

## **Kneeling Chair Plans**

There are several types of ergonomic chairs and the kneeling chair is one of them. Due to the very fact that it is ergonomic, sellers automatically react by pricing it higher than some ordinary chairs, similarly to all the products that in front of their names have the adjectives healthy, organic, natural ... To avoid buying overpriced ergonomic chairs, here we offer you two plans that can help you make simple wooden or metal kneeling chairs. Just like with the commercial chairs, these ones can also be adjusted to find your optimal seating position.



A kneeling chair typically has two major features: a padded seat, which is angled forward at 20 to 30 degrees, and a padded support in front of the seat on which the shins and knees rest.

In ordinary chairs the seats are horizontal and the whole weight of the upper body burdens the lower back, which can eventually cause pain. The operating principle of the kneeling chair is very simple and based on the fact that the burden is taken off the lower back and put on the shins and knees leaning on a padded support, which results in reduced strain on the lower back.

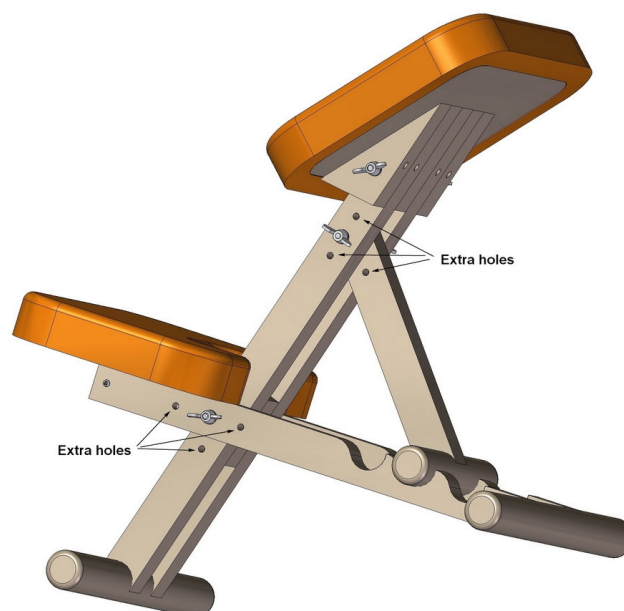
Manufacturers and sellers of kneeling chairs will list numerous advantages of this type of chair and many diseases the symptoms of which are eased or acted upon preventively with it.

If we ignore marketing, potential users of kneeling chairs can be divided into two types:

- those who already have pain in the lower back: if you have back pain, the first thing you should do is seek professional help with a medical specialist and consult them whether this kind of chair can be of any help. Ergonomically designed chairs are not intended for everyone and, depending on your health condition, may negatively affect its development. As part of the load is transferred to the knees and shins, do not use this chair until you consult a doctor in case you have any problems with the body parts mentioned.

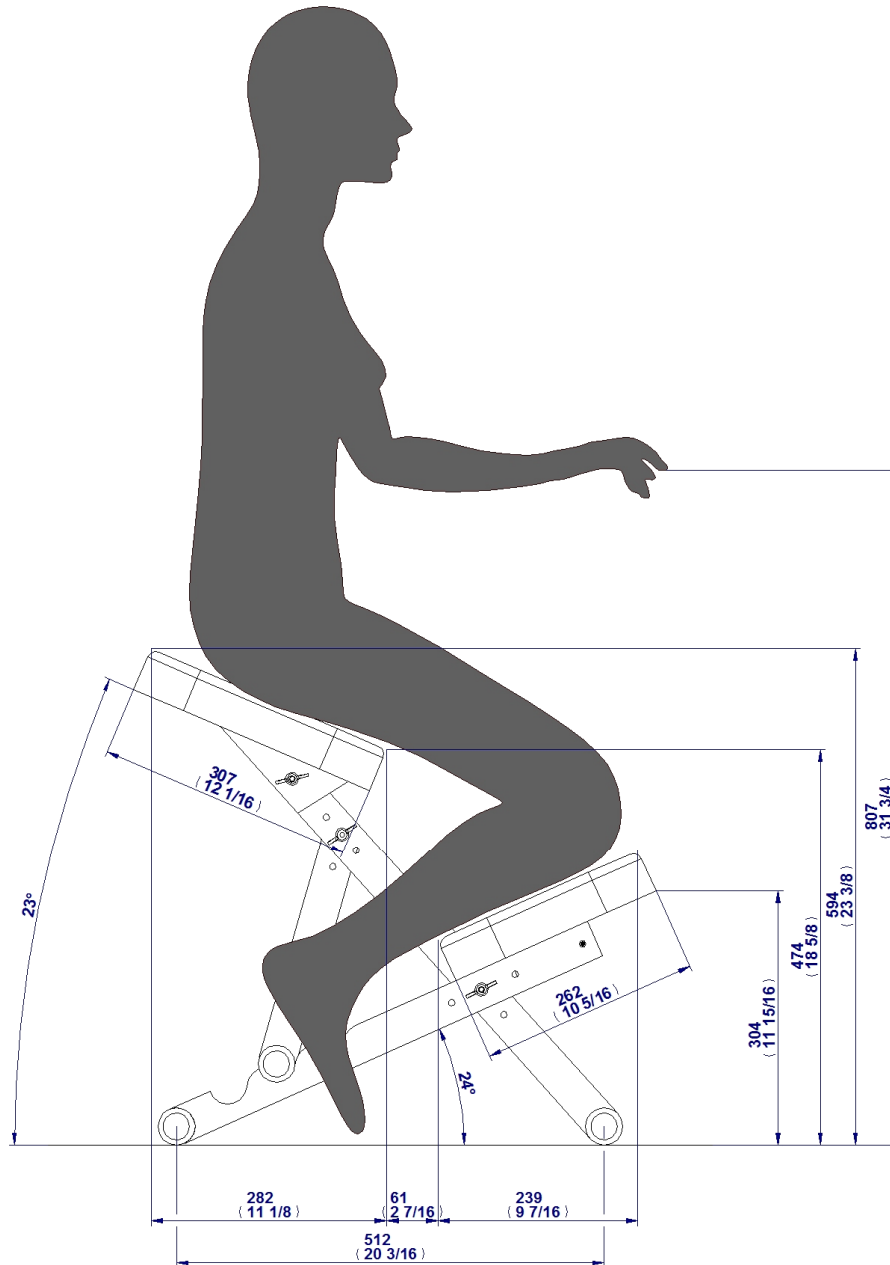
- those who want to make preventive use of this chair: back pain arises in consequence of prolonged sitting, most often in an incorrect position, and due to lack of movement. We recommend that the kneeling chair is used combined with an ordinary chair or other types of ergonomic chairs. Do not delude yourself that if you use the kneeling chair preventively, your problems arising from prolonged sitting will be completely avoided. Our bodies are designed to move and prolonged sitting, even in ergonomic chairs, will cause problems. We advise everyone who works under conditions associated with too much sitting to take frequent breaks during which you need to loosen up your muscles and joints, walk a little, exercise and engage in physical labor, if possible.

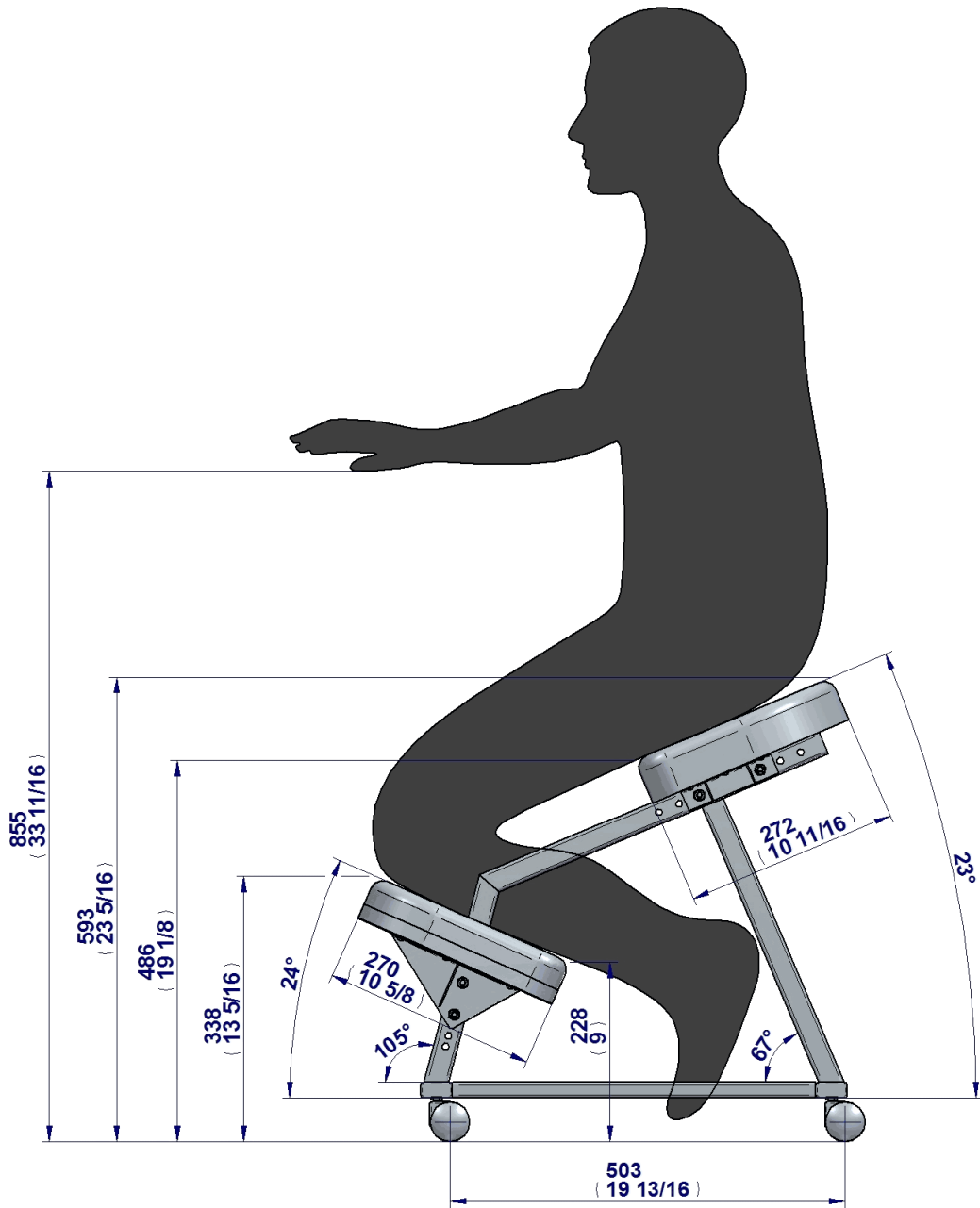
People falling into a wide height and weight range can sit on ordinary chairs, which is not the case with ergonomic chairs. The ergonomic chair must be adjusted and put into optimal position to suit your specific height and weight. With the metal kneeling chair from our plan you can adjust the seat position and kneeling support. With the wooden kneeling chair you have three predefined positions that can be changed very quickly. In the next picture you can see an additional way to customize the wooden kneeling chair. It is about drilling extra holes at specific distances from the existing ones.



