NCAR | NATIONAL CENTER FOR
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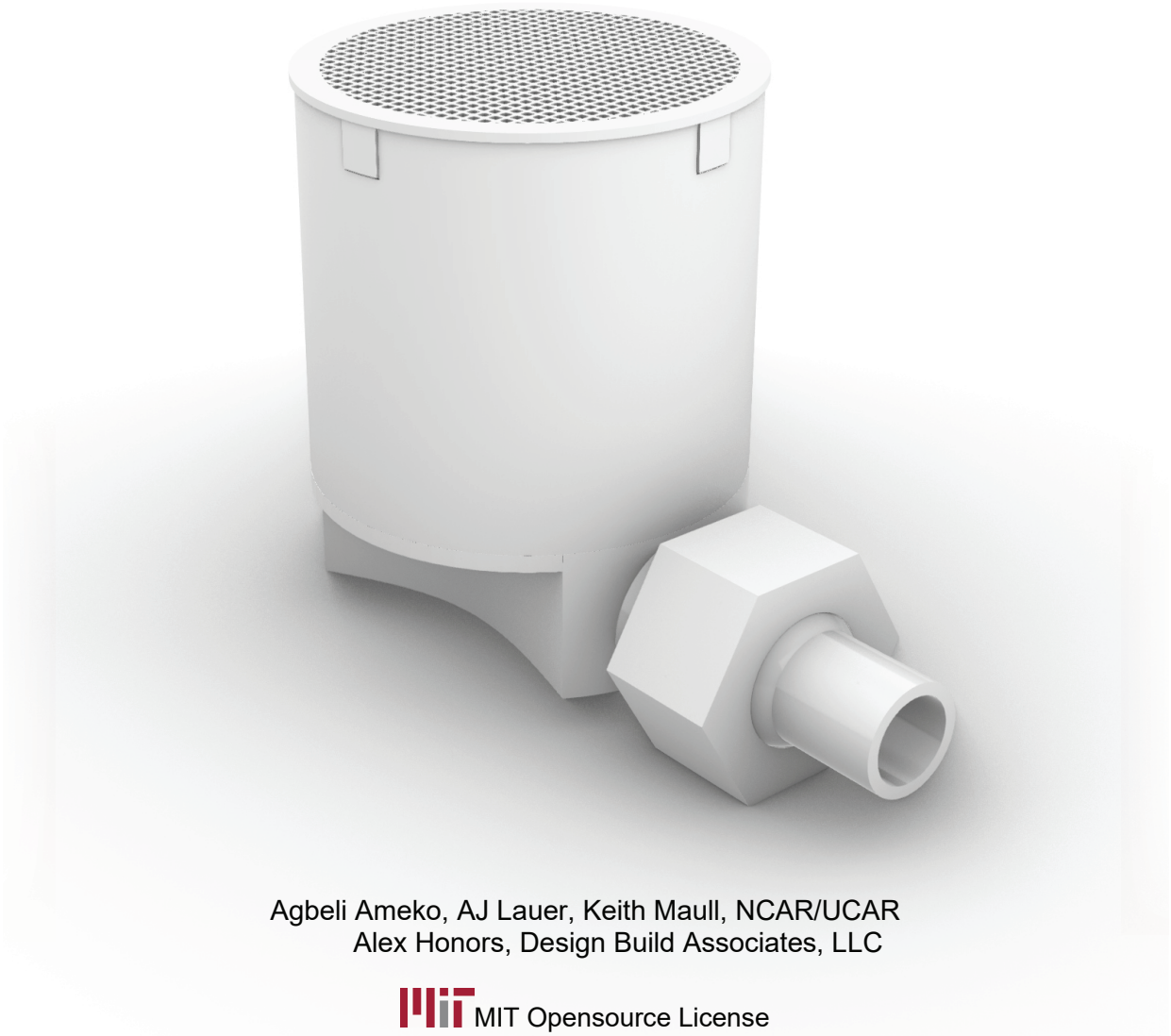
IOTWX HYDRO NODE ASSEMBLY



Agbeli Ameko, AJ Lauer, Keith Maull, NCAR/UCAR
Alex Honors, Design Build Associates, LLC

