

# OpenSCAD

- `scale([x,y,z])`

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 scale([1,1,2])
2 cube([10,10,10]);
```

Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-RLUwvial.scad  
Compiling design (CSG Products generation)...  
Compiling design (CSG Tree generation)...  
Geometries in cache: 1  
Geometry cache size in bytes: 728  
OGAL Polyhedrons in cache: 0  
OGAL cache size in bytes: 0  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.695

Error Log

Group	File	Line	Info
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Viewport: translate = [2.16 6.99 7.73], rotate = [57.80 0.00 27.10], distance = 91.89, fov = 22.50 (1415e654)

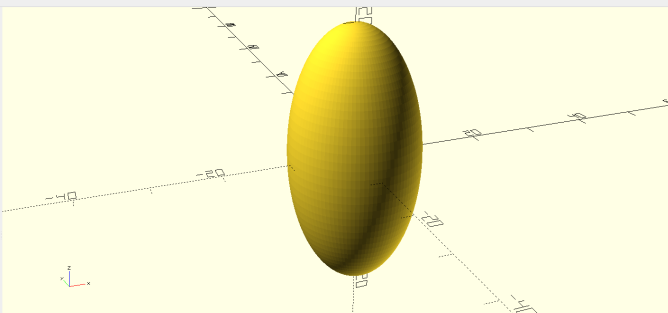
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Napovída

Editor

```
1 $fn=100;  
2  
3 scale([1,1,2])  
4 sphere(d=20);
```



Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-RLuWvniai.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 3  
Geometry cache size in bytes: 773352  
OGAL Polyhedrons in cache: 0  
OGAL cache size in bytes: 0  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.026

Error-Log

Show Vise

Group	File	Line	Info
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Viewport: translate = [-3.17 -1.26 -0.08], rotate = [65.50 0.00 338.80], distance = 113.40, fov = 22.50 [1415x854]

OpenSCAD 2021.01

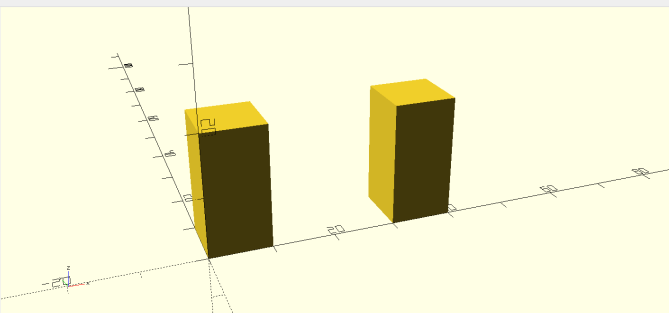
- module test() {...}

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;
2 |
3 test();
4
5 translate([30,0,0])
  test();
6
7 module test(){
8
9   cube([10,10,20]);
10 }
```



Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pevi/.local/share/OpenSCAD/backups/unsaved-backup-Rkurvoval.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 4  
Geometry cache size in bytes: 774080  
CGAL Polyhedrons in cache: 0  
CGAL cache size in bytes: 0  
Compiling design (CSG Products normalization)...  
Normalized tree has 2 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.041

Error Log

Show Vise

Group	File	Line	Info
-------	------	------	------

Viewport: translate = [119.52 -3.26 13.83], rotate = [65.50 0.00 338.80], distance = 113.40, fov = 22.50 (14294654)

OpenSCAD 2021.01

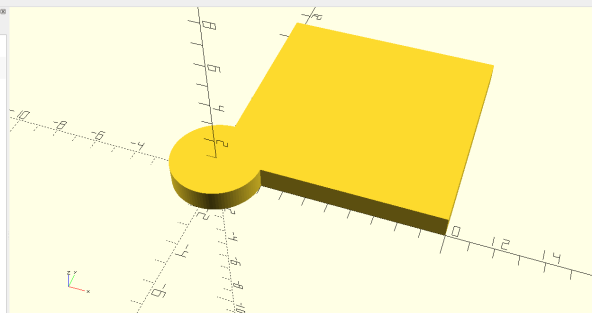
- `minkowski() { ... cylinder(d=4, h=1); }`
- `minkowski() { ... sphere(d=4); }`

Bezejmenný.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Napovídky

Editor

```
1 $fn=100;  
2 |  
3 cube([10,10,1]);  
4 cylinder(r=2,h=1);  
5  
6
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavsi/local/share/OpenSCAD/backups/unsaved-backup-8Luvsvia1.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 348  
Geometry cache size in bytes: 1148224  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalizer)...  
Normalized tree has 2 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.024

Error Log

Group	File	Line	Info
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Viewport: translate = [4.56 -1.55 3.92], rotate = [43.10 0.00 19.60], distance = 28.82, fov = 22.50 (1248d554)

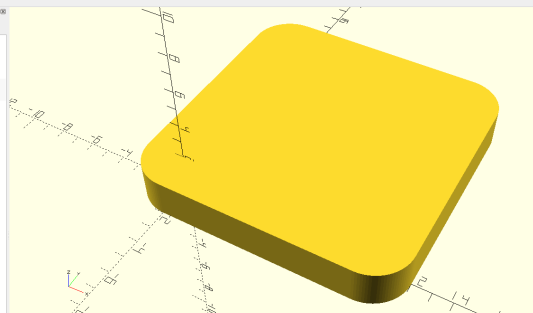
OpenSCAD 2021.01

Bežimenný.scad\* — OpenSCAD

Soubor Upravít Design Zobrazit Window nápověda

Editor

