FOR BEGINNERS

SIMPLE HORIZONTAL STEAM ENGINE

NOTES:
1. All drawings are in metric measurements.
2. All engineering practices shall be applied with regards to hole and shaft tolerances.
3. Preferably all tapped holes and matching screws and/or bolts to be metric fine (MF).
4. Materials specified on the drawings are indicative only. The builder can make his/her own material choice.
5. All connections/joints when have steam pressure applied to it shall be silver/hard soldered.
6. Compression springs are drawn in compressed state (CP), uncompressed state is approx 40% to 60% longer than compressed state.
7. Where preferred screw or riveted connections can be omitted and parts can be bonded together by using either high strength glue, epoxy resin, or solder.
8. Parts which are directly exposed to steam and/or water should be constructed using non-ferrous or non-corrosive material such as brass, bronze, gunmetal, stainless steel, copper or monel.
9. The order in which the parts/components are manufactured and the model is assembled is entirely left to the builder/model maker.
10. A colour scheme for this model is entirely left up to the model maker.
11. The manner in which the parts/components are manufactured is entirely left up to the builder.
12. Use loctite, on screws or press-fit connections or surfaces, were deemed necessary to prevent parts from loosening.
13. Errors and/or omissions may occur in the drawings, do not hesitate to contact me so that the errors/omissions can be rectified.

OTHER ABBREVIATIONS

ALL = ALUMINIUM
BRS = BRASS
COP = COPPER
EA = ENGINE ALLOY
GRA = GRAPHITE
MS = MILD STEEL/BRIGHT MILD STEEL
SPS = SPRING STEEL
SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLOM OR RUBBER

MATERIAL ABBREVIATIONS:

MS = MILD STEEL/BRIGHT MILD STEEL
S/S/BRZ = STAINLESS STEEL/BRASS
S/P = SOLDER/PREMIUM
S/PAA = SOLDER/PRESS FIT AFTER ASSEMBLY
S/S = SOLDER/STEEL
TUBE 3x2.5 = TUBE 3x2.5MM
SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLOM OR RUBBER

THEM.

THE OFF SET ANGLE OF THE ECCENTRIC IN RELATION TO THE CRANK AXIS TO BE EXPERIMENTALLY DETERMINED FOR THE SMOOTH RUNNING OF THE ENGINE AND TO THE SATISFACTION OF THE BUILDER.