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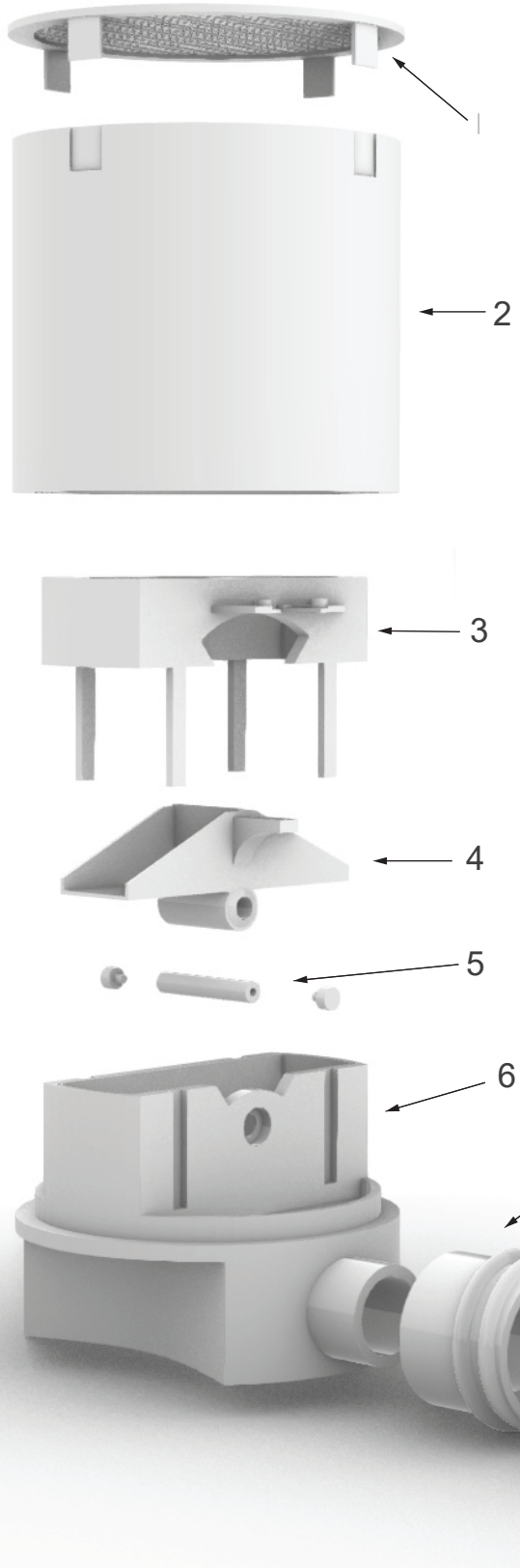


EXPLODED COMPONENTS

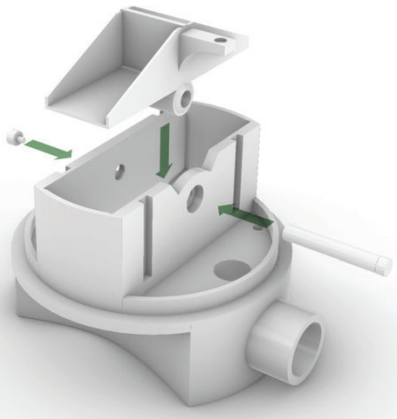
The HYDRO Node collects and measures precipitation using a 1 millimeter rain gauge and free standing funnel. The rain gauge is retro fitted with magnets using a customized arm extending from the gauge to a groove hall effect sensor situated within the funnel.

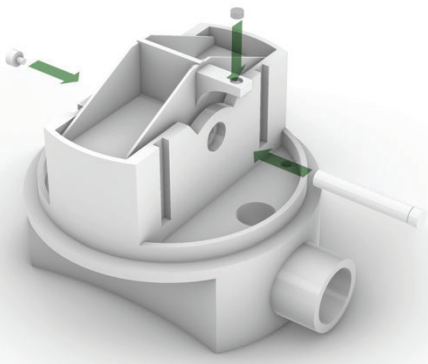
COMPONENTS LIST

No.	Component Name	Quality
1	Funnel Screen	1
2	Funnel	1
3	Hydro Slot	1
4	Hydro Gauge	1
5	Fulcrum	1
6	Hydro Base	1
7	Swivel Innerlock	1
8	Swivel Ball Joint Bar	1
9	Swivel Outerlock	1

ASSEMBLY STEP 1

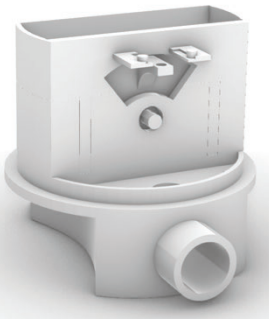
Align the holes in the Hydro Gauge with holes in the center of the Hydro Base and insert the Fulcrum into the hole in the center of the Gauge. Secure the fulcrum by snapping the pins in on both sides. Insert the small magnet into the circular slot on the arm of the Hydro Gauge.





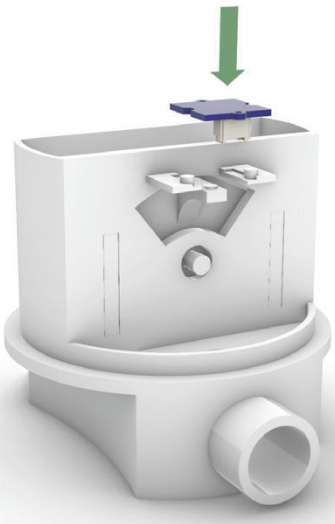
ASSEMBLY STEP 2

Align the legs on the Hydro Slot with linear groove s in the walls of the Hydro Base and insert the Slot into the base.