```
1 $fn=100;
2
3 |
4 minkowski()
5 {
6 cube([10,10,1]);
7 cylinder(d=4, h=1);
8 }
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-RLuvvial.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 354  
Geometry cache size in bytes: 26379624  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:00.023

Error Log

Group	File	Line	Info
-------	------	------	------

Viewport: translate = [17.94 -2.30 7.64], rotate = [44.50 0.00 29.40], distance = 28.82, fov = 22.50 (1248x654)

OpenSCAD 2021.01

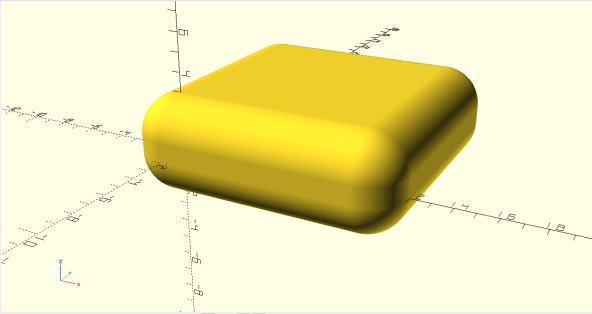


Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;  
2  
3 |  
4 minkowski()  
5 {  
6 cube([10,10,1]);  
7 sphere(d=4);  
8 }
```



Viewport: translate = [19.59 -5.91 3.75], rotate = [ 66.90 0.00 28.00 ], distance = 28.82, fov = 22.50 (1248x654)

Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-RLuvsvia.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 354  
Geometry cache size in bytes: 26379624  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalizer)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:00.029

Error Log

Group	File	Line	Info
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OpenSCAD 2021.01

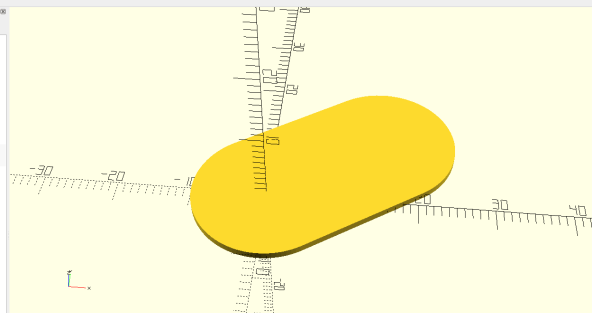
- `hull() { ... }`

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Napovka

Editor

```
1 $fn=100;
2
3 hull() {
4     translate([15,10,0])
5     circle(10);
6     circle(10);
7 }
8
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-8Luvvial.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 357  
Geometry cache size in bytes: 2684696  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:00.021

Error Log

Group	File	Line	Info
-------	------	------	------

Viewport: translate = [15.53 -3.95 11.05], rotate = [ 42.40 0.00 5.60 ], distance = 91.85, fov = 22.50 (1248x654)

OpenSCAD 2021.01

Bežimenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;
2
3 hull() {
4   translate([20,0,0])
5   sphere(10);
6   sphere(10);
7 }
8
```

Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-8Luwsvia1.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 361  
Geometry cache size in bytes: 5574328  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:01.103

Error Log

Group	File	Line	Info
-------	------	------	------

Viewport: translate = [113.75 -3.36 11.92] rotate = [48.00 0.00 37.80] distance = 113.40, fov = 22.50 (1248b054)

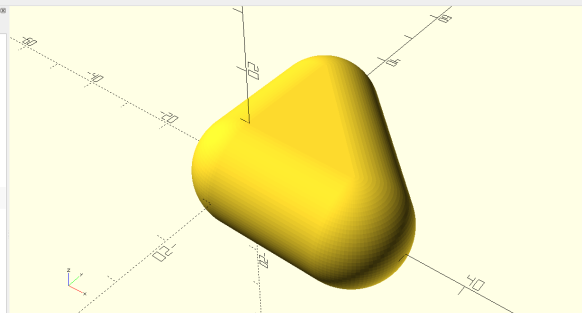
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Upravít Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;
2
3 hull() {
4     translate([20,0,0])
5     sphere(10);
6     sphere(10);
7     translate([0,20,0])
8     sphere(10);
9 }
10
```



Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-8Luvsvia1.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 363  
Geometry cache size in bytes: 7024328  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76204304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:01.390

Error Log

Group	File	Line	Info
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Viewport: translate = [113.75 -3.36 11.92], rotate = [48.00 0.00 37.80], distance = 113.40, fov = 22.50 (1248b054)

OpenSCAD 2021.01

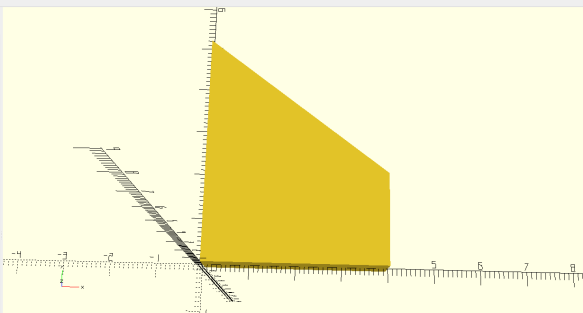
- `polygon(points=[[x1,y1],[x2,y2],...]);`

