

## Technical Service Bulletin

June 2018 TSB356.03

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### HYDRAcube Disassembly Procedure

This Technical Service Bulletin covers how to disconnect and remove HYDRAcube headers from the modules.

#### ***Introduction***

On occasion, modules may need to be removed from the skid for testing, cleaning or replacement. For example, The removed module may need to undergo bubble testing to isolate any existing damaged fiber(s). In order to perform this test, the module is removed from the skid and headers detached from the module housing. This same procedure should be followed when implementing o-ring or header replacements. Diligence is required to prevent part damage and ensure proper installation.

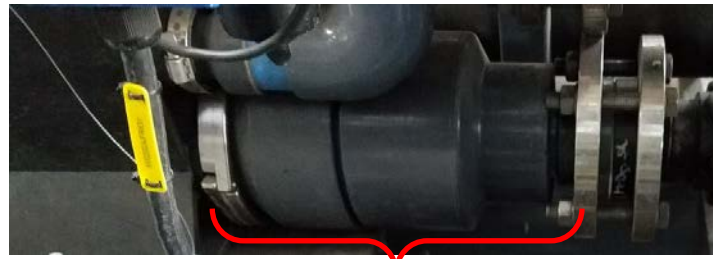
A mechanical lifting device is recommended to assist in moving modules. The estimated time for removal and re-installation of headers and related components is approximately 15 minutes per module.

#### **Tools Needed:**

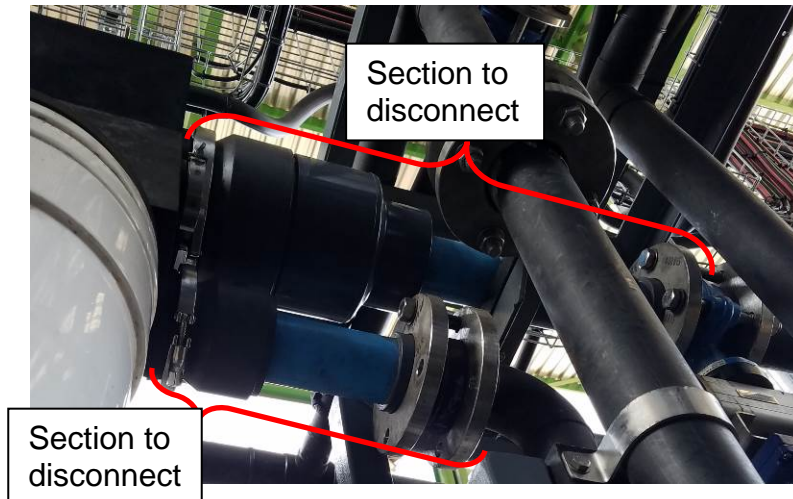
1. Crow bar
2. Universal Wing Nut or Gator Grip (optional)
3. Wooden blocks (need to raise module to remove headers)
4. Crescent Wrench or Similar Tool
5. 17 mm and 5/8" Wrench
6. PPE according to feed water type

#### ***To Dismantle Module:***

1. Turn off and ensure no flow enters the HYDRAcube skid.
2. Release system pressure.
3. Drain the feed and filtrate sides of rack.
4. Disconnect all flanges or similar type connections on one side of the rack to be able to separate HYDRAcube headers by approximately 1". See Figure 1. This will be necessary to avoid damaging gaskets and molded parts on the headers.

