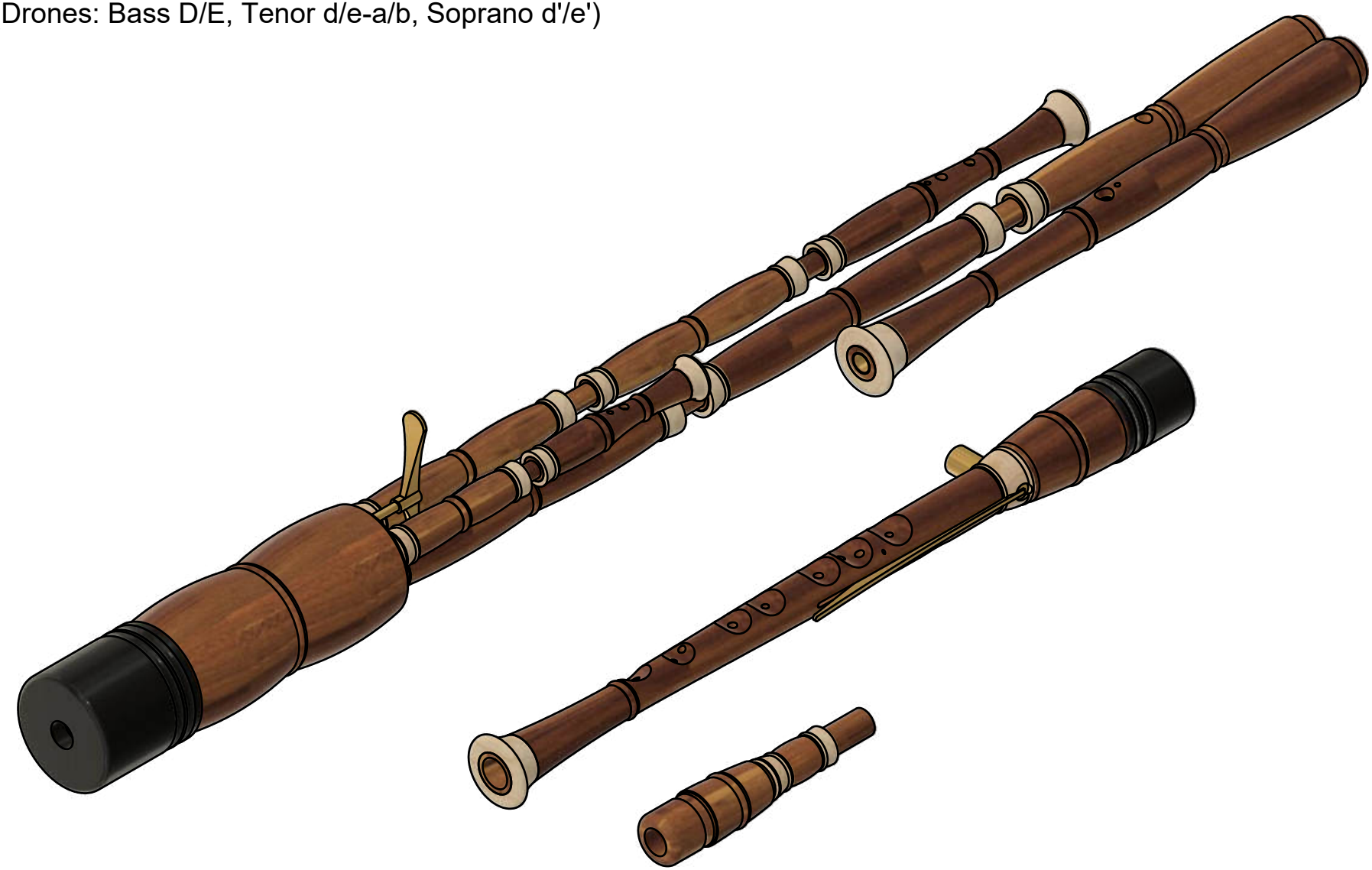
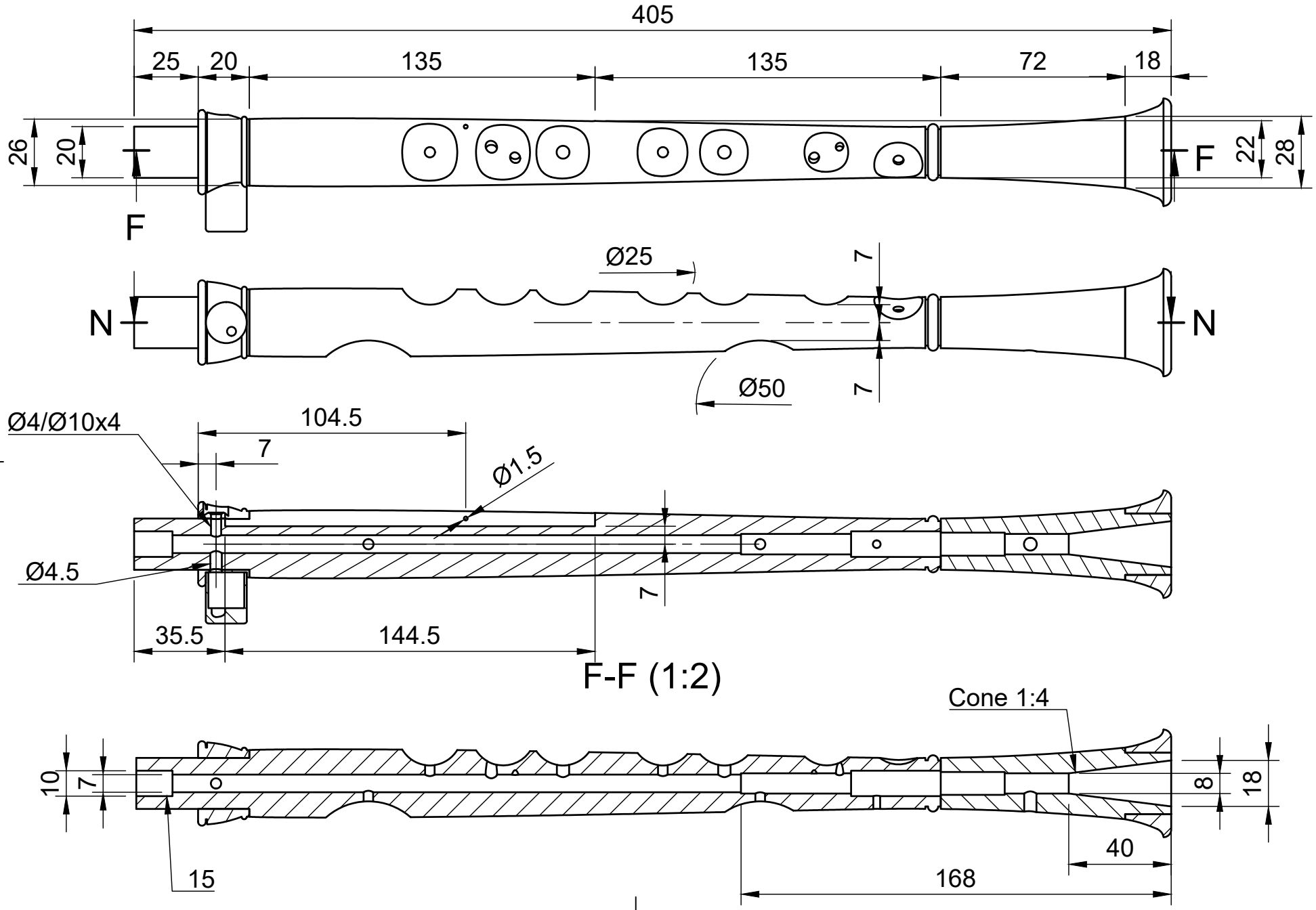
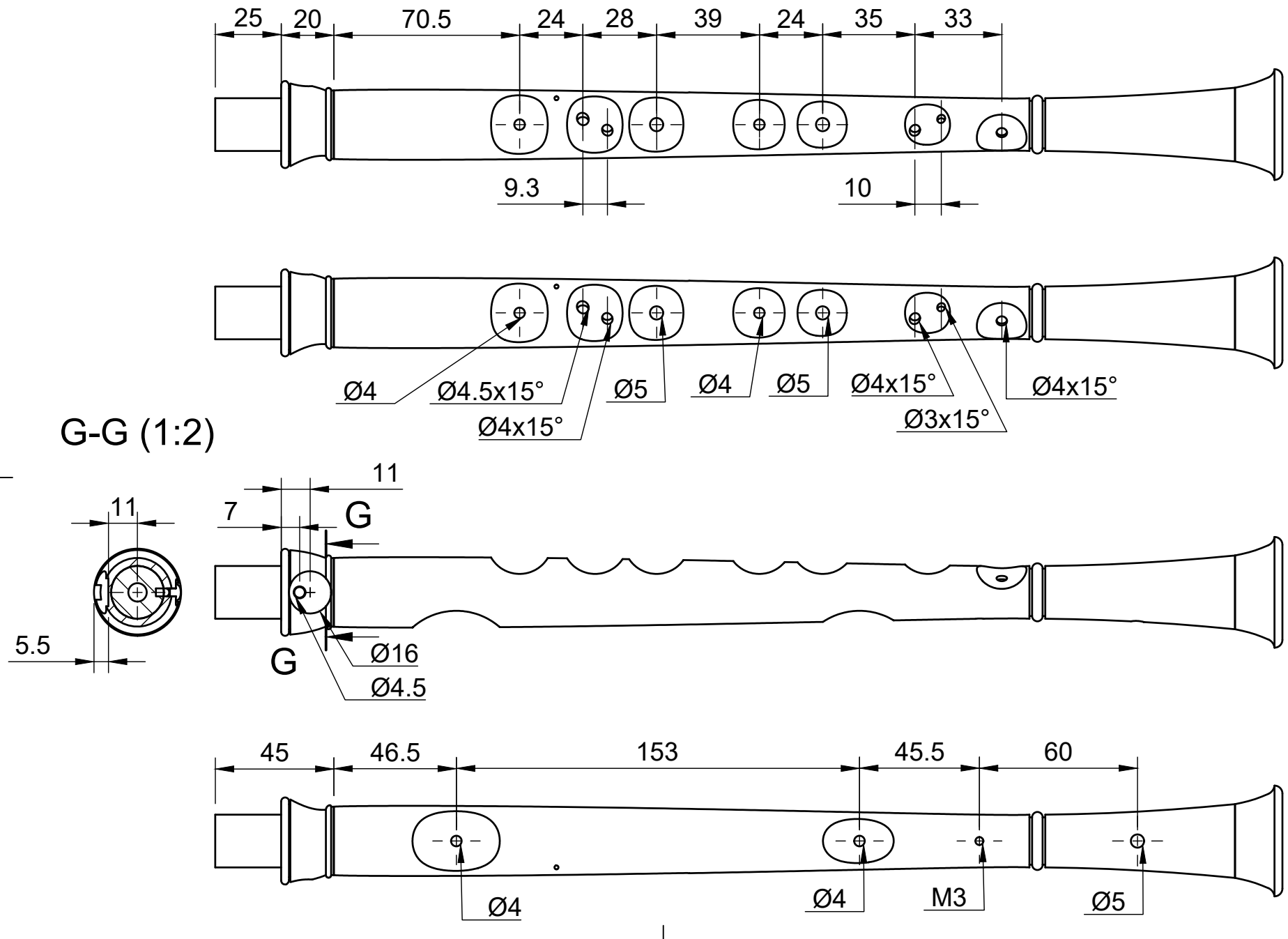
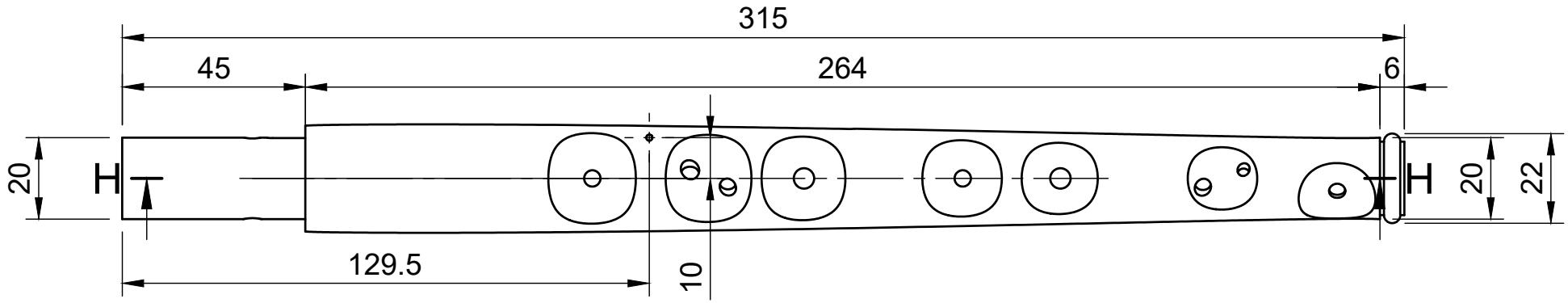
Swedish Bagpipes (Säckpipa), model 'Northern Uilleann Pipes' in E/A
(Drones: Bass D/E, Tenor d/e-a/b, Soprano d'/e')