Bežimenný.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;  
2  
3 polygon( points=[[0,0],[4,0],[  
4 4,2],[0,5]] );  
5  
6  
7  
8
```



Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-RLuwoval.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 377  
Geometry cache size in bytes: 10825056  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76306304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.043

Error-Log

Group	File	Line	Info
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Viewport: translate = [2.05 0.14 8.10 ], rotate = [ 15.10 0.00 1.40 ], distance = 9.05, fov = 22.50 (1243x654)

OpenSCAD 2021.01

- `polyhedron(points = [ [x, y, z], ... ], faces = [ [p1, p2, p3..], ... ]);`



Bežimenný scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```

1 $fn=100;
2
3 polyhedron(
4 points=[ [10,10,0],[10,-10,0
           ],[-10,-10,0],[-10,10,0],
           // the four points at base
5 [0,0,10] ],
6 // the apex point
7 faces=[ [0,1,4],[1,2,4],[2,3,4
          ],[3,0,4],
8 // each triangle side
9 [1,0,3],[2,1,3] ]
10 // two triangles for square base
11 );
12
13
14

```

Konzole

```

Parsing design (AST generator)...
Saved backup file: /home/panel/.local/share/OpenSCAD/backups/unsaved-backup-RLu6wval.scad
Compiling design (CSG Tree generator)...
Compiling design (CSG Products generator)...
Geometries in cache: 381
Geometry cache size in bytes: 11272784
CGAL Polyhedrons in cache: 2
CGAL cache size in bytes: 76306304
Compiling design (CSG Products normalization)...
Normalized tree has 1 elements!
Compile and preview finished.
Total rendering time: 0:00:00.044

```

Error Log

Group	File	Line	Info

Viewport: translate = [2.33 -0.53 -1.31], rotate = [41.00 0.00 13.30], distance = 74.40, fov = 22.50 (11986954)

OpenSCAD 2021.01

- `linear_extrude(height=10)() { ... }`

Bezejmenný scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Napovídky

Editor

```

1 $fn=100;
2
3 linear_extrude(height=10)
4   text("22"); |
5
6

```

Konzole

```

Parsing design (AST generation)...
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-RLuwtvial.scad
Compiling design (CSG Tree generation)...
Compiling design (CSG Products generation)...
Geometries in cache: 308
Geometry cache size in bytes: 9348440
CGAL Polyhedrons in cache: 2
CGAL cache size in bytes: 76206304
Compiling design (CSG Products normalization)...
Normalized tree has 1 elements!
Compile and preview finished.
Total rendering time: 0:00:00.032

```

Error Log

Group	File	Line	Info

Viewport: translate = [11.31 0.56 11.68], rotate = [27.00 0.00 11.20], distance = 43.93, fov = 22.50 (1248x654)

OpenSCAD 2021.01

Bežimenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;
2 |
3 linear_extrude(height=10)
4 {hull(){
5   circle(r=5);
6   translate([10,0,0])
7   circle(r=2);
8   }
9   };
10
11
```

Viewport: translate = [8.38 -2.72 6.85 ], rotate = [50.10 0.00 28.00 ], distance = 54.24, fov = 22.50 (1248x654)

Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-RLu5vial.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 373  
Geometry cache size in bytes: 9386412  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:00.028

Error Log

Group	File	Line	Info
-------	------	------	------

OpenSCAD 2021.01

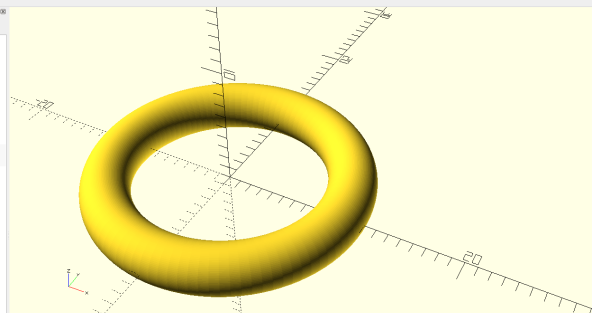
- `rotate_extrude(height=10)() { ... }`

Bezejmenny.scad\* — OpenSCAD

Soubor Upravít Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;  
2  
3 rotate_extrude()  
4 { translate([10,0,0])  
5   circle(r=2);  
6 }  
7  
8  
9
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-RLuwtvial.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 374  
Geometry cache size in bytes: 10824584  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76206304  
Compiling design (CSG Products normalizer)...  
Normalized tree has 1 element(s)  
Compile and preview finished.  
Total rendering time: 0:00:00.044

Error Log

Group	File	Line	Info
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Viewport: translate = [8.38 -2.72 6.85 ], rotate = [50.10 0.00 28.00 ], distance = 54.24, fov = 22.50 (12486454)

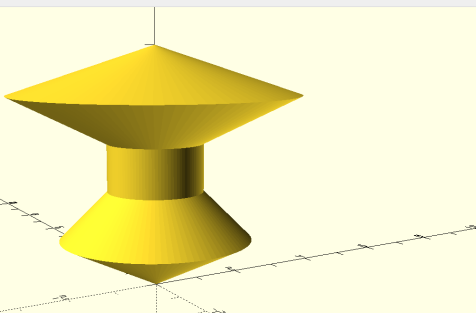
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Najpovida

Editor