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In the following pictures you can see a woman of average height and weight (163cm, 63kg) sitting on the wooden version and a man of average height and weight (175cm i 79kg) sitting on the metal version of the kneeling chair from our plan. Both are side view pictures, and also various dimensions important for the ergonomics of sitting have been quoted.





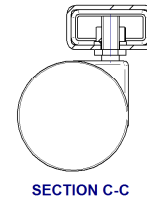
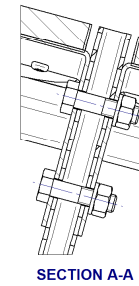
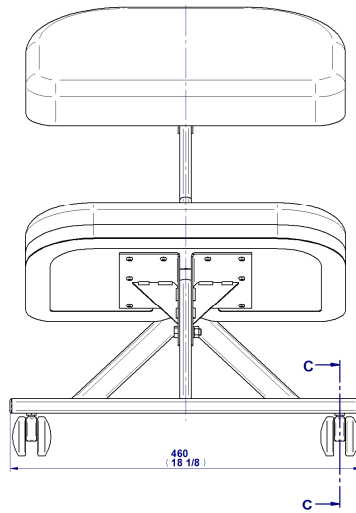
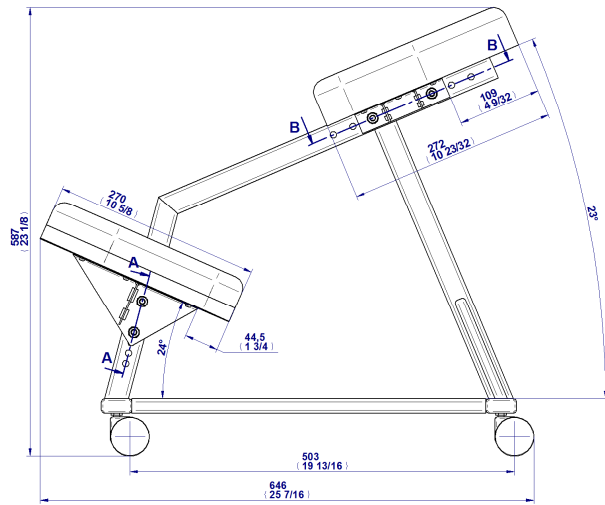
*Project: Kneeling chair plans*

## **Metal kneeling chair plan**

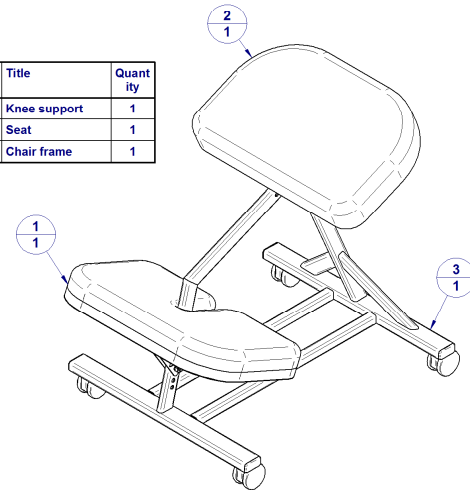
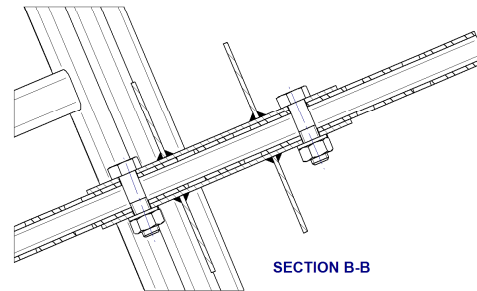
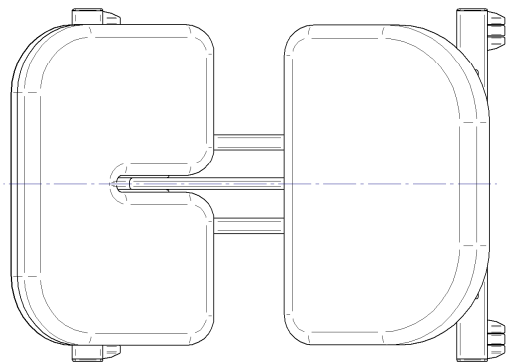


Project: Kneeling chair plans

Assembly drawing and subassembly list

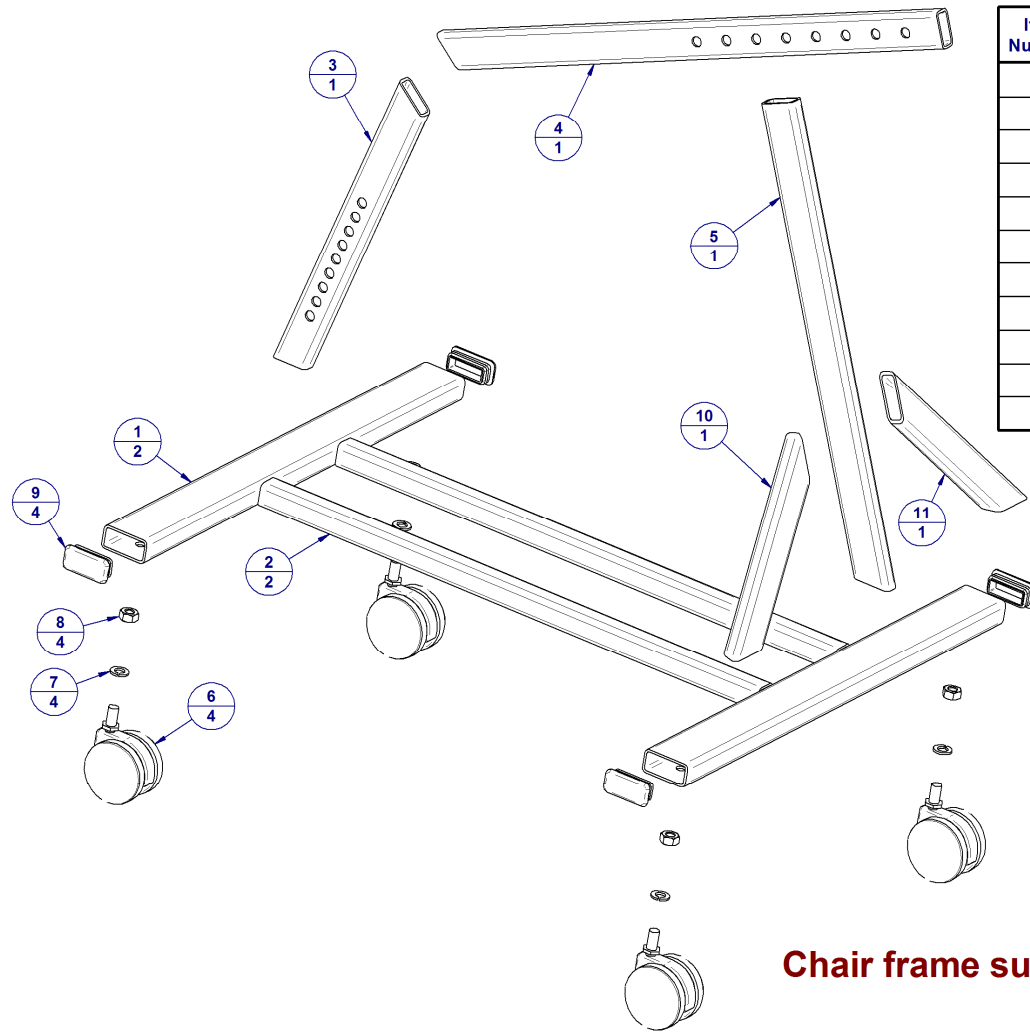


Item Number	Title	Quantity
1	Knee support	1
2	Seat	1
3	Chair frame	1



Project: Kneeling chair plans

Frame subassembly - Parts list

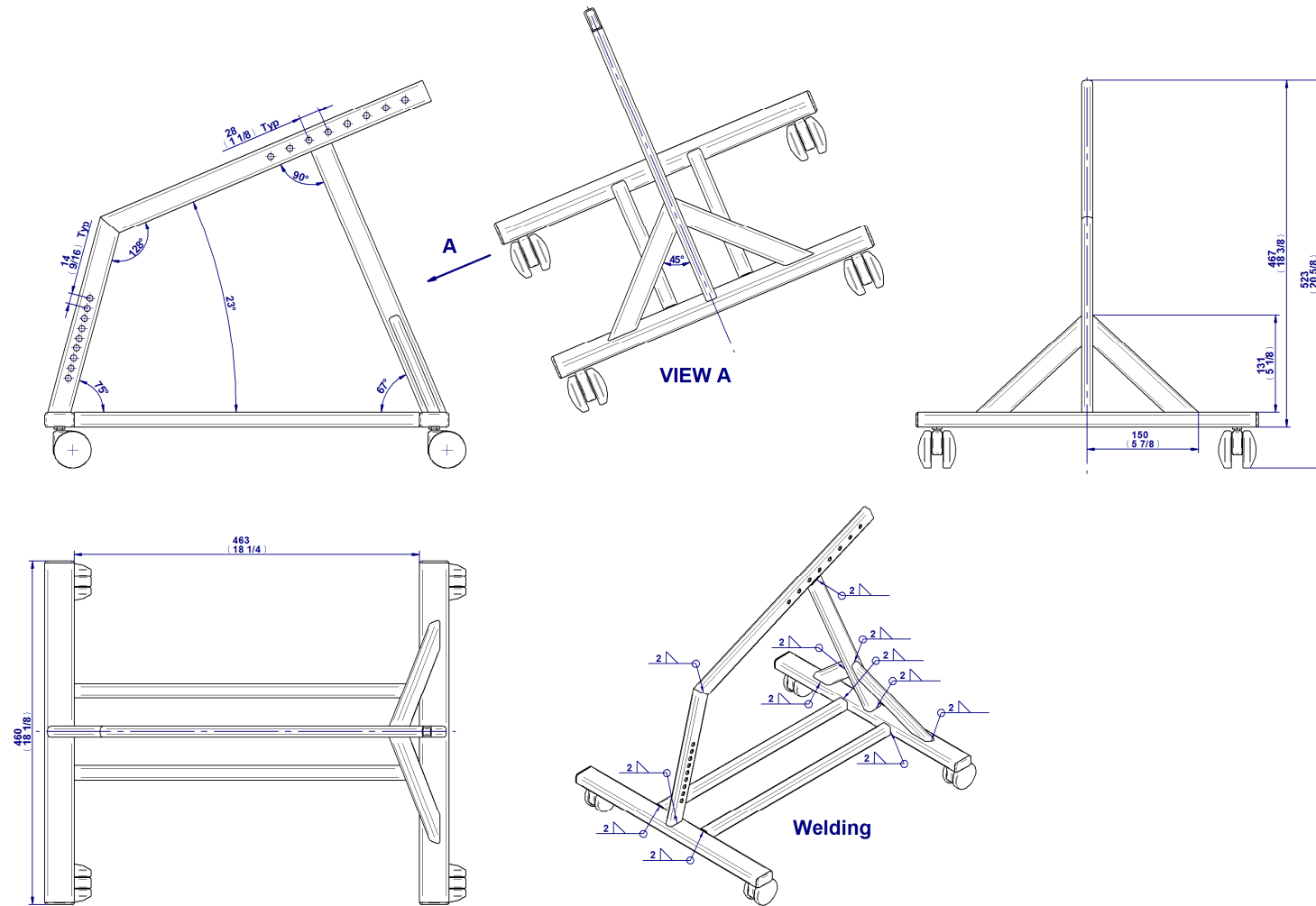


Item Number	Title	Quantity	Material
1	40 x 20 x 454mm	2	Steel
2	20 x 20 x 463mm	2	Steel
3	30 x 15 x 273mm	1	Steel
4	30 x 15 x 470mm	1	Steel
5	30 x 15 x 394mm	1	Steel
6	Caster	4	Plastic
7	Lock washer D8mm	4	Steel
8	Hexagonal nut M8	4	Steel
9	End cap	4	Plastic
10	Reinforcement	1	Steel
11	Reinforcement mirror	1	Steel

