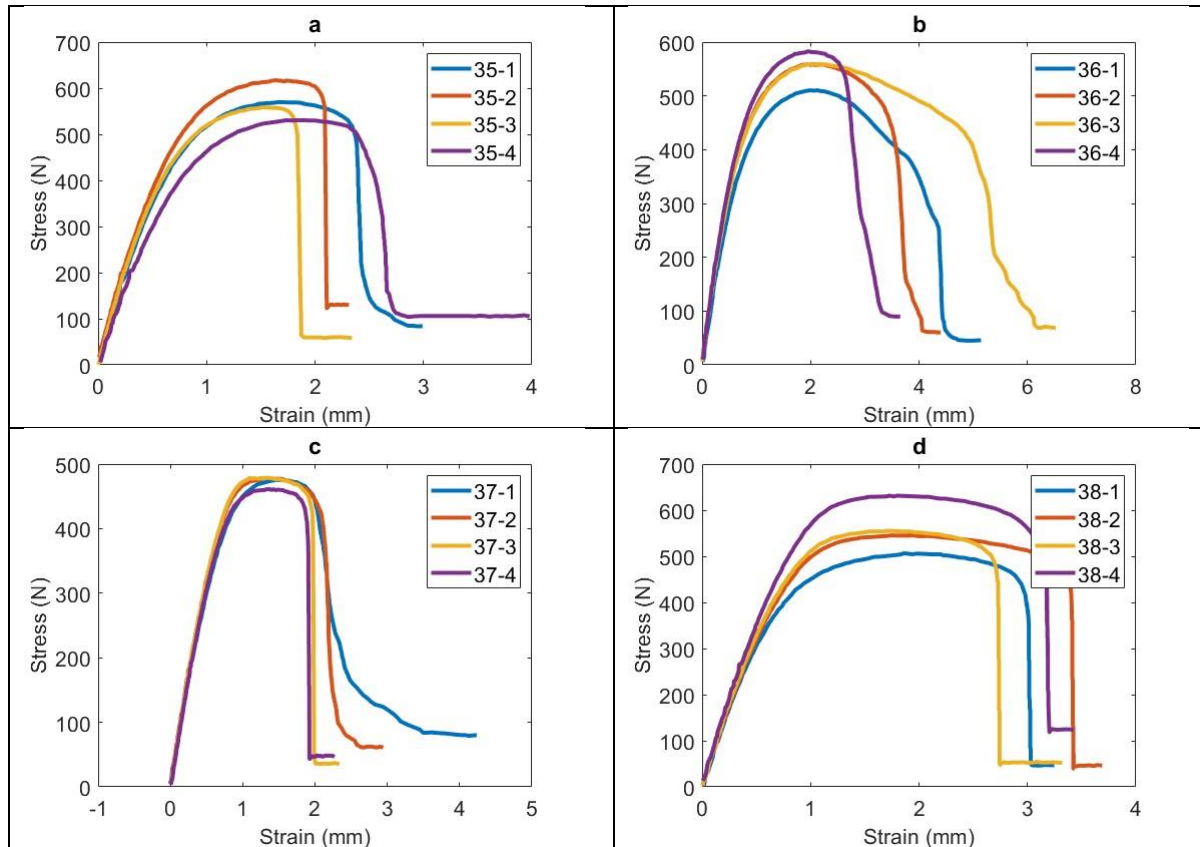
