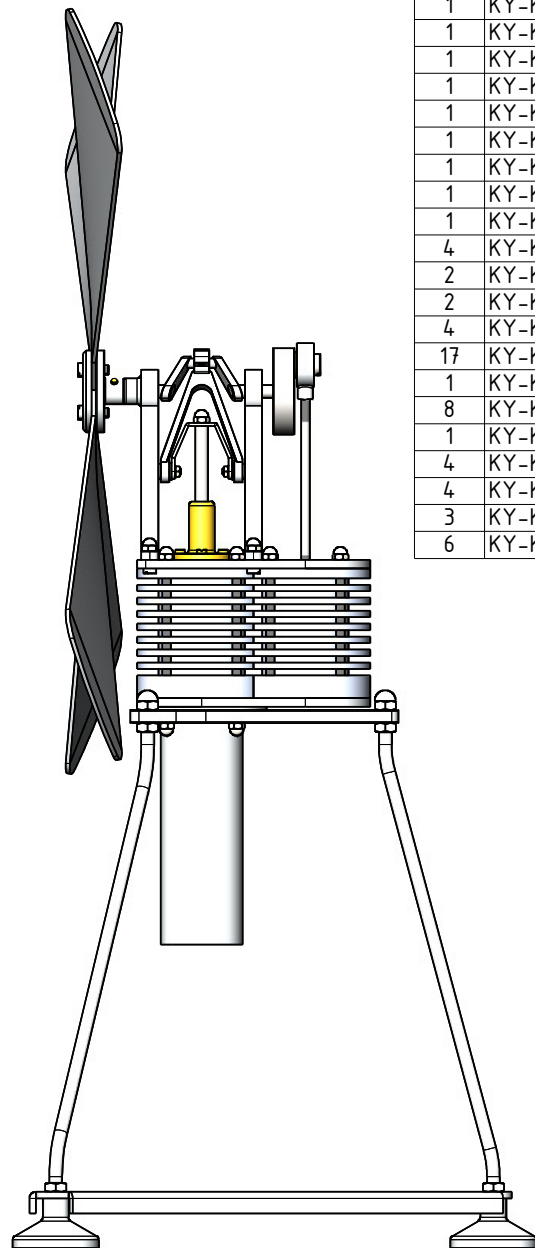
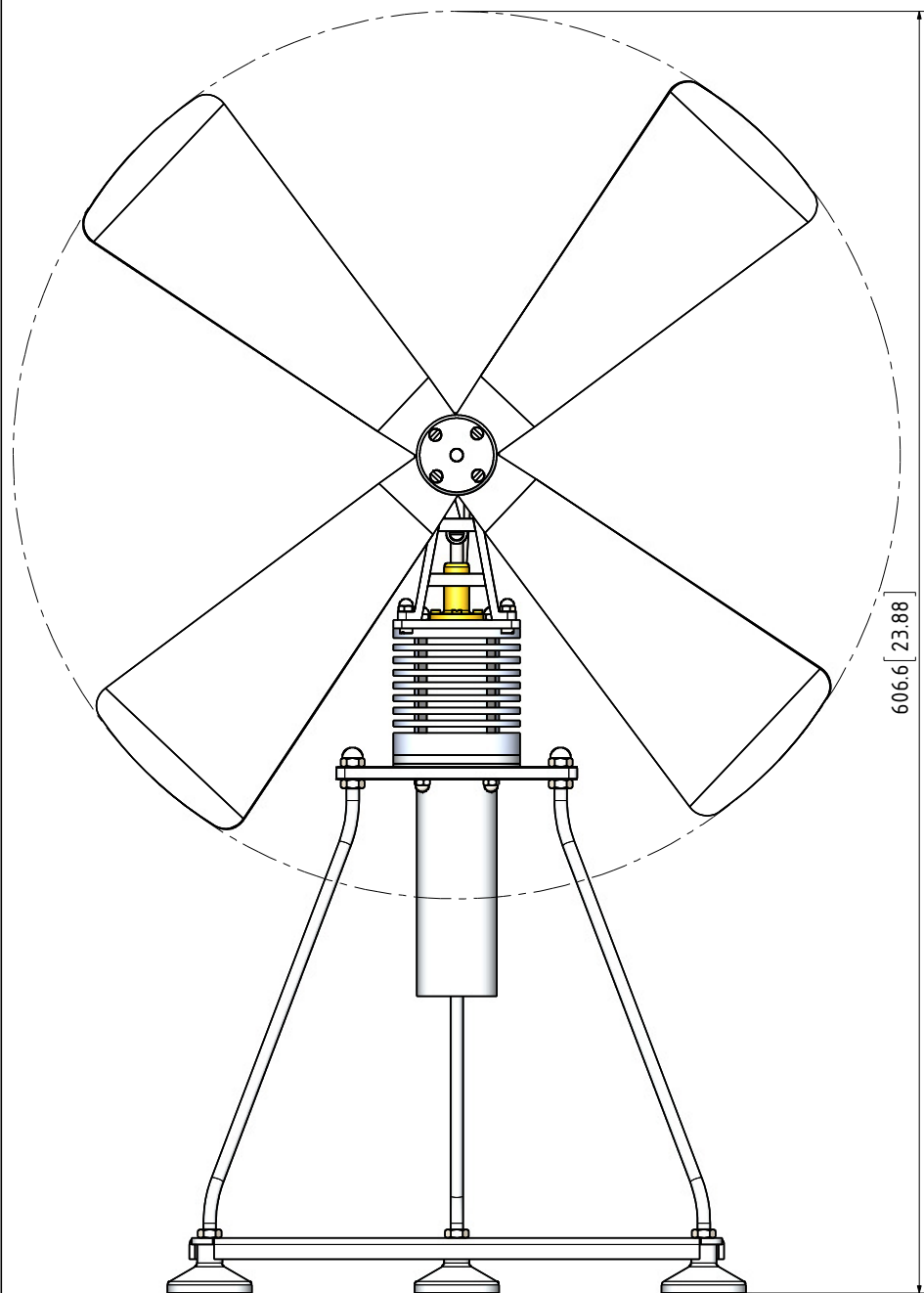
