

QTY.	PART NUMBER
1	HIRATA-01-BASE PLATE (11)
1	HIRATA-02-STAND FRAME (10)
1	HIRATA-03-TOP PLATE (9)
1	HIRATA-04-HOT END COVER (2)
2	HIRATA-05-DISPLACER + POWER CYLINDER (1)
2	HIRATA-06-DISPLACER+POWER CYLINDER LINING (6)
4	HIRATA-07-RUBBER FOOT (17)
2	HIRATA-08-MF63 BEARING (18)
1	HIRATA-09-POWER PISTON CRANK DISC (3)
1	HIRATA-10-SHAFT (12)
1	HIRATA-11-DISPLACER PISTON CRANK DISC (4)
2	HIRATA-12-CON-ROD (13)
1	HIRATA-13-DISPLACER (7)
1	HIRATA-14-POWER OISTIN (8)
2	HIRATA-15-PISTON HOLDER (5)
3	HIRATA-16-CYLINDER GASKET (15)
1	HIRATA-17-SEALING GASKET (16)
2	HIRATA-M2 NUT (27)
6	HIRATA-M2 WASHER (14)
2	HIRATA-M2x10 PAN HEAD SCREW (24)
4	HIRATA-M3 NUT (26)
8	HIRATA-M3 WASHER (25)
4	HIRATA-M3x7 GRUB SREW (28)
8	HIRATA-M3x12 PAN HEAD SCREW (21)
4	HIRATA-M3x15 PAN HEAD SCREW (22)
4	HIRATA-M3x20 PAN HEAD SCREW (20)
1	HIRATA-M4x12 PAN HEAD SCREW (19)

NOTES: FOUND ORIGINAL DRAWINGS ON THE INTERNET. ENGINE WAS DESIGNED BY Mr. KOICHI HIRATA, TOKYO, JAPAN, 3-MARCH-1996.