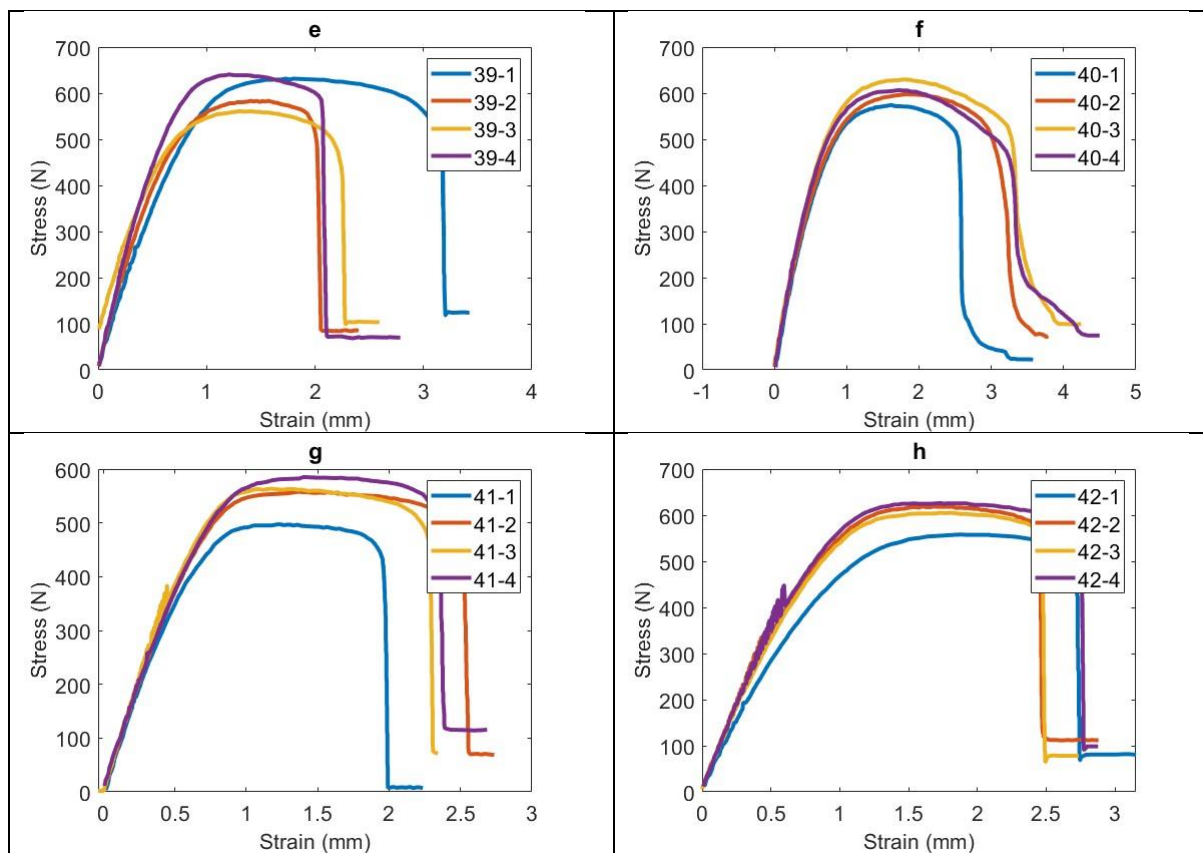
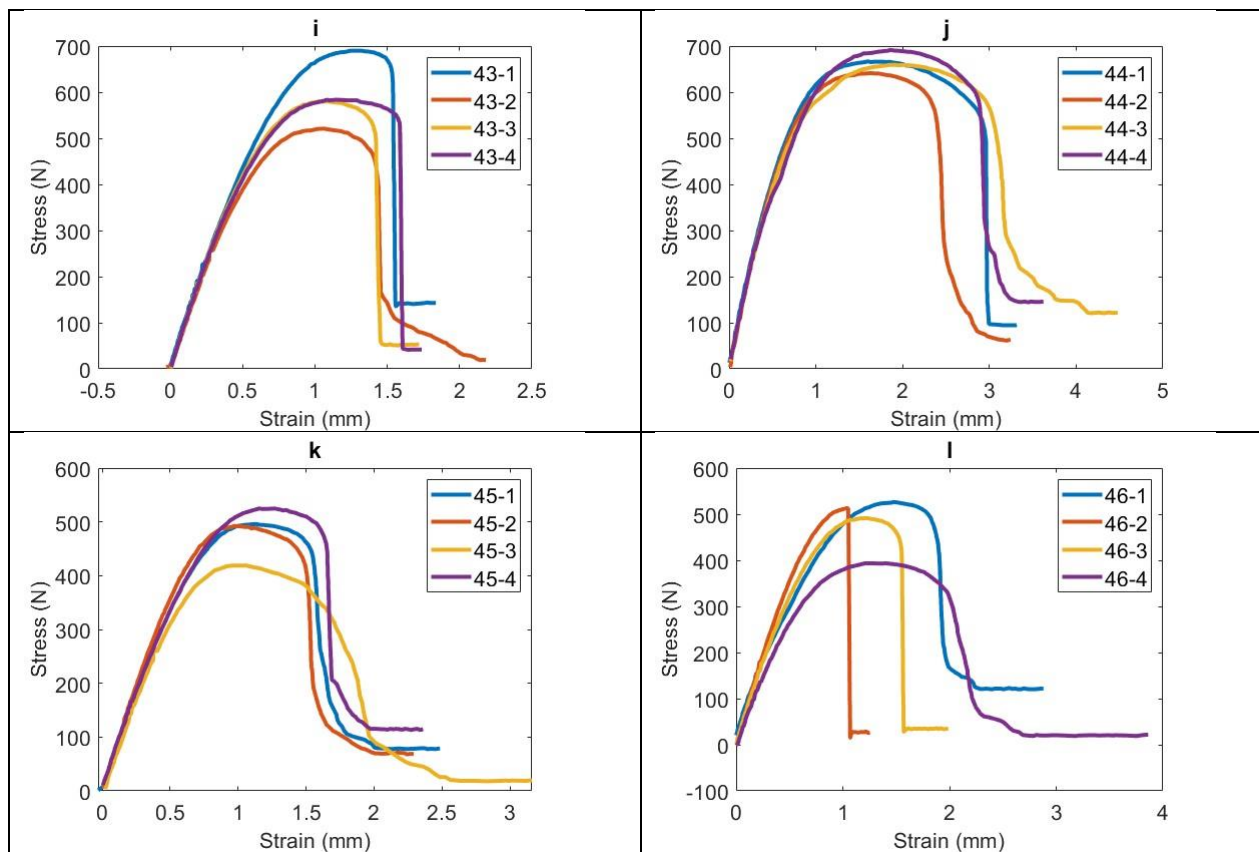
