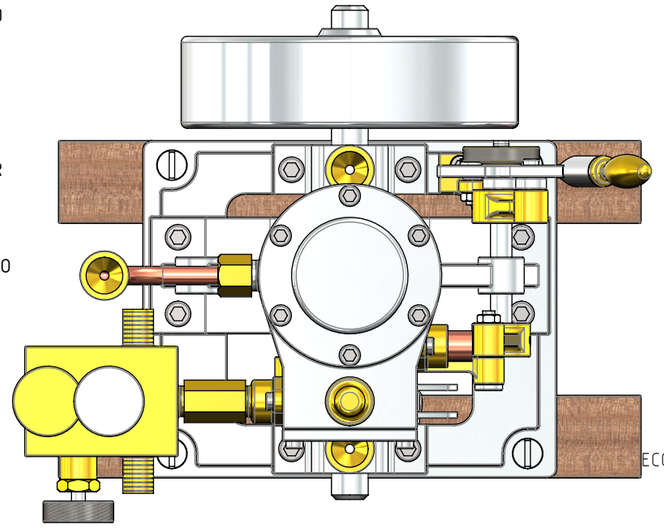
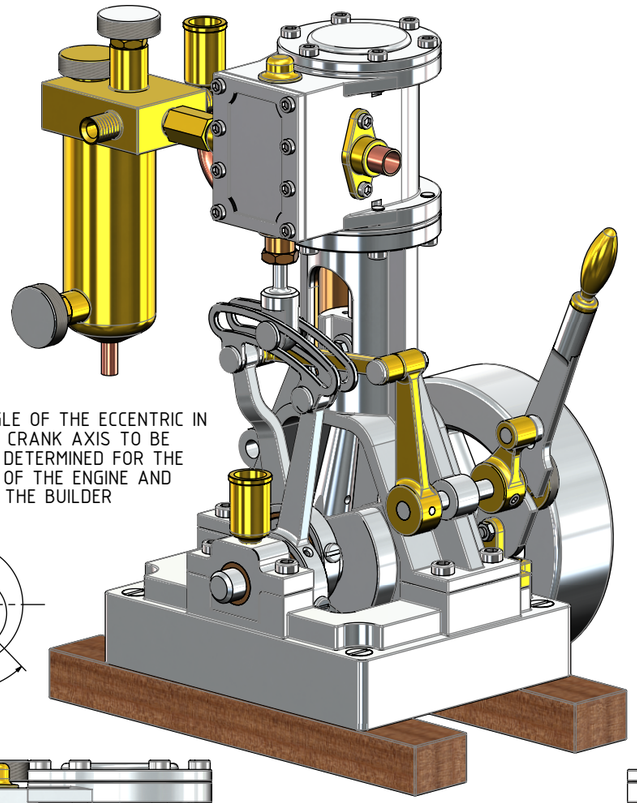
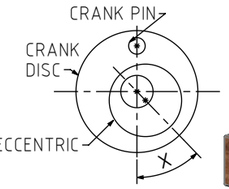
GENERAL NOTES:
0. ALL DRAWINGS ARE IN METRIC MEASUREMENTS
1. ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
2. WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.
3. PREFERABLY ALL TAPPED HOLES 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 WHICH 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 THEN 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 PROJECT 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 SCREW OR PRESS FIT CONNECTIONS OR SURFACES, WERE DEEMED NECESSARY TO PREVENT PARTS FROM LOOSENING.
13. WASHERS AND/OR SPRING WASHERS SHALL BE USED WHERE DEEMED NECESSARY.
14. REMOVE ALL SHARP EDGES
XX. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.

DUE TO THE LACK OF INFORMATION ON THE ORIGINAL DRAWING(S), SUCH AS VIEWS, DIMENSIONS, SECTIONS ETC AND/OR CLARITY OF COMPONENTS, OMITTED PARTS/COMPONENTS, SOME OF THE COMPONENTS MIGHT NOT BE AS CONSTRUCTED ORIGINALLY OR AS THE ORIGINAL DESIGNER INTENDED