TITLE
**STIRLING ENGINE DESIGNED BY
KOICHI HIRATA**

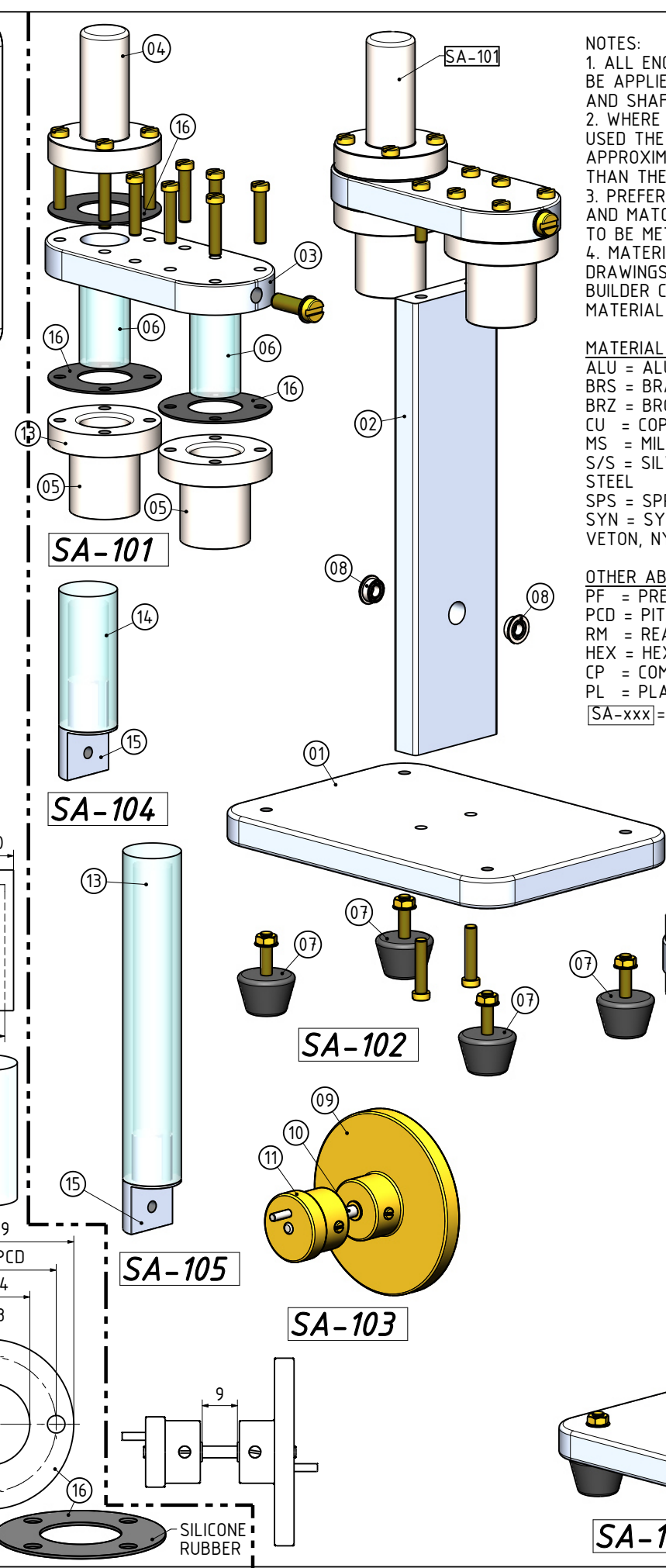
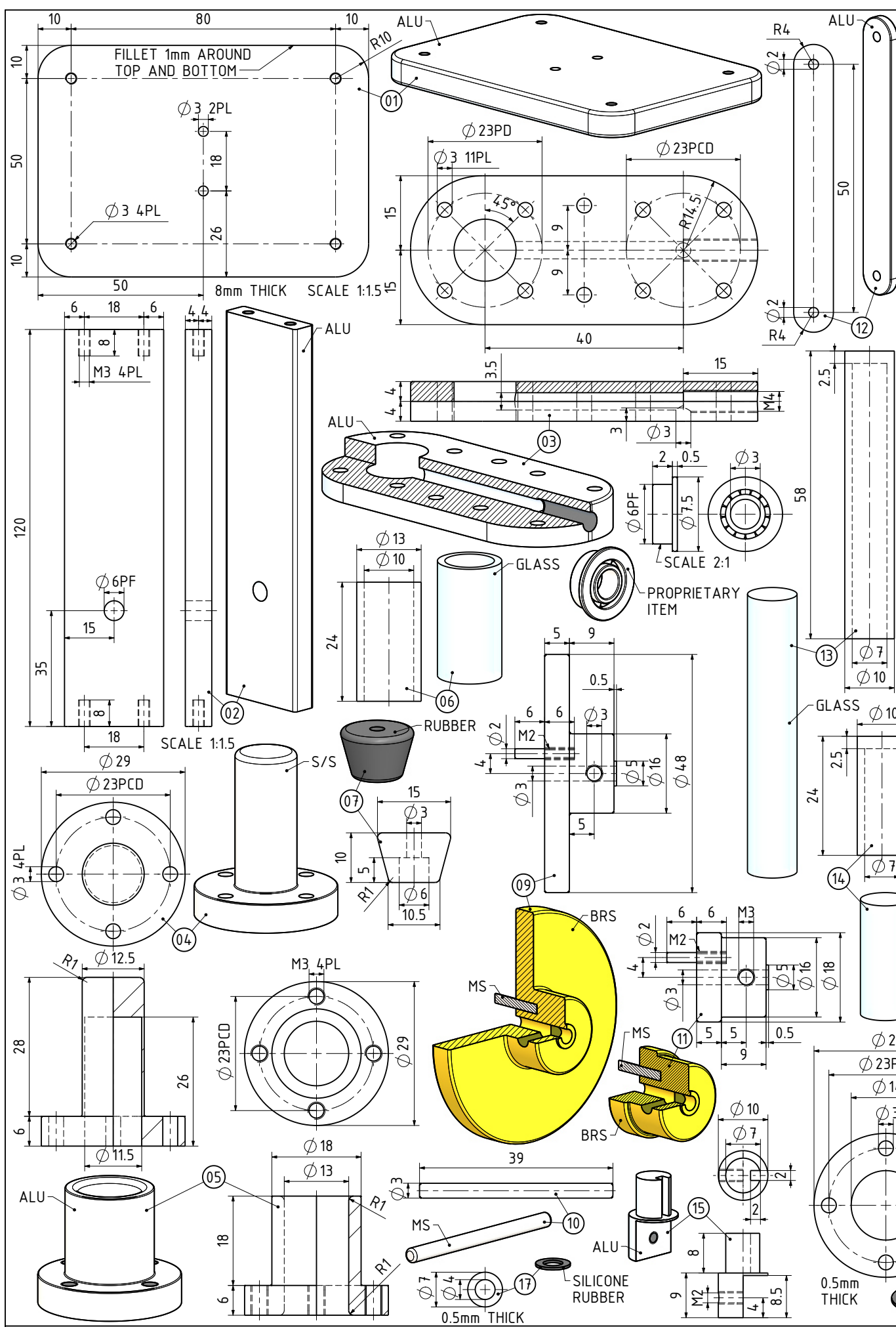
DRAWING CONTENTS
**GENERAL ARRANGEMENT, ISOMETRIC
VIEWS & BILL OF MATERIALS**