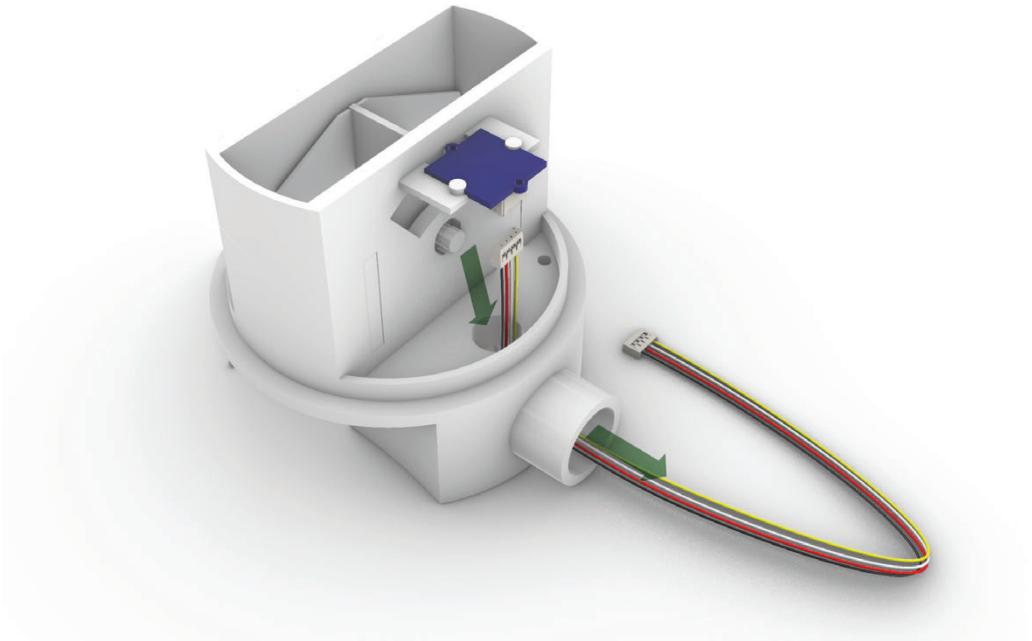
ASSEMBLY STEP 3

Align the holes on the side of Groove Hall Effect Senor with the two circular ex rusions on the Hydro Slot and seat the sensor in the sensor slot as shown



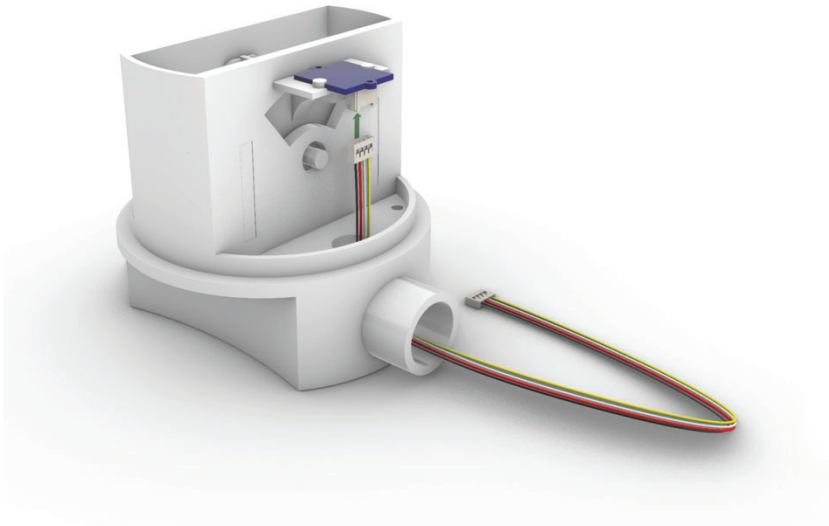
ASSEMBLY STEP 4

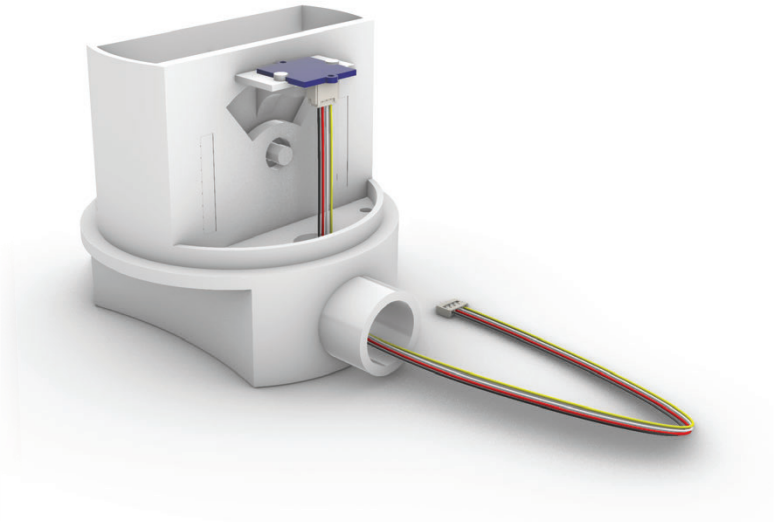
Thread the grove wire down through the cylindrical hole in the Hydro Base and out through the front to the cylinder in the base.