**Chair frame subassembly**

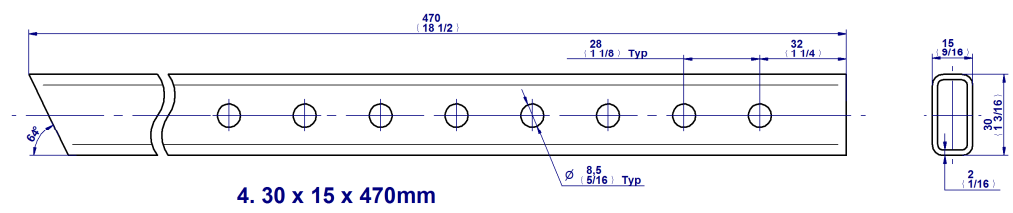
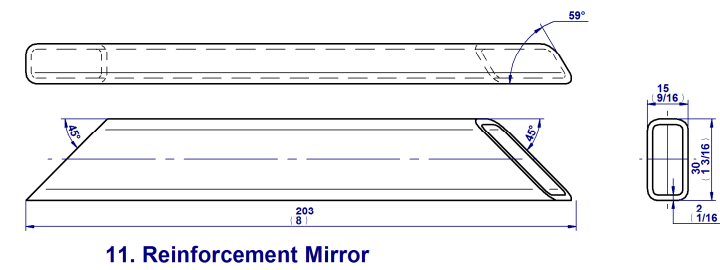
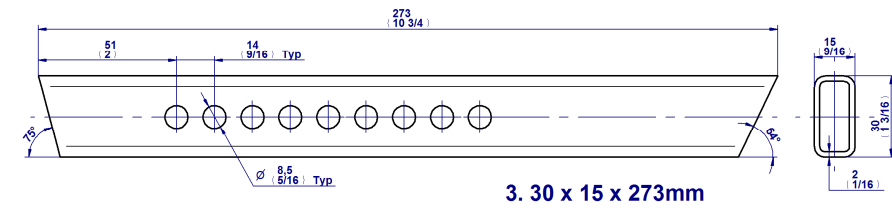
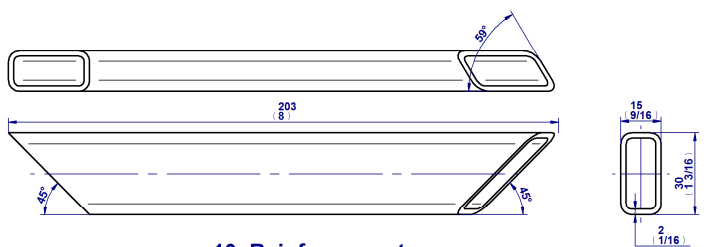
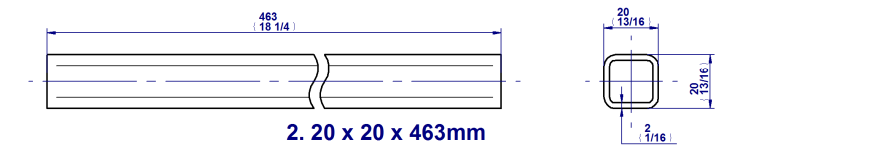
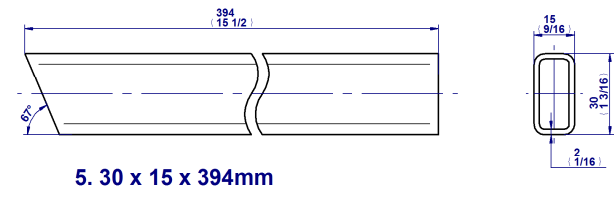
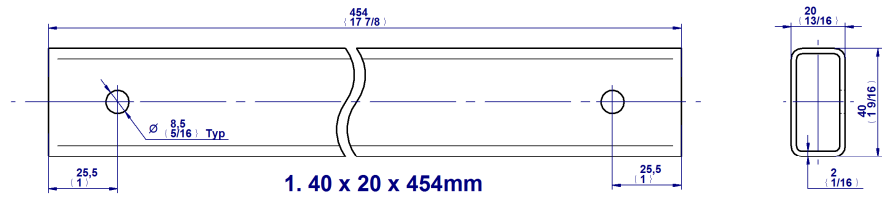
Project: Kneeling chair plans

