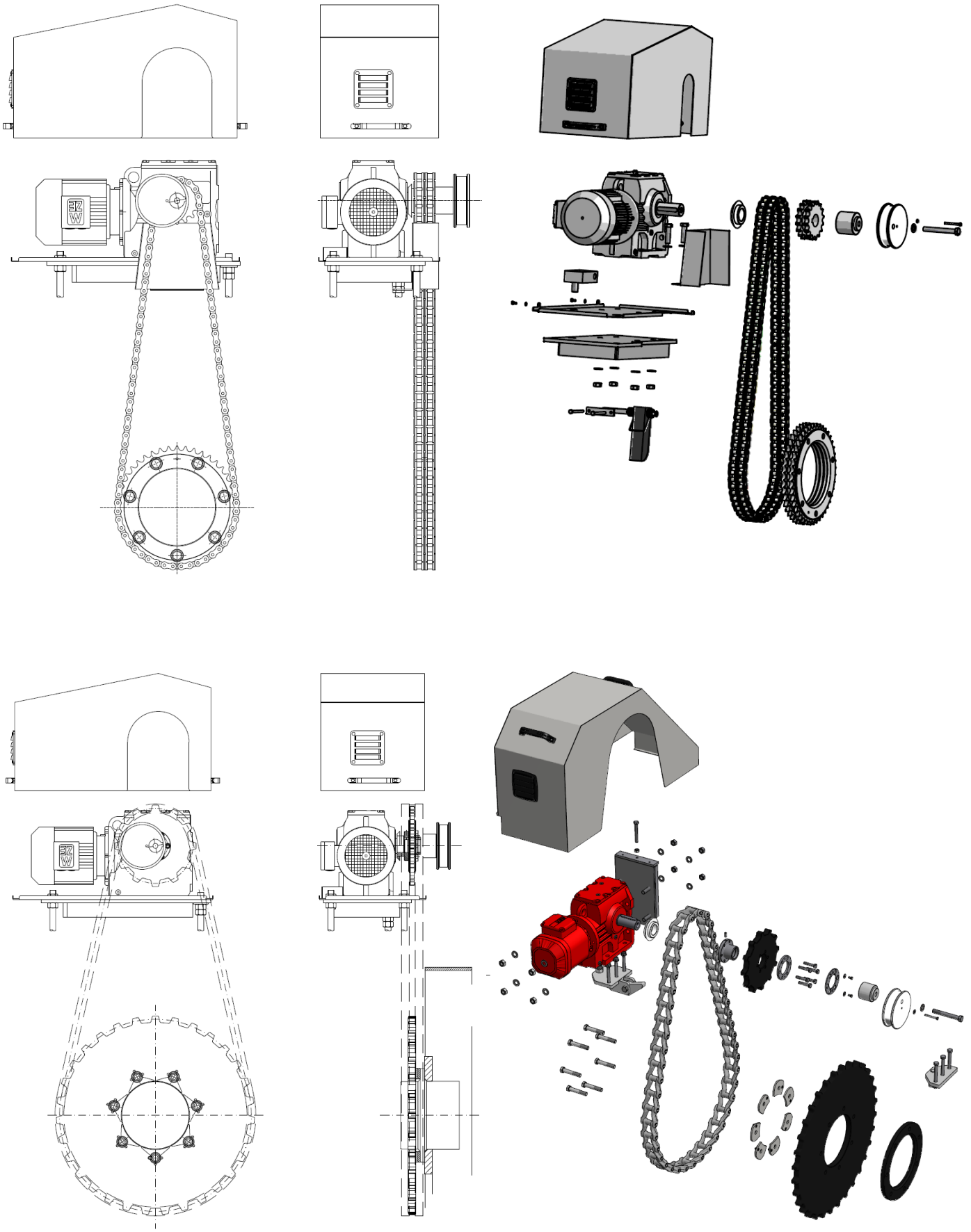




## How to change from duplex chain drive to H78 narrow chain

HSF 22-series

This document is intended to illustrate the methodology in how to change the duplex drive chain to an improved H78 narrow chain on a Hydrotech HSF 22 filter. See images below.