ASSEMBLY STEP 5

After threading the wire through connect the wire to the hall effect sensor.



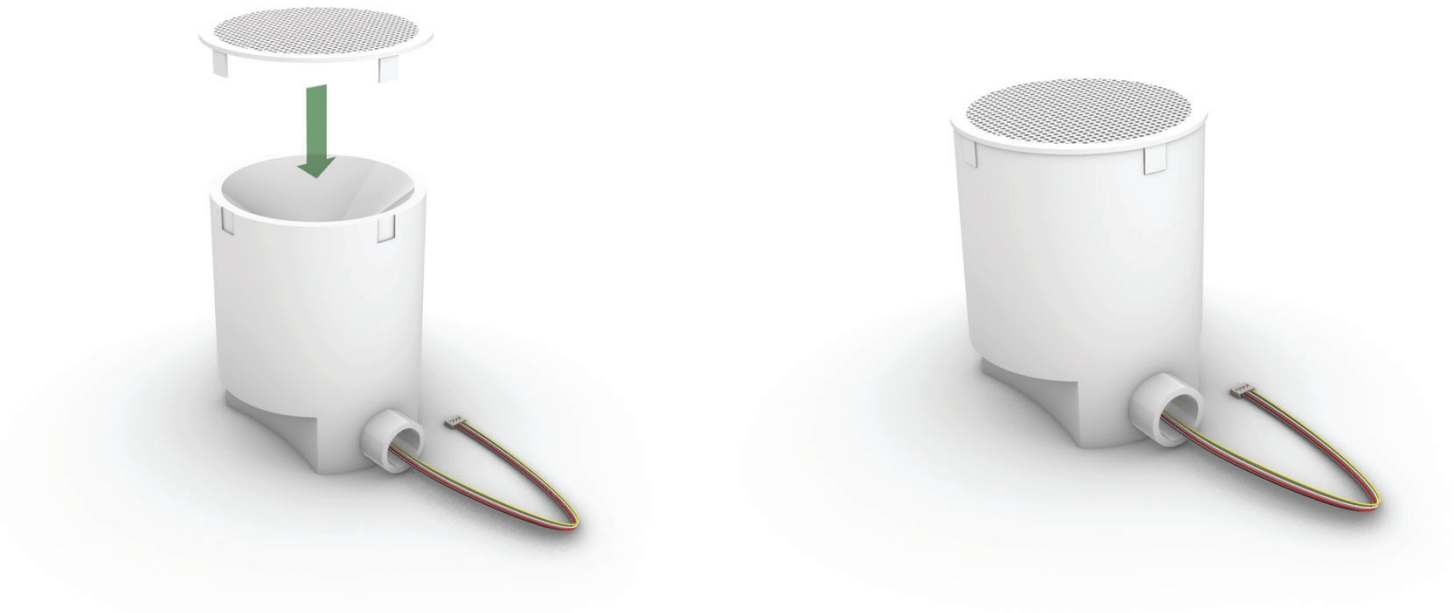


ASSEMBLY STEP 6

Slip the Funnel over the Base seating the funnel on the rim of the base.

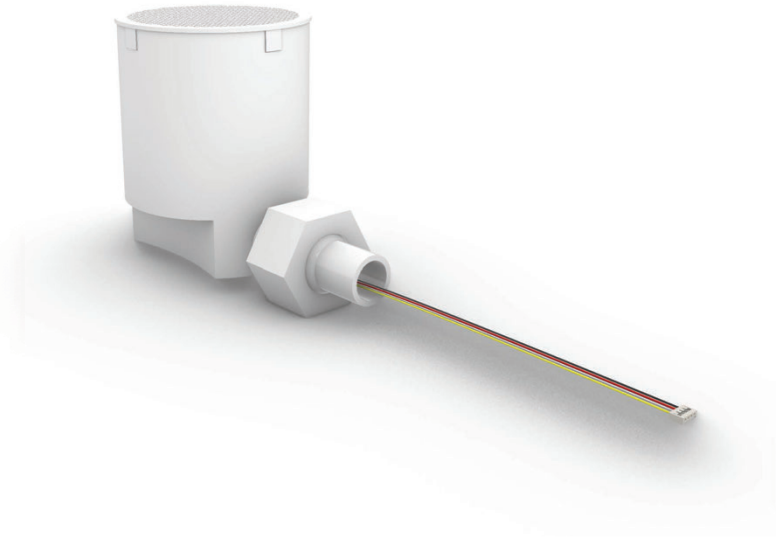
ASSEMBLY STEP 7

Align the legs of the Funnel Screen with the grooves in the Funnel and place the Funnel Screen on top of the funnel