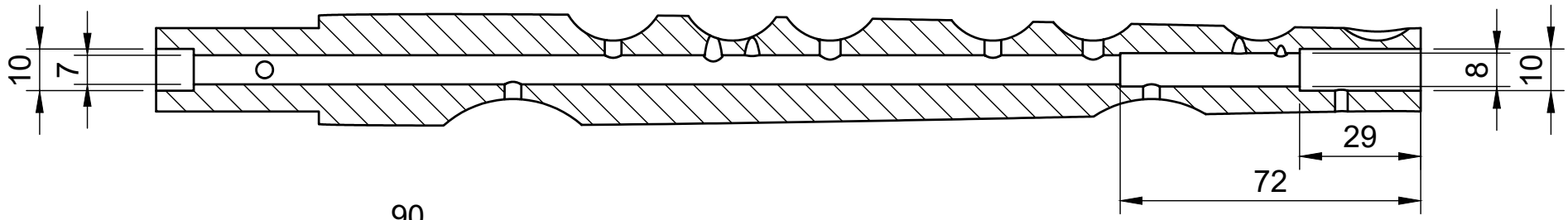

A
A

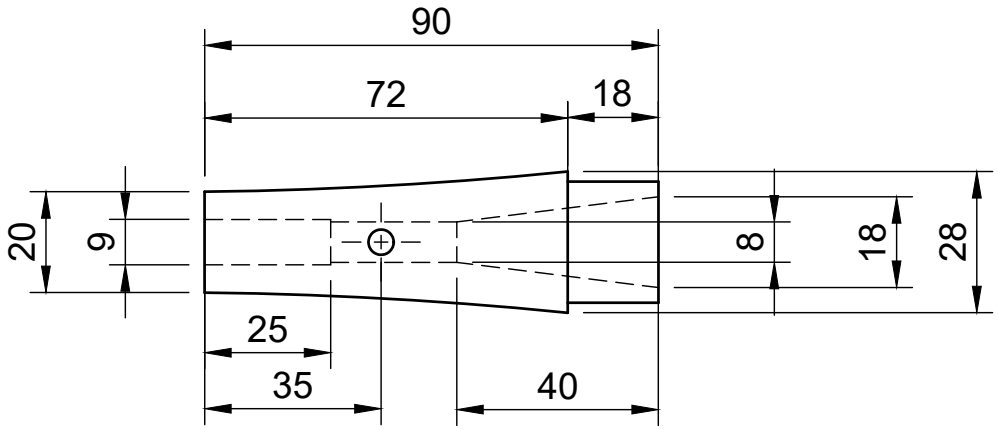

405
25
20
135
135
72
18
26
20
F
F
22
28
Ø25
7
N
N
Ø50
7
Ø4/Ø10x4
104.5
7
Ø1.5
Ø4.5
7
35.5
144.5
F-F (1:2)
Cone 1:4
10
7
15
8
18
40
168

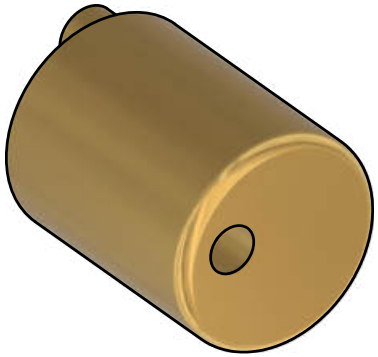

25
20
70.5
24
28
39
24
35
33
9.3
10
Ø4
Ø4.5x15°
Ø5
Ø4
Ø5
Ø4x15°
Ø4x15°
Ø4x15°
Ø3x15°
G-G (1:2)
11
7
G
11
5.5
G
Ø16
Ø4.5
45
46.5
153
45.5
60
Ø4
Ø4
M3
Ø5

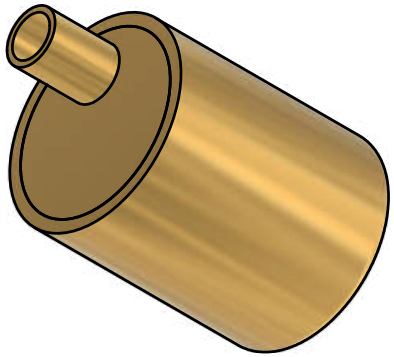

315
45
264
6
20
H
H
20
22
129.5
10

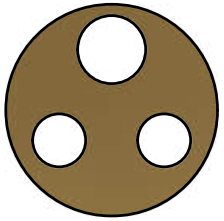
H-H (2:3)

