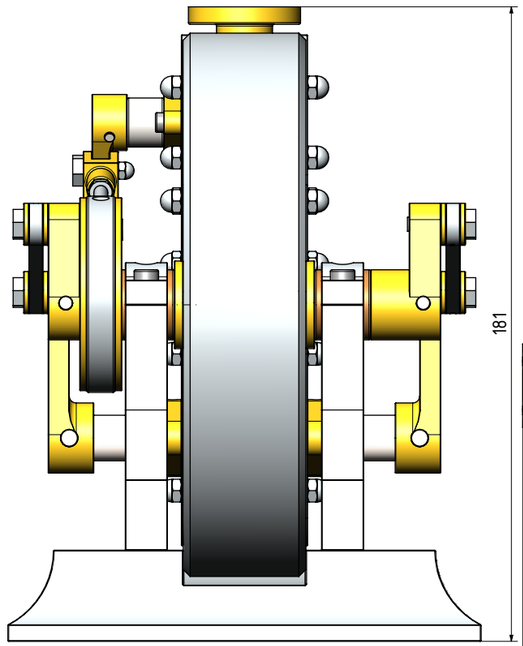
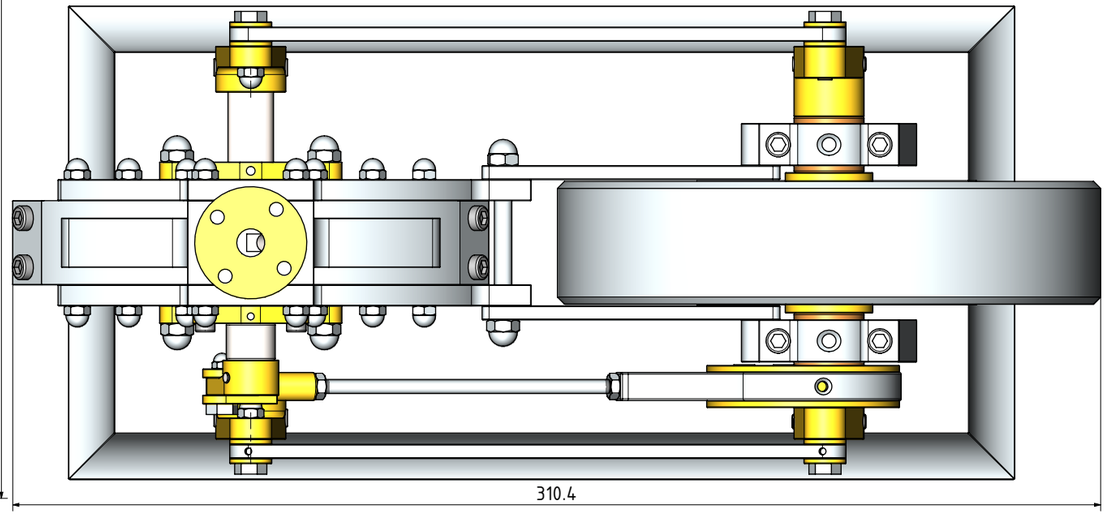
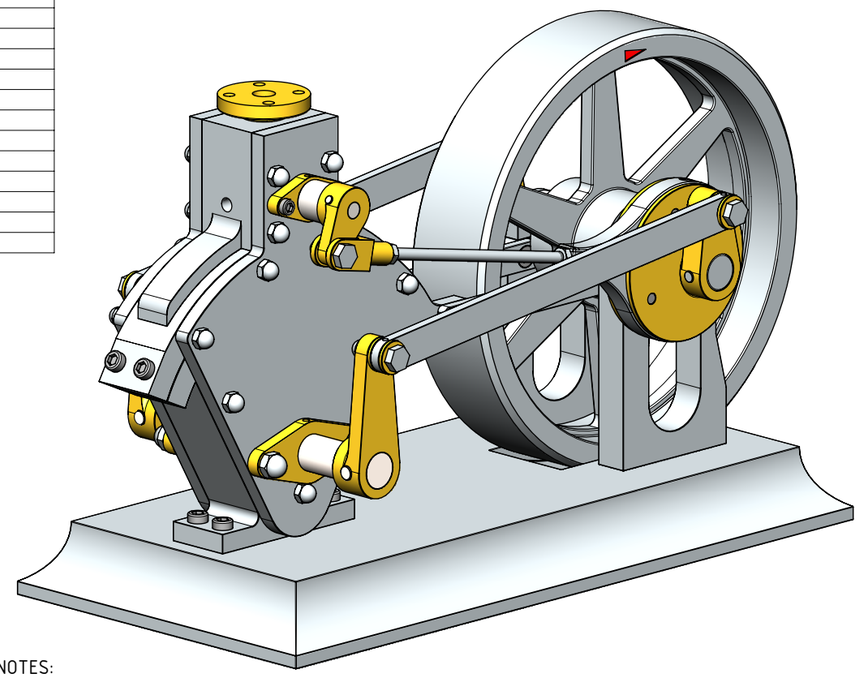
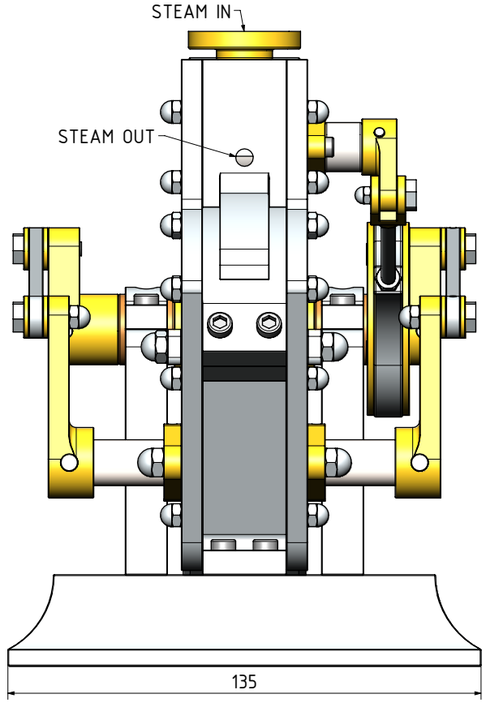
QTY.	PART NUMBER
1	KIMBLE-X2-1-01-BASE PLATE
2	KIMBLE-X2-1-02-CRANKSHAFT BEARING
1	KIMBLE-X2-1-03-CYLINDER FRAME
1	KIMBLE-X2-1-04-CYLINDER SIDE PLATE
1	KIMBLE-X2-1-04-CYLINDER SIDE PLATE
2	KIMBLE-X2-1-05-CYLINDER TIE PLATE
1	KIMBLE-X2-1-06-VALVE SHAFT GLAND
2	KIMBLE-X2-1-07-ROCKING PISTON SHAFT GLAND
1	KIMBLE-X2-1-08-STEAM SUPPLY VALE MOUNTING FLANGE
1	KIMBLE-X2-2-01-ROCKING PISTON
1	KIMBLE-X2-2-02-CRANKSHAFT+FLYWHEEL
2	KIMBLE-X2-2-03-CRANKSHAFT CRANK
1	KIMBLE-X2-2-04-ROCKNIG VALVE
1	KIMBLE-X2-2-05-ECCENTRIC SHEAVE
1	KIMBLE-X2-2-06-CON ROD
1	KIMBLE-X2-2-06-CON ROD
1	KIMBLE-X2-2-07-ECCENTRIC STRAP