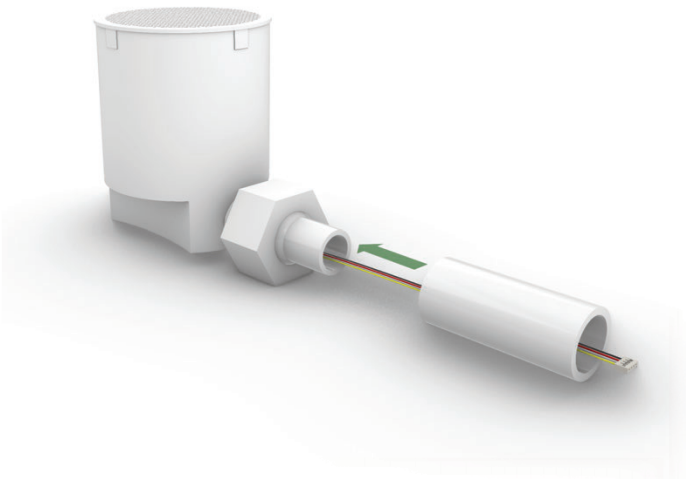
ASSEMBLY STEP 8

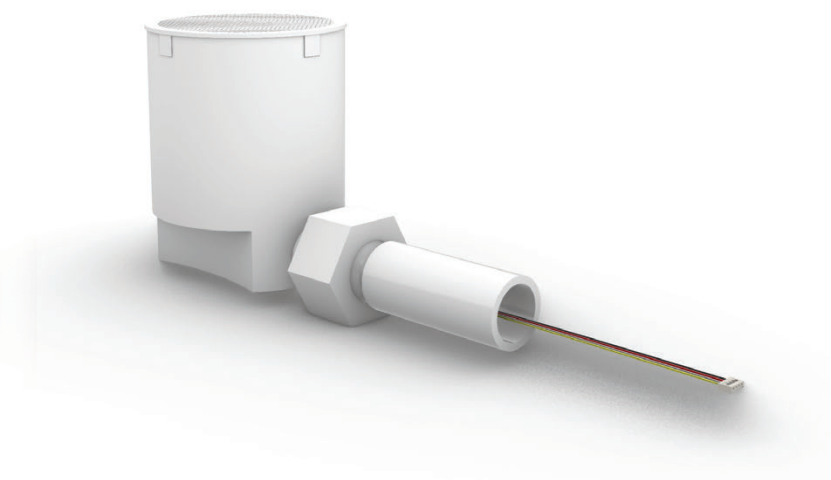
Align the Swivel Innerlock, Ball-joint Bar, and Outerlock respectively and assemble by twisting the outerlock onto the innerlock until tight with the ball-joint bar in between. Then push the swivel assembly on the cylinder of the base allowing the groove wire to pass through the assembly..



ASSEMBLY STEP 9

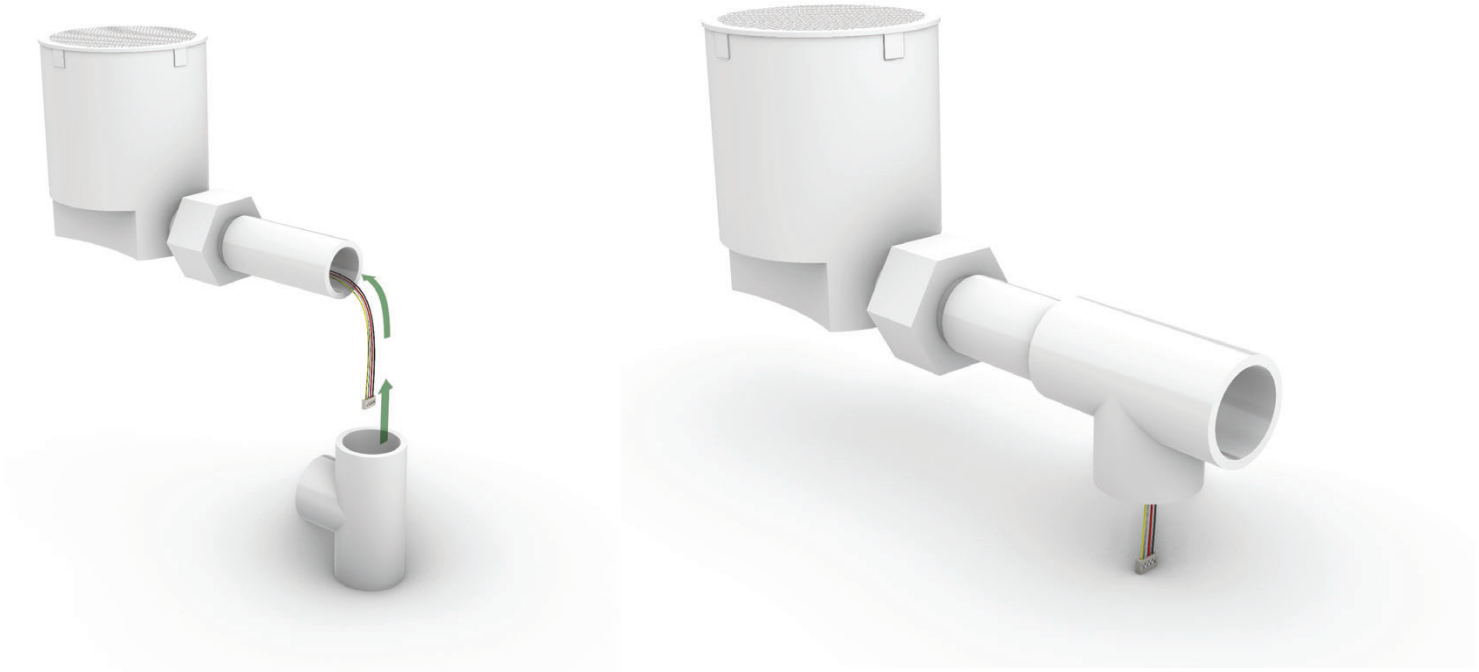
Cut a 3 inch piece of 1” diameter PVC and slot it on to the end of the Swivel Joint assembly ensuring that the groove wire is flowing through the PVC.