Frame subassembly – Assembly drawing



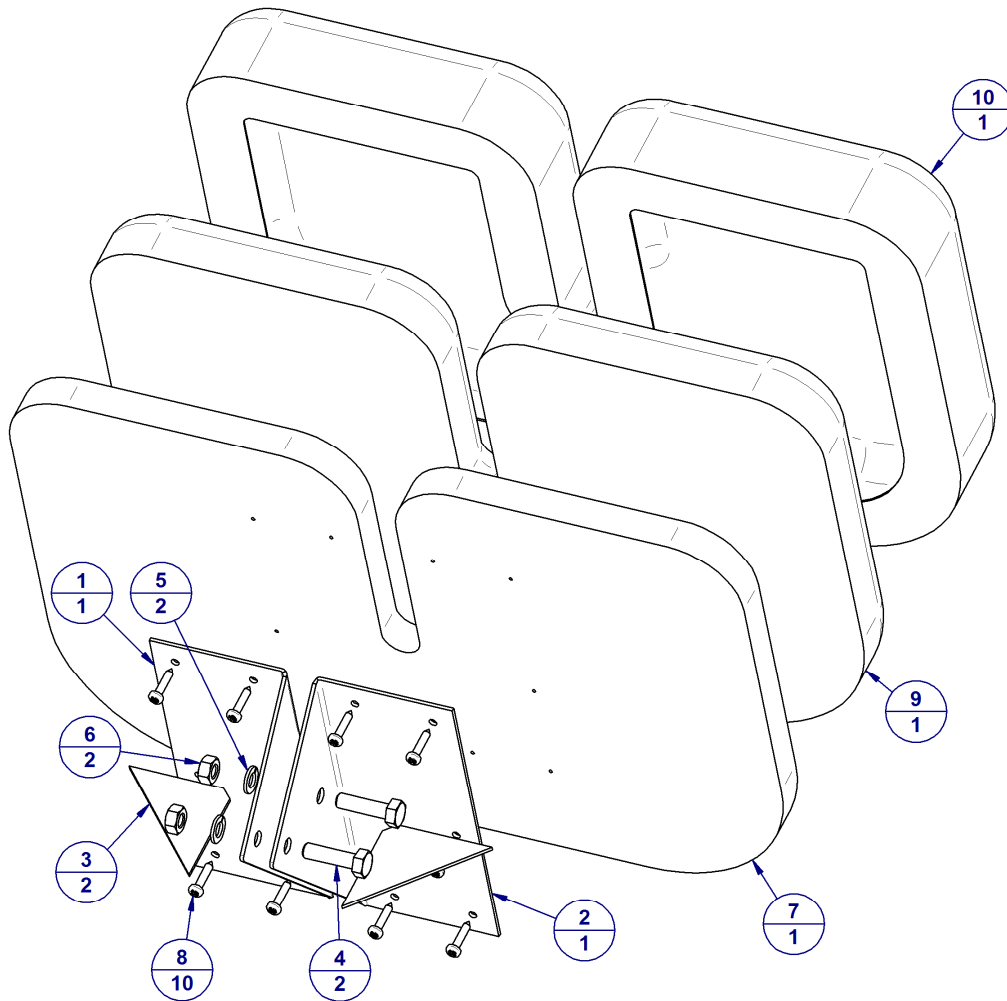


Project: Kneeling chair plans



Project: *Kneeling chair plans*

Knee support – Parts list

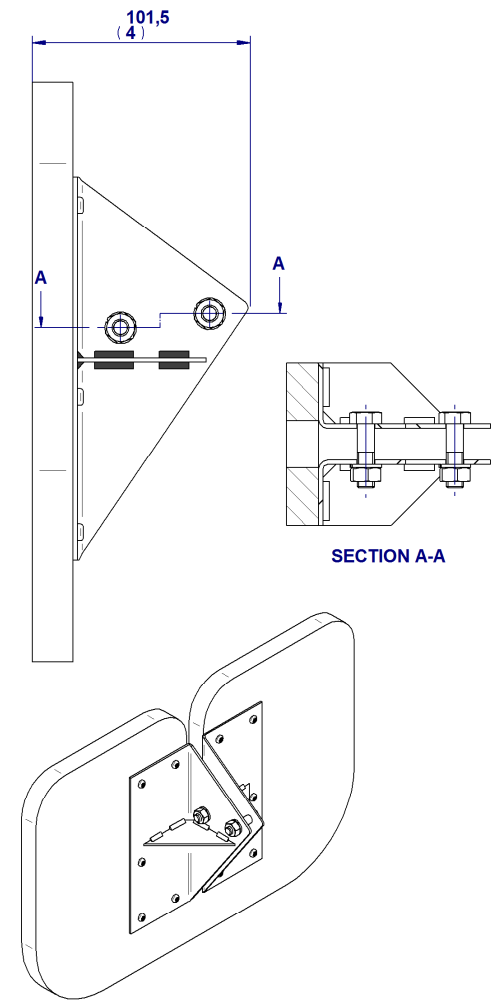
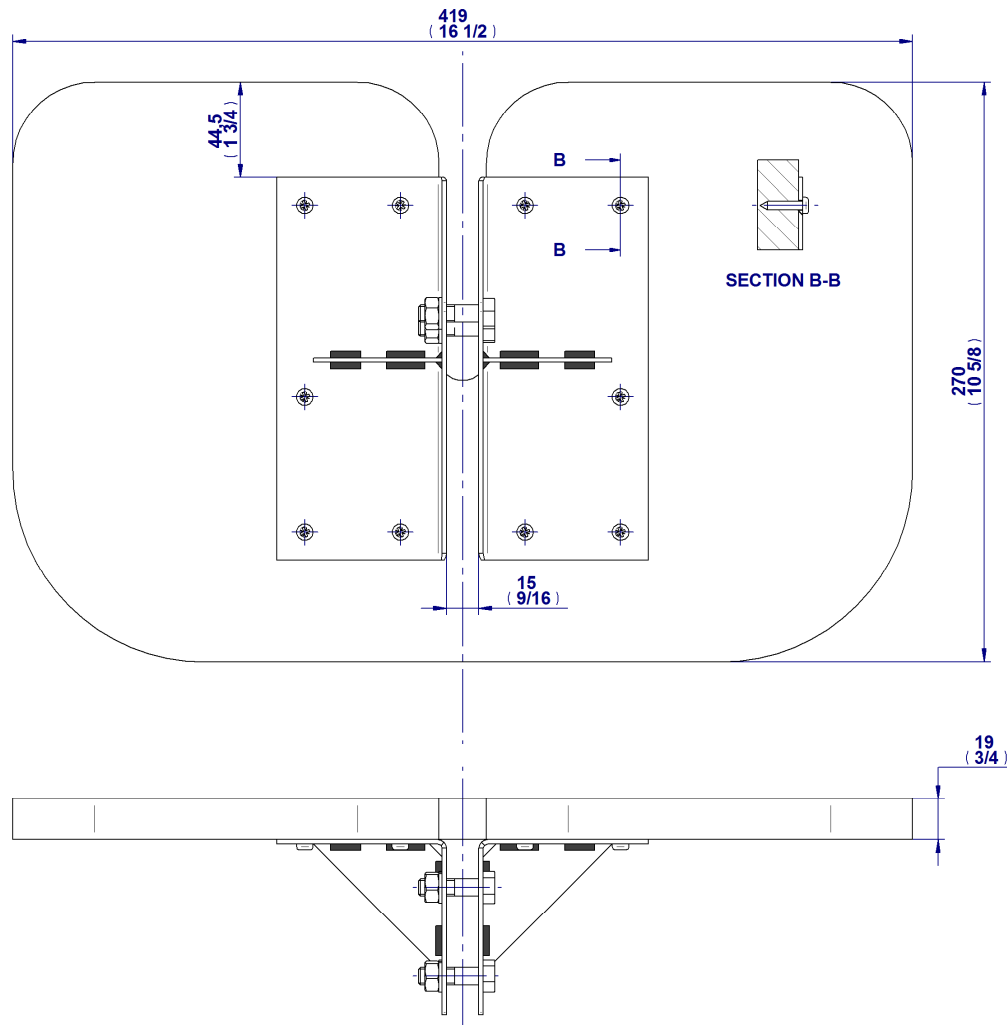


Item Number	Title	Quantity	Material
1	Knee support mirror	1	Steel
2	Knee support	1	Steel
3	Knee reinforcement	2	Steel
4	Hexagonal head bolt M8 x 30mm	2	Steel
5	Lock washer D8mm	2	Steel
6	Hexagonal nut M8	2	Steel
7	Knee board	1	Wood
8	Wood screw D4 x 20mm	10	Steel
9	Knee rubber foam	1	Rubber foam
10	Knee fabric	1	Fabric

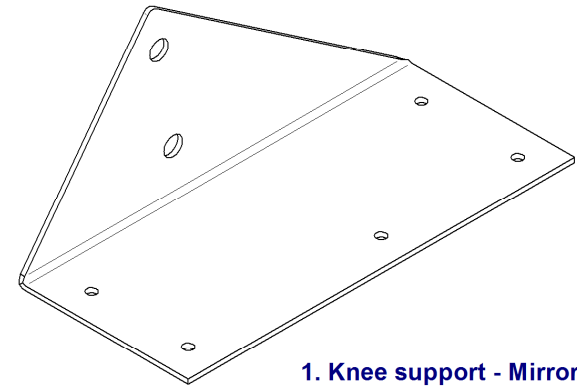
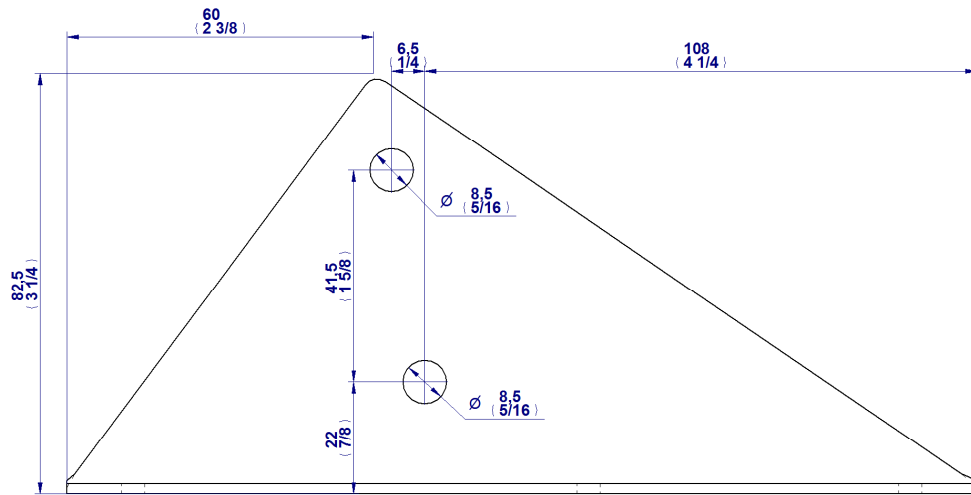
**Knee support subassembly**

Project: *Kneeling chair plans*

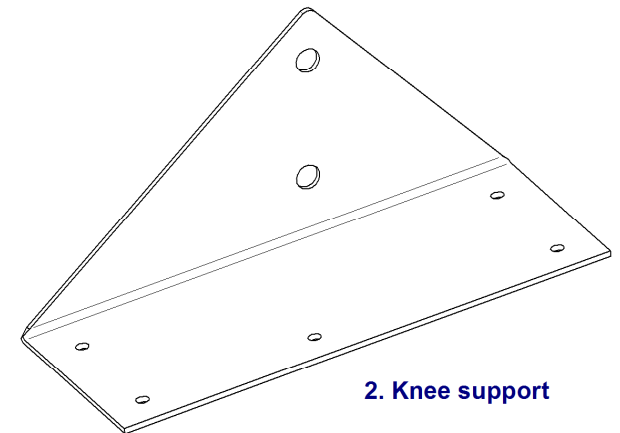
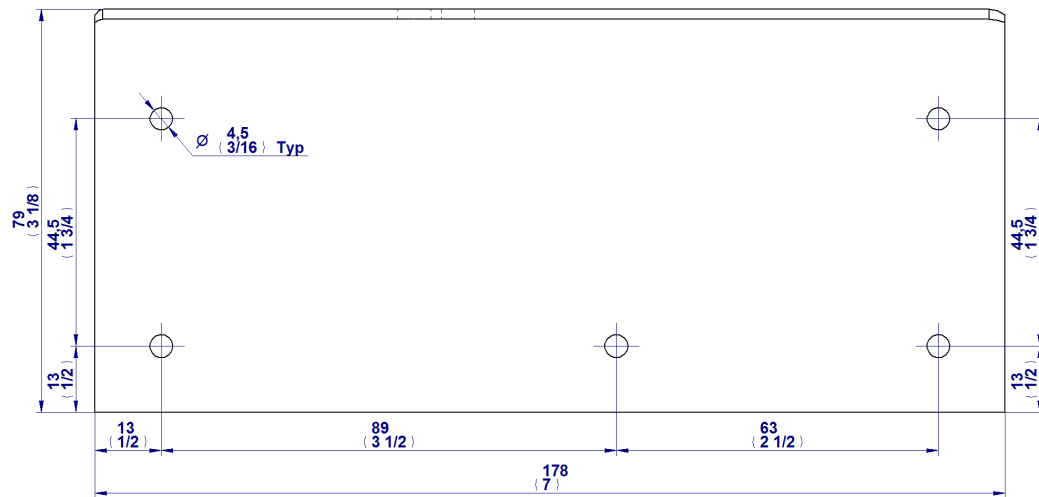
Knee support – Assembly drawing