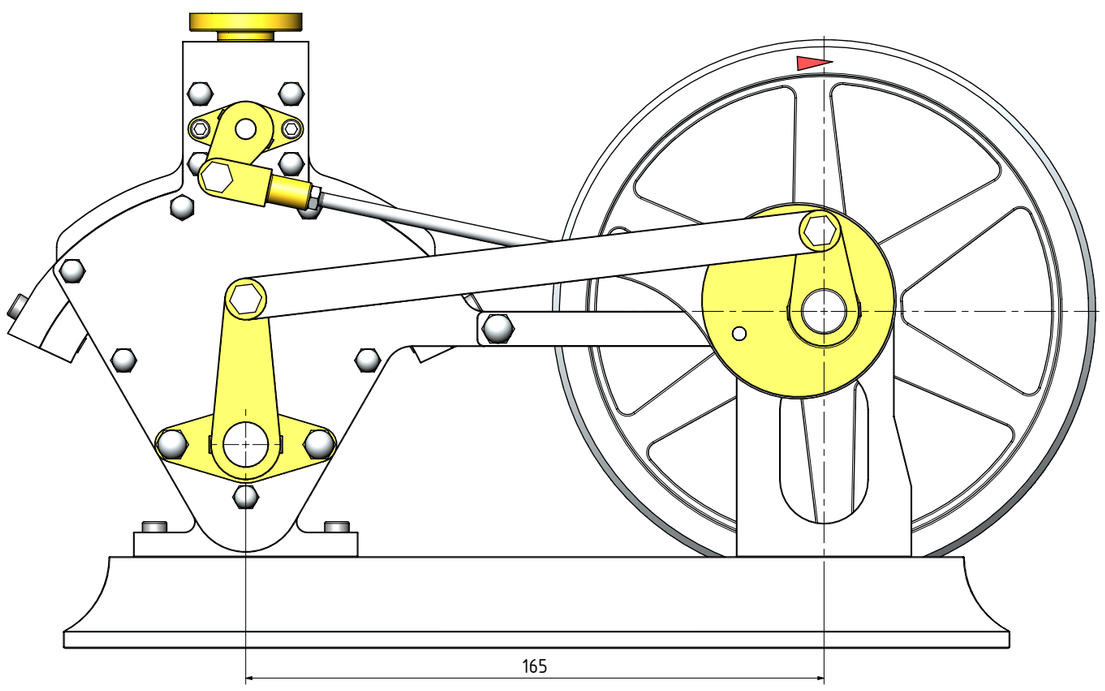
QTY.	PART NUMBER
1	KIMBLE-X2-M3 DOME NUT
24	KIMBLE-X2-M4 DOME NUT
2	KIMBLE-X2-M4 NUT
2	KIMBLE-X2-M4x10 A-K CYL HEAD SCREW
2	KIMBLE-X2-M4x12 A-K C-SINK SCREW
1	KIMBLE-X2-M4x18 A-K CYL HEAD SCREW
11	KIMBLE-X2-M4x44 TIE ROD
6	KIMBLE-X2-M5 DOME NUT
2	KIMBLE-X2-M5x16 A-K C-SINK SCREW
12	KIMBLE-X2-M5x20 A-K CYL HEAD SCREW
4	KIMBLE-X2-M5x28 A-K CYL HEAD SCREW
3	KIMBLE-X2-M5x54 TIE ROD