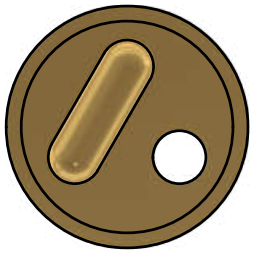

10
7
8
10
29
72

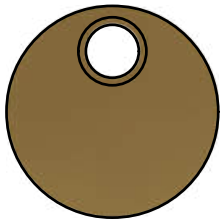

90
72
18
20
9
8
18
28
25
35
40

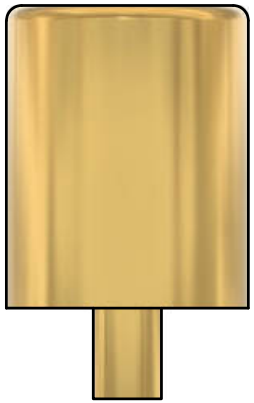






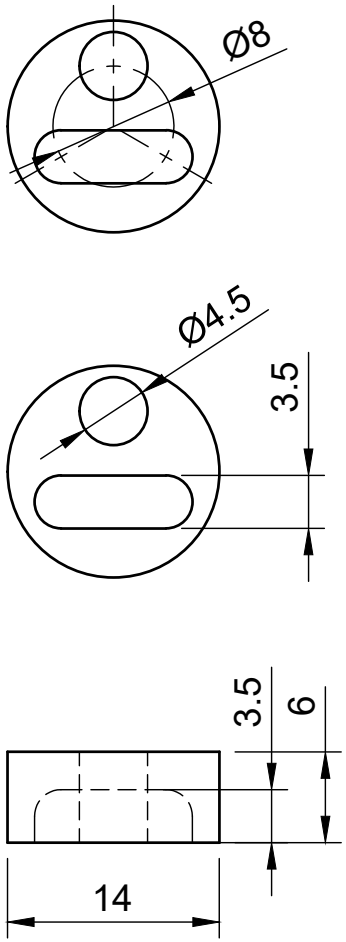




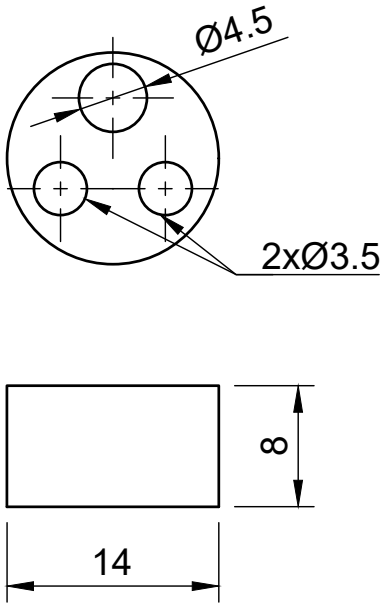


Branch Pipe

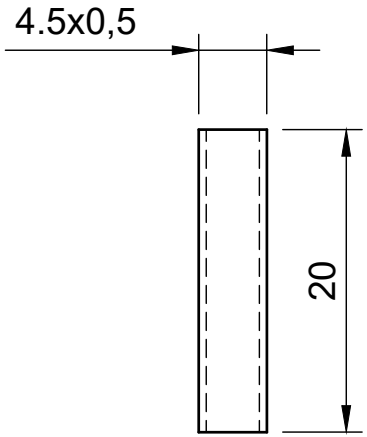
Bottom Piece



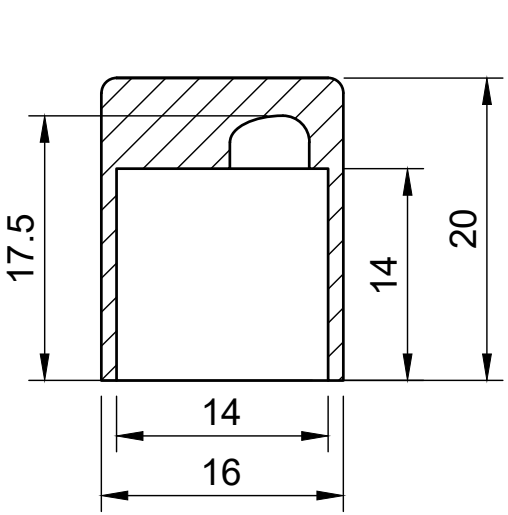
Mid Section



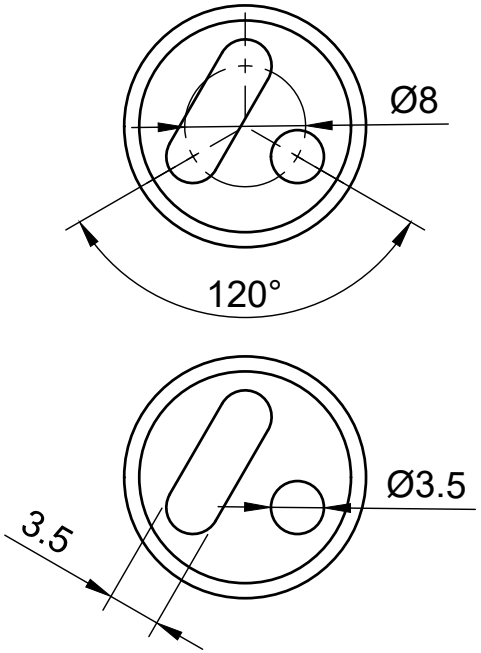
Connection Tube

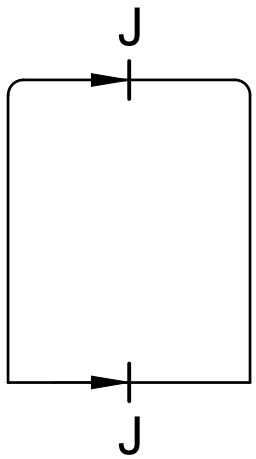


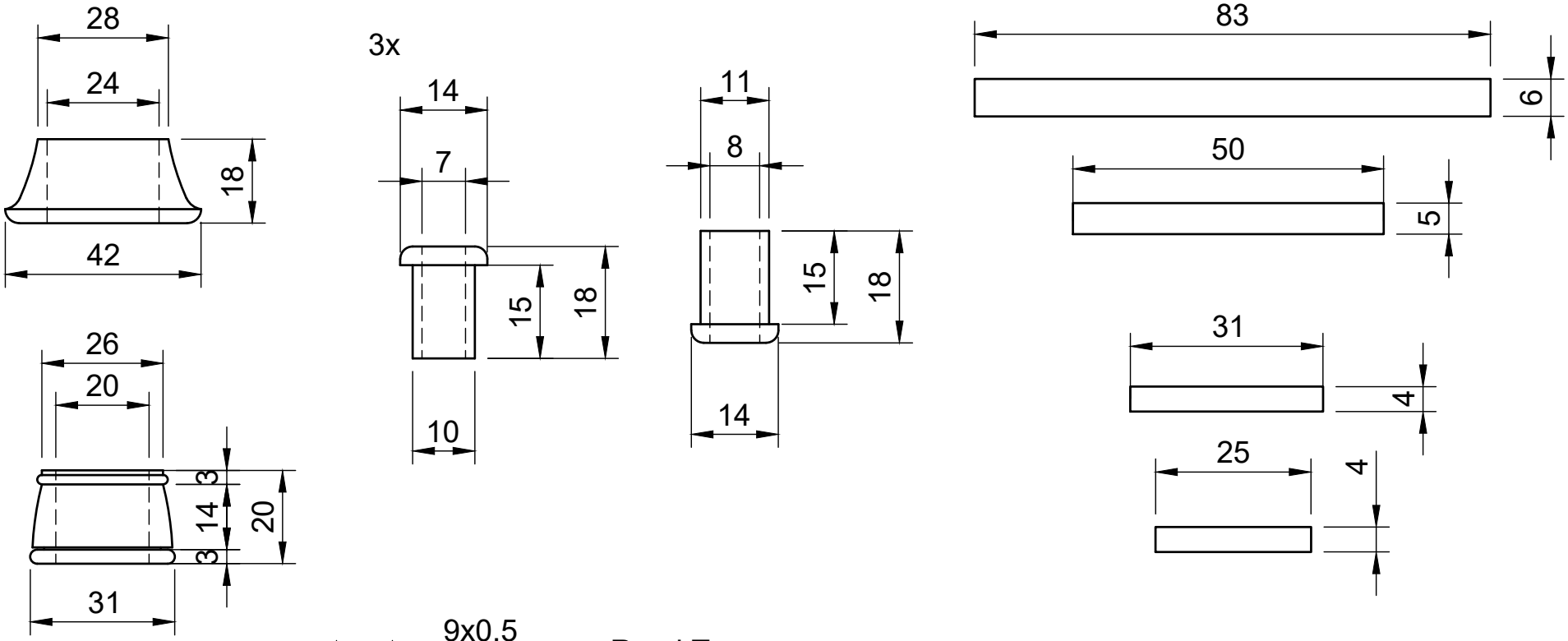
J-J (2)



Top Cap

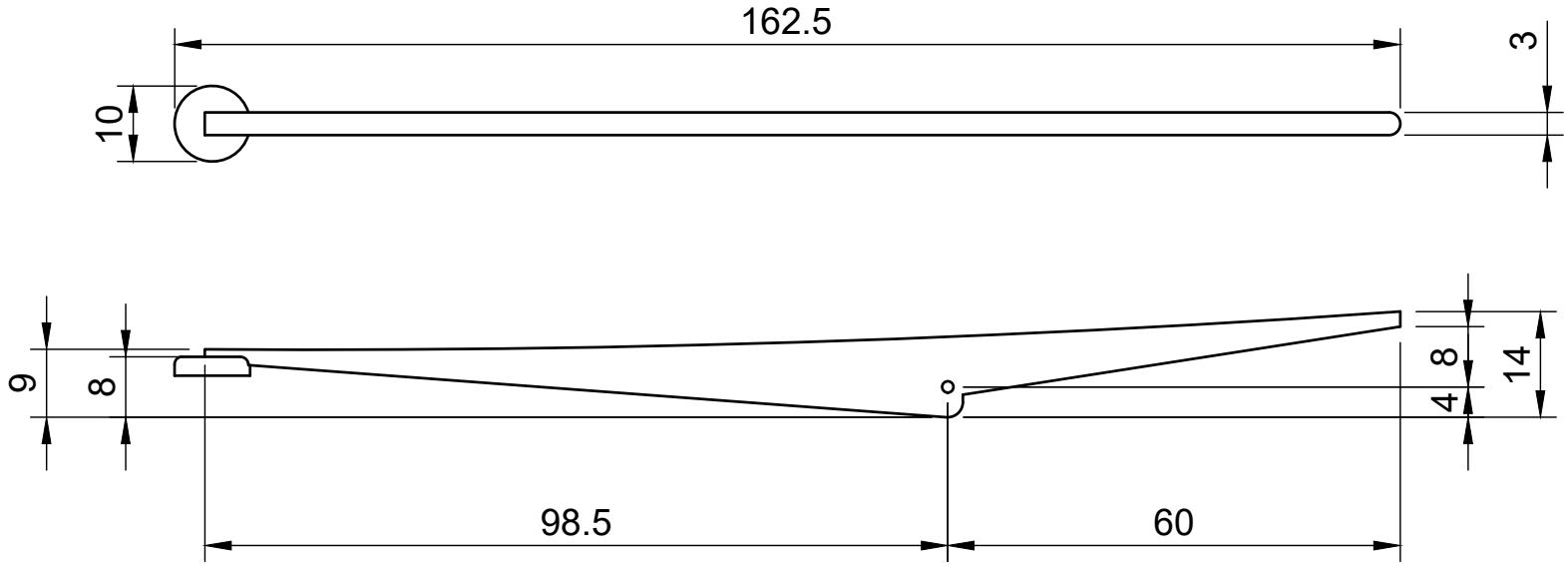


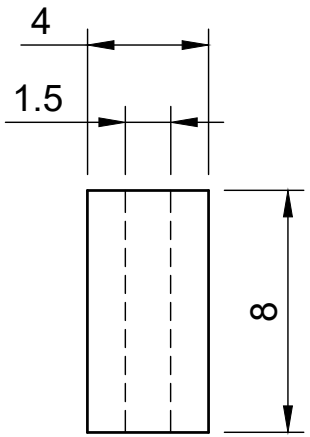




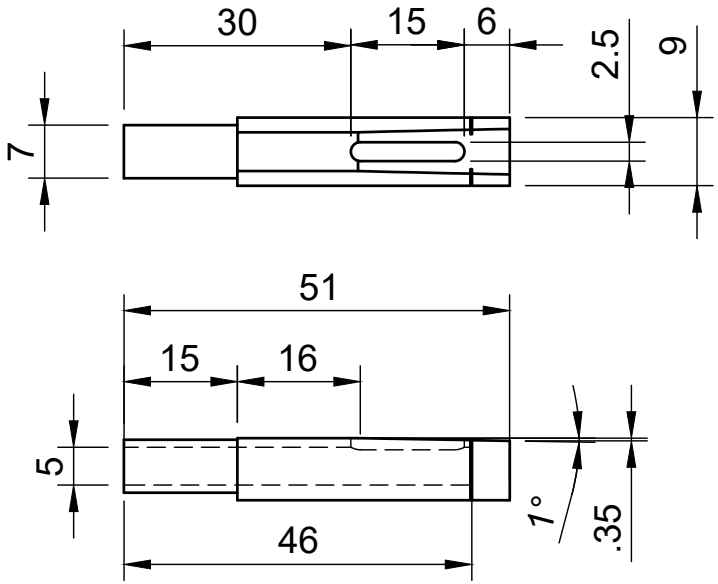
Reed Tongues:

Bass Reed; 1,0mm Carbonfiber/ Tied Up 20-24mm, note A3-B3
Tenor Reed; 0,6mm Carbonfiber/ Tied Up 12-14mm, note A4-B4
Soprano Reed; 0,4mm Carbonfiber/ Tied Up 11-12mm, note F#5-A5
Chanter Reed; 0,2-0,25mm Carbonfiber/ Tied Up 6-7mm, note B5-C6