Project: Kneeling chair plans

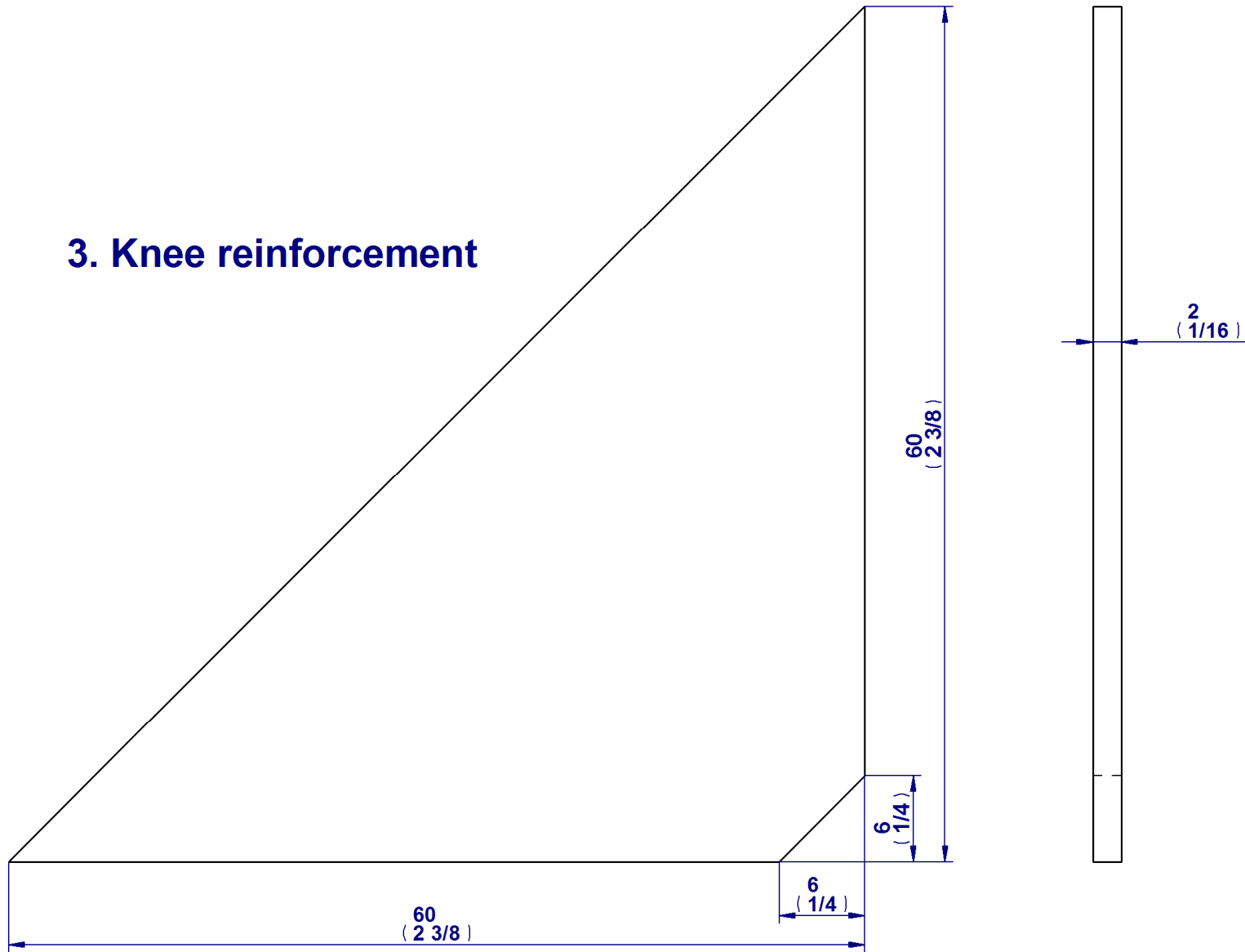


1. Knee support - Mirror

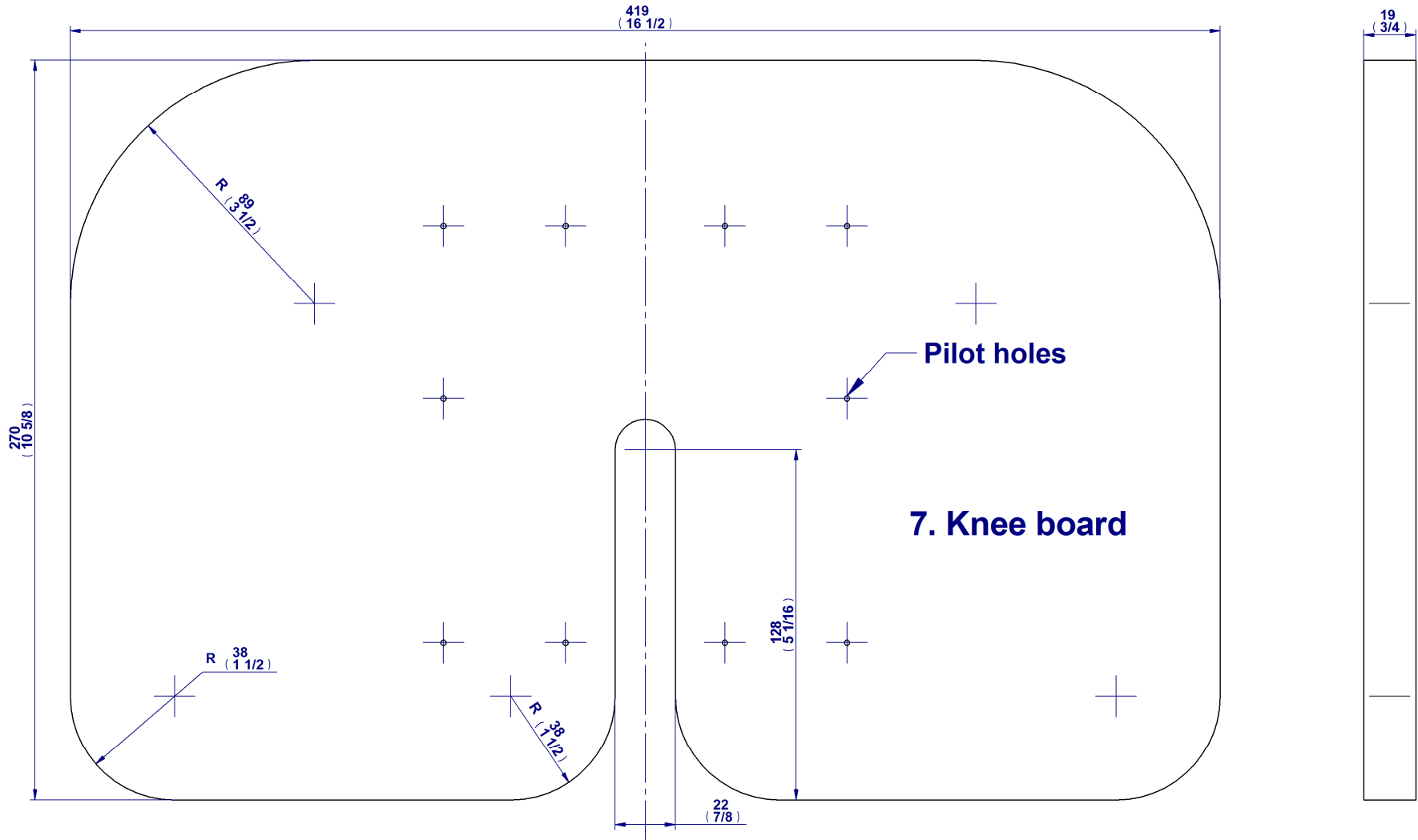


2. Knee support

### 3. Knee reinforcement

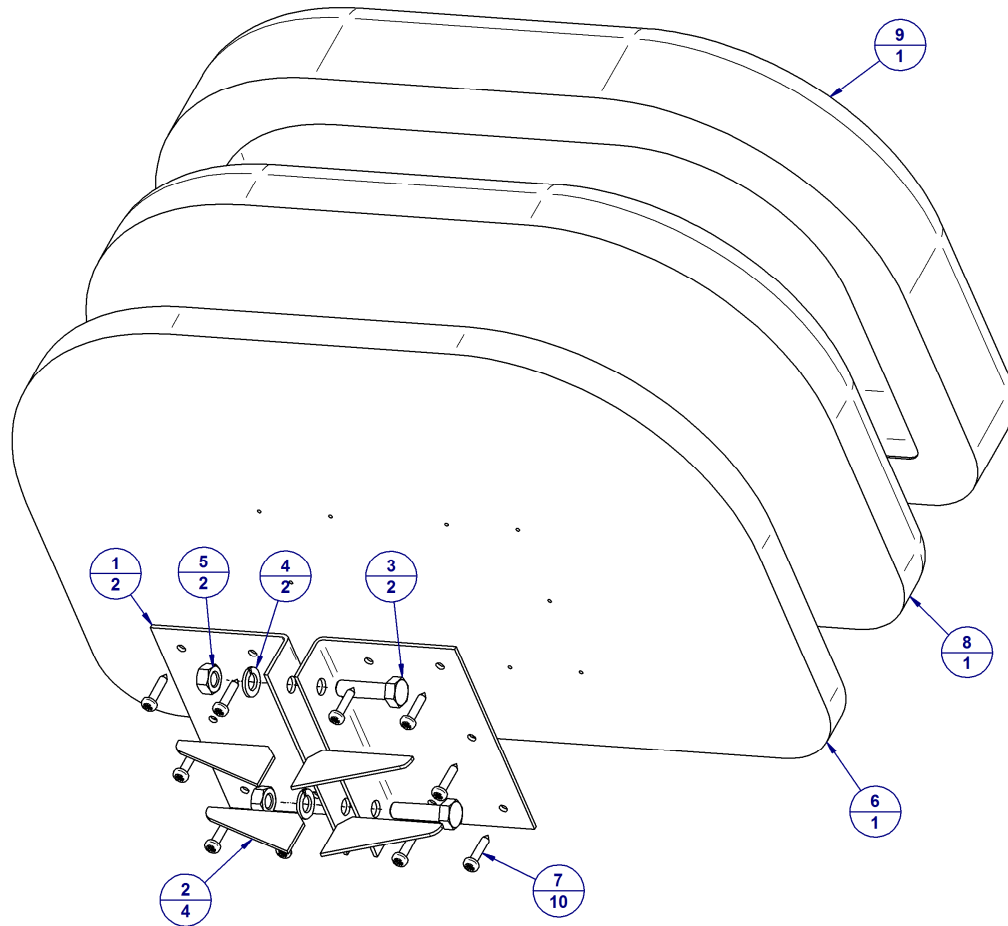


Project: Kneeling chair plans



Project: Kneeling chair plans

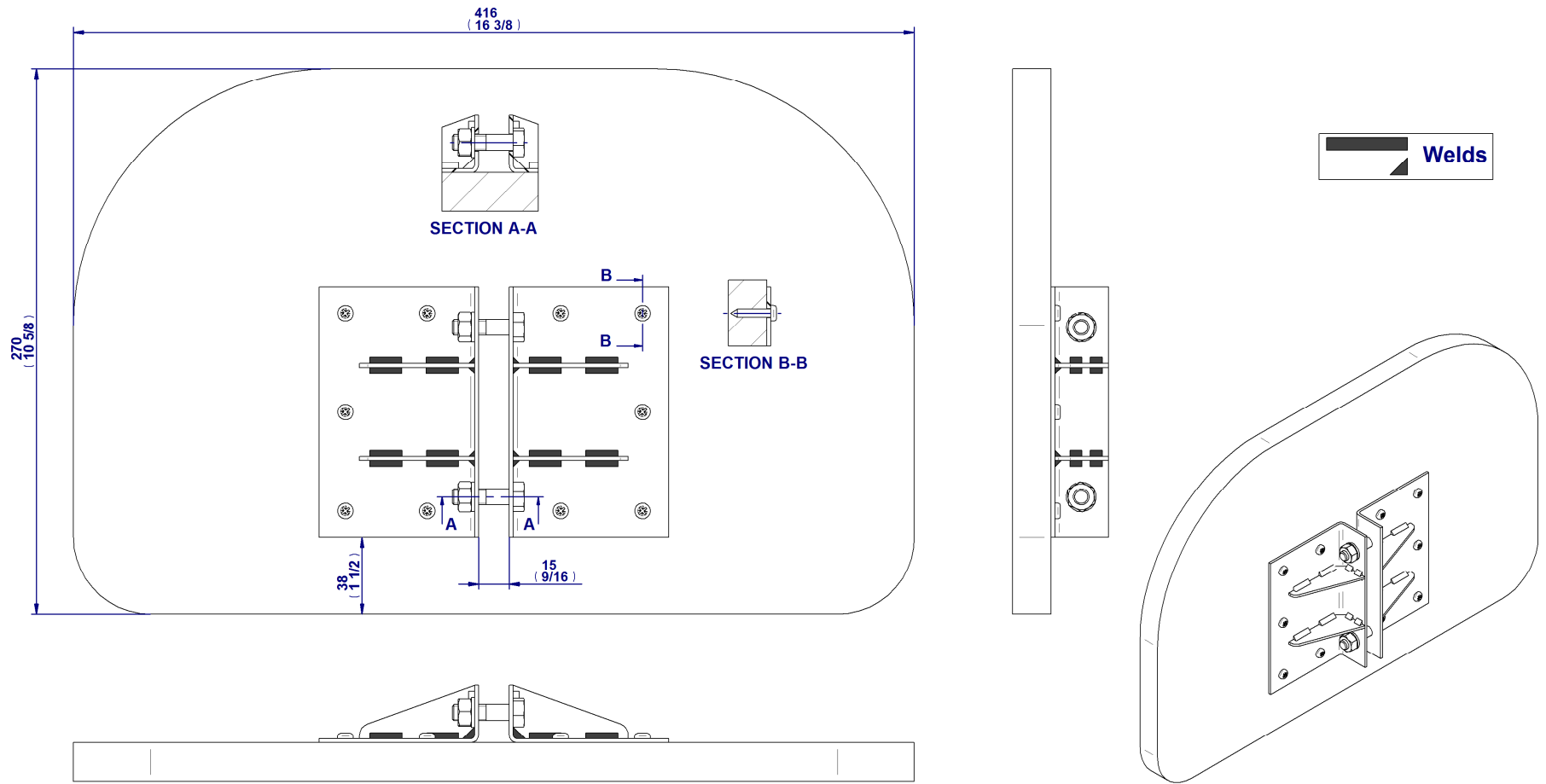
Seat support – Parts list



Item Number	Title	Quantity	Material
1	Seat support	2	Steel