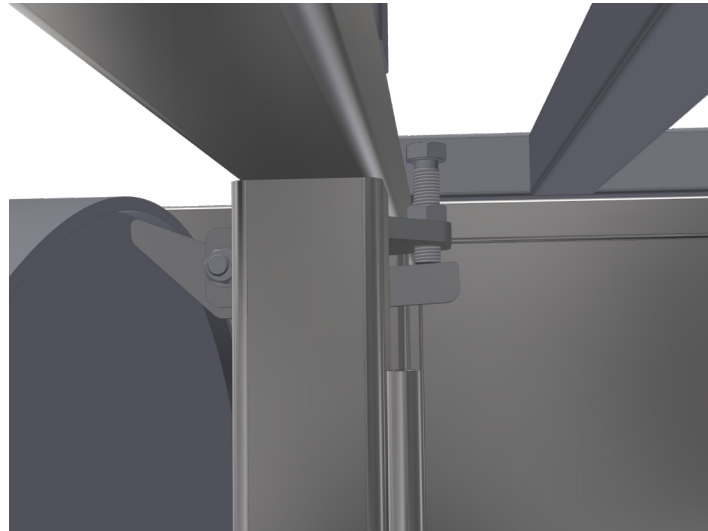


The top image illustrates the old duplex drive assembly and the lower image illustrates the newer H78 narrow chain drive.

# Instructions

1. Switch the filter off and ensure it won't be able to start during the work.

2. Adjust the lifting lever under the motor so it can lift the drum by pressing on the drum ring. Also check the amount of space between the plastic axial slide bearing and the frame when the drum is pushed against the inlet. There should be no more than 5-7 mm of play in the rear end when the drum is pushed against the inlet, to prevent the drum from slipping off the lifting arm.



3. Make sure that the bolt used to lift the drum is well greased before lifting and that no extra weight is acting down on the drum (water or sediment sludge).

4. Lift the drum and loosen the bolts that are holding the two square plates (pos. 1 and 2 on drawing 2976) on the frame (centre shaft). Lift just enough so that the centre shaft can be removed. The support plate between the drum and the frame is held in place by one M8 bolt in each side.

5. When the hollow shaft is out, remove the second plate.

6. Detach and remove the old sprocket and metal spacer.

7. Mount the new sprocket along with the new nylon spacer in the correct order according to the exploded view on the previous page.

8. Assemble the shaft and slide bearing. The pointed end of the shaft also supports the sludge tray. Let the drum down when finished.

9. Raise the spray bar and remove the eccentric plastic wheel.

10. Remove the gear box and detach the old sprocket.

11. Remove the motor bracket, cover bottom plate, spring washers and the spring sleeve.

12. Adjust the motor bottom plate, flooring tiles and the motor cover according to attached drawing images.

13. Mount the new sprocket.

14. Assemble the motor, bracket and cover bottom.

15. Try out the new height of the motor by mounting the new chain. Monitor the alignment between the two sprockets.

16. Ensure the drive shaft is in horizontal position and proper tension is applied to the chain. It should be possible to move the slack side of the chain approximately 15 mm when correct tension is achieved.