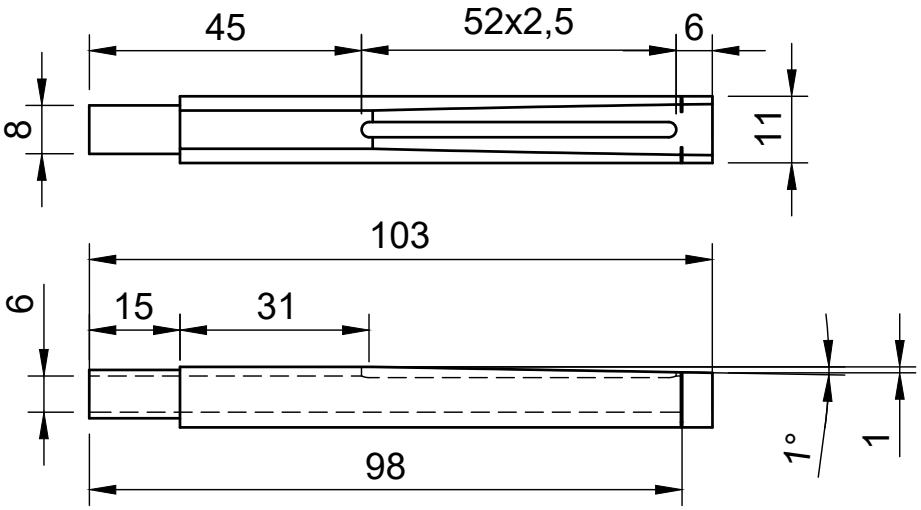

162.5
3
10
9
8
8
14
4
98.5
60


4
1.5
8

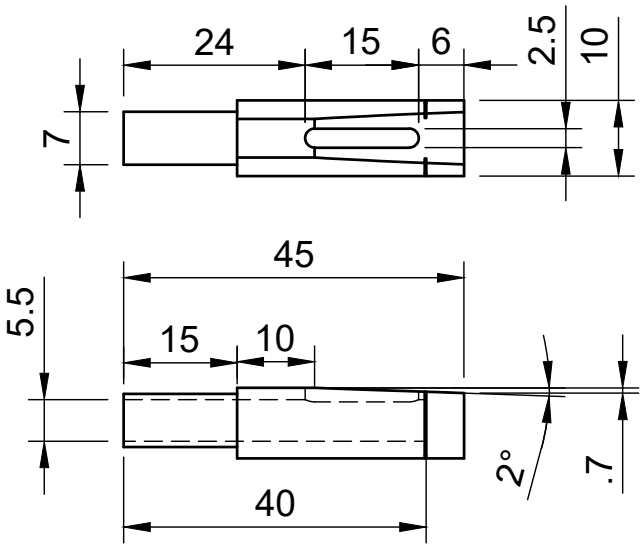
Soprano Drone Reed



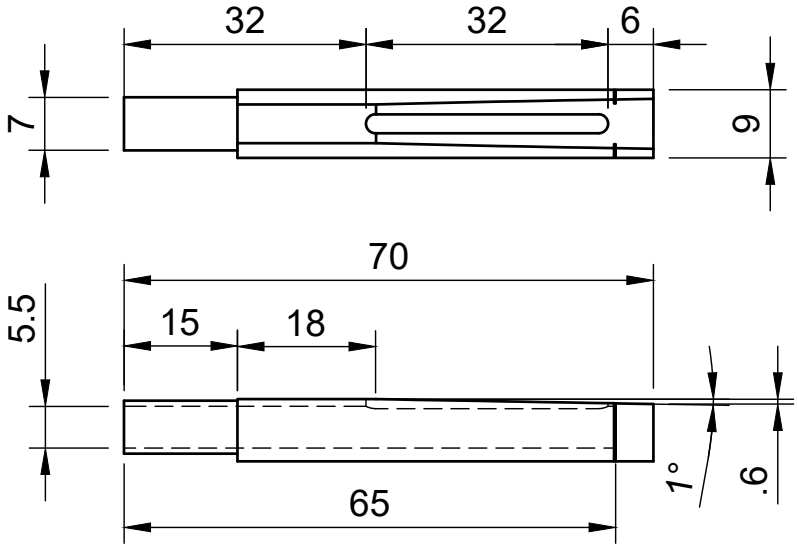
Bass Drone Reed



Chanter Reed

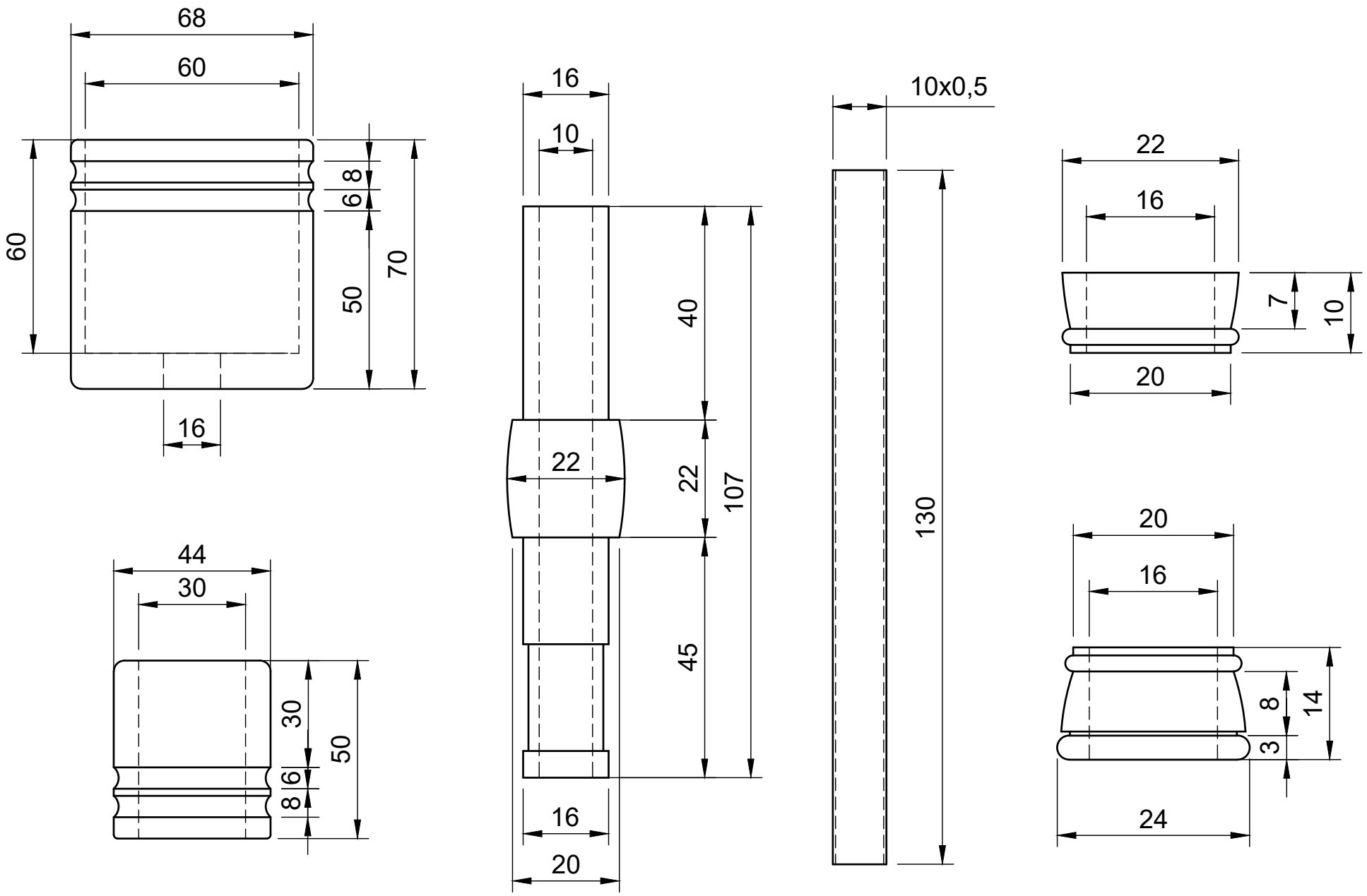


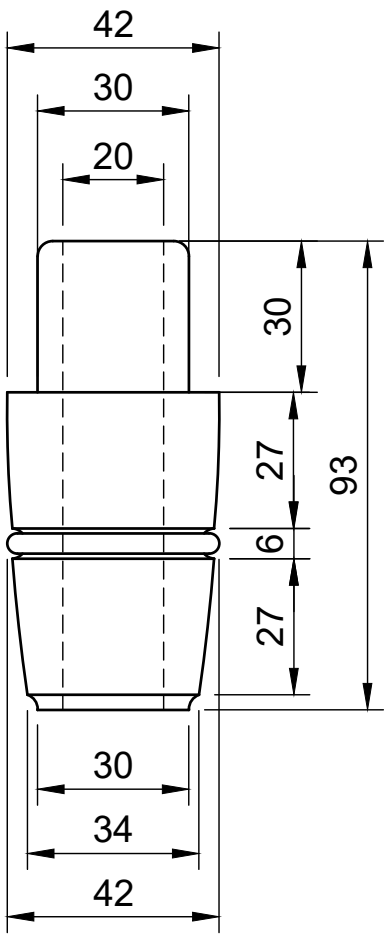
Baritone Drone Reed

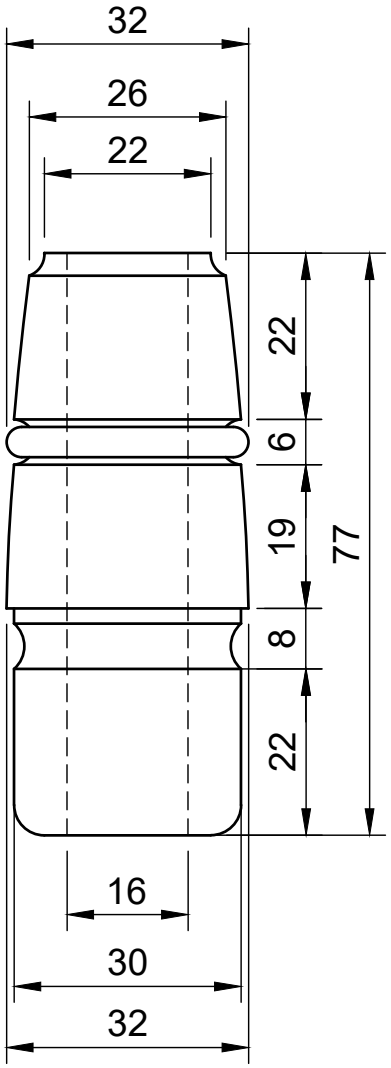


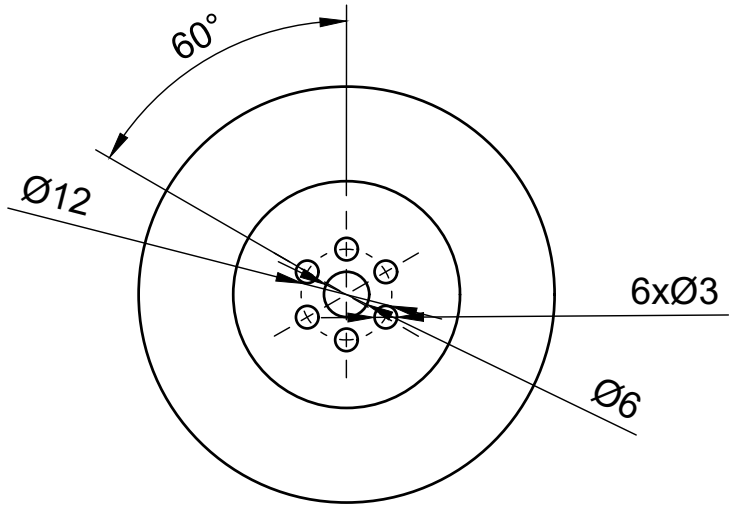
B-B (1:2)

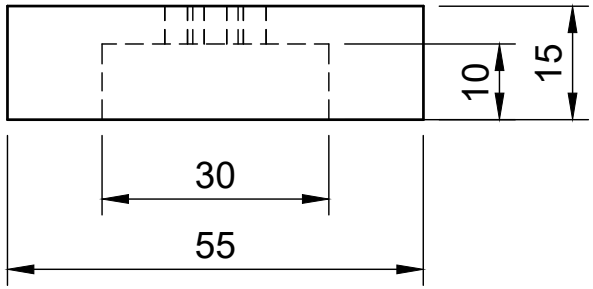
C-C (1:2)

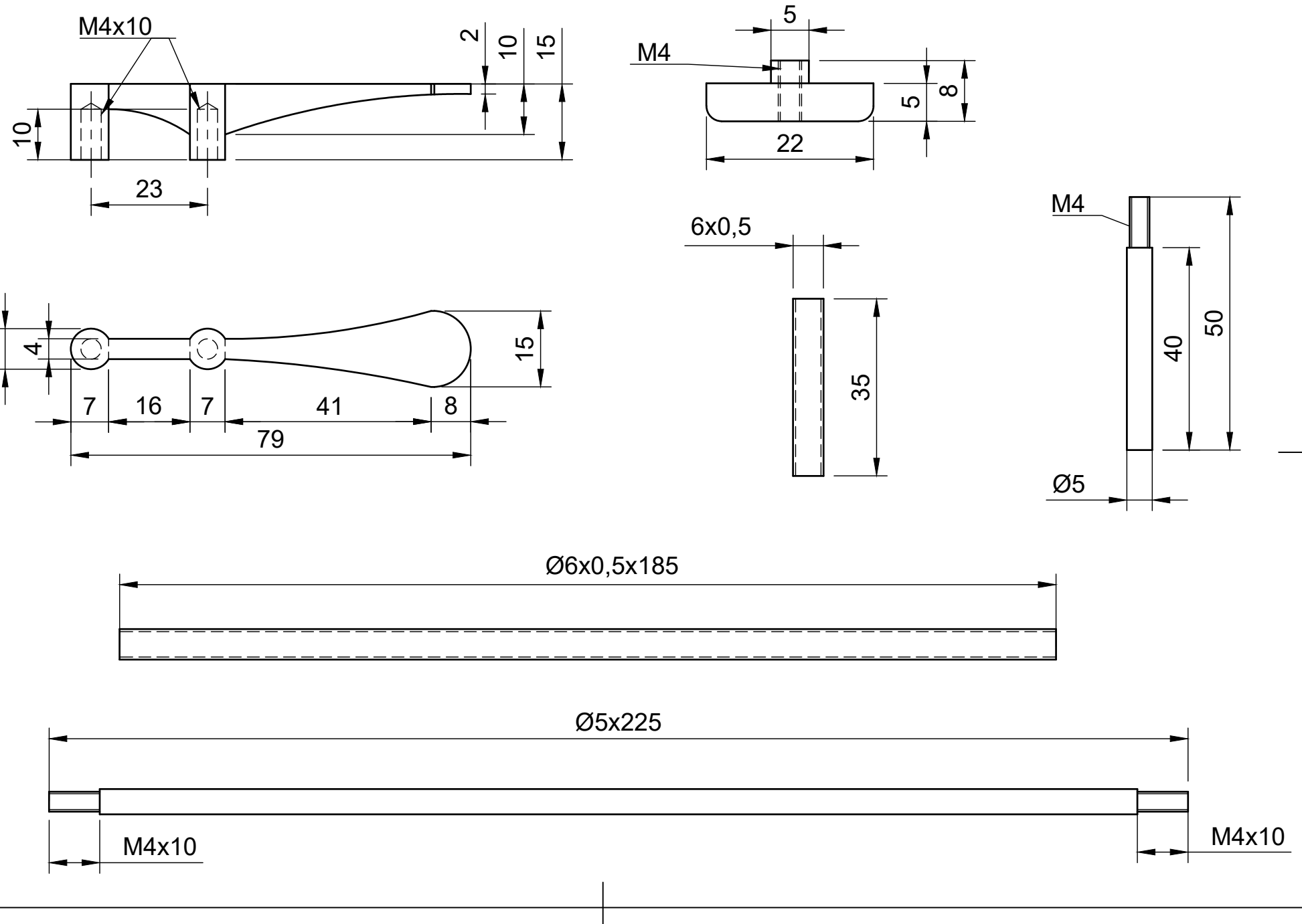

68
60
60
8
6
50
70
16
16
10
40
22
22
107
45
16
20
10x0,5
130
22
16
7
10
20
44
30
30
50
6
8
20
16
8
14
3
24