```
1 $fn=100;  
2  
3 rotate_extrude(()) polygon(  
    points=[[0,0],[2,1],[1,2  
    ],[1,3],[3,4],[0,5]] );  
4  
5  
6  
7  
8
```



Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-RLuwoval.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 378  
Geometry cache size in bytes: 10882808  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76306304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.042

Error-Log

Group	File	Line	Info
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Viewport: translate = [-0.55 -2.34 2.94], rotate = [81.60 0.00 329.20], distance = 13.79, fov = 22.50 (1243x654)

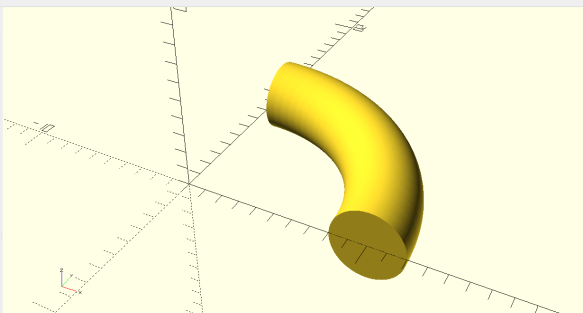
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Napovedka

Editor

```
1 $fn=100;  
2  
3 rotate_extrude(angle=90)  
4     translate([10,0,0])  
5     circle(r=2);  
6  
7  
8  
9  
10
```



Konzole

Parsing design (AST generation)...  
Saved backup file: /home/gajda/.local/share/OpenSCAD/backups/unsaved-backup-RLuwoval.scad  
Compiling design (CSG Tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 383  
Geometry cache size in bytes: 11272200  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 76306304  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements  
Compile and preview finished.  
Total rendering time: 0:00:00.031

Error-Log

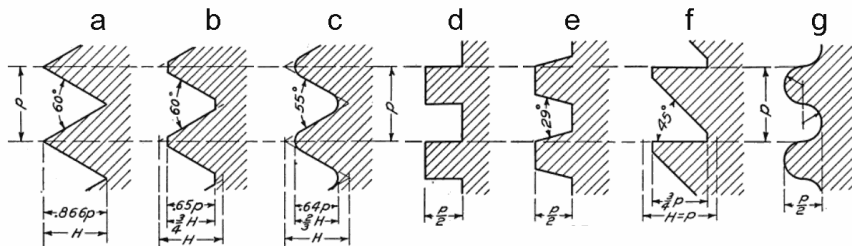
Group	File	Line	Info
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Viewport: translate = [4.86 2.74 1.28 ], rotate = [ 53.60 0.00 28.00 ], distance = 39.54, fov = 22.50 (1243x654)

OpenSCAD 2021.01



# Závity



Wikimedia

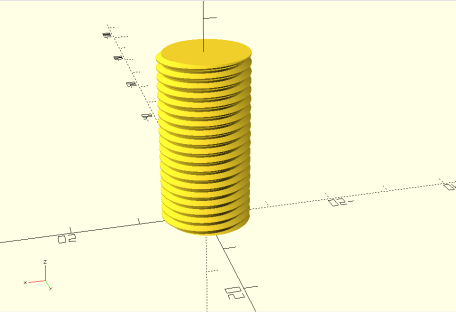
- a) V-thread
- b) American National thread
- c) Whitworth
- d) Square thread
- e) Acme thread
- f) Buttress thread
- g) Knuckle thread
  - Edison thread

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 $fn=100;
2
3 include<threads.scad>;
4
5 // G 1/4
6 english_thread (diameter=0.518,
7   threads_per_inch=19, length=1);
8
```



Viewport: translate = [-3.33 0.60 9.56 ], rotate = [ 65.30 0.00 164.50 ], distance = 113.40, fov = 22.50 (965x654)

Konzole

Geometry cache size in bytes: 1130944  
CGAL Polyhedrons in cache: 2  
CGAL cache size in bytes: 7036304  
Total rendering time: 0:01:56.100  
Top level object is a 3D object:  
Simple: yes  
Vertices: 27476  
HalfEdges: 85430  
Edges: 42715  
HalfFaces: 30482  
Facets: 15241  
Volumes: 2  
Rendering finished.

Error Log

Group	File	Line
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OpenSCAD 2021.01

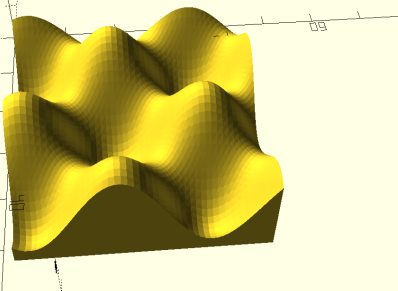
- `if( podmínka ) { ... } else { ... }`
- `import(" test.stl" );`
- `surface(file=" test.dat" );`

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 // example010.dat generated using octave:
2 // d = (sin(1:0.2:10)' * cos(1:0.2:10)) * 10;
3 // save("example010.dat", "d");
4 surface(file = "example010.dat");
5
```



Konsole

Parasing design (AST generation)...  
Saved backup file: /home/panel/local/share/OpenSCAD/backups/unsaved-backup-B4yo0tdt.scad  
Compiling design (CSG tree generation)...  
Rendering Polygon Mesh using CGAL...  
Geometries in cache: 3  
Geometry cache size in bytes: 1244328  
CGAL Polyhedrons in cache: 0  
CGAL cache size in bytes: 0  
Total rendering time: 0:00:00.038  
Top level object is a 3D object:  
Facets: 8638  
Rendering finished.

Error-Log

show vlse

Group

Viewport: translate = [27.52 26.05 -1.76], rotate = [41.00 0.00 85.20], distance = 140.00, fov = 22.50 (1055654)

OpenSCAD 2021.01

s.scad\* - OpenSCAD

File Edit View Design Tools Window Help

Editor