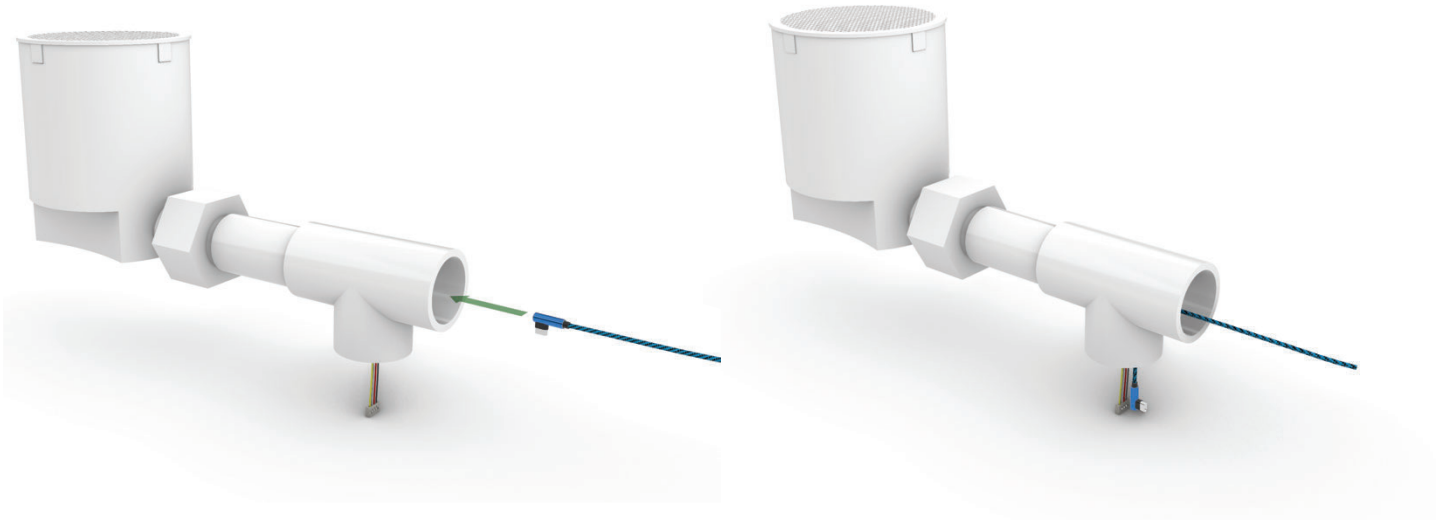
ASSEMBLY STEP 10

Place your PVC T-Joint onto the smaller PVC ensuring that the grove wire flows out of the bottom of the T-Joint.



