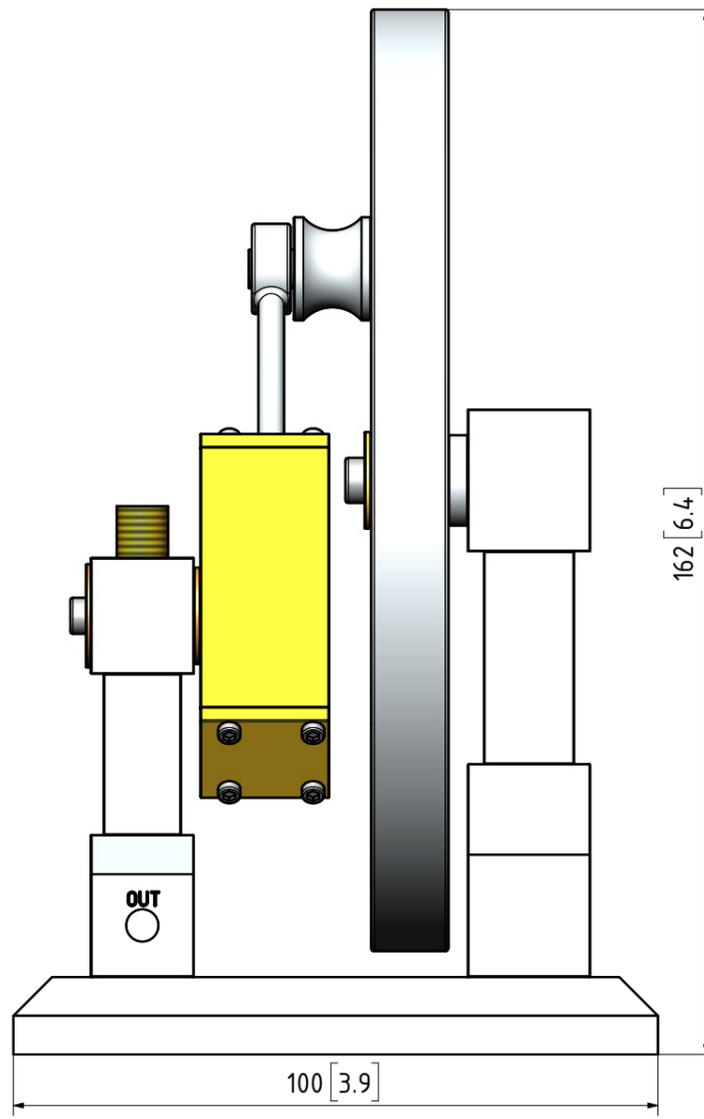


QTY.	PART NUMBER
1	01-44-00-1-01-BASE PLATE
1	01-44-00-2-01-FLYWHEEL+CRANK
1	01-44-00-2-02-CYLINDER
1	01-44-00-2-03-PISTON
8	01-44-00-M2.5x10 A-K CYL HEAD SCREW
4	01-44-00-M4x20 A-K C-SINK SCREW
1	01-44-00-M4x6 A-K CYL HEAD SCREW
1	01-44-00-M5x8 A-K CYL HEAD SCREW



NOTES:

- ALL DRAWINGS ARE IN METRIC MEASUREMENTS
- ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
- WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.
- PREFERABLY ALL TAPPED HOLES AND MATCHING SCREWS AND/OR BOLTS TO BE METRIC FINE (MF)
- MATERIALS SPECIFIED ON THE DRAWINGS ARE INDICATIVE ONLY. THE BUILDER CAN MAKE HIS/HER OWN MATERIAL CHOICE.
- ALL CONNECTIONS/JOINTS WHICH HAVE STEAM PRESSURE APPLIED TO IT SHALL BE SILVER/HARD SOLDERED.
- COMPRESSION SPRINGS ARE DRAWN IN COMPRESSED STATE (CP), UNCOMPRESSED STATE IS APPROX 40% TO 60% LONGER THEN COMPRESSED STATE.
- 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.
- 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.
- THE ORDER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED AND THE MODEL IS ASSEMBLED IS ENTIRELY LEFT TO THE BUILDER/MODEL MAKER.
- A COLOUR SCHEME FOR THIS PROJECT IS ENTIRELY LEFT UP TO THE MODEL MAKER.
- THE MANNER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED IS ENTIRELY LEFT UP TO THE BUILDER.
- USE LOCTITE, ON SCREW OR PRESS FIT CONNECTIONS OR SURFACES, WERE DEEMED NECESSARY TO PREVENT PARTS FROM LOOSENING.
- 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.

OTHER ABBREVIATIONS

- AS = AS SHOWN
- 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
- OD = OUTSIDE DIAMETER
- ID = INSIDE DIAMETER
- MAX/MIN = CRITICAL DIMENSION
- SA-xxx = SUB ASSEMBLY-xxx

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

NOTES: THE ORIGINAL DRAWINGS WERE GIVEN TO ME. THE ORIGINAL DRAWINGS WERE BY BOYNTON PRODUCTS CO. BYONTON BEACH FL 33437. DESIGNER/DRAFTER E. WEINBERG. DATE UNKNOWN. TOTAL 7 A4-SHEETS (SHEET 5 MISSING)

TITLE
A VERY SIMPLE COMPRESSED AIR ENGINE FOR BEGINNERS (B=13mm DOUBLE ACTING)

DRAWING CONTENTS
GENERAL ARRANGEMENT, NOTES, BILL OF MATERIALS

PROJECT No 01-44-00
 JDW DRAUGHTING SERVICES
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PROJECTION
JDWDS MODEL SCALE: 1:1
 DWG SCALE: 1:1 @A4 OR AS SHOWN
 DATE APRIL 2021 Copyright © J.A.M. DE WAAL PAKAKURA NZ
 SHEET: 01 OF 03 A4 No: 01-44-00-SHT01