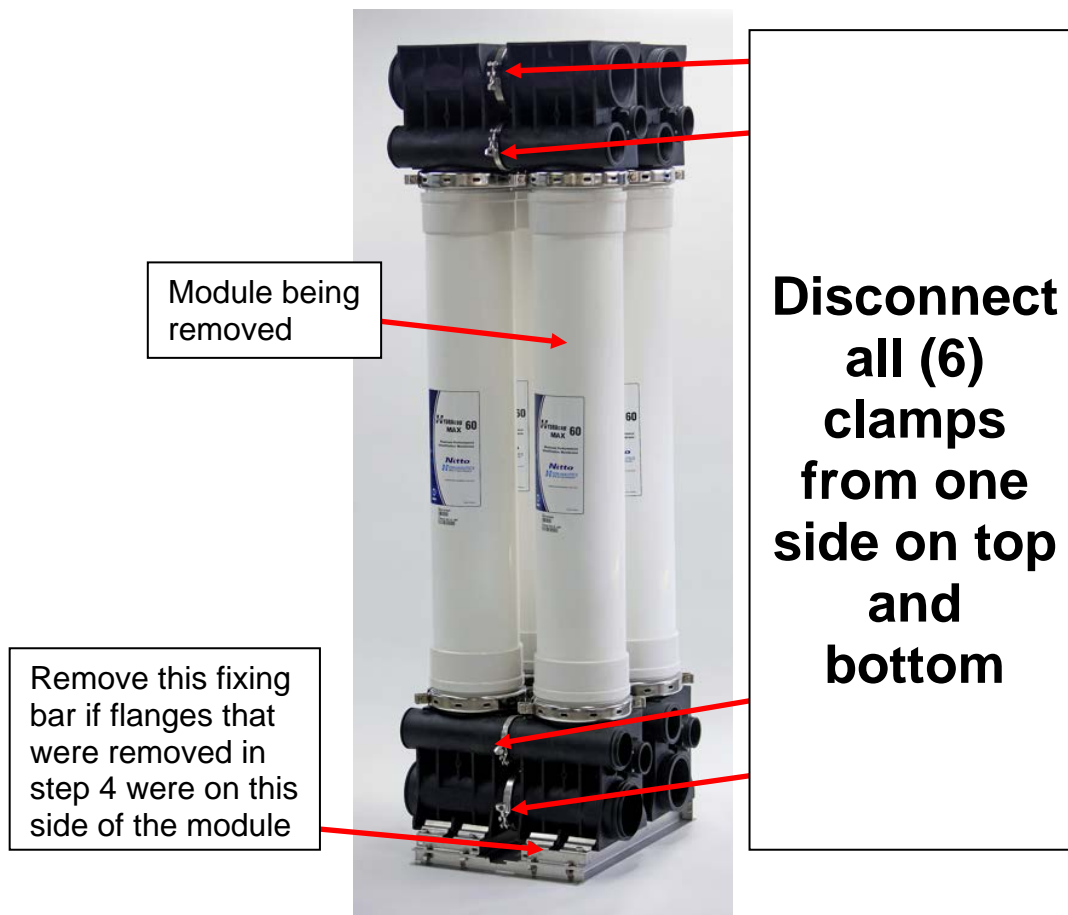


Section to disconnect



**Figure 1: Example of flange connections at end of module that can be disconnected.**

5. Disconnect all sanitary clamps from top and bottom (2x6" clamps, 2x4" clamps, and 2x2" for Gen. 1 or 3" clamps for Gen. 2) on one side of the module that is to be removed. See Figure 2. **NOTE:** There may be some residual liquid in the module that will come out.



**Figure 2: Disconnect clamps on one side of module**

6. Remove the front fixing bar from frame(s) such that you may slide one section. You will need to remove the front fixing bars on the same section that had the flanges removed. See Figure 2. Leave the other front fixing bars in place. **NOTE:** Any additional straps or braces that are in place should be removed at this time as well.



**CAUTION: AS THESE MODULES ARE FREELY STANDING, A TEMPORARY STRAP AROUND THE MODULES IS RECOMMENDED TO ENSURE MODULES DO NOT TIP OVER.**

7. Use a crowbar or wooden block to separate the headers, while taking care not to damage the shells or any other module components. It may be necessary to use some padding on areas where the crowbar comes in contact with the modules. See Figure 3 below.



**Figure 3: Crowbar with padding to separate modules.**

8. Disconnect all sanitary clamps on top and bottom (2x6" clamps, 2x4" clamps, and 2x2" for Gen. 1 or 3" clamps for Gen. 2) on the other side of the module that is to be removed and again separate this module from the rest.



**Figure 4: Shows the three quick disconnect clamps 6",4",3".**

9. Lay the module horizontally on wooden blocks to facilitate removal of the headers by keeping the headers off the ground.
10. Remove bolts, washers, and nuts from stainless steel clamps at both top and bottom of module.



Remove the Bolt, Nut,  
Washer and Clamp

**Figure 5: Shows bottom portion of a single module and cube. Same idea for the top cube.**



**CAUTION: ENSURE HEADERS DO NOT FALL WHILE REMOVING CLAMPS FROM THE MODULES.**

11. Pull, **DO NOT ROTATE**, on the headers to remove from the module shell.



**CAUTION: DO NOT USE ANY METALLIC TOOLS TO LOOSEN HEADERS FROM THE SHELL. SHELL AND HEADERS ARE MADE FROM PLASTIC AND CAN EASILY BE DAMAGED ON SEALING SURFACES.**

12. Pull, **DO NOT ROTATE**, concentrate and feed adaptors from all modules if they remained in the module while pulling off the headers.

13. Module is now completely disassembled.

**For assembly instructions of a HYDRAcube skid, please refer to TSB 352.**

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