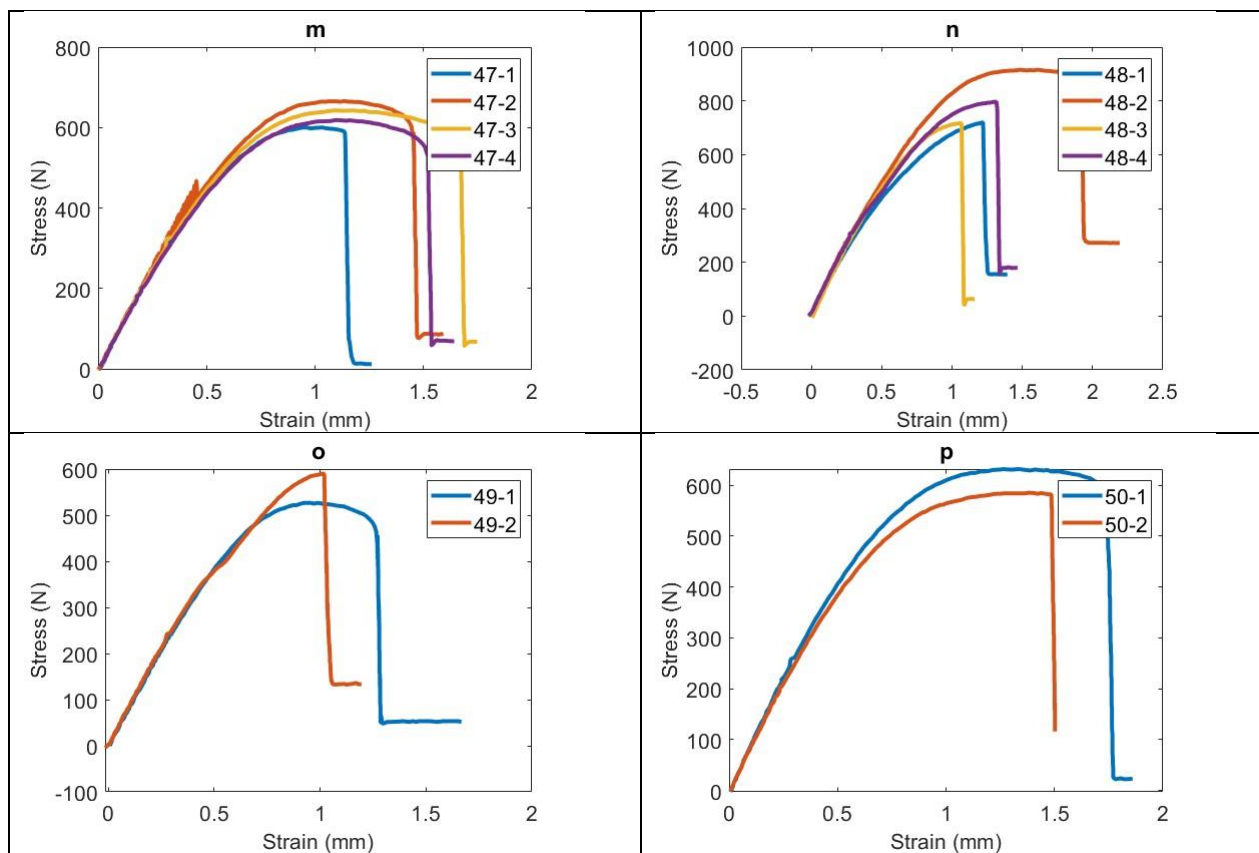