2	Seat reinforcement	4	Steel
3	Hexagonal head bolt M8 x 30mm	2	Steel
4	Lock washer D8mm	2	Steel
5	Hexagonal nut M8	2	Steel
6	Seat board	1	Wood
7	Wood screw D4 x 20mm	10	Steel
8	Seat rubber foam	1	Rubber foam
9	Seat fabric	1	Fabric

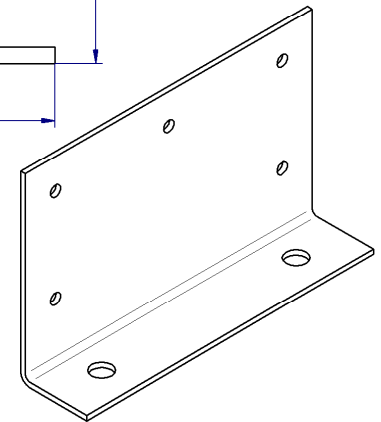
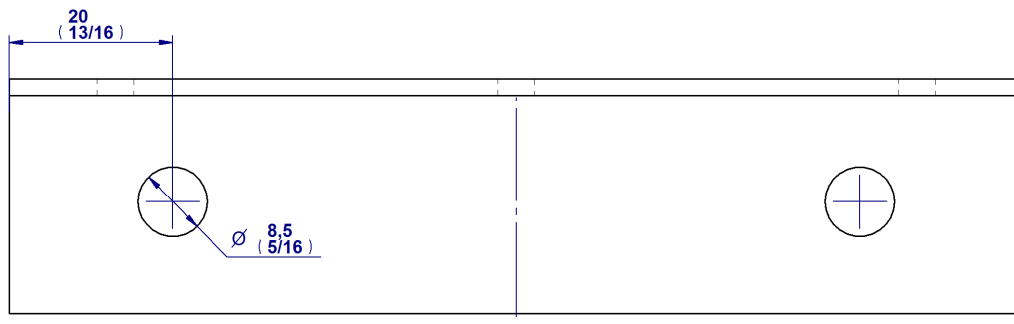
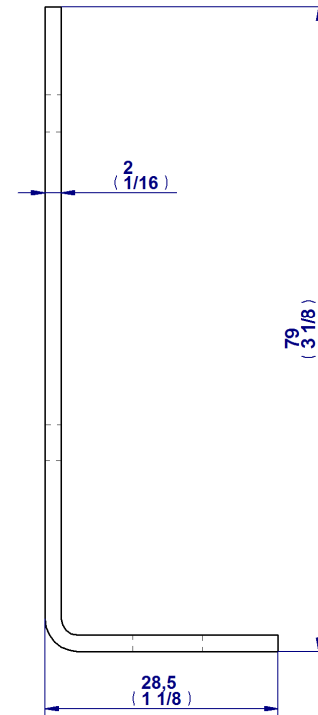
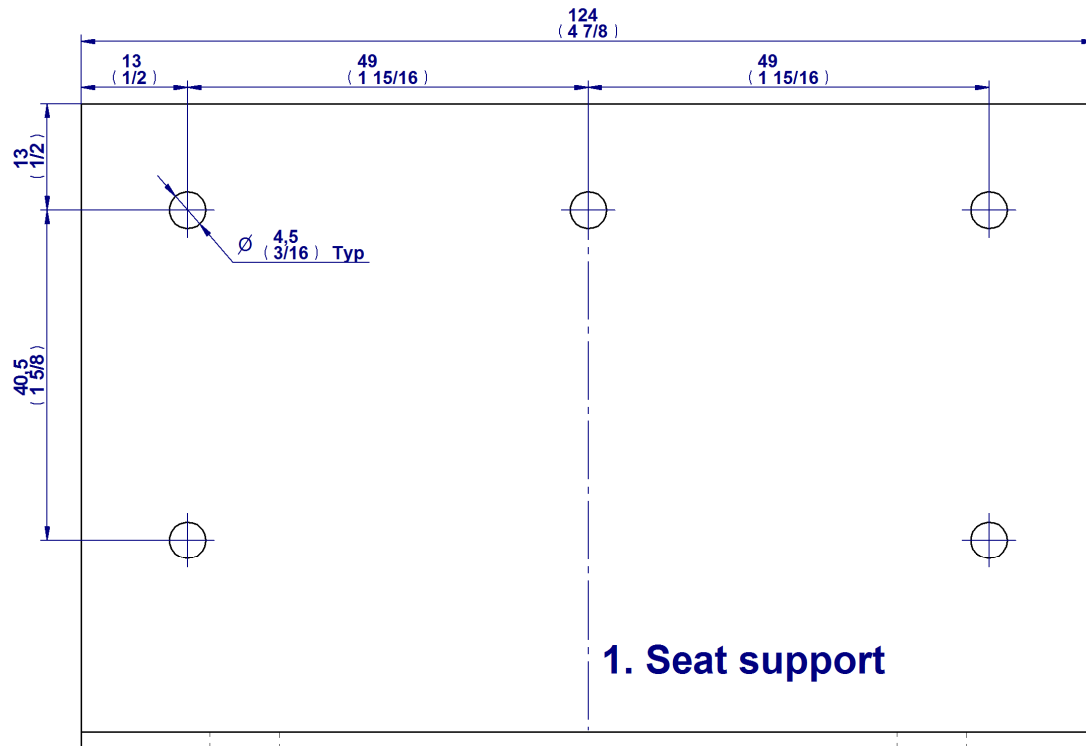
**Seat subassembly**