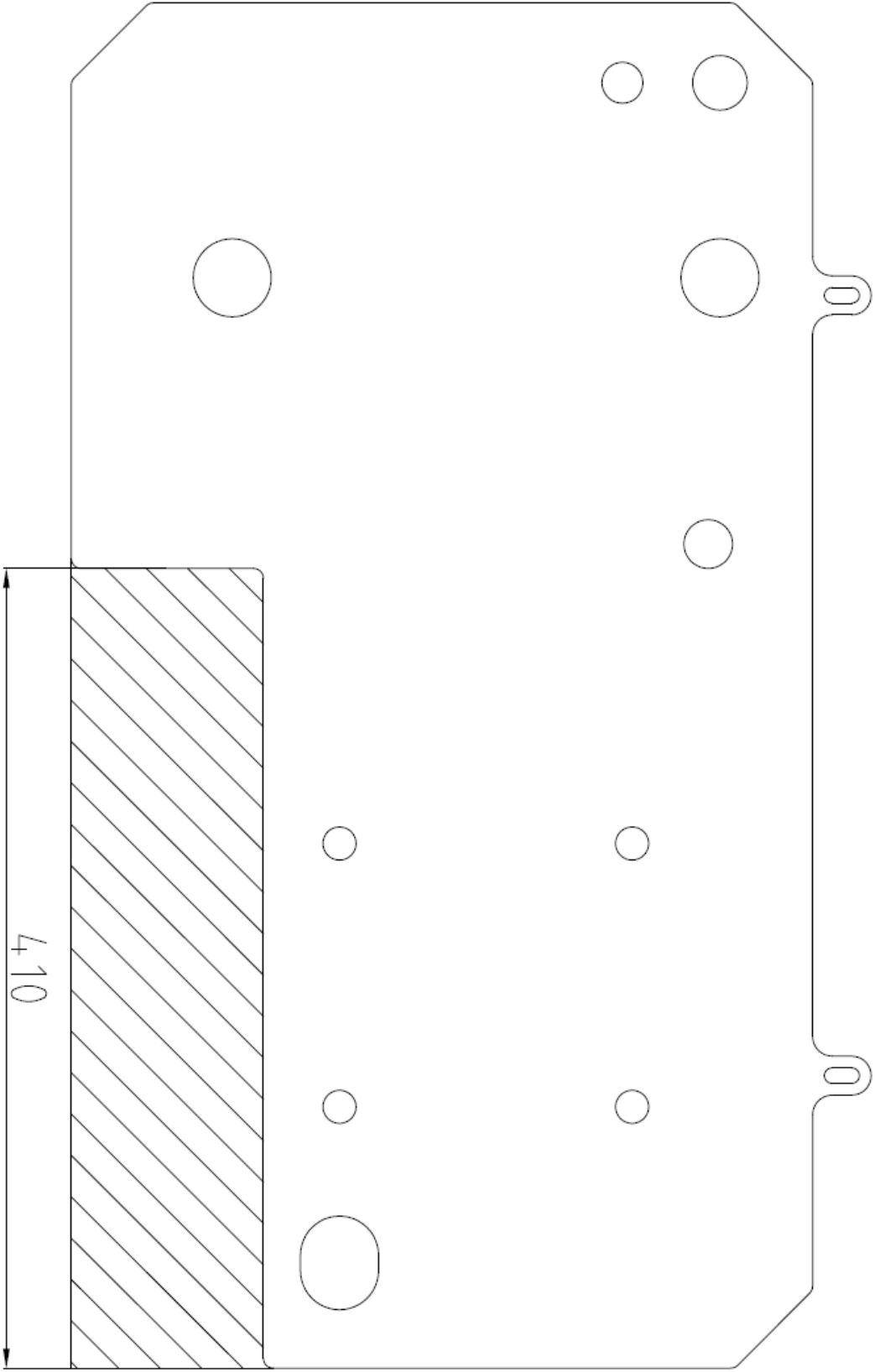
**NOTE!** The old chain tensioner and protecting bracket for the chain are not to be used after the conversion.

**NOTE!** Before starting the procedure of changing the chain, secure the sludgtray to the drum (preferable by the use of straps) of the filter to prevent it from dropping to the bottom of the drum when working on the shaft and slide bearing.

**NOTE!** The images used in this manual may not be 100 % accurate to all filter models. Many filters are customer specific so this manual aims to be a general guide rather than a step by step manual.