Supplementary Figure S1 Stress-Strain diagrams for the experiments (multiple curves shows the number of samples)









# Supplementary Table S1 Pearson correlation matrix confidence

	T	D <sub>N</sub>	H <sub>L</sub>	α	T · D <sub>N</sub>	T · H <sub>L</sub>	T · α	D <sub>N</sub> · L <sub>H</sub>	D <sub>N</sub> · α	H <sub>L</sub> · α	σ <sub>t</sub>	E	σ <sub>f</sub>
T	[-0.03,0.44]	[0.18,0.59]	[0.16,0.58]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]
D <sub>N</sub>	[0.15,0.57]	[0.00,0.47]	[-0.24,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
H <sub>L</sub>	[-0.18,0.31]	[-0.03,0.44]	[0.02,0.48]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]
α	[0.42,0.74]	[0.62,0.84]	[0.49,0.78]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
T · D <sub>N</sub>	[0.10,0.54]	[-0.18,0.31]	[-0.23,0.26]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
T · H <sub>L</sub>	[-0.24,0.25]	[-0.22,0.28]	[-0.20,0.29]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
T · α	[0.07,0.52]	[-0.09,0.39]	[-0.22,0.27]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
D <sub>N</sub> · L <sub>H</sub>	[-0.20,0.29]	[-0.20,0.29]	[-0.20,0.29]	[-0.25,0.25]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
D <sub>N</sub> · α	[0.12,0.55]	[0.02,0.48]	[0.22,0.62]	[-0.25,0.25]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
H <sub>L</sub> · α	[-0.23,0.26]	[-0.22,0.27]	[-0.20,0.29]	[NaN,NaN]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]	[-0.25,0.25]
σ <sub>t</sub>	[0.31,0.68]	[0.65,0.86]	[NaN,NaN]	[-0.20,0.29]	[0.22,0.62]	[-0.20,0.29]	[-0.22,0.27]	[-0.20,0.29]	[-0.23,0.26]	[0.49,0.78]	[0.02,0.48]	[-0.24,0.25]	[0.16,0.58]
E	[0.19,0.59]	[NaN,NaN]	[0.65,0.86]	[-0.22,0.27]	[0.02,0.48]	[-0.20,0.29]	[-0.09,0.39]	[-0.22,0.28]	[-0.18,0.31]	[0.62,0.84]	[-0.03,0.44]	[0.00,0.47]	[0.18,0.59]
σ <sub>f</sub>	[NaN,NaN]	[0.19,0.59]	[0.31,0.68]	[-0.23,0.26]	[0.12,0.55]	[-0.20,0.29]	[0.07,0.52]	[-0.24,0.25]	[0.10,0.54]	[0.42,0.74]	[-0.18,0.31]	[0.15,0.57]	[-0.03,0.44]

## Supplementary Table S2 Specimen table

No.	nozzle type	nozzle diameter (mm)	layer height (mm)	temperature (C°)	shell wall line count (-)	infill orientation (°)
1	MK8	0,6	0,4	220	1	45
2	MK8	0,6	0,4	250	1	45
3	MK8	0,6	0,4	220	1	45
4	MK8	0,6	0,15	220	1	45
5	MK8	0,6	0,15	250	1	45
6	MK8	0,6	0,15	220	5	45
7	MK8	0,6	0,4	220	1	0
8	MK8	0,6	0,15	220	1	0
9	MK8	0,6	0,4	250	1	0
10	MK8	0,6	0,15	250	1	0
11	MK8	0,6	0,4	220	0	0
12	MK8	0,6	0,15	220	0	0
13	MK8	0,6	0,4	220	0	45
14	MK8	0,6	0,15	220	0	45
15	MK8	0,6	0,4	250	0	90
16	MK8	0,6	0,4	250	0	45
17	MK8	0,6	0,15	250	0	0
18	MK8	0,6	0,15	250	0	45
19	MK8	0,3	0,2	220	1	45
20	MK8	0,3	0,1	220	1	0
21	MK8	0,3	0,2	220	1	0
22	MK8	0,3	0,1	220	1	45
23	MK8	0,3	0,1	220	0	0
24	MK8	0,3	0,2	220	0	0

25	MK8	0,3	0,1	220	0	45
26	MK8	0,3	0,2	220	0	45
27	MK8	0,3	0,2	250	1	45
28	MK8	0,3	0,1	250	1	0
29	MK8	0,3	0,2	250	1	0
30	MK8	0,3	0,1	250	1	45
31	MK8	0,3	0,1	250	0	0
32	MK8	0,3	0,2	250	0	0
33	MK8	0,3	0,2	250	0	45
34	MK8	0,3	0,1	250	0	45
35	V6	0,4	0,1	220	0	0
36	V6	0,4	0,25	220	0	0
37	V6	0,4	0,1	220	0	45
38	V6	0,4	0,25	220	0	45
39	V6	0,4	0,1	250	0	0
40	V6	0,4	0,25	250	0	0
41	V6	0,4	0,1	250	0	45
42	V6	0,4	0,25	250	0	45
43	V6	0,8	0,2	220	0	0
44	V6	0,8	0,5	220	0	0
45	V6	0,8	0,5	220	0	45
46	V6	0,8	0,5	220	0	45
47	V6	0,8	0,2	250	0	0
48	V6	0,8	0,5	250	0	0
49	V6	0,8	0,2	250	0	45
50	V6	0,8	0,5	250	0	45

# Supplementary Config file: all parameters

# generated by SuperSlicer 2.5.59 on 2023-05-15 at 12:40:43 UTC

allow\_empty\_layers = 0

avoid\_crossing\_not\_first\_layer = 1

avoid\_crossing\_perimeters = 1

avoid\_crossing\_perimeters\_max\_detour = 0

bed\_custom\_model =

bed\_custom\_texture =

bed\_shape = 0x0,400x0,400x400,0x400

bed\_temperature = 90

before\_layer\_gcode = ;BEFORE\_LAYER\_CHANGE\n;[layer\_z]\nG92 E0\n;if layer\_num == 2 }SET\_FILAMENT\_SENSOR SENSOR=my\_sensor  
ENABLE=1{endif}\n\n