```
1 $fn=200;
2
3 difference(){
4   union(){
5     for ( z = [1:640] ){rotate(-z*2)
6       translate([0,0,z*.1])
7         rotate([90,0,0])
8           cube(size = [12,7,1]);}
9
10    cylinder(h=7, r=12);
11    cylinder(h=75,r=5);
12  }
13
14  cylinder(h=75, r=2.5);
15 }
16
```

Konzole

Geometry cache size in bytes: 1020152  
CGAL Polyhedrons in cache: 3  
CGAL cache size in bytes: 31873328  
Total rendering time: 0:01:15.765  
Top level object is a 3D object:  
Simple: yes  
Vertices: 8854  
Halfedges: 20576  
Edges: 13288  
Halfacets: 8872  
Facets: 4436  
Volumes: 2  
Rendering finished.

Error-Log

Show Vise

Group

Viewport: translate = [-8.38 13.71 22.80], rotate = [95.00 0.00 25.00], distance = 237.09, fov = 22.50(1055654)

OpenSCAD 2021.01

# Knihovna - BOSL2

- 2D tvary
- 3D tvary
- ozubená kola
- závity
- ...

Bezejmenný.scad\* — OpenSCAD

Source | Upravat | Design | Zobrazit | Window | Nápověda

Editor

```
1 include <BOSL2/std.scad>
2
3 right_triangle([40,30]);
```

Konzole

Parsing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-5f0c6zWw.scad  
Used file cache size: 1 files  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 1  
Geometry cache size in bytes: 128  
CGAL Polyhedrons in cache: 0  
CGAL cache size in bytes: 0  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.147

Error-Log

Show | v|se

Group

Viewport: translate = [16.05 9.29 3.29], rotate = [31.20 0.00 359.10], distance = 91.85, fov = 22.50 (1055x654)

OpenSCAD 2021.01

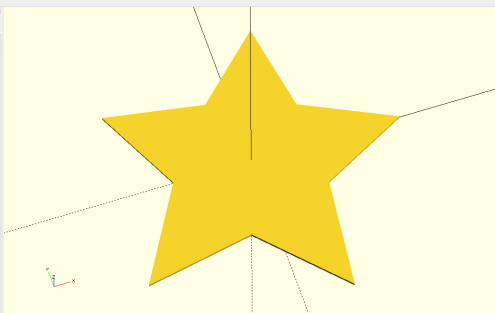


Bezejmenný.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 star(n=5, r=50, ir=25);
```



Konzole

Parasing design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-SfjvGzWf.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 2  
Geometry cache size in bytes: 368  
CGAL Polyhedrons in cache: 0  
CGAL cache size in bytes: 0  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.166

Error-Log

Show vstě

Group

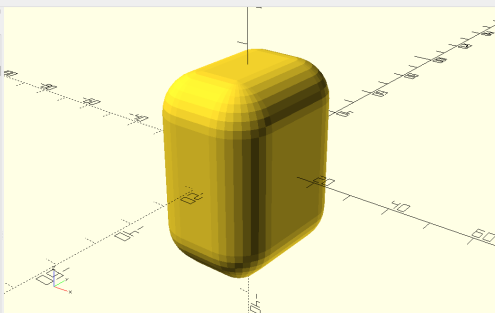
Viewport: translate = [-0.02 -2.90 3.93], rotate = [28.40 0.00 341.60], distance = 237.09, fov = 22.50 (100x65x4)

OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Source | View | Design | Zobrazení | Window | Help | Editor

```
1 include <BOSL2/std.scad>
2 cuboid([30,40,50], rounding=10,
  teardrop=true);
```



Viewport: translate = [ 3.06 -1.45 0.86 ], rotate = [ 64.10 0.00 38.30 ], distance = 192.04, fov = 22.50 (1055e54)

Konzole

```
Parsing design (AST generation)...
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-SfjyGzWf.scad
Compiling design (CSG tree generation)...
Compiling design (CSG Products generation)...
Geometries in cache: 12
Geometry cache size in bytes: 196072
CGAL Polyhedrons in cache: 0
CGAL cache size in bytes: 0
Compiling design (CSG Products normalization)...
Normalized tree has 1 elements!
Compile and preview finished.
Total rendering time: 0:00:00.187
```

Error-Log

Show | v|se |

Group

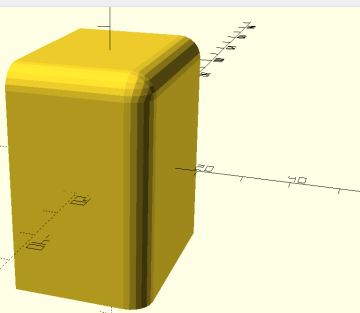
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 cuboid(
3     [30,40,50], rounding=5,
4     edges=[TOP+FRONT, TOP+RIGHT,
5           FRONT+RIGHT],
6     $fn=24
7 );
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-SfjGzWf.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 43  
Geometry cache size in bytes: 310232  
CGAL Polyhedrons in cache: 11  
CGAL cache size in bytes: 476048  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.375

Error-Log

show vlse

Group

Viewport: translate = [2.63 -1.78 0.42], rotate = [49.00 0.00 19.40], distance = 172.84, fov = 22.50 (1055e54)