PROJECT No 05A-10-00
JDW DRAUGHTING SERVICES
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAPAOKURA 2110.
NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000
E-MAIL: dewaal@xtra.co.nz.

PROJECTION
DATE
MAY-2015

MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN
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SHEET: 01 OF 02
A3 No: 05A-10-00-SHT01

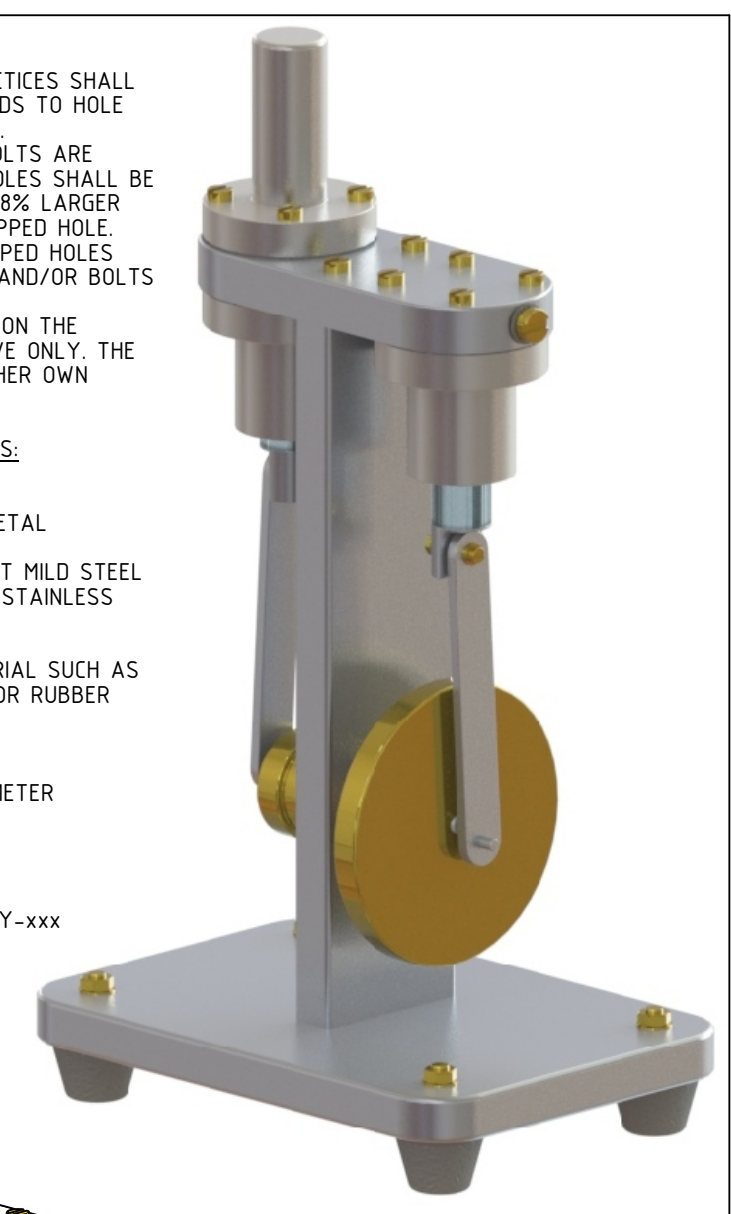
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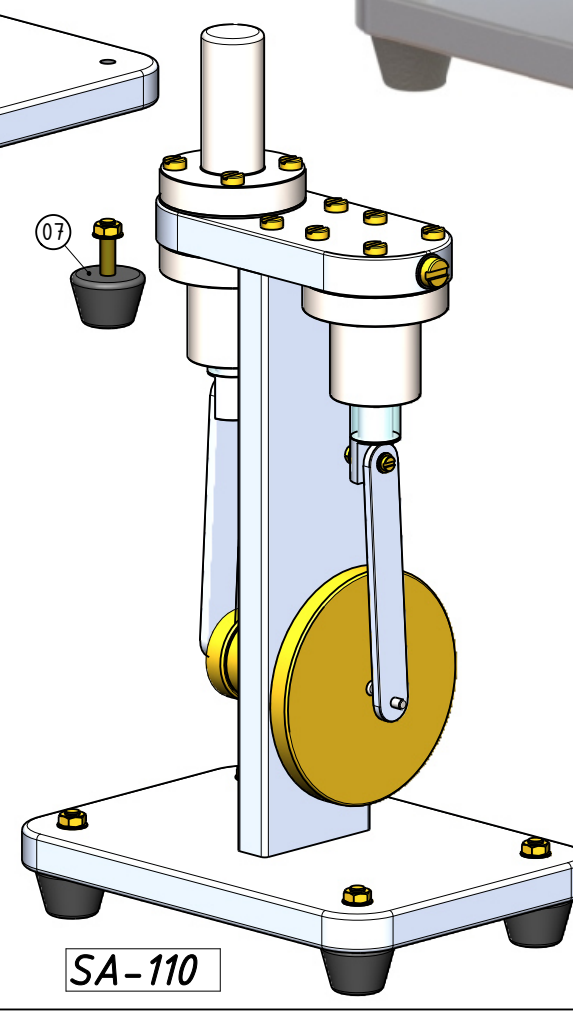
NOTES:
 1. ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
 2. WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.
 3. PREFERABLY ALL TAPPED HOLES AND MATCHING SCREWS AND/OR BOLTS TO BE METRIC FINE (MF)
 4. MATERIALS SPECIFIED ON THE DRAWINGS ARE INDICATIVE ONLY. THE BUILDER CAN MAKE HIS/HER OWN MATERIAL CHOICE.