between\_objects\_gcode =

bottom\_fill\_pattern = monotonic

bottom\_solid\_layers = 0

bottom\_solid\_min\_thickness = 0

bridge\_acceleration = 0

bridge\_angle = 0

bridge\_fan\_speed = 0



bridge\_fill\_pattern = rectilinear  
bridge\_flow\_ratio = 80%  
bridge\_internal\_acceleration = 0  
bridge\_internal\_fan\_speed = 0  
bridge\_overlap = 90%  
bridge\_overlap\_min = 80%  
bridge\_speed = 70%  
bridge\_speed\_internal = 150%  
bridge\_type = nozzle  
bridged\_infill\_margin = 200%  
brim\_acceleration = 0  
brim\_ears = 0  
brim\_ears\_detection\_length = 1  
brim\_ears\_max\_angle = 125  
brim\_ears\_pattern = concentric  
brim\_inside\_holes = 0  
brim\_separation = 0  
brim\_speed = 120%  
brim\_width = 5  
brim\_width\_interior = 0

```
chamber_temperature = 0
clip_multipart_objects = 1
color_change_gcode = M600
colorprint_heights =
compatible_printers_condition_cumulative = printer_model=~/*VC3_*/;
complete_objects = 0
complete_objects_one_brim = 0
complete_objects_one_skirt = 0
complete_objects_sort = object
cooling_tube_length = 5
cooling_tube_retraction = 91.5
curve_smoothing_angle_concave = 0
curve_smoothing_angle_convex = 0
curve_smoothing_cutoff_dist = 2
curve_smoothing_precision = 0
default_acceleration = 4500
default_filament_profile = "Generic PLA @RatRig"
default_print_profile = 0.20mm NORMAL @RatRig
default_speed = 40
deretract_speed = 45
```

disable\_fan\_first\_layers = 3  
dont\_support\_bridges = 1  
draft\_shield = disabled  
duplicate\_distance = 6  
end\_filament\_gcode = "; Filament-specific end gcode \n;END gcode for filament\n"  
end\_gcode = END\_PRINT\n  
enforce\_full\_fill\_volume = 0  
enforce\_retract\_first\_layer = 1  
ensure\_vertical\_shell\_thickness = 1  
exact\_last\_layer\_height = 0  
external\_infill\_margin = 150%  
external\_perimeter\_acceleration = 10%  
external\_perimeter\_cut\_corners = 0%  
external\_perimeter\_extrusion\_spacing =  
external\_perimeter\_extrusion\_width = 100%  
external\_perimeter\_fan\_speed = 0  
external\_perimeter\_overlap = 100%  
external\_perimeter\_speed = 80%  
external\_perimeters\_first = 0  
external\_perimeters\_hole = 1

external\_perimeters\_nothole = 1  
external\_perimeters\_vase = 0  
extra\_loading\_move = -2  
extra\_perimeters = 0  
extra\_perimeters\_odd\_layers = 0  
extra\_perimeters\_overhangs = 0  
extruder\_clearance\_height = 25  
extruder\_clearance\_radius = 45  
extruder\_colour = ""  
extruder\_fan\_offset = 0%  
extruder\_offset = 0x0  
extruder\_temperature\_offset = 0  
extrusion\_axis = E  
extrusion\_multiplier = 0.92  
extrusion\_spacing = 0  
extrusion\_width =  
fan\_always\_on = 0  
fan\_below\_layer\_time = 10  
fan\_kickstart = 0  
fan\_percentage = 0

fan\_speedup\_overhangs = 1  
fan\_speedup\_time = 0  
feature\_gcode =  
filament\_colour = #3A80CA  
filament\_cooling\_final\_speed = 3.4  
filament\_cooling\_initial\_speed = 2.2  
filament\_cooling\_moves = 4  
filament\_cooling\_zone\_pause = 0  
filament\_cost = 60  
filament\_custom\_variables = ""  
filament\_density = 1.24  
filament\_deretract\_speed = nil  
filament\_diameter = 1.75  
filament\_dip\_extraction\_speed = 70  
filament\_dip\_insertion\_speed = 33  
filament\_enable\_toolchange\_part\_fan = 0  
filament\_enable\_toolchange\_temp = 0  
filament\_load\_time = 0  
filament\_loading\_speed = 28  
filament\_loading\_speed\_start = 3

filament\_max\_overlap = 100%

filament\_max\_speed = 0

filament\_max\_volumetric\_speed = 4

filament\_max\_wipe\_tower\_speed = 0

filament\_melt\_zone\_pause = 0

filament\_minimal\_purge\_on\_wipe\_tower = 15

filament\_notes = ""

filament\_ramming\_parameters = "120 100 6.6 6.8 7.2 7.6 7.9 8.2 8.7 9.4 9.9 10.0| 0.05 6.6 0.45 6.8 0.95 7.8 1.45 8.3 1.95 9.7 2.45 10 2.95 7.6 3.45 7.6 3.95 7.6 4.45 7.6 4.95 7.6"

filament\_retract\_before\_travel = nil

filament\_retract\_before\_wipe = nil

filament\_retract\_layer\_change = nil

filament\_retract\_length = 2

filament\_retract\_lift = nil

filament\_retract\_lift\_above = nil

filament\_retract\_lift\_below = nil

filament\_retract\_restart\_extra = nil

filament\_retract\_speed = nil

filament\_seam\_gap = nil

filament\_settings\_id = "Esun ePA12 @RatRig - Copy20230313"

