DIY Guide: MLT from Igloo 10-Gallon Commercial (yellow) Water Cooler

Let me start out this DIY guide by saying that the inspiration and instructions came almost verbatim from FlyGuy's original thread (http://www.homebrewtalk.com/f51/cheap-easy-10-gallon-rubbermaid-mlt-conversion-23008/). FlyGuy saved me multiple hours of making repeated trips to Home Depot in order to get all of the pieces for the build and I thank him immensely!

I had to change two or three minor things from his build in order to get a good tight seal to ensure no leaks on my Igloo 10 Gallon Industrial Water Cooler.

I'll start out with pictures of the final product and of the final inside view. I have also included a pdf document in case you would like to print the instructions out.

Here was my parts list (again, thanks to FlyGuy for these product Cat #'s):

Here are the parts you will need for the conversion (see images 1, 2, and 3):

Parts List:
- Igloo 10-Gallon Commercial (yellow one) Water Cooler
- Two stainless steel ¼” hose clamps
- One brass square head plug (Watts A-737)
- One ½” x 12” braided stainless steel supply hose
- One 3/8” female barb adapter (Watts A-298)
- Three 5/8” stainless steel fender washer
- One 3/8” MIP x 1-1/2” brass nipple (Watts A-786)
- One roll Teflon tape
- One 5/8” O-ring
- One neoprene 5/8" fender-type washer
- Five non-stainless steel 5/8” fender washers
- One 3/8” threaded ball valve (threaded on BOTH sides)
- One 3/8” male barb adapter (Watts A-294)

All of the above products were purchased at Home Depot, with the exception of the "Three 5/8" stainless steel fender washers" and "One neoprene 5/8" fender-type washer", which were both purchased at Ace Hardware.

Step 1 – Removing Spigot from 10-Gallon Commercial Water Cooler:

(1) Remove nut on inside of cooler with wrench. If you use your wrench to immobilze the nut, you can simply turn the spigot counter clockwise.
(2) After nut is removed, spigot assembly will slide out (images 4 and 5).
(3) Save o-ring and sealer plug for later use.

Step 2 – Preparing Stainless Steel Braid

(1) Cut off both ends of your SS braided tubing using cutting utensil of choice (image 6). I lent my hacksaw to a friend and don't own a dremel, so I simply used an old dull serrated bread knife and was able to cut off both ends within a minute.
(2) Because I used a dull knife to do the above step I was left with uneven frayed edges ofnewly cut braided tubing, so I used a pair of scissors and trimmed off the frayed edges to make the end of the braids a nice clean cut (image 7)
(3) Grab the end of the inner plastic tubing (image 8) with a pair of needle nose pliers.
(4) While grabbing the inner tubing, slowly **push** the outside braided tubing off of the inner plastic tubing (images 9 and 10). It is very important that you push the outer braided tubing off and do not try to pull it. If you try to pull the braided tubing off, the braids will just pull tighter and you will not be able to remove it (imagine a chinese finger trap).
(5) Place brass square head plug into one end of the tubing and secure it down with one of the ¼" SS hose clamps. (images 11 and 12)

NOTE: FlyGuy actually changed his original build and got rid of the hose clamps because they began to rust. He chose to insert heat-safe vinyl tubing with notches in it the entire length of the braided hose. I could not find any heat-safe tubing so I chose to go with the hose clamp method for the time being. For instructions, see http://www.homebrewtalk.com/253344-post62.html

Step 3 – Preparing Inner Nipple and Attaching Braided Hose

(1) Apply Teflon tape to one side of the threads of the brass nipple (image 13).
(2) Slide three 5/8" **stainless steel** fender washers over nipple and attach the female barb adaptor (images 14 and 15). Notice that my image on has one washer on the nipple, but I did in fact use three washers but for some reason forgot to include all three in my picture.
(3) Add the o-ring and sealer plug that you harvested from the original cooler's spigot (from step 1.3) between the three washers (again, picture error I actually used 3 washers) and the un-used end of the nipple (image 16).
(4) Add newly purchased 5/8" o-ring (not from original cooler; image 17).
(5) This entire assembly will go on the inside of your cooler (image 18).
(6) Before placing in cooler, slip a ¼" hose clamp over braided tubing and attach braided hose assembly (from step 2.5) onto the barbed end of the piece from step 3.5 (image 19)
(7) Now you are left the un-used side of your nipple poking out of the cooler (image 20).

Step 4 – Creating Seal and Adding Ball Valve

(1) Slide 5/8" neoprene fender washer over exposed nipple (image 21).

(2) Apply Teflon tape threads of the brass nipple (image 22).
(3) Add five non-stainless steel 5/8” fender washers on end of nipple (image 23).
(4) Twist ball valve onto end of nipple (image 24). You must use two wrenches—one to hold the inner assembly from twisting and a second to tighten the ball valve in order to get a proper seal along the neoprene washer. Also, make sure you orient the ball valve properly so that you can still open and close it!
(5) Add Teflon tape to threads of male barb (image 25).
(6) Tighten male bard into threaded female receptor of the ball valve (image 26).

Finished MLT
You have now successfully completed your brand new Igloo 10-Gallon Commercial Mash Lauter Tun (image 27).

I tested this for leaks and it easily held 5 gallons of warm water for over an hour with no leaks whatsoever!

Again, many thanks go out to FlyGuy for the inspiration to this project!