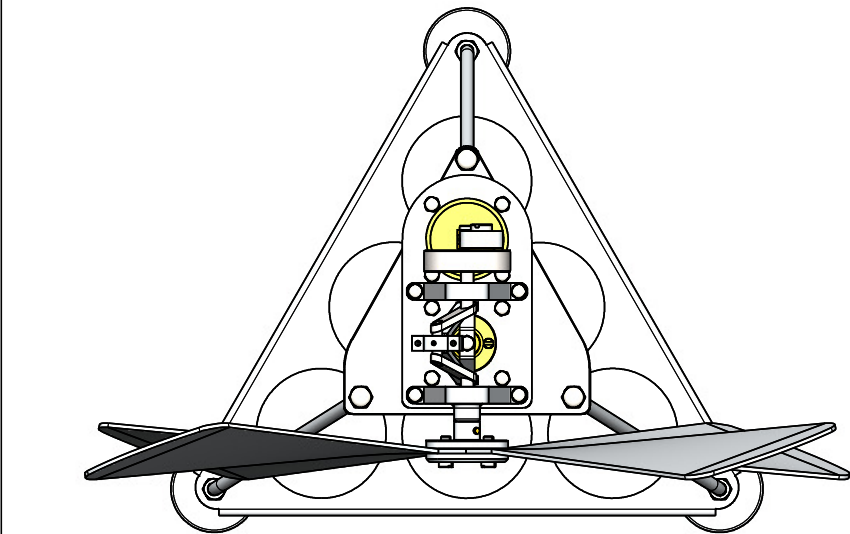