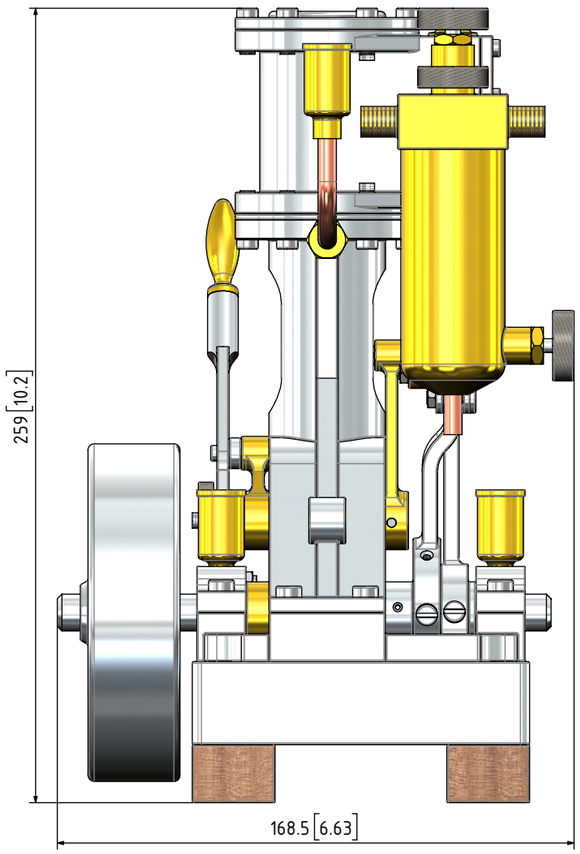


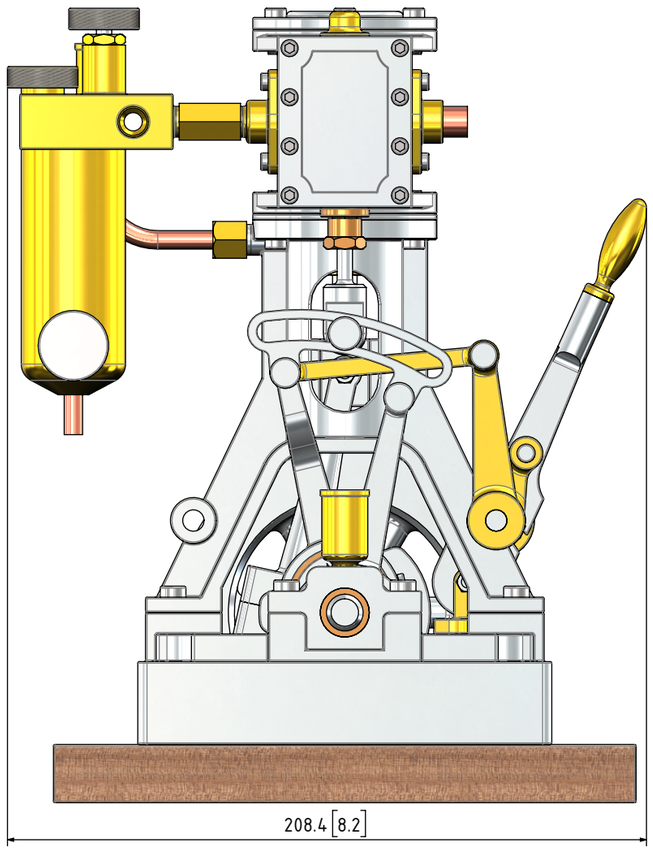


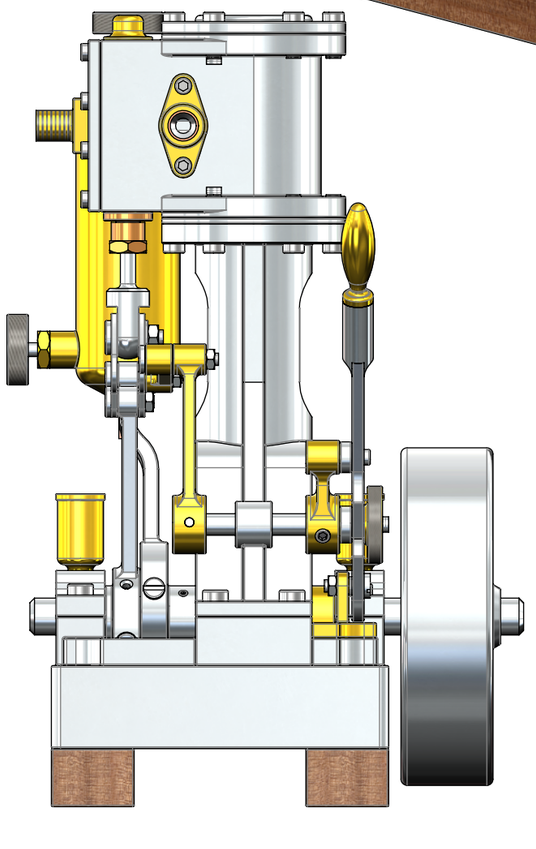
THE OFF SET ANGLE OF THE ECCENTRIC IN RELATION TO THE CRANK AXIS TO BE EXPERIMENTALLY DETERMINED FOR THE SMOOTH RUNNING OF THE ENGINE AND SATISFACTION OF THE BUILDER