filament\_shrink = 100%  
filament\_skinnydip\_distance = 31  
filament\_soluble = 0  
filament\_spool\_weight = 0  
filament\_toolchange\_delay = 0  
filament\_toolchange\_part\_fan\_speed = 50  
filament\_toolchange\_temp = 200  
filament\_type = NYLON  
filament\_unload\_time = 0  
filament\_unloading\_speed = 90  
filament\_unloading\_speed\_start = 100  
filament\_use\_fast\_skinnydip = 0  
filament\_use\_skinnydip = 0  
filament\_vendor = Esun  
filament\_wipe = 1  
filament\_wipe\_advanced\_pigment = 0.5  
filament\_wipe\_extra\_perimeter = nil  
filament\_wipe\_inside\_depth = nil  
filament\_wipe\_inside\_end = nil  
filament\_wipe\_inside\_start = nil

filament\_wipe\_only\_crossing = nil

filament\_wipe\_speed = nil

fill\_angle = 0

fill\_angle\_increment = 0

fill\_density = 100%

fill\_pattern = rectilinear

fill\_smooth\_distribution = 10%

fill\_smooth\_width = 50%

fill\_top\_flow\_ratio = 100%

first\_layer\_acceleration = 10%

first\_layer\_acceleration\_overRAFT = 0

first\_layer\_bed\_temperature = 90

first\_layer\_extrusion\_spacing =

first\_layer\_extrusion\_width = 100%

first\_layer\_flow\_ratio = 100%

first\_layer\_height = 0.3

first\_layer\_infill\_speed = 0

first\_layer\_min\_speed = 20

first\_layer\_size\_compensation = -0.1

first\_layer\_size\_compensation\_layers = 1



first\_layer\_speed = 35%

first\_layer\_speed\_overRAFT = 30

first\_layer\_temperature = 285

full\_fan\_speed\_layer = 0

fuzzy\_skin = none

fuzzy\_skin\_point\_dist = 200%

fuzzy\_skin\_thickness = 150%

gap\_fill\_acceleration = 0

gap\_fill\_enabled = 1

gap\_fill\_extension = 0

gap\_fill\_flow\_match\_perimeter = 0%

gap\_fill\_last = 0

gap\_fill\_max\_width = 0

gap\_fill\_min\_area = 100%

gap\_fill\_min\_length = 0

gap\_fill\_min\_width = 0

gap\_fill\_overlap = 100%

gap\_fill\_speed = 80%

gcode\_comments = 0

gcode\_filename\_illegal\_char = [<>:"/\|?\*

gcode\_flavor = klipper  
gcode\_label\_objects = 1  
gcode\_precision\_e = 4  
gcode\_precision\_xyz = 3  
gcode\_resolution = 0  
gcode\_substitutions =  
high\_current\_on\_filament\_swap = 0  
hole\_size\_compensation = 0  
hole\_size\_threshold = 100  
hole\_to\_polyhole = 0  
hole\_to\_polyhole\_threshold = 0.01  
hole\_to\_polyhole\_twisted = 1  
host\_type = octoprint  
infill\_acceleration = 4500  
infill\_anchor = 600%  
infill\_anchor\_max = 5  
infill\_connection = connected  
infill\_connection\_bottom = connected  
infill\_connection\_bridge = connected  
infill\_connection\_solid = connected

infill\_connection\_top = connected

infill\_dense = 0

infill\_dense\_algo = autoenlarged

infill\_every\_layers = 1

infill\_extruder = 1

infill\_extrusion\_spacing =

infill\_extrusion\_width = 100%

infill\_first = 0

infill\_only\_where\_needed = 0

infill\_overlap = 18%

infill\_speed = 250%

inherits\_cumulative = "0.20mm NORMAL @RatRig";"Esun ePA-CF @RatRig";"RatRig V-Core-3-400"