QTY.	PART NUMBER
1	KY-KO-01-BASE PLATE
2	KY-KO-02A-BASE LEG-1
1	KY-KO-02B-BASE LEG-2
1	KY-KO-03-CYLINDER PLATFORM
3	KY-KO-04-FOOT
1	KY-KO-05-HOT CAP
1	KY-KO-06-DISPLACER CYLINDER
1	KY-KO-07-POWER CYLINDER
1	KY-KO-08-CYLINDERS TOP PLATE
1	KY-KO-09-CYLINDERS BOTTOM PLATE
1	KY-KO-10-DISPLACER BEARING PLATE
1	KY-KO-11-DISPLACER CRANKSHAFT STAND-1
1	KY-KO-12-DISPLACER CRANKSHAFT STAND-2
3	KY-KO-13-BALL BEARING
1	KY-KO-21-DISPLACER
1	KY-KO-22-DISPLACER TOP PLATE
1	KY-KO-23-DISPLACER CON-ROD
1	KY-KO-24-DISPLACERCON-ROD TOP YOKE
1	KY-KO-25-CRANKSHAFT
1	KY-KO-26-DISPLACER MAIN CON-ROD
2	KY-KO-27-DISPLACER MAIN CON-ROD TOP BUSH
2	KY-KO-28-DISPLACER MAIN CON-ROD LOWER BUSH
1	KY-KO-29-POWER PISTON CRANK DISC
1	KY-KO-30-CRANK PIN
2	KY-KO-31-DISPLACER CON-ROD PIN
2	KY-KO-32-DISPLACER CON-ROD SPACER
1	KY-KO-33-POWER PISTON
1	KY-KO-34-POWER PISTON YOKE
1	KY-KO-35-POWER PISTON YOKE SCREW
1	KY-KO-36-POWER PISTON ROD
1	KY-KO-37-POWER PISTON ROD BIG END
1	KY-KO-38-POWER PISTON ROD SMALL END
1	KY-KO-39-CRANK PIN SPACER
1	KY-KO-40-FAN BLADE HUB
1	KY-KO-41-FAN BLADE HUB COVER
4	KY-KO-42-FAN BLADE
2	KY-KO-M3 NUT
2	KY-KO-M3 WASHER
4	KY-KO-M3x7 PAN HEAD SCREW
17	KY-KO-M4 DOME NUT
1	KY-KO-M4x9 C-SINK SCREW
8	KY-KO-M4x12 PAN HEAD SCREW
1	KY-KO-M4x17 GRUB SREW
4	KY-KO-M4x72 STUD
4	KY-KO-M4x79 STUD
3	KY-KO-M6 DOME NUT
6	KY-KO-M6 NUT