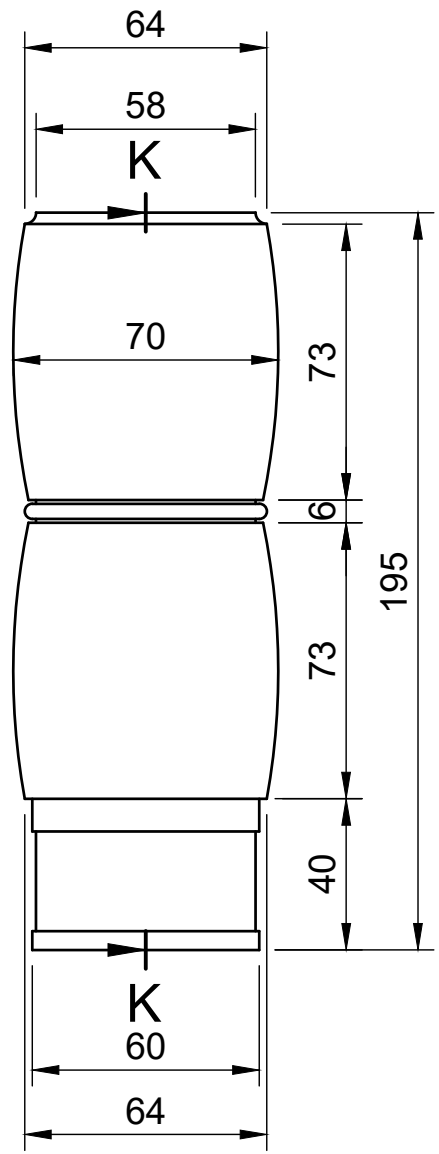

42
30
20
30
27
6
27
93
30
34
42


32
26
22
22
6
19
8
22
77
16
30
32

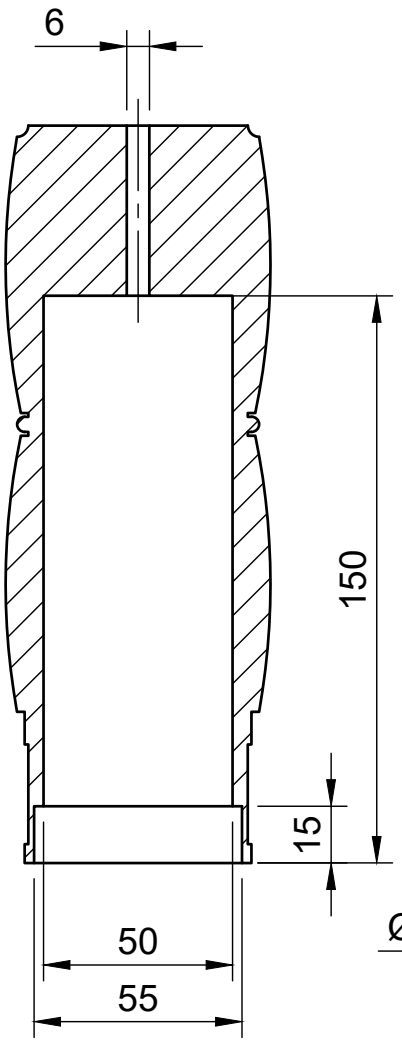

60°
Ø12
6xØ3
Ø6

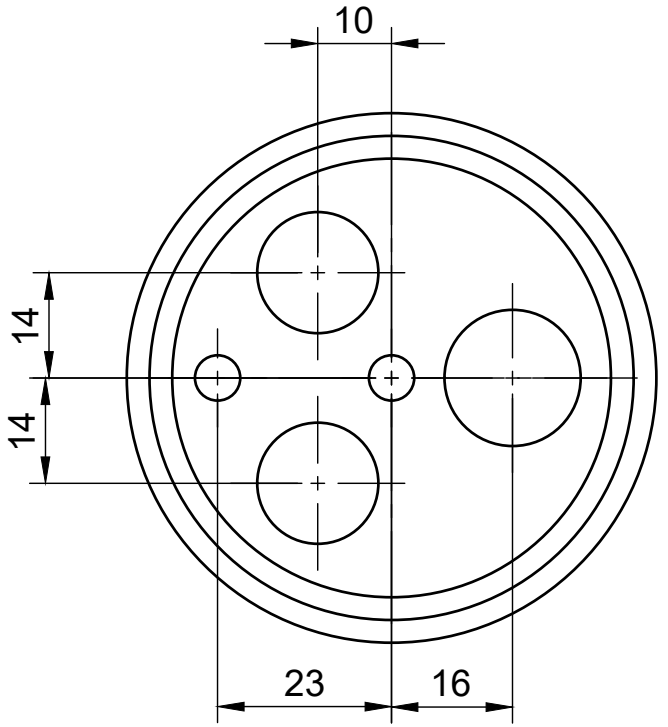

10
15
30
55

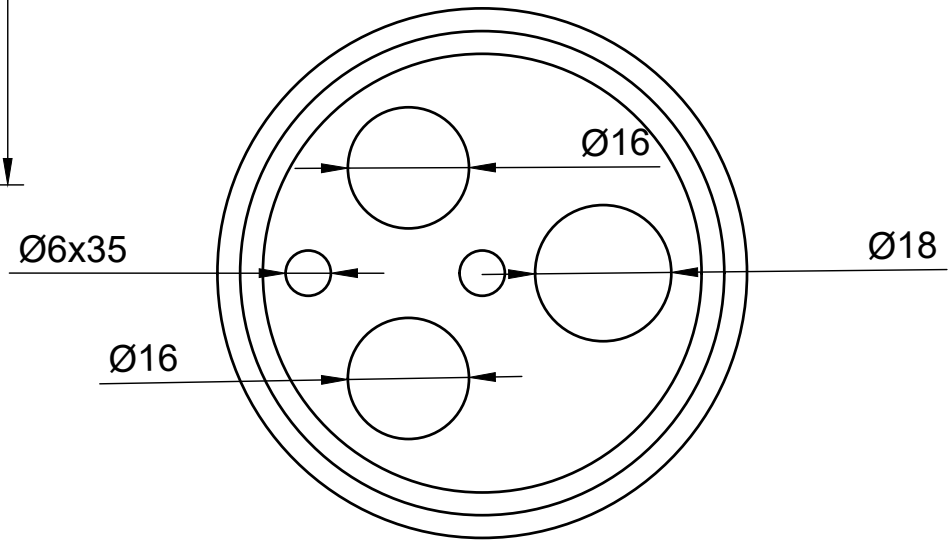

M4x10
2
10
15
10
23
5
M4
8
5
22
M4
6x0,5
40
50
35
Ø5
8
4
15
7
16
7
41
8
79
Ø6x0,5x185
Ø5x225
M4x10
M4x10


64
58
K
70
73
6
73
195
40
K
60
64

K-K (1:2)

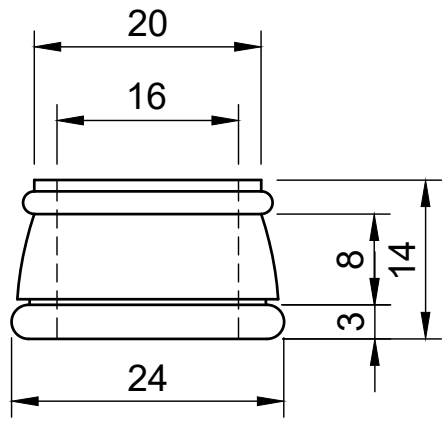

6
150
15
50
55

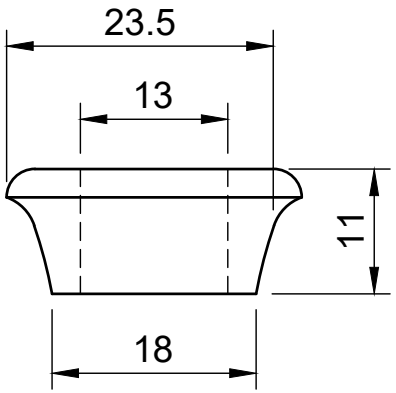

10
14
14
23
16

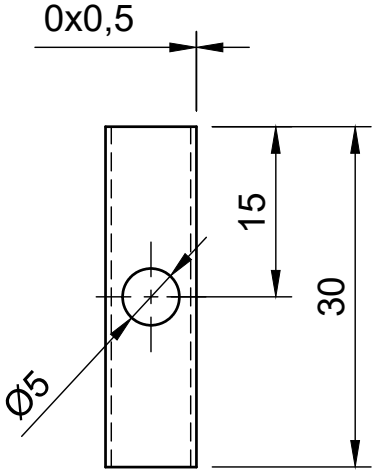

Ø16
Ø6x35
Ø18
Ø16

E-E (1:3)

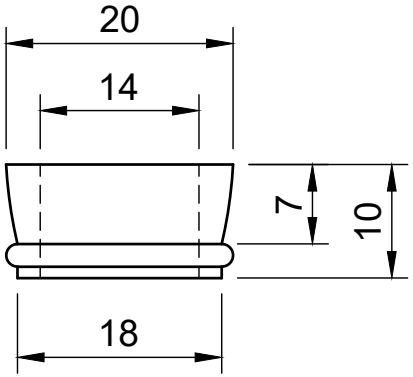
D-D (1:3)