init\_z\_rotate = 0

interface\_shells = 0

ironing = 0

ironing\_acceleration = 0

ironing\_angle = -1

ironing\_flowrate = 15%

ironing\_spacing = 0.1

ironing\_speed = 15

ironing\_type = top

layer\_gcode = ;AFTER\_LAYER\_CHANGE\n;[layer\_z]\n

layer\_height = 0.3

lift\_min = 0

machine\_limits\_usage = time\_estimate\_only

machine\_max\_acceleration\_e = 5000

machine\_max\_acceleration\_extruding = 9000

machine\_max\_acceleration\_retracting = 9000

machine\_max\_acceleration\_travel = 9000,1250

machine\_max\_acceleration\_x = 9000

machine\_max\_acceleration\_y = 9000

machine\_max\_acceleration\_z = 100

machine\_max\_feedrate\_e = 60

machine\_max\_feedrate\_x = 500

machine\_max\_feedrate\_y = 500

machine\_max\_feedrate\_z = 10

machine\_max\_jerk\_e = 5

machine\_max\_jerk\_x = 5

machine\_max\_jerk\_y = 5

machine\_max\_jerk\_z = 0.4

machine\_min\_extruding\_rate = 0

machine\_min\_travel\_rate = 0

max\_fan\_speed = 0

max\_gcode\_per\_second = 1500

max\_layer\_height = 0.5

max\_print\_height = 400

max\_print\_speed = 500

max\_speed\_reduction = 90%

max\_volumetric\_speed = 12

milling\_after\_z = 200%

milling\_diameter =

milling\_extra\_size = 150%

milling\_post\_process = 0

milling\_speed = 30

milling\_toolchange\_end\_gcode =

milling\_toolchange\_start\_gcode =

milling\_z\_lift =

min\_bead\_width = 85%

min\_fan\_speed = 0

min\_feature\_size = 0.1

min\_layer\_height = 0.2  
min\_length = 0.035  
min\_print\_speed = 15  
min\_skirt\_length = 20  
min\_width\_top\_surface = 100%  
mmu\_segmented\_region\_max\_width = 0  
model\_precision = 0.0001  
no\_perimeter\_unsupported\_algo = noperi  
notes =  
nozzle\_diameter = 0.8  
only\_one\_perimeter\_first\_layer = 0  
only\_one\_perimeter\_top = 0  
only\_one\_perimeter\_top\_other\_algo = 0  
only\_retract\_when\_crossing\_perimeters = 0  
ooze\_prevention = 0  
output\_filename\_format = {input\_filename\_base}\_{layer\_height}mm\_{filament\_type[0]}\_{print\_time}.gcode  
over\_bridge\_flow\_ratio = 100%  
overhangs\_acceleration = 0  
overhangs\_reverse = 0  
overhangs\_reverse\_threshold = 250%

overhangs\_speed = 100%  
overhangs\_width = 75%  
overhangs\_width\_speed = 55%  
parking\_pos\_retraction = 92  
pause\_print\_gcode = M601  
perimeter\_acceleration = 4500  
perimeter\_bonding = 0%  
perimeter\_extruder = 1  
perimeter\_extrusion\_spacing =  
perimeter\_extrusion\_width = 100%  
perimeter\_generator = classic  
perimeter\_loop = 0  
perimeter\_loop\_seam = rear  
perimeter\_overlap = 100%  
perimeter\_round\_corners = 0  
perimeter\_speed = 120%  
perimeters = 0  
physical\_printer\_settings\_id =  
post\_process =  
print\_custom\_variables =

print\_extrusion\_multiplier = 100%

print\_host =

print\_retract\_length = -1

print\_retract\_lift = -1

print\_settings\_id = NYLON RATRIG20230110probat04and08nozzle

print\_temperature = 0

printer\_custom\_variables =

printer\_model = VC3\_400

printer\_notes = Don't remove the following keywords! These keywords are used in the "compatible printer" condition of the print and filament profiles to link the particular print and filament profiles to this printer

profile.\nPRINTER\_VENDOR\_RatRig\nPRINTER\_MODEL\_VCORE\nPRINTER\_HAS\_Directextruder\nE3DV6

printer\_settings\_id = NYLON0.8mmRatRig V-Core-3-400first

printer\_technology = FFF

printer\_variant = 0.4

printer\_vendor =

printhost\_apikey =

printhost\_cafile =

printhost\_port =

raft\_contact\_distance = 0.1

raft\_expansion = 3

raft\_first\_layer\_density = 90%



raft\_first\_layer\_expansion = 6  
raft\_interface\_layer\_height = 0  
raft\_layer\_height = 0  
raft\_layers = 0  
remaining\_times = 1  
remaining\_times\_type = m73m117  
resolution = 0.0125  
resolution\_internal = 0.2  
retract\_before\_travel = 3  
retract\_before\_wipe = 0%  
retract\_layer\_change = 0  
retract\_length = 1  
retract\_length\_toolchange = 1  
retract\_lift = 0.2  
retract\_lift\_above = 0  
retract\_lift\_below = 0  
retract\_lift\_first\_layer = 1  
retract\_lift\_top = "All surfaces"  
retract\_restart\_extra = 0  
retract\_restart\_extra\_toolchange = 0

retract\_speed = 45

seam\_angle\_cost = 80%

seam\_gap = 15%

seam\_position = cost

seam\_travel\_cost = 20%

silent\_mode = 0

single\_extruder\_multi\_material = 0

single\_extruder\_multi\_material\_priming = 1

skirt\_brim = 0

skirt\_distance = 20

skirt\_distance\_from\_brim = 1

skirt\_extrusion\_width = 110%

skirt\_height = 1

skirts = 1

slice\_closing\_radius = 0.049

slicing\_mode = regular

slowdown\_below\_layer\_time = 10

small\_perimeter\_max\_length = 20

small\_perimeter\_min\_length = 6

small\_perimeter\_speed = 80%

solid\_fill\_pattern = rectilinear

solid\_infill\_acceleration = 0

solid\_infill\_below\_area = 0

solid\_infill\_every\_layers = 0

solid\_infill\_extruder = 1

solid\_infill\_extrusion\_spacing =

solid\_infill\_extrusion\_width = 100%

solid\_infill\_overlap = 100%

solid\_infill\_speed = 80%

solid\_over\_perimeters = 2

spiral\_vase = 0

standby\_temperature\_delta = -5

start\_filament\_gcode = "; Filament gcode\nSET\_GCODE\_OFFSET Z=0.0\n\n{if nozzle\_diameter[0]==0.4} SET\_PRESSURE\_ADVANCE ADVANCE=0.045{elsif nozzle\_diameter[0]==0.6}SET\_PRESSURE\_ADVANCE ADVANCE=0.02{endif}\n\n"