OpenSCAD 2021.01

Bezejmennj.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 prismoid(size2=[100,75], h=30, xang
  =[50,60], yang=[70,40]);
```

Konzole

Parasing design (AST generation)...  
Saved backup file: /home/pavel/local/share/OpenSCAD/backups/unsaved-backup-SfyGzWf.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 44  
Geometry cache size in bytes: 311248  
CGAL Polyhedrons in cache: 11  
CGAL cache size in bytes: 476048  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.176

Error-Log

Show Hide

Group

Viewport: translate = [ 116.99 16.23 16.80 ], rotate = [ 34.00 0.00 157.50 ], distance = 486.13, fov = 22.50 (1055x654)

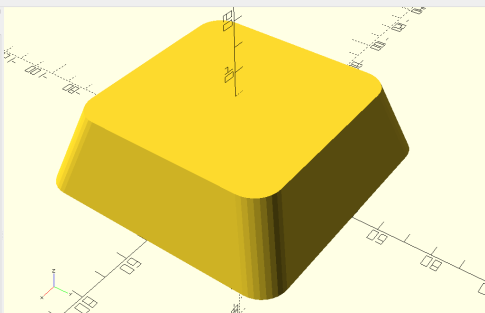
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 prismoid(100, 80, rounding=10, h=30);
```



Konzole

Parasing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-SfjyGzWf.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 45  
Geometry cache size in bytes: 321480  
CGAL Polyhedrons in cache: 11  
CGAL cache size in bytes: 476048  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.296

Error-Log

Show vše

Group

OpenSCAD 2021.01

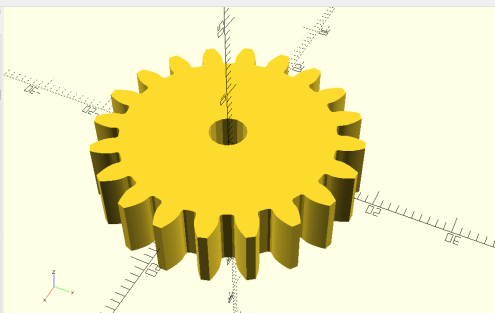
Viewport: translate = [113.87 18.09 18.47], rotate = [-49.40 0.00 126.00], distance = 263.41, fov = 22.50 (1055x654)

Bezejmennj.scad\* — OpenSCAD

Soubor Upravít Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/gears.scad>
3 spur_gear(circ_pitch=5, teeth=20,
  thickness=8, shaft_diam=5);
```



Konzole

Parasing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-SfjyGzWf.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 50  
Geometry cache size in bytes: 515504  
CGAL Polyhedrons in cache: 11  
CGAL cache size in bytes: 476048  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.400

Error-Log

show vlse

Group

Viewport: translate = [116.87 12.00 19.22], rotate = [-44.50 0.00 116.20], distance = 74.40, fov = 22.50 (10954854)

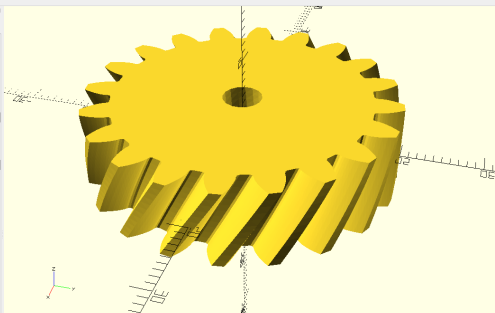
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Source | View | Design | Zobrazení | Window | Help/Docs

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/gears.scad>
3 spur_gear(
4     circ_pitch=5, teeth=20,
5     thickness=10,
6     shaft_diam=5, helical=-30,
7     slices=12,
8     $fa=1, $fs=1
9 );
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/panel/local/share/OpenSCAD/backups/unsaved-backup-SfjyGzWt.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 54  
Geometry cache size in bytes: 1621912  
CGAL Polyhedrons in cache: 11  
CGAL cache size in bytes: 476048  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.279

Error-Log

show v'se

Group

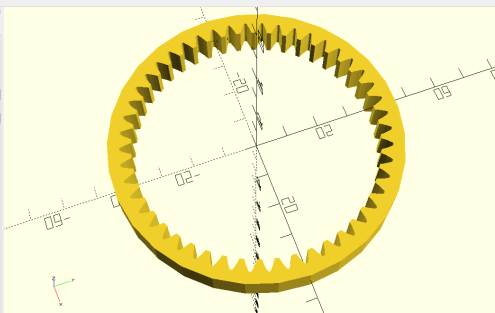
Viewport: translate = [21.49 7.83 11.25], rotate = [35.00 0.00 196.40], distance = 74.40, fov = 22.50 (1055x654)

OpenSCAD 2021.01

Bezejmennj.scad\* — OpenSCAD

Soubor Upravat Design Zobrazit Window Napovkda  
Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/gears.scad>
3 ring_gear(circ_pitch=5, teeth=48,
  thickness=10, profile_shift=0.5
  );|
```



Kontrola

Parse design (AST generation)...  
Saved backup file: /home/panel/local/share/OpenSCAD/backups/unsaved-backup-SfjyGzWf.scad  
Compiling design (CSG tree generation)...  
Rendering Polygon Mesh using CGAL...  
Geometries in cache: 70  
Geometry cache size in bytes: 6948556  
CGAL Polyhedrons in cache: 4  
CGAL cache size in bytes: 193126169  
Total rendering time: 0:00:00.407  
Top level object is a 3D object.  
Facets: 6264  
Rendering finished.