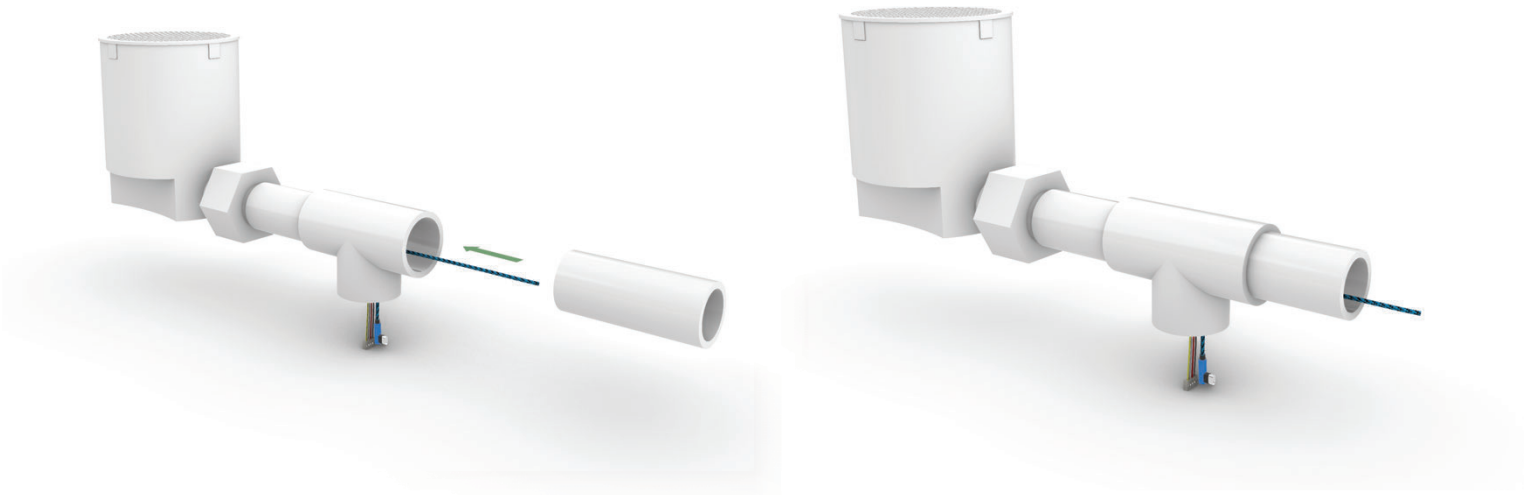
ASSEMBLY STEP 11

Insert the USB-C power Cord onto the PVC T-Joint ensuring that the cord is coming out through the bottom of the T-Joint.



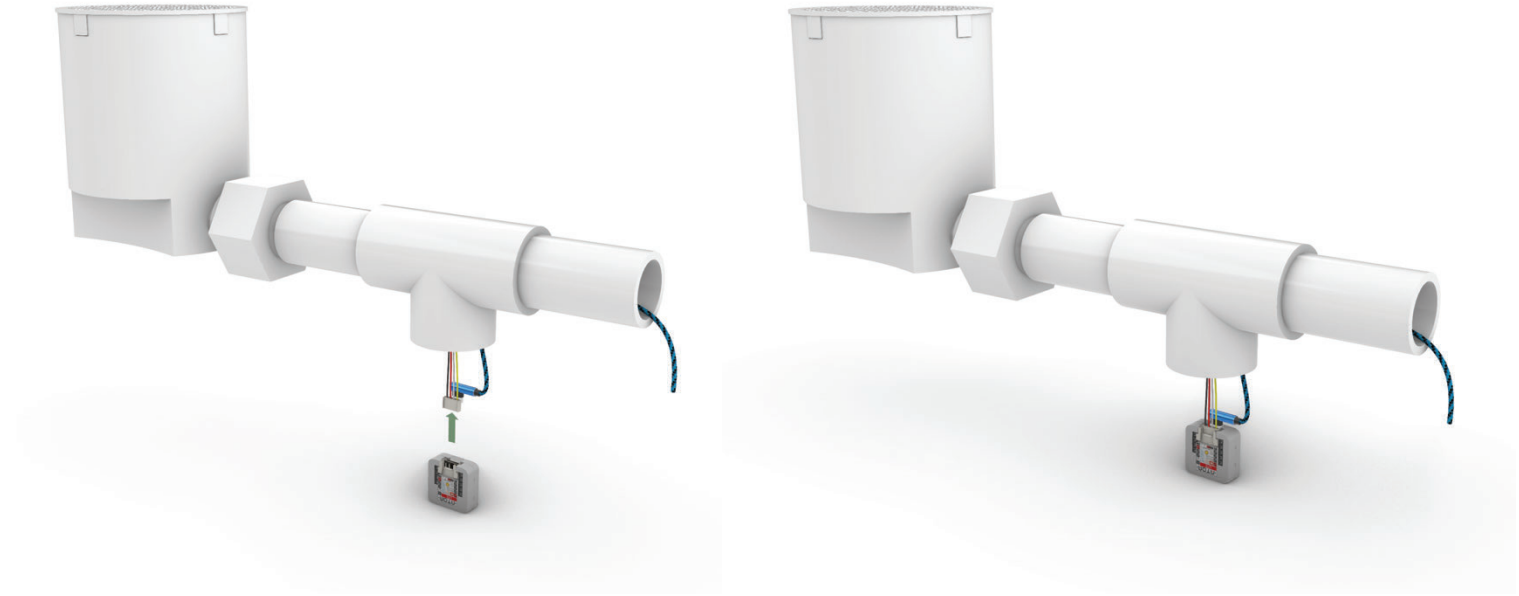
ASSEMBLY STEP 12

Cut a second 3” piece of 1” PVC and attach it to the T-Joint ensuring that the power cord is flowing through the end of the PVC.