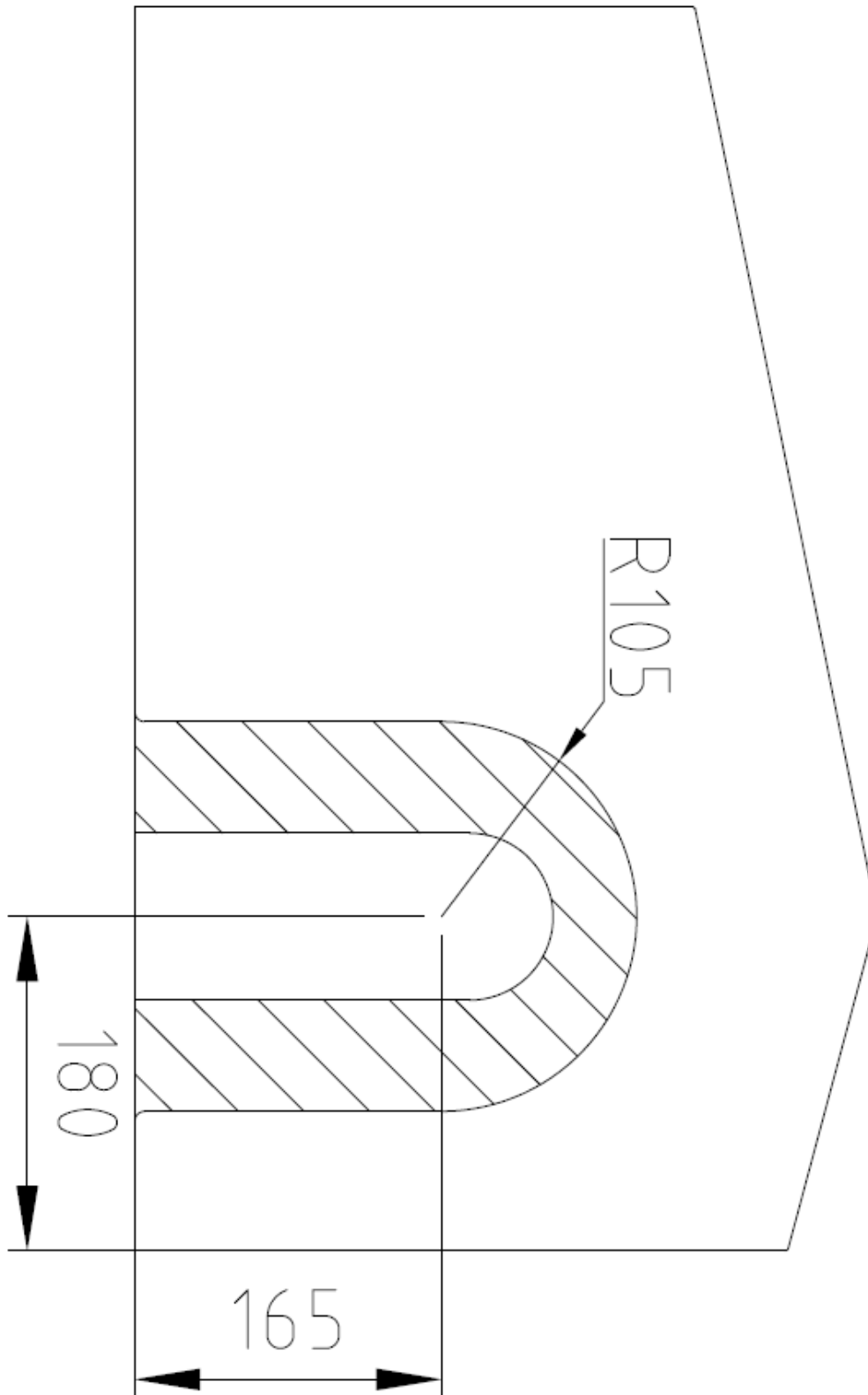
# Modifications to motor bottom plate

The motor bottom plate needs to be modified to fit the wider path of the new chain in accordance with the image below. The cutout need to be 410 mm wide so no inteference between the chain and motor bottom plate occurs.