Error-Log

Show v'se  
Group

Viewport: translate = [13.28 -5.58 19.78], rotate = [24.20 0.00 70.00], distance = 213.38, fov = 22.50 (1055x654)

OpenSCAD 2021.01

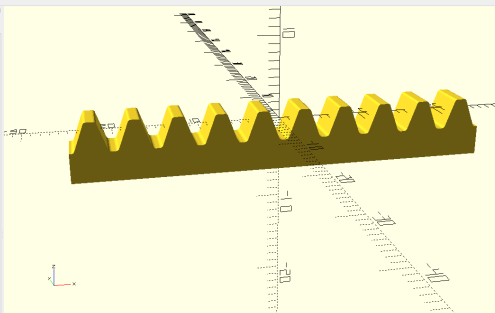


Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/gears.scad>
3 rack(pitch=5, teeth=10, thickness=5);
```



Konzole

Parse design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-SfjvGzW.scad  
Compiling design (CSG tree generation)...  
Compiling design (CSG Products generation)...  
Geometries in cache: 74  
Geometry cache size in bytes: 7002064  
CGAL Polyhedrons in cache: 4  
CGAL cache size in bytes: 193126169  
Compiling design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.221

Error-Log

Show Hide

Group

OpenSCAD 2021.01

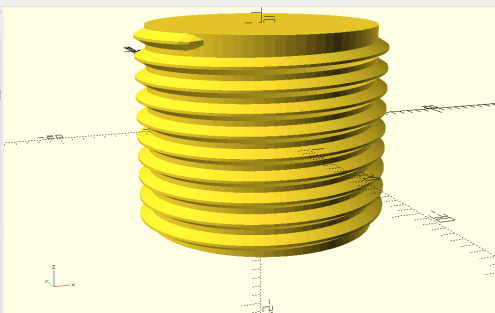
Viewport: translate = [-5.75;-11.77;-1.09], rotate = [70.40;0.00;347.40], distance = 82.67, fov = 22.50 (100%e654)

Bezejmenný.scad\* — OpenSCAD

Source | Draw | Design | Zobraziť | Window | Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/threading.scad>
3 threaded_rod(d=25, height=20, pitch
    =2, $fa=1, $fs=1);
```



Viewport: translate = [-5.17 -11.86 -0.66], rotate = [74.60 0.00 339.70], distance = 66.96, fov = 22.50 (100%e654)

Konzole

```
Parsing design (AST generation)...
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-SfyGzW.scad
Compiling design (CSG tree generation)...
Rendering Polygon Mesh using CGAL...
Geometries in cache: 70
Geometry cache size in bytes: 9391784
CGAL Polyhedrons in cache: 4
CGAL cache size in bytes: 193126160
Total rendering time: 0:00:00.307
Top level object is a 3D object.
Facets: 6636
Rendering finished.
```

Error-Log

show vlse

Group

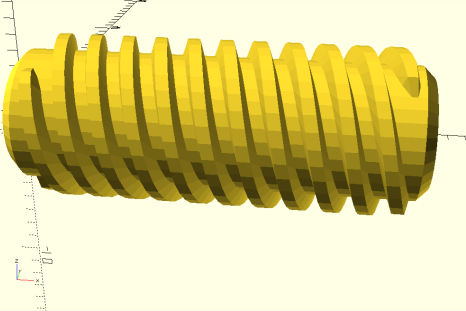
OpenSCAD 2021.01

Bezejmenný scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/threading.scad>
3 trapezoidal_threaded_rod(l=25, d=10
  , pitch=2, starts=3, $fa=1, $fs
  =1, bevel=true, orient=RIGHT,
  anchor=BOTTOM);|
4
```



Konzole

Parasing design (AST generation)...  
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-SfjGzW.scad  
Compiling design (CSG tree generation)...  
Rendering Polygon Mesh using CGAL...  
Geometries in cache: 84  
Geometry cache size in bytes: 10610784  
CGAL Polyhedrons in cache: 4  
CGAL cache size in bytes: 193126169  
Total rendering time: 0:00:00.326  
Top level object is a 3D object.  
Facets: 3384  
Rendering finished.

Error-Log

show vls

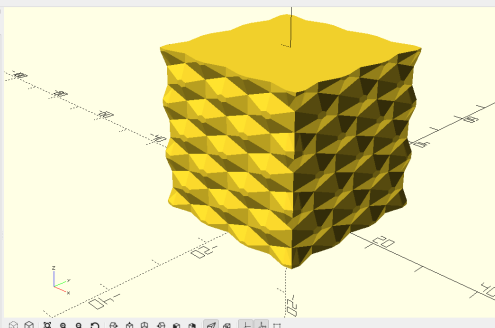
Group

Viewport: translate = [13.52 -8.10 1.52], rotate = [ 65.50 0.00 8.40 ], distance = 39.54, fov = 22.50 (1005x654)

OpenSCAD 2021.01

Bezejmennj.scad\* — OpenSCAD

```
1 include <BOSL2/std.scad>
2 tex = texture("hex_grid", border=0.4);
3 linear_sweep(
4   rect(30), texture=tex, h=30,
5   tex_size=[10,10]
6 );
```



Konzole