MATERIAL ABBREVIATIONS:
 ALU = ALUMINIUM
 BRS = BRASS
 BRZ = BRONZE OR GUNMETAL
 CU = COPPER
 MS = MILD STEEL/BRIGHT MILD STEEL
 S/S = SILVER STEEL OR STAINLESS STEEL
 STEEL
 SPS = SPRING STEEL
 SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLON OR RUBBER

OTHER ABBREVIATIONS
 PF = PRESS FIT
 PCD = PITCH CIRCLE DIAMETER
 RM = REAM
 HEX = HEXACON, 6SIDED
 CP = COMPRESSED
 PL = PLACES
 [SA-xxx]= SUB ASSEMBLY-xxx



- ASSEMBLY SUGGESTIONS:
1. GLUE TOGETHER PARTS 05 AND 06 USING SILICONE GLUE
 2. GLUE TOGETHER PARTS 13 AND 15 USING QUICK DRYING GLUE
 3. GLUE TOGETHER PARTS 14 AND 15 USING QUICK DRYING GLUE
 4. ALL MOVING PARTS SHOULD BE FREE RUNNING.
 5. IT IS ADVISABLE TO PUT A SMALL DROP OF LIGHT OIL ONTO THE MOVING PARTS.



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STIRLING ENGINE DESIGNED BY KOICHI HIRATA

DRAWING CONTENTS
PARTS AND ASSEMBLIES

PROJECT No 05A-10-00	PROJECTION JDWDS	MODEL SCALE: 1:1
JDW DRAUGHTING SERVICES	DATE MAY-2015	DWG SCALE: 1:1 @A3 OR AS SHOWN
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAKAPURA 2110. NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000 E-MAIL: dewaal@xtra.co.nz.	SHEET: 02 OF 02	Copyright © J.A.M. DE WAAL PAKAPURA NZ A3 No: 05A-10-00-SHT02

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