

How to Do a Bongo Tow

The Bongo tow is an oblique tow which is deployed at a 45 degree wire angle to approximately 210 meters (300 meters wire out). The Bongo frame is retrieved with same 45 degree wire angle.

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Steps for doing a Bongo Tow :

1. First check the actual bottom depth. If it is less than 210 meters, then you will have to use the [Bongo deployment graph](#) to see how much wire out you need. If the depth is over 210 meters, then a standard 300 meter wire out tow is fine.
2. Make sure you have the cod end/s attached to the net securely.
3. Attach the Bongo frame to the hydro wire using a quick-link. Then attach a 75 lb. weight to the frame using a snap shackle. You can either attach the inclinometer to the wire now, or wait until you put the Bongo frame over the side and then attach it. Check the flowmeter numbers and record them on the tow sheet. Record the first 5 numbers reading from left to right. You are now ready to deploy the Bongo.
4. The ship speed necessary to tow the Bongo will vary from ship to ship and with weather conditions. Generally, to get a 45 degree wire angle upon deployment, the ship's speed should be 1.5 - 2.0 knots. The purpose of having a 45 degree wire angle is to insure proper sampling depths at all times during the tow. Also, it is virtually impossible to deploy the Bongo frame with less than a 45 degree wire angle without causing the nets, frame and wire to wrap around each other.
5. When the ship is at the proper speed, lower the Bongo into the water. Make sure the winch operator zeros the winch counter at the surface before starting down. A stopwatch should be started to record the sinking time. Record the begin tow time on the tow sheet. The wire should be let out at 50 met/min. The sinking time for a standard 300 meter wire out tow should be close to 6:00. When the depth is reached stop the watch, record the time quickly, and then restart it. There is a soaking time of 30 seconds. When the new stopwatch time reads 30 seconds, start bringing in the Bongo at 20 met/min. Record the wire angles every 10 meters until the Bongo reaches the surface. There are a total of 30 angles for a standard tow. The acceptable wire angle range is between 38 & 52 degrees, 45 degrees being optimal. This range is to be adhered to strictly, especially in the last 100 meters of the tow. When the Bongo is at the surface, stop the watch and record the towing time on the tow sheet. The towing time should be 15:30 for a standard 300 meter tow.
6. Record the end flowmeter numbers.
7. Wash down the net/s and concentrate the plankton sample into the cod end. Take the cod end off with a screwdriver and preserve the sample/s.
8. Detach the Bongo frame from the hydro wire and secure the wire to the 100 lb. weight with the quick-link. Remove the 75 lb. weight from the frame and secure it in its' proper holder.

Stow the Bongo frame in its' designated spot and secure it.

Filling out the Bongo Tow Sheet :

1. Make sure to put all the information in the proper place as shown on the sample tow form.
2. To calculate the Total Time, add the Sinking Time and the Towing Time together. The Towing Time includes the 30 second soak time. This should be about 15:30 for a standard 300 meter Bongo Tow.
3. To get the End Tow Time, add the Total Time to the Begin Tow Time. Be sure to calculate the seconds also.
4. Acceptable flowmeter readings: 3500 - 4500 revs. (These are normal for a 300 meter tow, depending on weather.) If the readings consistently vary too much from this range, then check the flowmeter for any problems. If high or low readings persist, then try using a new meter.
5. Refer to the [Example Tow Form](#) or the [Net Tow Data Sheet Instructions](#) for further detailed instructions.

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