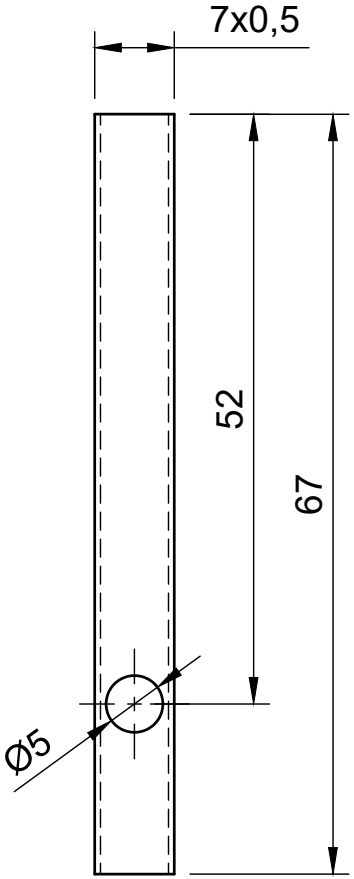

20
16
8
14
3
24

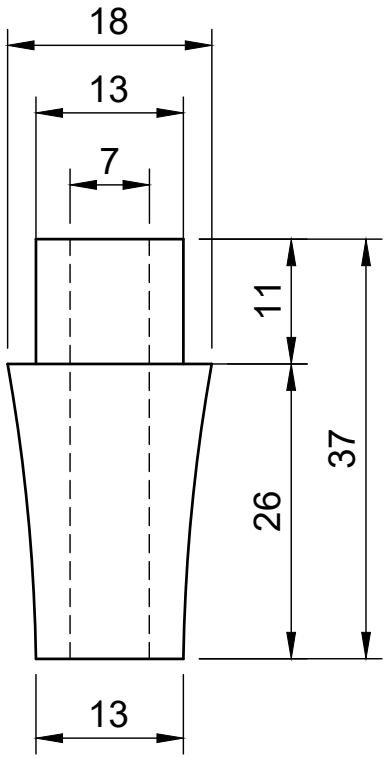

23.5
13
11
18

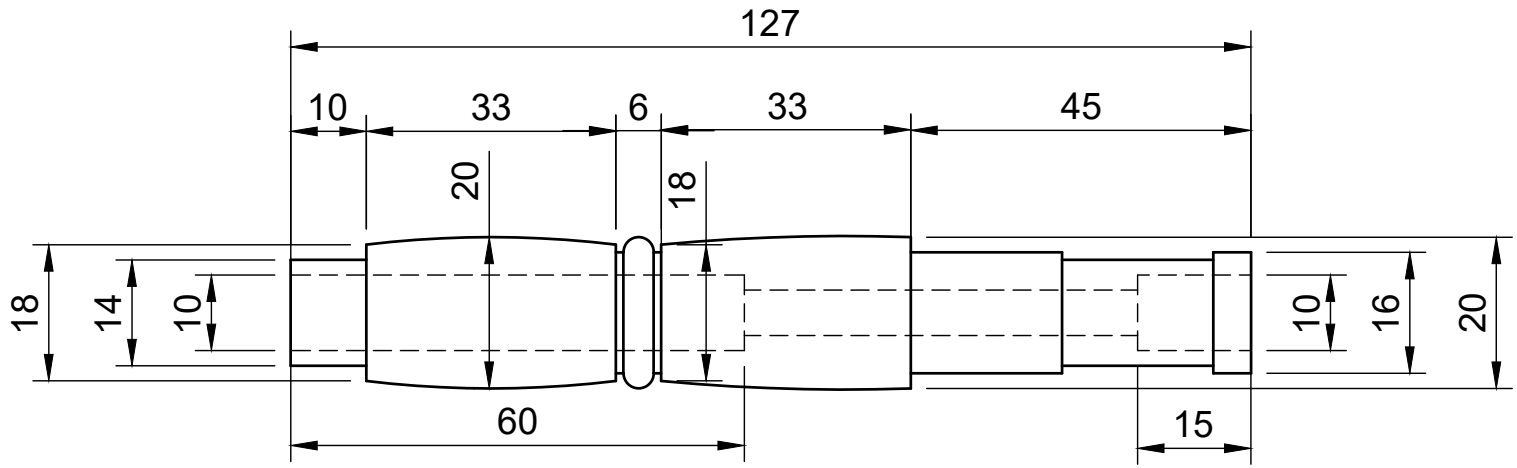

0x0,5
15
30
Ø5

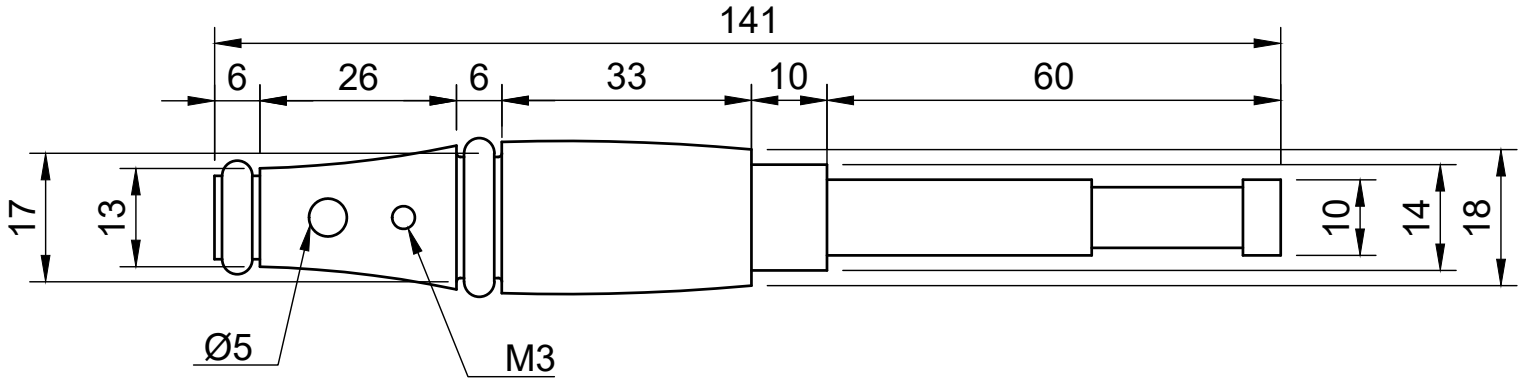
2x

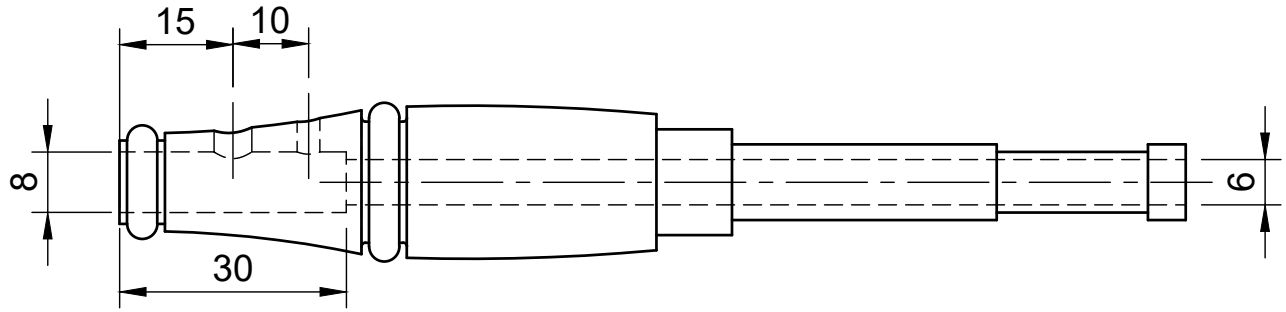

20
14
7
10
18

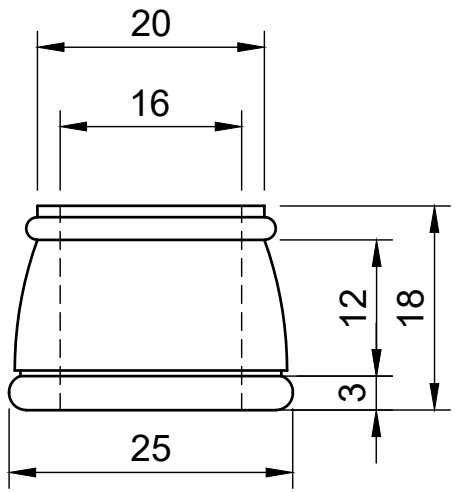

7x0,5
52
67
Ø5

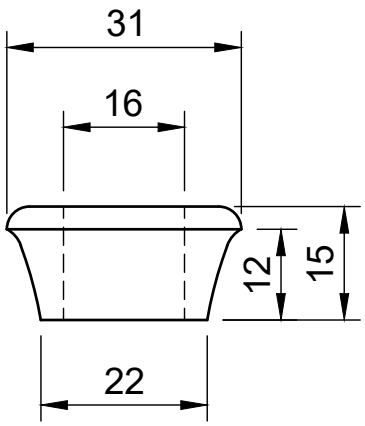

18
13
7
11
26
37
13

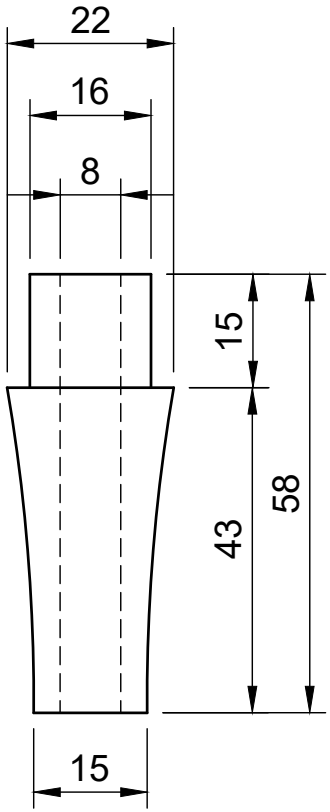

127
10
33
6
33
45
20
18
18
14
10
10
16
20
60
15

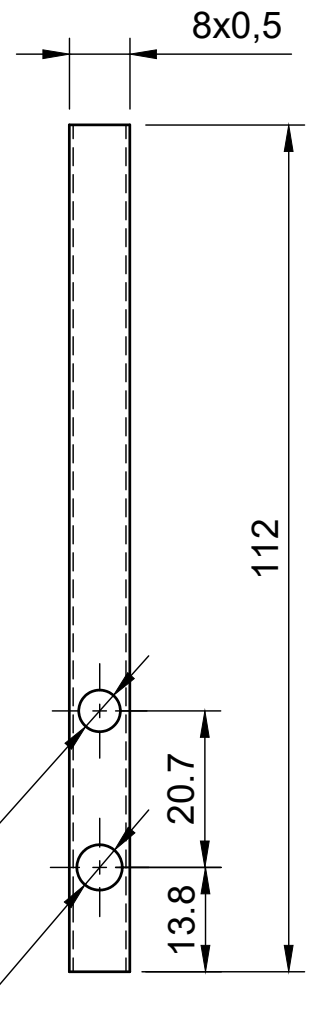

141
6
26
6
33
10
60
17
13
10
14
18
Ø5
M3

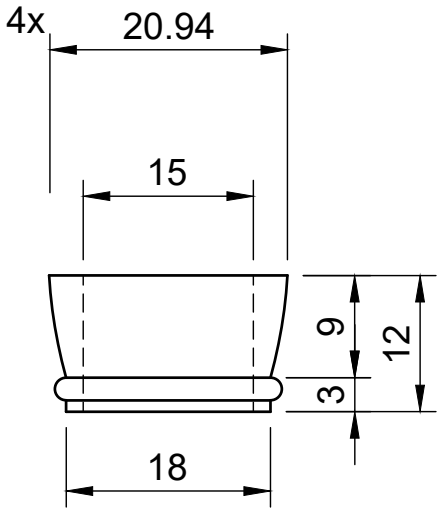

15
10
8
6
30

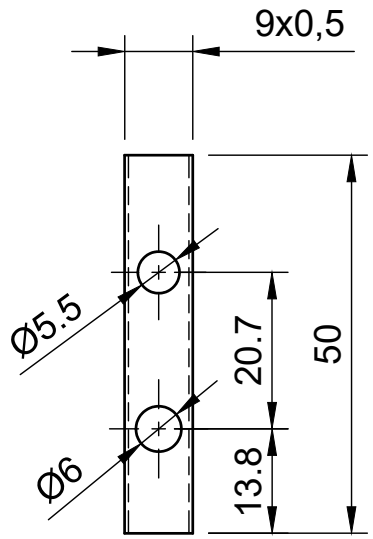

20
16
12
18
3
25

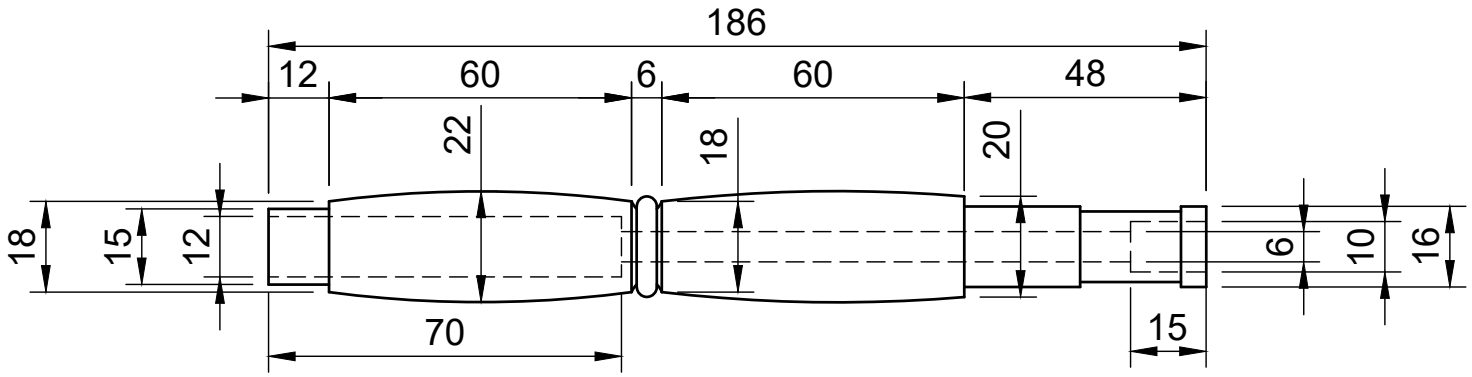

31
16
12
15
22

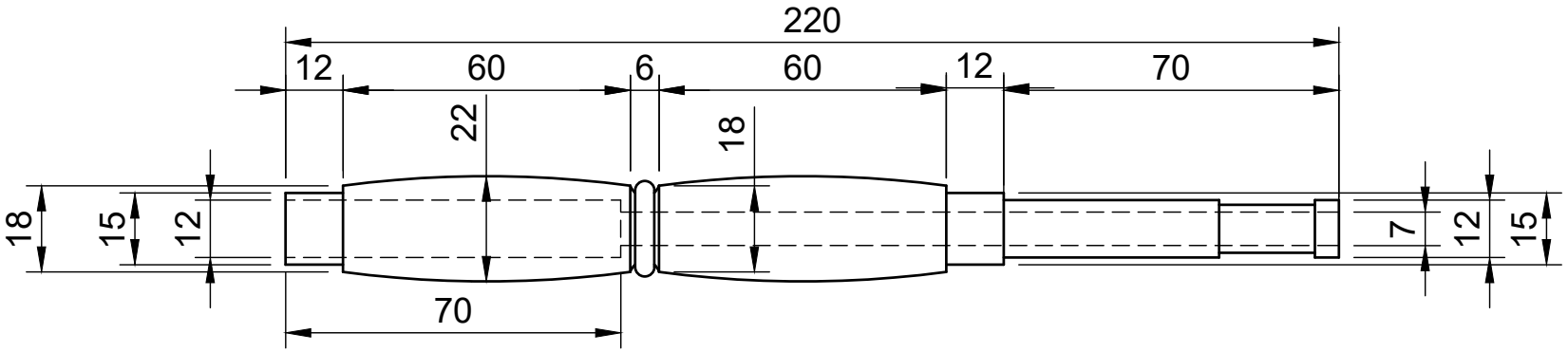

22
16
8
15
43
58
15

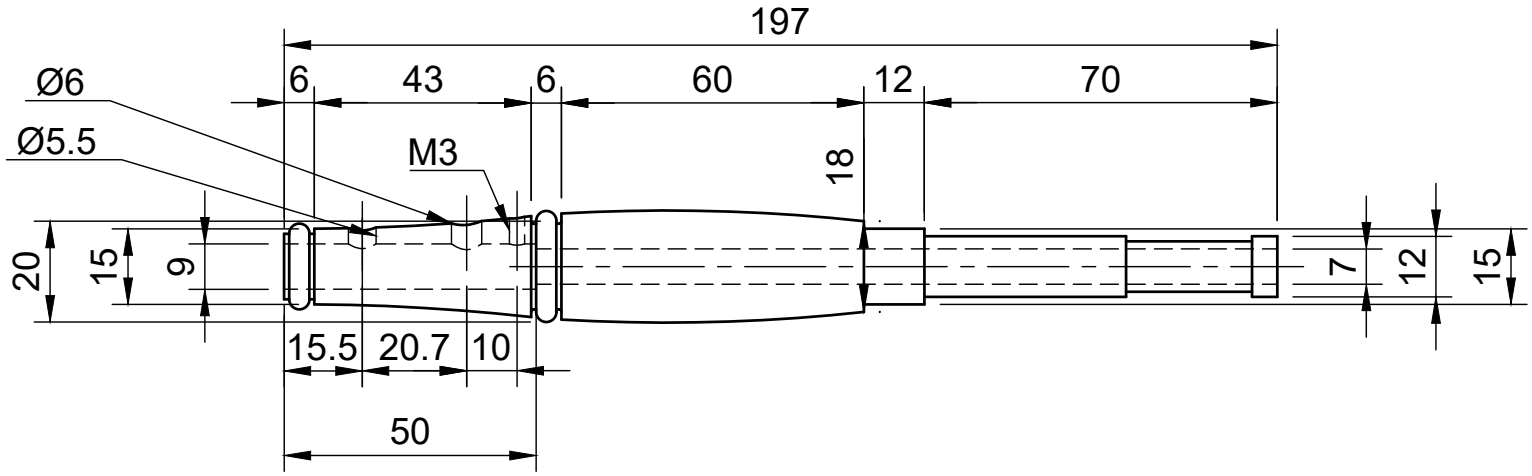

8x0,5
112
20.7
13.8
Ø5.5x60°
Ø6

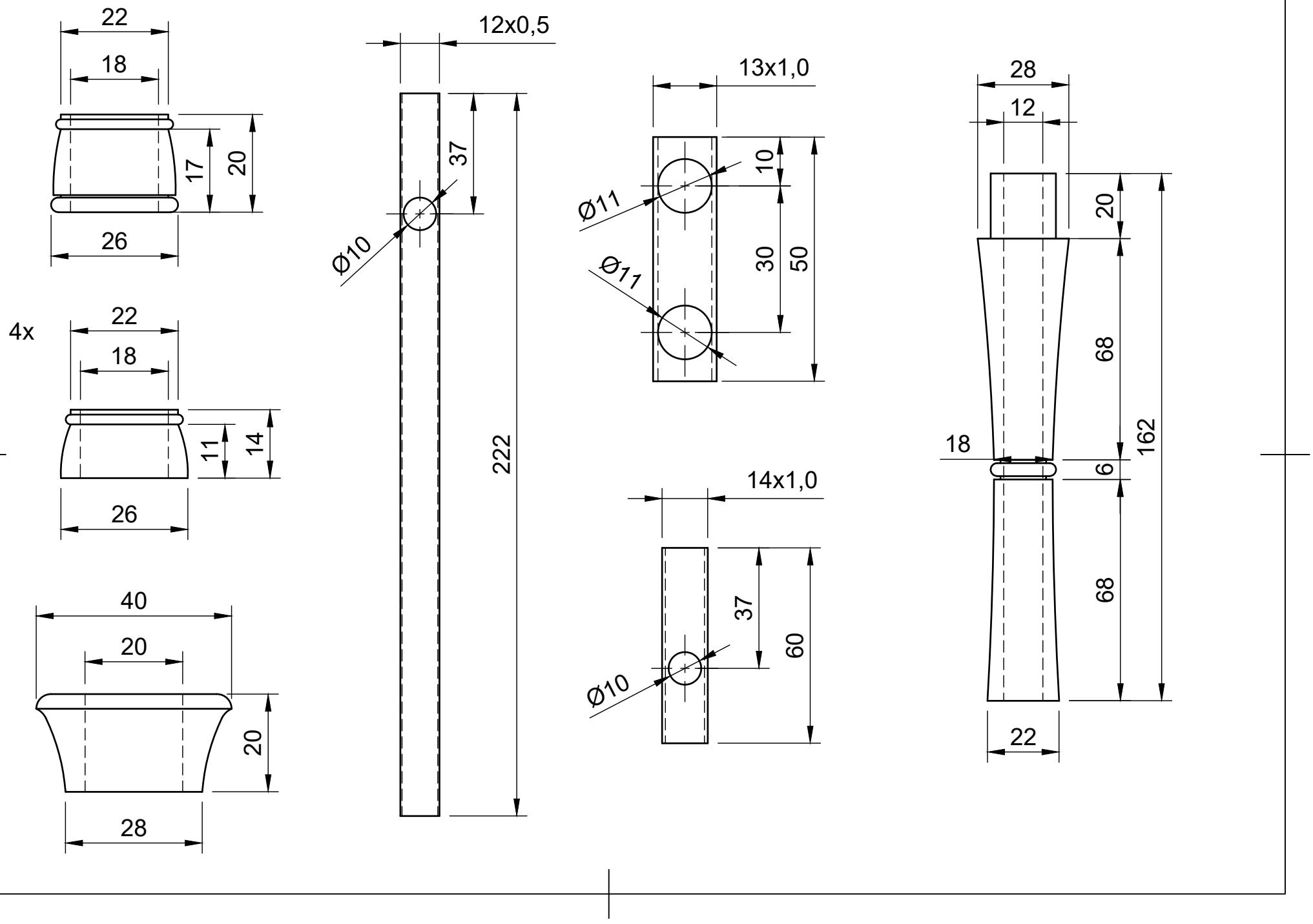

4x
20.94
15
9
12
3
18

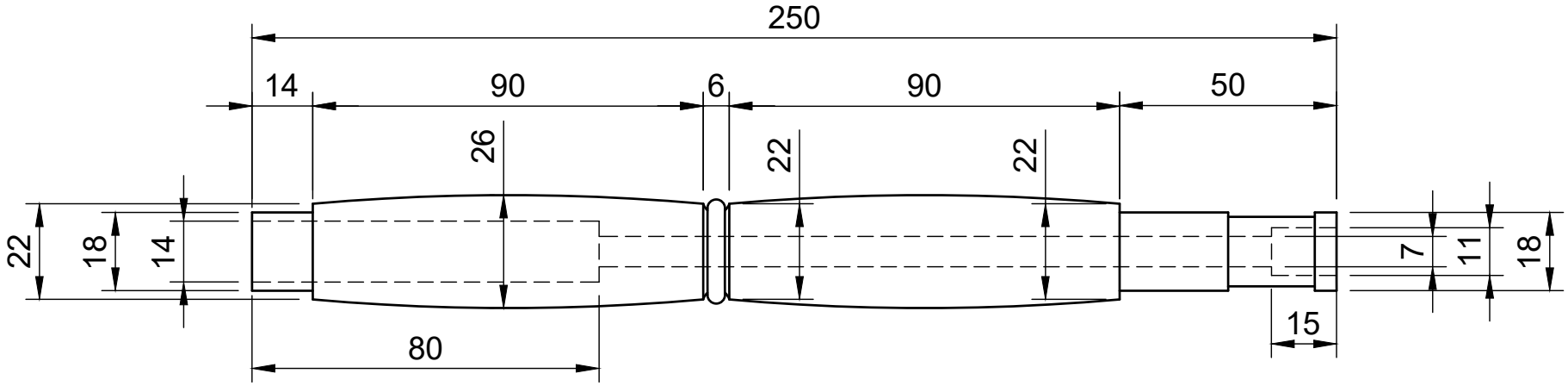

9x0,5
Ø5.5
Ø6
20.7
13.8
50

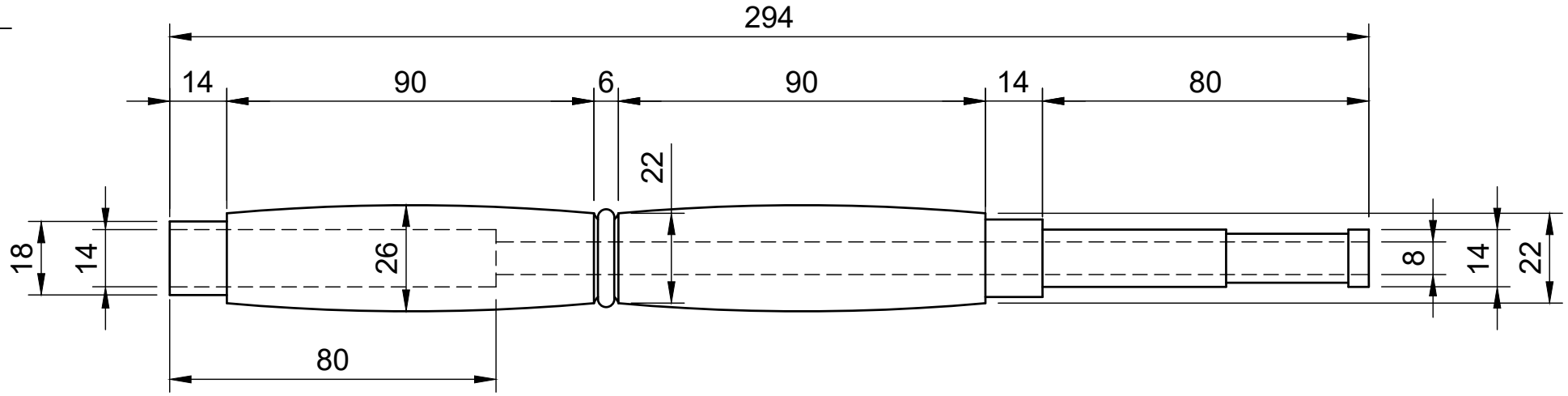

186
12
60
6
60
48
22
18
20
18
15
12
6
10
16
70
15

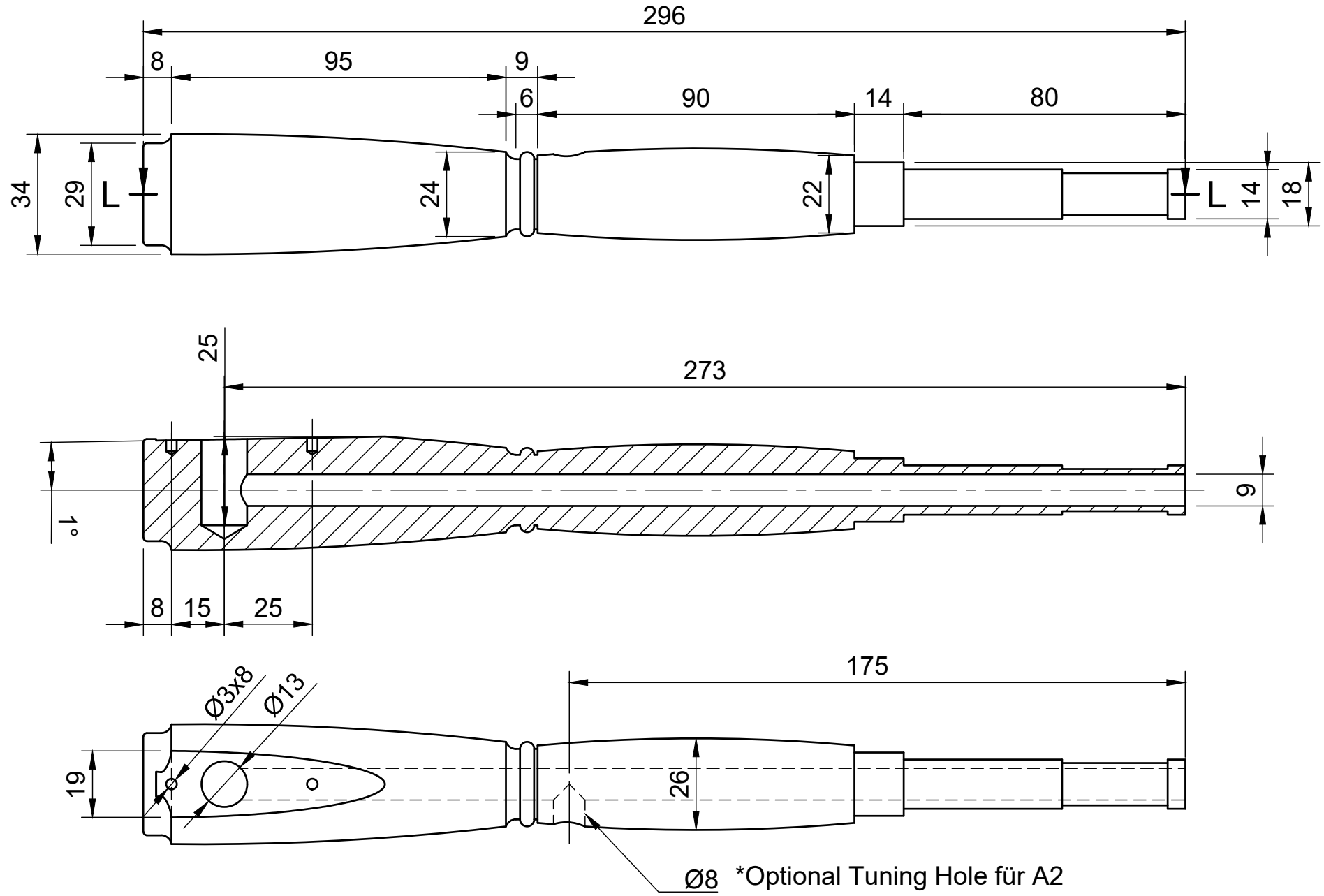

220
12
60
6
60
12
70
22
18
18
15
12
7
12
15
70

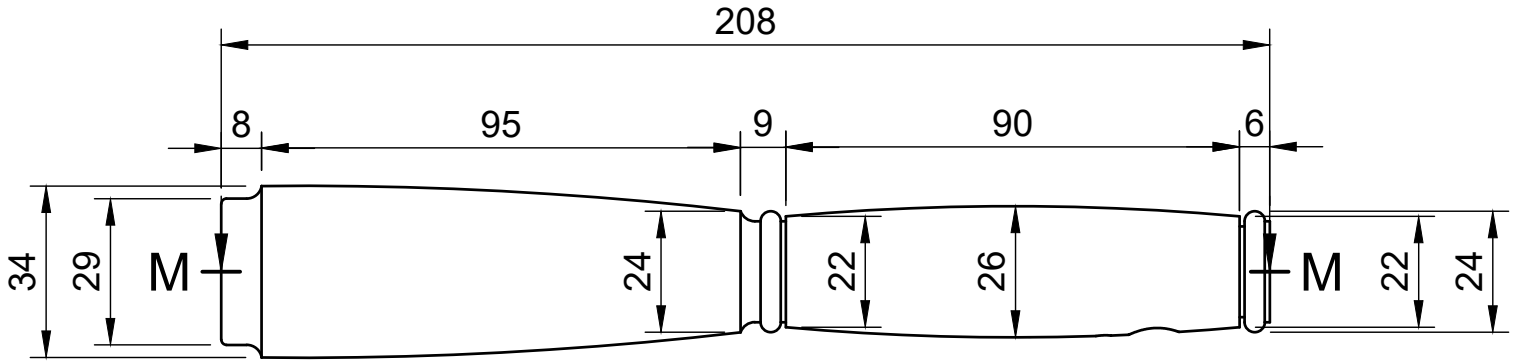

197
Ø6
Ø5.5
M3
6
43
6
60
12
70
18
20
15
9
7
12
15
15.5
20.7
10
50


22
18
17
20
26
4x
22
18
11
14
26
40
20
20
28
12x0,5
37
Ø10
222
13x1,0
10
Ø11
Ø11
30
50
14x1,0
37
60
Ø10
28
12
20
68
18
6
68
162
22

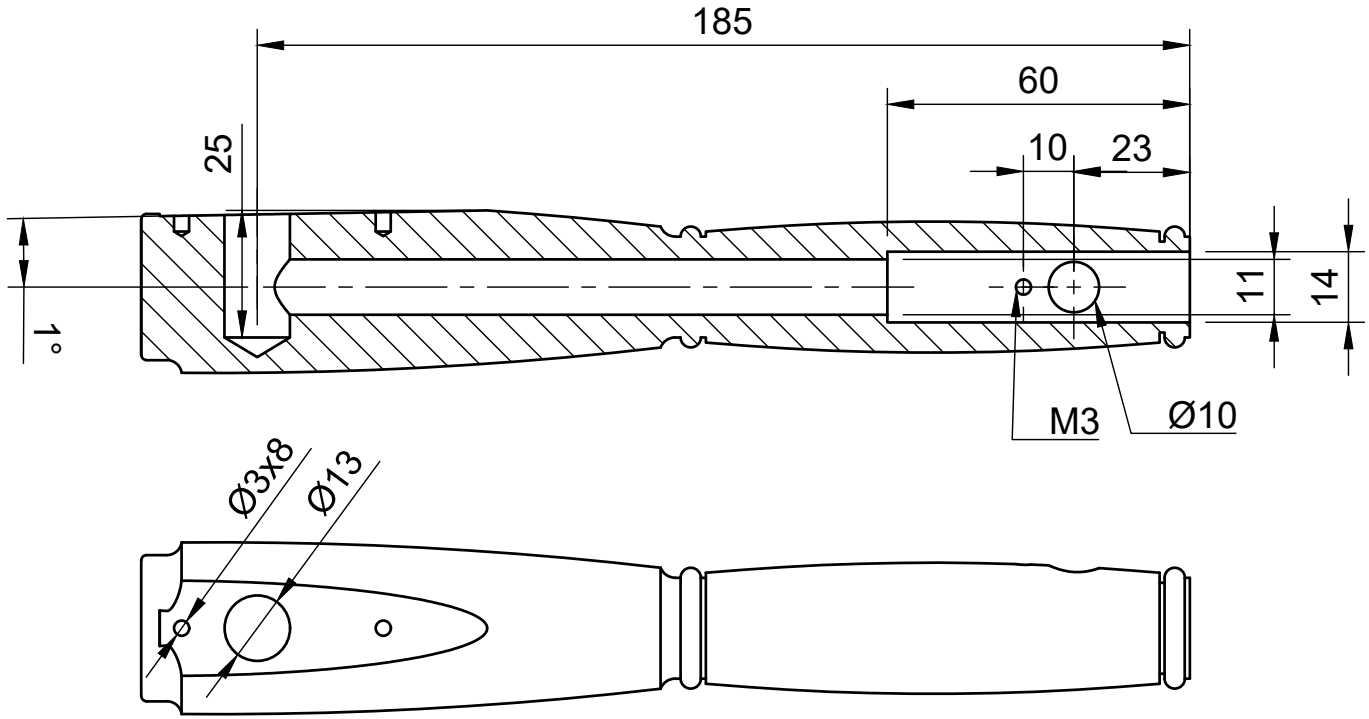