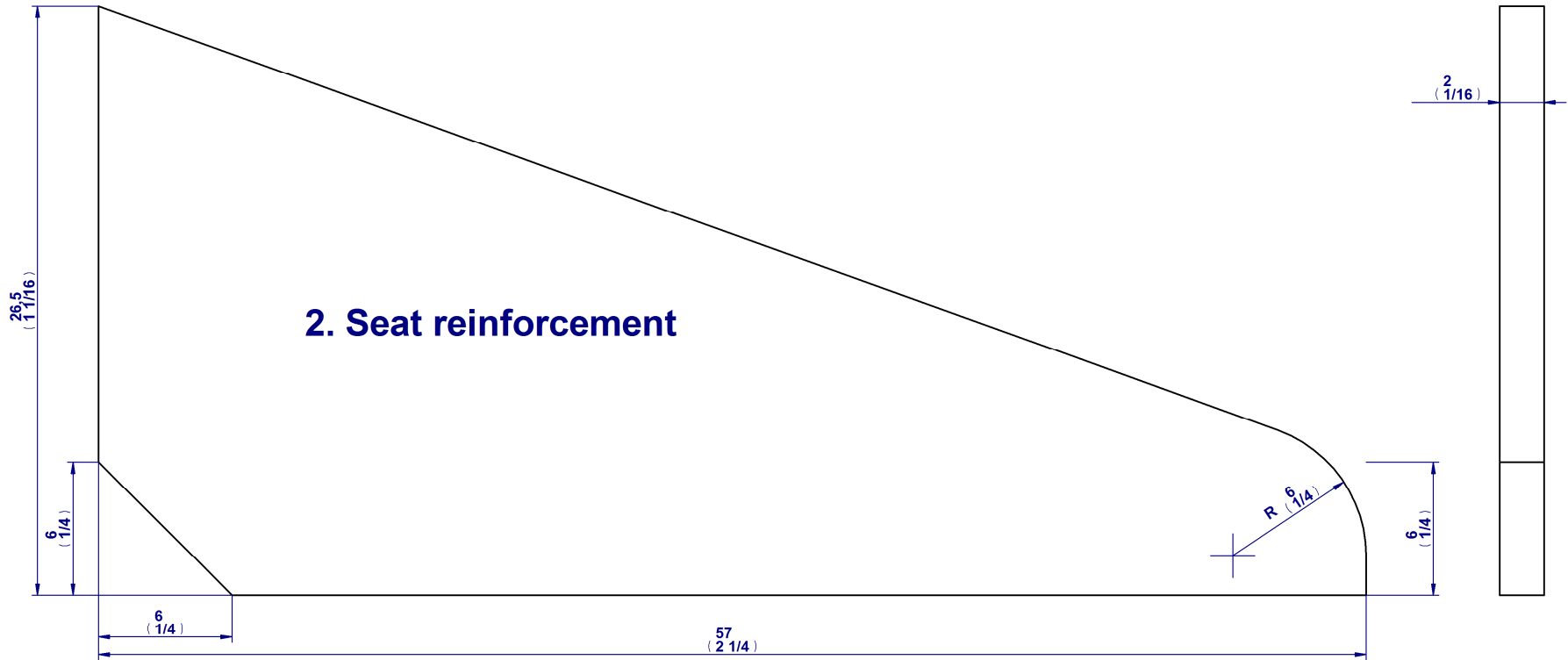
Seat support – Assembly drawing

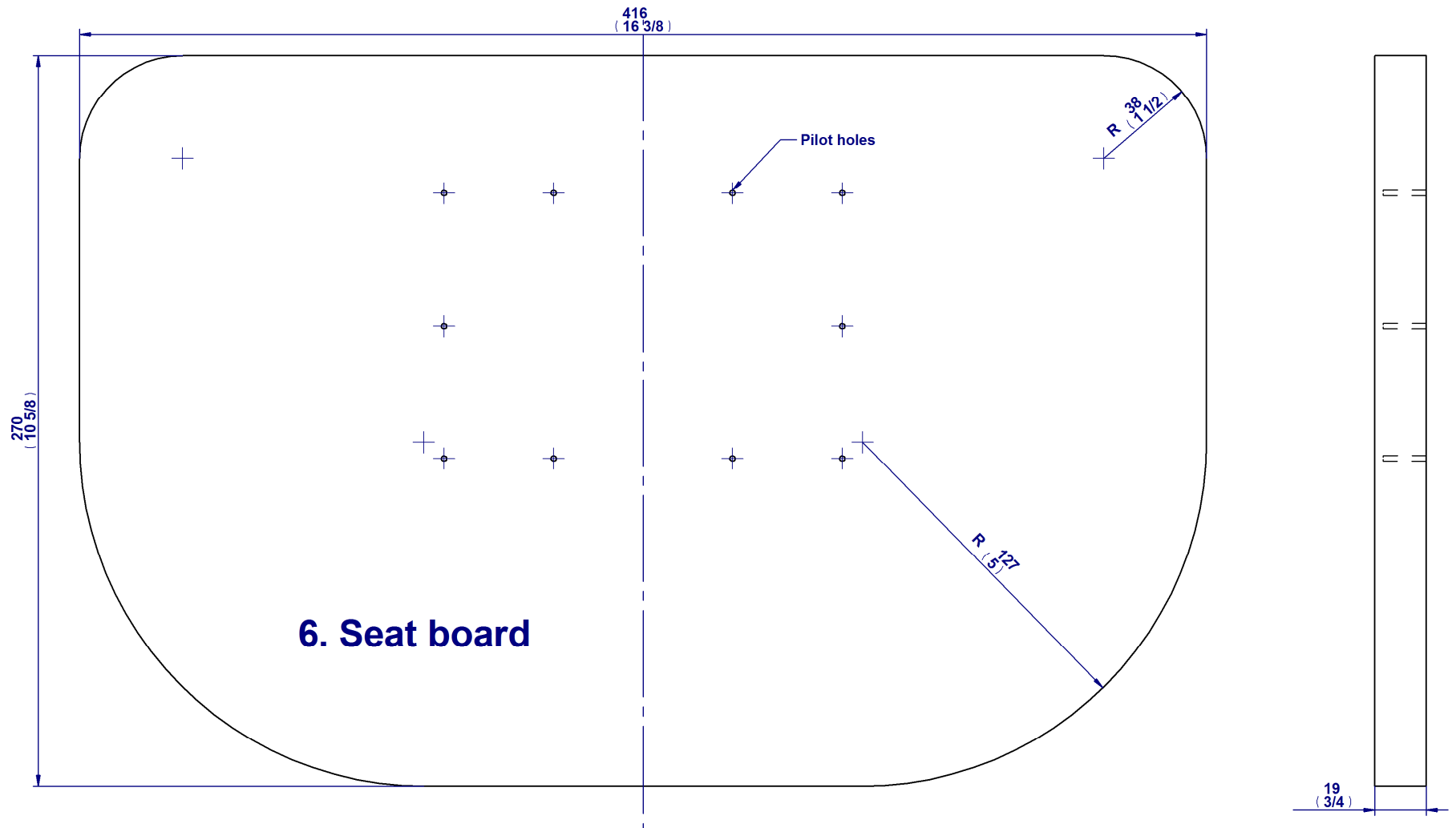




Project: Kneeling chair plans

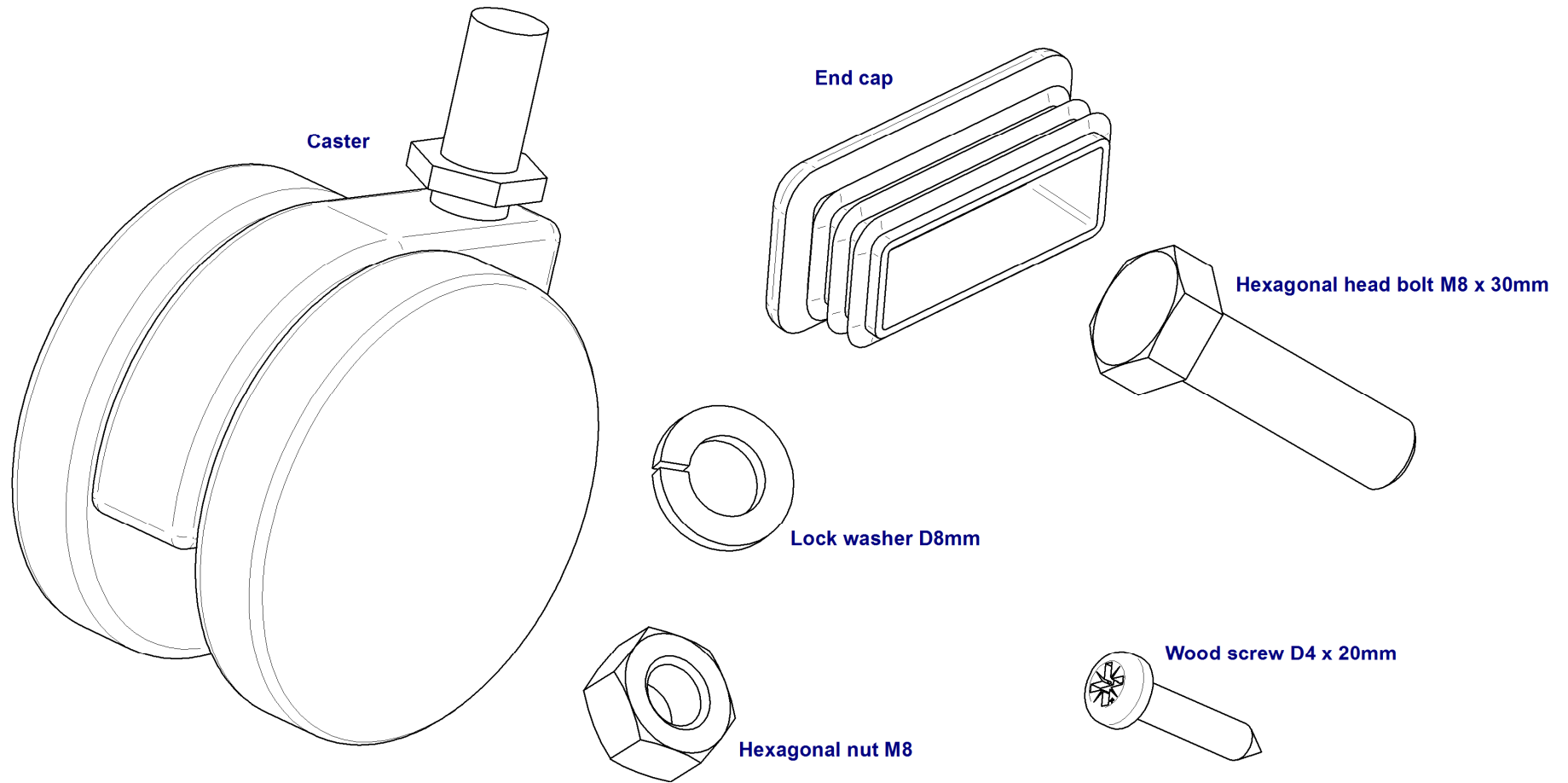






*Project: Kneeling chair plans*

Seat support – Standard parts



*Project: Kneeling chair plans*

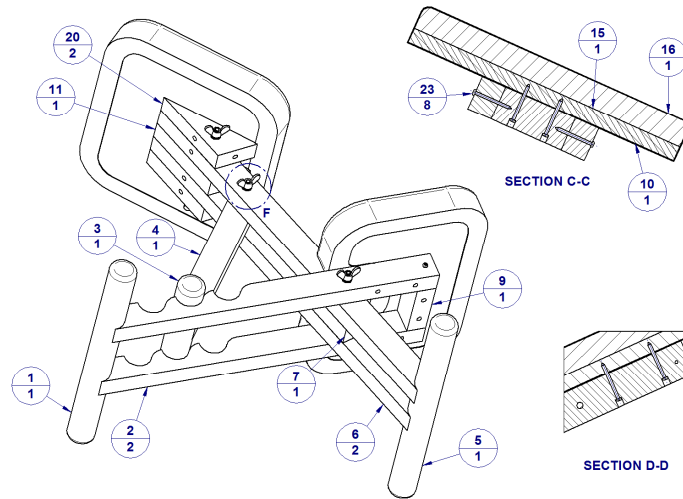
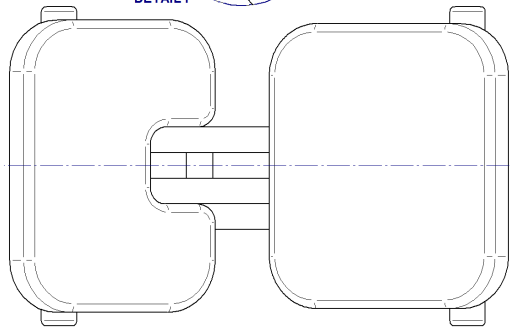
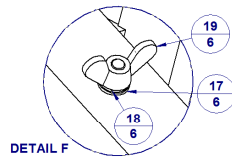
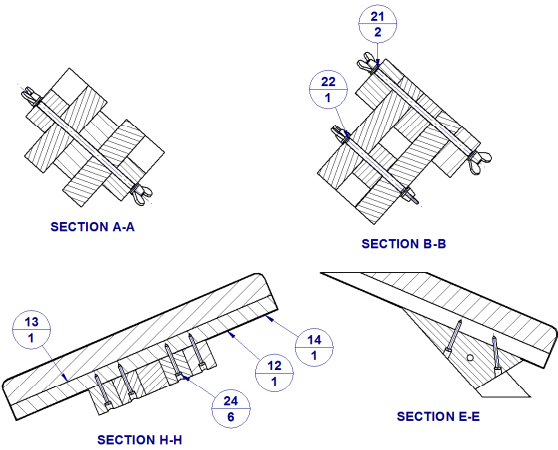
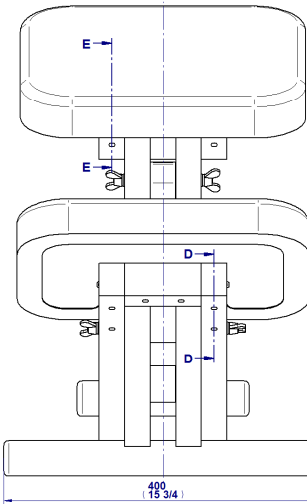
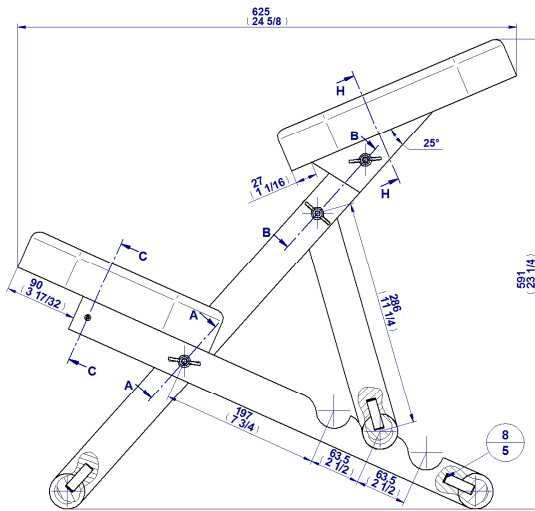
## **Wooden Kneeling chair plan**



Whatever wood you use, make sure it is a hardwood in order to provide adequate strength.