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 FINE THREAD
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 SPRINGWASHERS SHALL BE USED WHERE DEEMED NECESSARY.
XX. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.

MATERIAL ABBREVIATIONS:
ALU = ALUMINIUM
HALU= HARD ALUMINIUM
BRS = BRASS
BRZ = BRONZE OR GUNMETAL (BRZ/GM)
CI = CAST IRON
CU = COPPER
GRA = GRAPHITE
MS = MILD STEEL/BRIGHT MILD STEEL
SS = SILVER STEEL OR STAINLESS STEEL
SPS = SPRING STEEL
PEEK= POLYETHER ETHER KETONE
SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLON OR RUBBER
IN GENERAL SYNTHETIC MATERIALS SOULD BE ABLE TO WITHSTAND THE HEAT AND PRESSURE(S) APPLIED TO THEM.
nnn/nnn MEANS THAT EITHER MATERIAL CAN BE USED

OTHER ABBREVIATIONS
DP = DEEP
DAA= DRILL AFTER ASSEMBLY
D&TAA= DRILL AND TAP AFTER ASSEMBLY
CF = CLOSE FIT (SIZE FOR SIZE)
PF = PRESS FIT
PFAA= PRESS FIT AFTER ASSEMBLY
PCD = PITCH CIRCLE DIAMETER
RM = REAM
HEX = HEXACON, 6SIDED
CP = COMPRESSED
KNL = KNURLED
CSK = COUNTERSINK
PL = PLACES
DWL= DOWEL
SPF= SPOTFACE
(T)HESOP=(TAPPED)HOLES EQUALLY SPACED ON PCD
(T)HESOC=(TAPPED)HOLES EQUALLY SPACED ON CIRCUMFERENCE
SA-xxx = SUB ASSEMBLY-xxx

NOTES: THIS MODIFIED DESIGN IS BASED ON DRAWINGS WHICH WERE GIVEN TO ME. THE ORIGINAL DRAWINGS WERE BY Mr. JERRY PONTIUS, DEADWOOD, SOUTH DAKOTA.

TITLE
A MODEL OF A KIMBLE TYPE STEAM ENGINE

DRAWING CONTENTS
GENERAL ARRANGEMENT, NOTES, ISOMETRIC VIEW AND BOM

PROJECT No 09E-30-00
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E-MAIL: dewaal@xtra.co.nz.

PROJECTION | JDWDS | MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
DATE OCTOBER 2018

SHEET: 01 OF 03 | A3 | No: 09E-30-00-SHT01