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

NOTES:

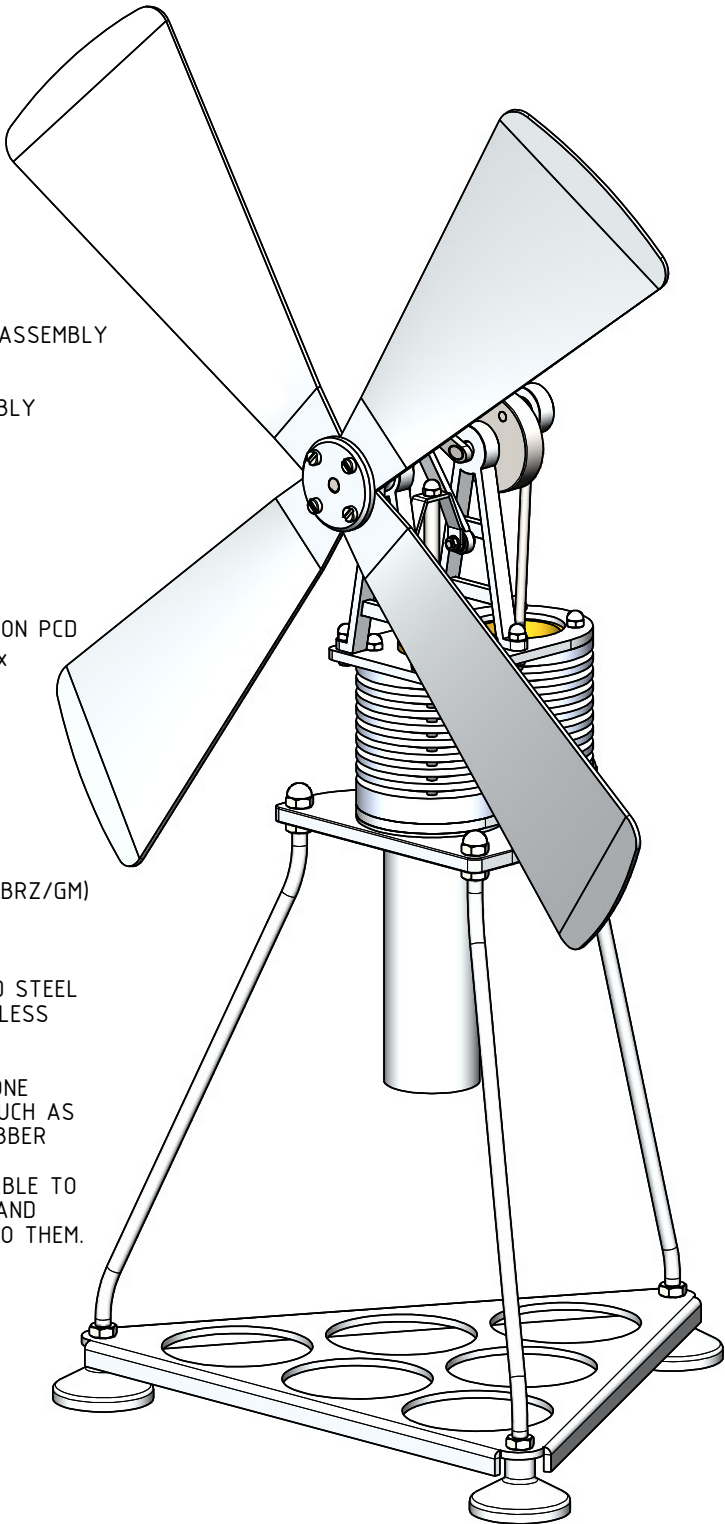
0. ALL DRAWINGS ARE IN METRIC MEASUREMENTS
1. ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
2. WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.
3. PREFERABLY ALL TAPPED HOLES AND MATCHING SCREWS 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.
- XX. 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

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= DWEL
HESOP=HOLES EQUALLY SPACED ON PCD
[SA-n-xxx]= SUB ASSEMBL-n-xxx

MATERIAL ABBREVIATIONS:

ALU = ALUMINIUM
BRS = BRASS
BRZ = BRONZE OR GUNMETAL (BRZ/GM)
CI = CAST IRON
CU = COPPER
GRA = GRAPHITE
MS = MILD STEEL/BRIGHT MILD STEEL
S/S = 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



NOTES: FOUND THE ORIGINAL DRAWINGS ON INTERNET. ARTICLE AND DRAWINGS WERE PUBLISHED IN "MODEL ENGINEER" MAGAZINE APRIL 1997. ARTICLE BY H.D.BICKLEY AND DRAWINGS BY T.GAUSDEN

TITLE
A STIRLING ENGINE POWERED AIR FAN
CALLED "KY-KO"

DRAWING CONTENTS
GENERAL ARRANGEMANT,
ISOMETRIC VIEW, BOM, NOTES.

PROJECT No 05A-12-00
JDW DRAUGHTING SERVICES
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPA KURA 2110.
NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000
E-MAIL: dewaal@xtra.co.nz.

PROJECTION
DATE
JULY-2016
SHEET: 01 OF 03

MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
Copyright © J.A.M. DE WAAL PAPA KURA NZ
A3 No: KY-KO-01