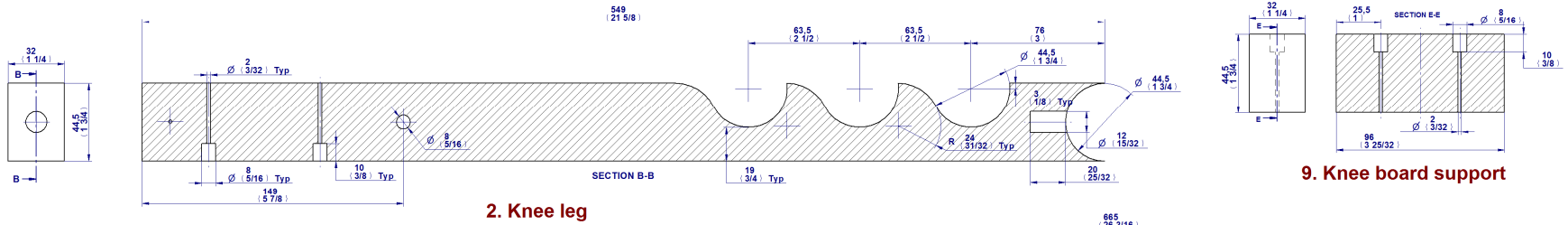
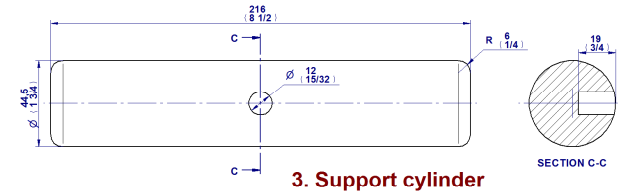
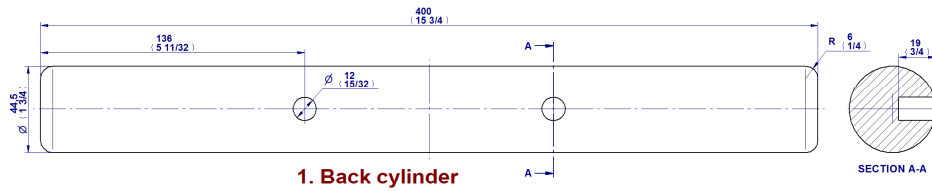
Project: *Kneeling chair plans*

Wooden kneeling chair – Assembly drawing and parts list

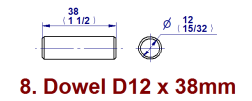
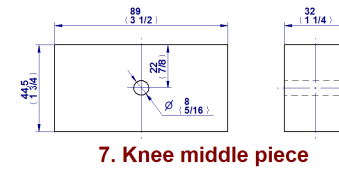
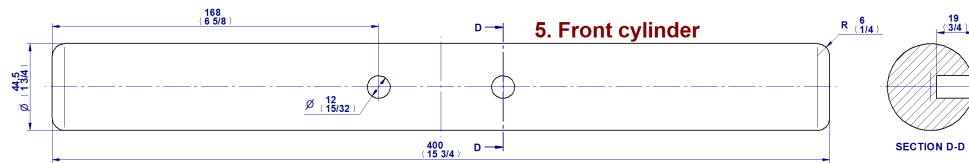
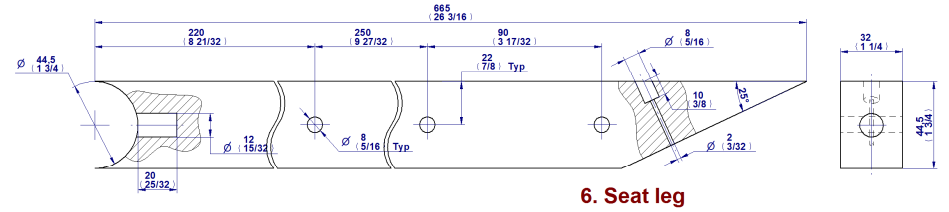
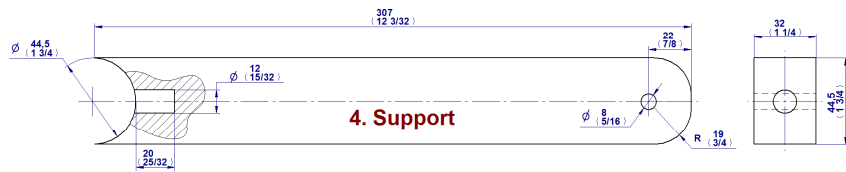


Item Number	Title	Quantity	Material
1	Back cylinder	1	Wood
2	Knee leg	2	Wood
3	Support cylinder	1	Wood
4	Support	1	Wood
5	Front cylinder	1	Wood
6	Seat leg	2	Wood
7	Knee middle piece	1	Wood
8	Dowel D12 x 38mm	5	Wood
9	Knee board support	1	Wood
10	Knee board	1	Wood
11	Middle seat support	1	Wood
12	Seat board	1	Wood
13	Seat rubber foam	1	
14	Seat canvas	1	
15	Knee rubber foam	1	
16	Knee canvas	1	
17	Washer D8mm	6	Steel
18	Lock washer D8mm	6	Steel
19	Wing nut M8	6	Steel
20	Side seat support	2	Wood
21	Threaded axle M8 long	2	Steel
22	Threaded axle M8 short	1	Steel
23	Wood scret D4 x 50mm	8	Steel
24	Wood screw D4 x 40mm	6	Steel

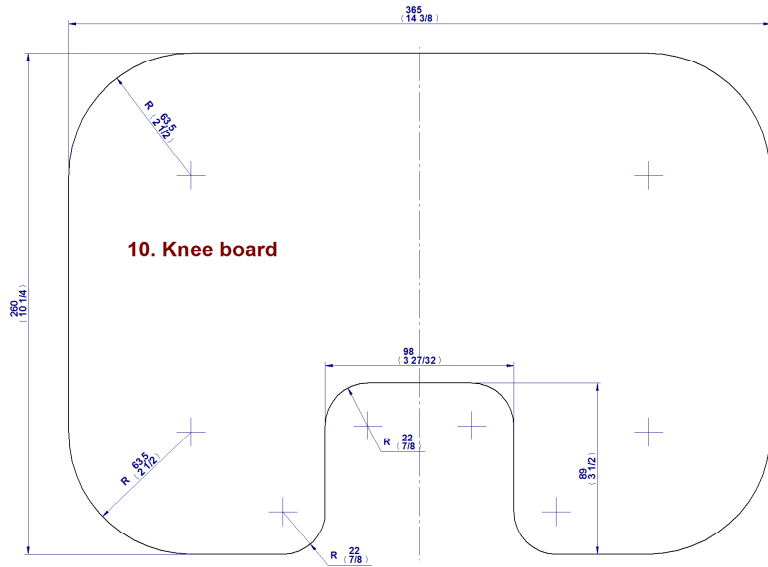
Project: *Knelling chair plans*



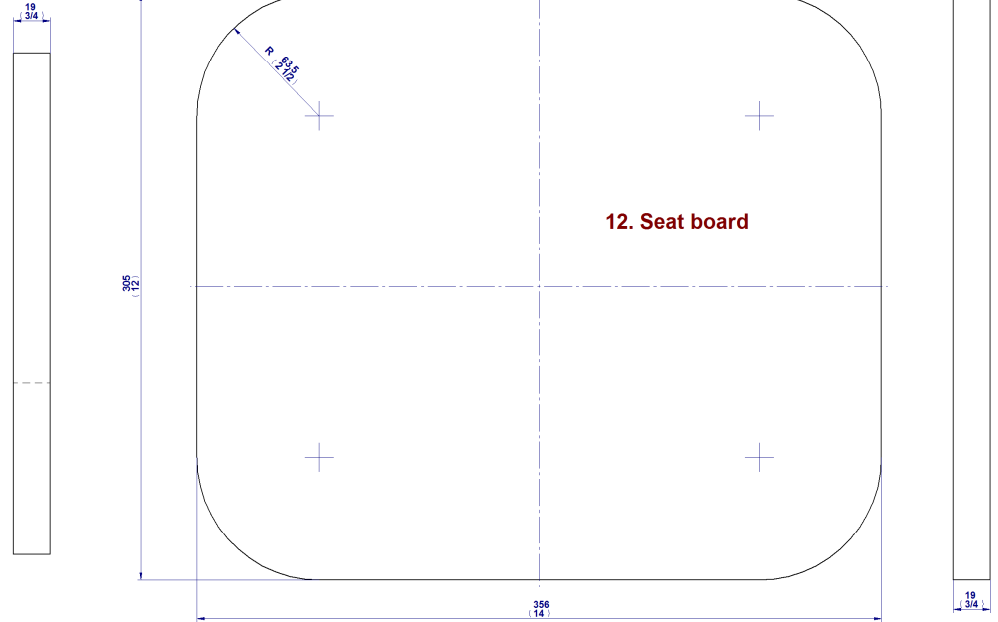
**9. Knee board support**



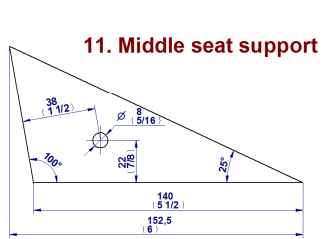
Project: Kneeling chair plans



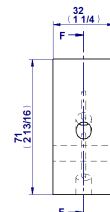
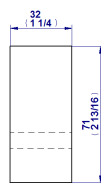
10. Knee board



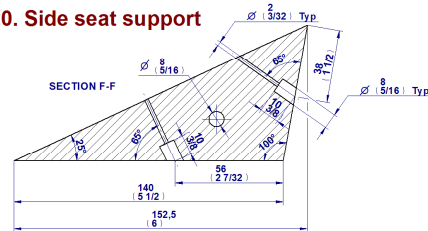
12. Seat board



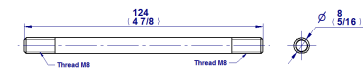
11. Middle seat support



20. Side seat support



21. Threaded axle M8 long



22. Threaded axle M8 short



Standard parts