250
14
90
6
90
50
26
22
22
22
18
14
7
11
18
15
80


294
14
90
6
90
14
80
22
18
14
26
8
14
22
80


296
8
95
9
6
90
14
80
34
29
24
22
14
18
25
273
1°
9
8
15
25
175
Ø3x8
Ø13
19
26
Ø8
*Optional Tuning Hole für A2


208
8
95
9
90
6
34
29
M
24
22
26
M
22
24

M-M (2:3)


185
60
25
10
23
1°
11
14
M3
Ø10
Ø3x8
Ø13

Comment:

1. Add grub screws with spring balls in the M3 threads to hold the drone and Chanter parts in place

2.You can use https://marktsack.de/community/index.php?attachment/1780-ma-sack-pdf/ for a suitable bag, but maybe the neck should be a bit shorter

3. The branch pipe ($\frac{2}{3}$ diamete of the chante bore and with a $\frac{1}{6}$ wavelength of the Low B -from the B/E chanter, where the finger spacement is copied) is some concept which was invented by Yamaha and used by Lindsey Pollak on his Cylisax, too. It changes the physical abilities from a cylindrical bore to that of an instrument with a conical bore. This allows you an overblowing in the octave when you increase the playing pressure on yout instrument.
The chanter reed has a higher pitch then in the other plans, where the chanter reed is normally tuned to a fifth higher then the referenced chanter. This should make it possible to extend the musical range to 1 $\frac{1}{2}$ octave, like other central european bagpipes - for example Cornemuse de Centre.
For a more comfortable and aesthetical use, the branch pipe is shortended like the Taylor bass drone.

