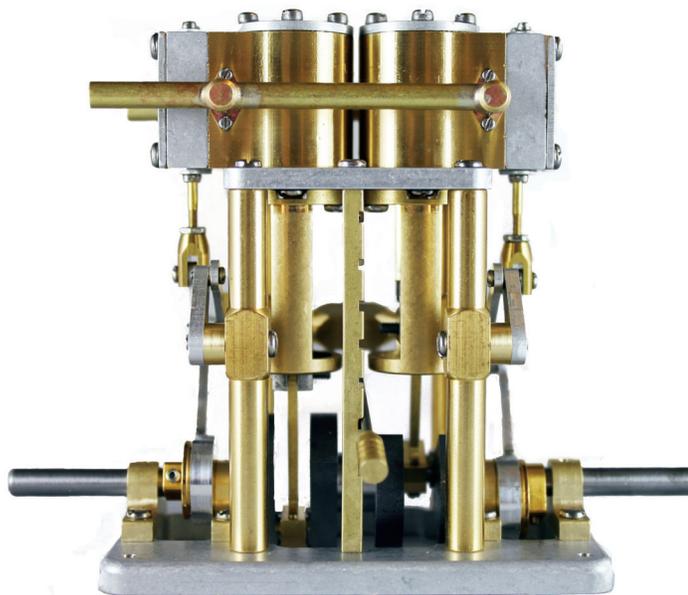


TVR1A

Steam Engine Assembly Kit



The Graham Industries TVR1A is a twin-cylinder, reversing steam engine with 1/2" diameter bore by 5/8" stroke. The crankpins are set 90 degrees apart so the engine is self-starting at any position of the crankshaft. A Hackworth reversing gear is used to provide reversing operation and is easily adapted to radio control. All machining is done and critical assemblies such as the silver-soldered manifolds are pre-assembled. All necessary materials and hardware are supplied with the kit. Most of the hardware is stainless steel and the machined parts are made from brass, aluminum and steel.

Only a few hand tools are required to assemble this kit. These include: a small set of screwdrivers, needle nose pliers and a small file. Approximately 6

to 10 hours are required to assemble this engine. If desired, all parts will accept a high-polish. This will take some extra time but will produce an exhibition quality model.

With steam or air operating pressures up to 35 PSI, this is a powerful engine for model marine use. After breaking in, the TVR1A makes a good display model, operating reliably at low speeds with under 5 PSI pressure. Included with the kit is a detailed instruction manual with drawings, photographs and complete assembly instructions.

Dimensions:

- Base: 3.000" x 1.844"
- Crankshaft end-to-end: 4.344"
- Crankshaft end diameter: 3/16 (.1875")
- Bottom of base to crankshaft center: .469"
- Height: 3.375"
- Weight: 323g

Graham Industries

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Models available:

- TVR1A (Ready to assemble kit)
- TVR1A-FA (Fully assembled ready to run engine)

Accessories available:

- TVR1AHEX (Brass hex head bolt dress up kit)



BFLY1
1 3/4" 5 spoke
brass flywheel



BFLY2
1 3/4" 6 spoke
brass flywheel



MFLY
1 3/8" marine
brass flywheel