```
Parsing design (AST generation)...
Saved backup file: /home/panefi/local/share/OpenSCAD/backups/unsaved-backup-SfjyGzWf.scad
Compiling design (CSG tree generation)...
Compiling design (CSG Products generation)...
Geometries in cache: 85
Geometry cache size in bytes: 10949336
CGAL Polyhedrons in cache: 4
CGAL cache size in bytes: 193126169
Compiling design (CSG Products normalization)...
Normalized tree has 1 elements!
Compile and preview finished.
Total rendering time: 0:00:01.366
```

Error-Log

Group

Viewport: translate = [-3.33 -5.45 9.14], rotate = [64.80 0.00 45.50], distance = 140.00, fov = 22.50 (1055x654)

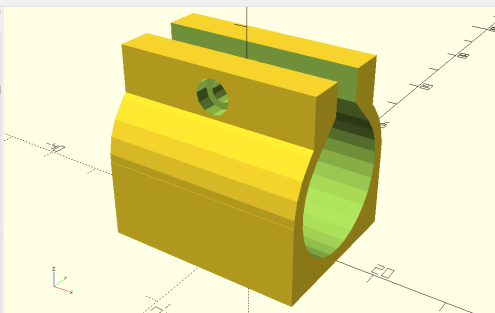
OpenSCAD 2021.01

Bezejmennj.scad\* — OpenSCAD

Source | Správní | Design | Zobrazení | Window | Nápověda

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/linear_bearings.scad>
3 linear_bearing_housing(d=19, l=29, wall=
4     2, tab=8, screwsize=2.5);
```



Konzole

```
Parsing design (AST generation)...
Saved backup file: /home/pavel/.local/share/OpenSCAD/backups/unsaved-backup-q5LMDWm.scad
Used file cache size: 1 files
Compiling design (CSG tree generation)...
Compiling design (CSG Products generation)...
Geometries in cache: 8
Geometry cache size in bytes: 22816
CGAL Polyhedrons in cache: 0
CGAL cache size in bytes: 0
Compiling design (CSG Products normalization)...
Normalized tree has 15 elements!
Compile and preview finished.
Total rendering time: 0:00:00.883
```

Error-Log

show vstě

Group

Viewport: translate = [-2.44 5.18 7.44], rotate = [60.80 0.00 34.10], distance = 113.40, fov = 22.50 (1055e54)

OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```

1 include <BOSL2/std.scad>
2 include <BOSL2/hinges.scad>
3 $fn=32;
4 cuboid([2,40,15])
5   position(TOP+RIGHT) orient(
6     anchor=RIGHT)
7     knuckle_hinge(length=35, segs
8       =9, offset=3, arm_height=1);

```

Viewport: translate = [-1.66;0.70;-1.22], rotate = [48.00;0.00;29.90], distance = 91.85, fov = 22.50 (117.66054)

Konzole

```

ECHO: clearance = 0
ECHO: clearance = 0
ECHO: clearance = 0
ECHO: clearance = 0
Compiling design (CSG Products generation)...
Geometries in cache: 13
Geometry cache size in bytes: 53728
CGAL Polyhedrons in cache: 0
CGAL cache size in bytes: 0
Compiling design (CSG Products normalization)...
Normalized tree has 6 elements!
Compile and preview finished.
Total rendering time: 0:00:00.323

```

Error-Log

Group	File	Line	Info

OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Nápověda

Editor

```

1 include <BOSL2/std.scad>
2 include <BOSL2/walls.scad>
3 sparse_wall(h=40, l=100, thick=3);

```

Konzole

```

Parsing design (AST generation)...
Saved backup file: /home/panel@local/share/OpenSCAD/backups/unsaved-backup-q5LMDMm.scad
Compiling design (CSG Tree generation)...
Compiling design (CSG Products generation)...
Geometries in cache: 51
Geometry cache size in bytes: 78664
CGAL Polyhedrons in cache: 0
CGAL cache size in bytes: 0
Compiling design (CSG Products normalization)...
Normalized tree has 1 elements!
Compile and preview finished.
Total rendering time: 0:00:00.208

```

Error-Log

Group	File	Line	Info

Viewport: translate = [-2.60;-10.71;4.55], rotate = [307.90;0.00;270.40], distance = 192.04, fov = 22.50 (1198x654)

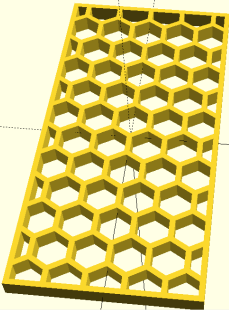
OpenSCAD 2021.01

Bezejmenný.scad\* — OpenSCAD

Soubor Uprav Design Zobrazit Window Napovídky

Editor

```
1 include <BOSL2/std.scad>
2 include <BOSL2/walls.scad>
3 hex_panel([50, 100, 5], strut=
    1.5, spacing=10);
```



Konzole

Parse design (AST generation)...  
Save backup file: /home/panel@local/share/OpenSCAD/backup/unsaved-backup-q5LMDMm.scad  
Compile design (CSG Tree generation)...  
Compile design (CSG Products generation)...  
Geometries in cache: 58  
Geometry cache size in bytes: 228176  
CGAL Polyhedrons in cache: 0  
CGAL cache size in bytes: 0  
Compile design (CSG Products normalization)...  
Normalized tree has 1 elements!  
Compile and preview finished.  
Total rendering time: 0:00:00.241

Error-Log

Group	File	Line	Info
-------	------	------	------

Viewport: translate = [ 14.34 -6.44 15.25 ], rotate = [ 216.20 0.00 354.40 ], distance = 237.05, fov = 22.50 (1198x654)

OpenSCAD 2021.01



# OpenSCAD - závěr

- <https://openscad.org>
- jednoduché ovládání
- příklady
- knihovny
- u složitějších modelů delší doba renderování