"Beginners" Steam Plant Offer Supporting Notes:

Overview:

Hopefully you will copy and print this section for easy referral in making your decision to follow through and enjoy making and operating a steam powered model boat "on the pond".
Your first step should be to read this document, click on Guides. and select the "The Basic Guide" Button. You will find that the material discussed there, may be a duplicated in the content in the following and in the references that link you to the "Advanced Users Guide". We have allowed the duplications because of the variety of visitor needs. If you find some contradictions or errors, please let us know with an email.
Then read the following document and its cross references.
Having done so, we recommend that you **locate** the suppliers of your choice of boat, the RC System and drive train components, then **order** the appropriate steam plant. As noted in the guide to unpacking the delivery, the mounting board can be used, as delivered, for a bench run-up!
International postage to UK, RU countries and USA currently takes about two weeks – remember postage is free for these plants. We email tracking details when confirming despatch of your order for you to follow its progress.
Learning to run the plant properly may take a little time and it will give you more confidence when it comes time to fit and run it in the boat.
Then purchase and build the boat kit and fit the steam plant in, allowing setting accurate dimensions for the drive shaft and planning the setting of the receiver and servo.
Finally purchase the RC System and servo. This is probably the simplest item to install and learn to operate and is a major player in your enjoyment – it puts YOU in charge!

Review of what comprises an MSM Integrated Steam Plant Advanced User Guide Scroll to Page 2.

Unpacking the the Steam Plant:

Click on Advanced User Guide and scroll down to Page 5.
The following sections elaborate on the information there.

Filling the Boiler:

Use one of the two syringes supplied and mark it as distinct to the second one, that is used to empty the exhaust oil trap. Unless you live in a location with known "soft" water, it is best that you use distilled water and not local tap water or deionized water that is available in drinking fountains and the drinking type bottled water. If "hard" or bottled drinking water is used the life of the boiler will be compromised by a progressive build up scale on the inside that is deposited from the impurities that can be in the water as it boils.
Watch the water level in the boiler sight glass as you work with the "water" syringe.
The boiler should be considered "empty" when the water level can just be seen at the bottom of the sight glass and "full" when the water level is just visible at the top. Apart from the initial filling process the boiler should not be run on "empty" (even though there is still some water in the bottom of the boiler), nor refilled beyond the "full" level. When preparing to refill the boiler after a run be careful to ensure there is no steam pressure. Open the refill nut carefully, with a cloth cover over you hand, to avoid possible serious burns.

Removing and refilling the gas tank:

As noted in the instructions for unpacking the plant, the gas tank is fixed to its mounting screws with four nuts. These are only need for delivery. Remove and discard these, and remove the gas tank for filling AND refilling in a well-ventilated space. Click on Advanced User Guide and scroll down to page 19 for detailed instructions.

Maintaining the Exhaust Steam Oil Trap.

This should be done as routine every time the plant is run for a full session.

Remove the nut and, using the second syringe, extract and discard the liquid in the tank. It should have a "milky" appearance. If not, then your displacement lubricator is not functioning properly, and you are at risk of damaging the inside of your engine unless corrected.

Maintaining the Displacement Lubricator:

After each session remove the nut on the top of the lubricator then drain the "milky" fluid that will have collected, by opening the valve on the bottom of the lubricator. Close off the valve if/when clean oil appears.

Refill with steam oil to just cover the "spray bar" that you can see near the top of the chamber and replace the top nut. Click on Advanced User Guide and scroll to page 8 for more information about steam oil.

Steam Oil:

This is a very important consumable item. Click Advanced User Guide and scroll to Page 8.

It is most unlikely that it can be purchased from normal retail outlets. The best source could be a local model boat club.

We have a clearance certificate, allowing us to supply 250ml bottles (P/N 8321) through the post if you can't locate a local supplier. The small bottle supplied should be sufficient to allow you to properly become familiar with operating the plant on the bench.

Lubricating Oil:

Click Advanced User Guide and scroll to page 6 for further information.

The bottle of lubricating oil supplied can be easily used by using a small wooden skewer to collect small amounts of oil and place drops of oil in the required locations.

Drive Components:

The output shaft of the Tyne engine is 5mm diameter which is widely used size for these components. You should be able to source the following components from a local hobby shop.

We recommend a 45 to 50mm propeller in diameter **metal** propeller RH (Right Hand – determined by viewing, from the back of the boat, the leading edge of the propeller should be on the right side of the propeller blade.

The length of the propeller shaft will be determined by your choice of boat and steam plant model. It is measured from the universal joint to the output outer bearing. Add 8 mm for the propeller and lock nut and 10 mm for the universal joint.

A single "universal", pictured below, is a "must have" to compensate for minor alignment differences in the engine output shaft and the drive shaft, like the universals employed on the drive shafts of motor

vehicles.

The ideal setup is to use two universals connected with a joiner so that the yokes are at 90 degrees to each other. These need to be taken into consideration when setting the length of the drive shaft.

Boat Models:

Boats suitable for our entry level steam plants would be max of 800 mm min of 600 mm long, of open launch design to avoid difficulty of matching the position of the stack with any superstructure in the model.

The vertical steam plant (P/N 4035) is most suitable for open launch where space is available. (Krick

“Anna” or the Billing Boats “African Queen”).
The horizontal steam plant (P/N 4036) is suitable for larger open launch where space is available and boats around 800 mm with suitable superstructure up to 800 mm. (e.g. Revell Flower Class Corvette plus many other plastic war ship kits).

RC Systems:

Click here Advanced User Guide and then click on the “Radio Controls (RC) Introduction” Button for a general introduction to this subject.
While the operation of your new plant will only require one servo, to control the rudder, we are recommending the purchase of a three channel model. This will enable you to operate later models that may require up to three channels to control engine speed, rudder and a whistle.
We have little experience with purchase and operation of RC systems, but a reliable supplier recommended the following for your plant – with the warning that there are cheaper versions available but these may be troublesome.
SPMSLT300: Spektrum SLT3 3ch 2.4Ghz Surface **Transmitter** with SR315DP **Receiver**
HRC36646: Hitec D646WP Digital HV High Torque Programmable **Servo**
Or:
DS8180: Dualsky DS8180 Digital HV **Servo**, 10kg at 7.4v

We can supply these in Australia on request, but issues of freight costs and post-sale support make your location of a local supplier important to you.