start\_gcode = START\_PRINT EXTRUDER\_TEMP=[first\_layer\_temperature] BED\_TEMP=[first\_layer\_bed\_temperature]

start\_gcode\_manual = 0

support\_material = 0

support\_material\_acceleration = 0

support\_material\_angle = 0

support\_material\_angle\_height = 0

support\_material\_auto = 0  
support\_material\_bottom\_contact\_distance = 0.2  
support\_material\_bottom\_interface\_layers = -1  
support\_material\_buildplate\_only = 1  
support\_material\_closing\_radius = 2  
support\_material\_contact\_distance = 50%  
support\_material\_contact\_distance\_type = filament  
support\_material\_enforce\_layers = 0  
support\_material\_extruder = 0  
support\_material\_extrusion\_width = 80%  
support\_material\_interface\_acceleration = 0  
support\_material\_interface\_angle = 90  
support\_material\_interface\_angle\_increment = 0  
support\_material\_interface\_contact\_loops = 0  
support\_material\_interface\_extruder = 0  
support\_material\_interface\_fan\_speed = -1  
support\_material\_interface\_layer\_height = 0  
support\_material\_interface\_layers = 2  
support\_material\_interface\_pattern = rectilinear  
support\_material\_interface\_spacing = 0.2

support\_material\_interface\_speed = 100%

support\_material\_layer\_height = 0

support\_material\_pattern = rectilinear

support\_material\_spacing = 2

support\_material\_speed = 80%

support\_material\_style = snug

support\_material\_synchronize\_layers = 0

support\_material\_threshold = 65

support\_material\_with\_sheath = 0

support\_material\_xy\_spacing = 60%

temperature = 285

template\_custom\_gcode =

thin\_perimeters = 80%

thin\_perimeters\_all = 20%

thin\_walls = 1

thin\_walls\_acceleration = 0

thin\_walls\_merge = 1

thin\_walls\_min\_width = 33%

thin\_walls\_overlap = 50%

thin\_walls\_speed = 100%

threads = 8

thumbnails = 32x32,400x300

thumbnails\_color = #018aff

thumbnails\_custom\_color = 0

thumbnails\_end\_file = 0

thumbnails\_format = PNG

thumbnails\_with\_bed = 1

time\_cost = 0

time\_estimation\_compensation = 100%

time\_start\_gcode = 20

time\_toolchange = 30

tool\_name = ""

toolchange\_gcode =

top\_fan\_speed = 0

top\_fill\_pattern = monotonic

top\_infill\_extrusion\_spacing =

top\_infill\_extrusion\_width = 100%

top\_solid\_infill\_acceleration = 0

top\_solid\_infill\_speed = 60%

top\_solid\_layers = 0

top\_solid\_min\_thickness = 0  
travel\_acceleration = 4500  
travel\_deceleration\_use\_target = 1  
travel\_speed = 400  
travel\_speed\_z = 0  
use\_firmware\_retraction = 0  
use\_relative\_e\_distances = 1  
use\_volumetric\_e = 0  
variable\_layer\_height = 1  
wall\_add\_middle\_threshold = 75%  
wall\_distribution\_count = 1  
wall\_split\_middle\_threshold = 50%  
wall\_transition\_angle = 10  
wall\_transition\_filter\_deviation = 25%  
wall\_transition\_length = 0.4  
wipe = 0  
wipe\_advanced = 0  
wipe\_advanced\_algo = linear  
wipe\_advanced\_multiplier = 60  
wipe\_advanced\_nozzle\_melted\_volume = 120

wipe\_extra\_perimeter = 0  
wipe\_inside\_depth = 50%  
wipe\_inside\_end = 1  
wipe\_inside\_start = 0  
wipe\_into\_infill = 0  
wipe\_into\_objects = 0  
wipe\_only\_crossing = 1  
wipe\_speed = 0  
wipe\_tower = 0  
wipe\_tower\_bridging = 10  
wipe\_tower\_brim\_width = 2  
wipe\_tower\_no\_sparse\_layers = 0  
wipe\_tower\_rotation\_angle = 0  
wipe\_tower\_width = 60  
wipe\_tower\_x = 170  
wipe\_tower\_y = 140  
wiping\_volumes\_extruders = 70,70  
wiping\_volumes\_matrix = 0  
xy\_inner\_size\_compensation = 0  
xy\_size\_compensation = 0



`z_offset = -0.05`

`z_step = 0.005`