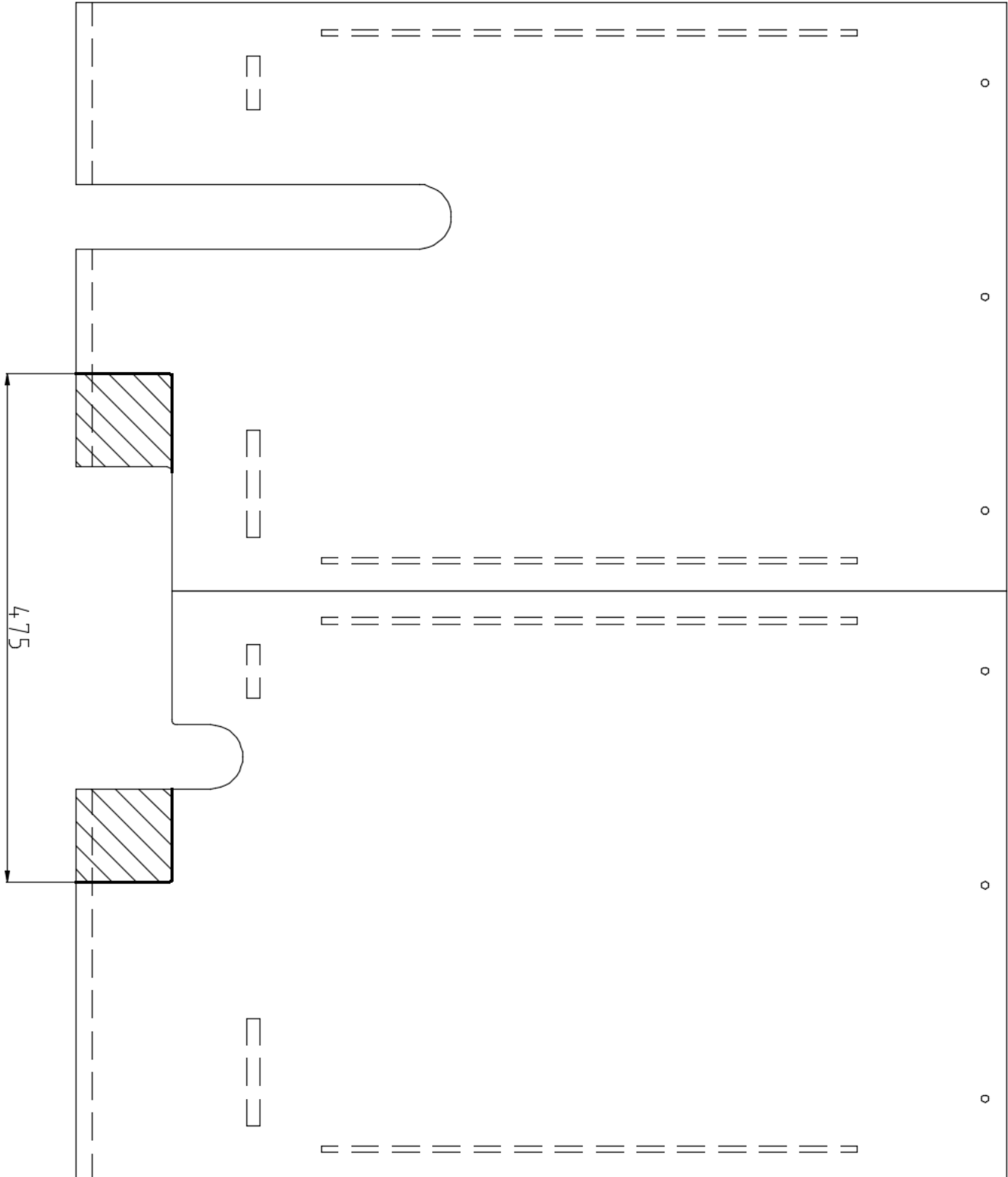
## Modifications to motor cover

The motor over cutout needs to be enlarged to fit the wider chain profile in accordance with the image below. The cutout below should be enough to house the new chain, but some trimming might be necessary. No interference between the cover and chain is allowed.



## Modifications to flooring plates

The cut out in the floor plates needs to be widened to accommodate the new chain. The picture below illustrates the two affected floor plates and how the cut out should be made.



## Parts list

1011736 Hub plastic sprocket 2200N/2600, AISI316L.

1011737 Bracket plastic sprocket 2200N/2600, AISI316L.

1012043 Sprocket wheel motor 2200 Z=12, Polyamide Plastic.

1012044 Sprocket wheel drum 2200 Z=32, PE2000+MOS2 Plastic.

1017405 Locking plate AISI316L HSF2200/2600.

1016604 Chain H78 Narrow Series 47link 15-5pH SS/17-4pH SS stainless steel.  
C/C per link=2.609"=66.2686 mm.

1016553 2x Chain H78 Narrow Series 15-5pH SS/17-4pH SS H78 Narrow 15-5 chain.  
C/C per link=2.609"=66.2686mm.

1012047 Spacer Ø340/231x16 PA6 plastic.

1018994 7x Washer with locking device HSF2200 / HSF2600 AISI316L stainless steel.

352120 Stop screw MSK6SS M8x20, A4 DIN916 stainless steel.

350770 2x Screw hex. head M6S M6x12H A4 stainless steel.

350990 6x Screw hex. head M6S M10x50H A4 stainless steel.

1018790 7x Screw hex. head M6S M16x90 BUMAX 88 stainless steel.

350532 3x Washer, RB 6,4x18x1.6, A4 Stainless steel.

1019853 Krysskil DIN6885-1 A14x9x80 +C S 77.

All parts above are necessary for the chain conversion. It's recommended to also change the excentric plastic wheel for the backwash but this is optional.