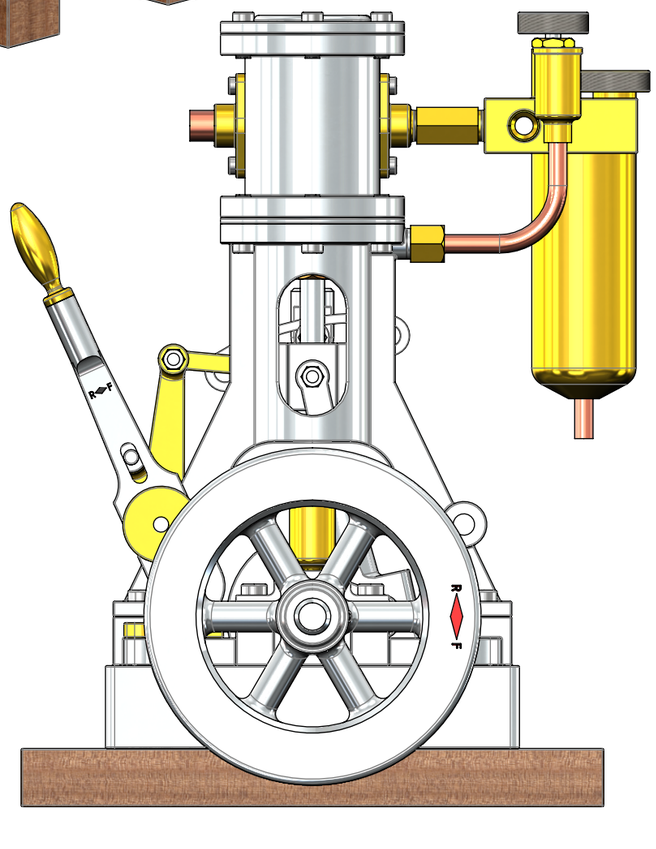


QTY.	PART NUMBER
1	09C-64-00-1-01-BASE PLATE
2	09C-64-00-1-02-BEARING BLOCK
1	09C-64-00-1-03-COLUMN
1	09C-64-00-1-04-CYLINDER+VALVE CHEST
1	09C-64-00-1-05-CYLINDER TOP COVER
1	09C-64-00-1-06-CYLINDER BOTTOM COVER
1	09C-64-00-1-07-DISPLACEMENT LUBRICATOR
1	09C-64-00-2-01-CRANK SHAFT+FLYWHEEL
1	09C-64-00-2-02-PISTON+CROSSHEAD
1	09C-64-00-2-03-CON-ROD
1	09C-64-00-2-04-WEIGHSHAFT
1	09C-64-00-2-05-REVERSING HANDLE
1	09C-64-00-2-06-ECCENTRICS
1	09C-64-00-2-07-ECCENTRIC STRAP-1
1	09C-64-00-2-08-ECCENTRIC STRAP-2
1	09C-64-00-2-09-EXPANSION LINK
1	09C-64-00-2-09-EXPANSION LINK
1	09C-64-00-2-10-LIFTING LINK
1	09C-64-00-2-11-SLIDE VALVE
3	09C-64-00-M3x4 A-K GRUB SCREW
6	09C-64-00-M4 NUT
2	09C-64-00-M4x12 A-K C-SINK SCREW
12	09C-64-00-M4x12 A-K CYL HEAD SCREW
1	09C-64-00-M4x6 A-K GRUB SCREW
1	09C-64-00-M5 NUT
6	09C-64-00-M5x12 A-K CYL HEAD SCREW
6	09C-64-00-M5x16 A-K CYL HEAD SCREW
2	09C-64-00-M5x24 A-K CYL HEAD SCREW
1	09C-64-00-M5x6 A-K GRUB SCREW
8	09C-64-00-M6x20 A-K CYL HEAD SCREW
4	09C-64-00-M6x40 C-SINK WOOD SCREW









NOTES: THE ENGINE SHOWN ON MY DRAWINGS IS LOOSELY BASED ON DRAWINGS WHICH I FOUND ON THE INTERNET. THE ORIGINAL DRAWING DID NOT HAVE THE AUTHOR, DRAFTER, DATE, BORDER AND TITLE. ON THE VALVE CHEST COVER THE FOLLOWING ENGRAVING: "KACIO LS1-14".

TITLE
A VERTICAL STEAM ENGINE, REVERSABLE, CALLED "KACIO LS1-14" (B=30mm S=34mm)

DRAWING CONTENTS
GENERAL ARRANGEMENT, ISOMETRIC VIEW, NOTES, BILL OF MATERIALS

PROJECT No 09C-64-00
JDW DRAUGHTING SERVICES
J.A.M. DE WAAL. 12 BRIGHTWELL STREET PAPAKURA 2110. NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000 E-MAIL: dewaal@xtra.co.nz.

PROJECTION | JDWDS | MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
DATE DECEMBER 2024 | Copyright © J.A.M. DE WAAL PAPAKURA NZ
SHEET: 01 OF 04 | A3 | No:09C-64-00-SHT-01

DRAWINGS ARE FOR PERSONAL USE ONLY NOT FOR COMMERCIAL PURPOSES