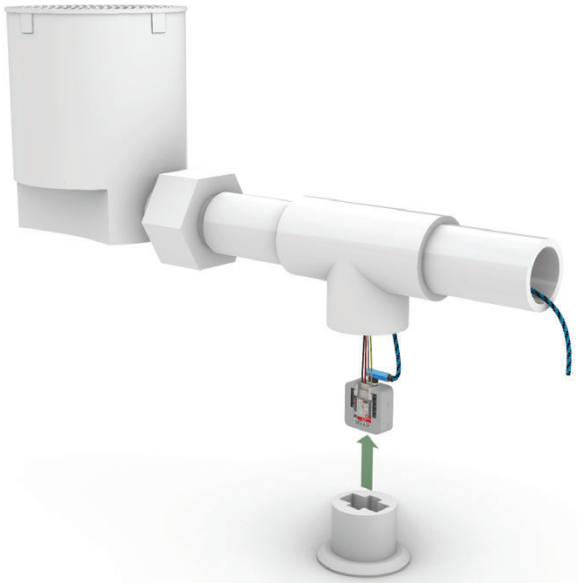
ASSEMBLY STEP 13

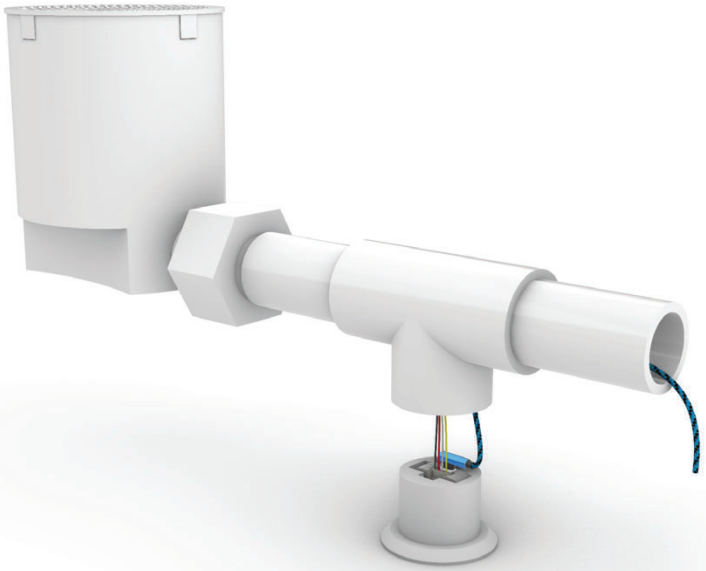
Connect the Micro controller to the Grove Cord and the Power Cord



ASSEMBLY STEP 14

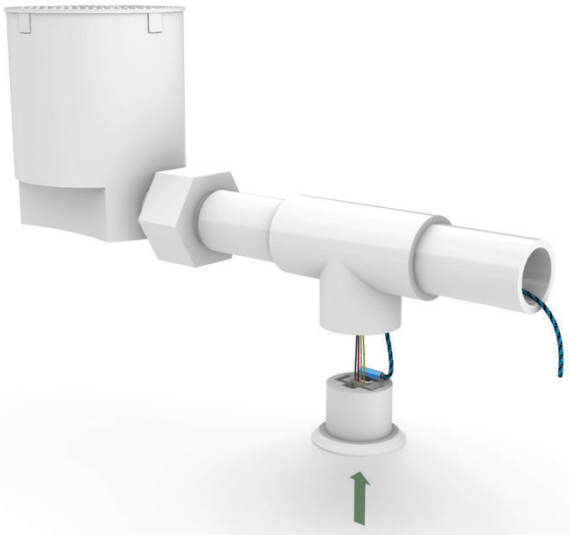
Slot the Connected Microcontoller into the Micro Holder.

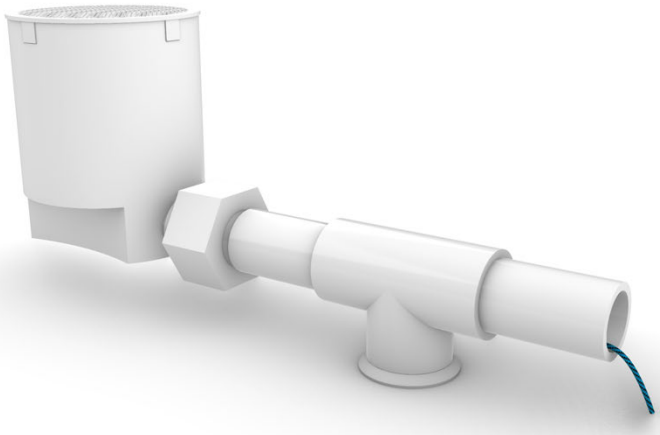




ASSEMBLY STEP 15

Push the Micro Holder into the T-Joint and assembly is complete.





ASSEMBLY COMPLETE

The Grove Cords and Power Cords Should run through the Assembles Hydro Module as shown.