4. With carbonfiber reeds in every pipe, it is also possible to build a mouth-blown instrument.

5. For the cone at the end of the chanter, you can use this reamer:
https://www.dictum.com/de/rund-konusschneider-bakj/star-m-astloch-reparaturset-717255

6. You can also use this plan in combination with the other plans for Swedish Bagpipes, to construct your own model in different tuning. For this use the Chanter and its Stock, change the outer diameters from the drones that you like to them of this set. This is suitable for the Tenor and Soprano Drone.

If you want to make your own bass drone - or contrabass drone - in another key, then you use the physical wavelength of your bass note and subtract -1166mm (wavelength D2 = 294Hz) and divide the result with 7. Then you add this on the middle segments of each drone part - on the Top Neck you halve the result of your calculation and add it to he halfs.
When you want to go deeper, you must multiplicate the bore diameter and the slide length and its diameter,too - with the multiplicator 1,125 for every full note deeper and 1,06 for a half note.

The easiest way is just to change the tenor and soprano drone. So you can use the Bass Drone in D/E in combination with the Low A/D or Low B/E set.

Another way is to change the bass drone with the ones of this two Low Key sets and combinate it with sets in higher pitches, as an example for the common chanter in E/A you can use A/B, d/e, d'/e' or A/B, d/e, a/b.