

MATERIAL ABBREVIATIONS:
 ALU = ALUMINIUM OR DURAL(MIN)
 BR5 = 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 SHOULD BE
 ABLE TO WITHSTAND THE HEAT AND
 PRESSURE(S) APPLIED TO THEM.
 nnn/nnn MEANS THAT EITHER MATERIAL CAN BE USED

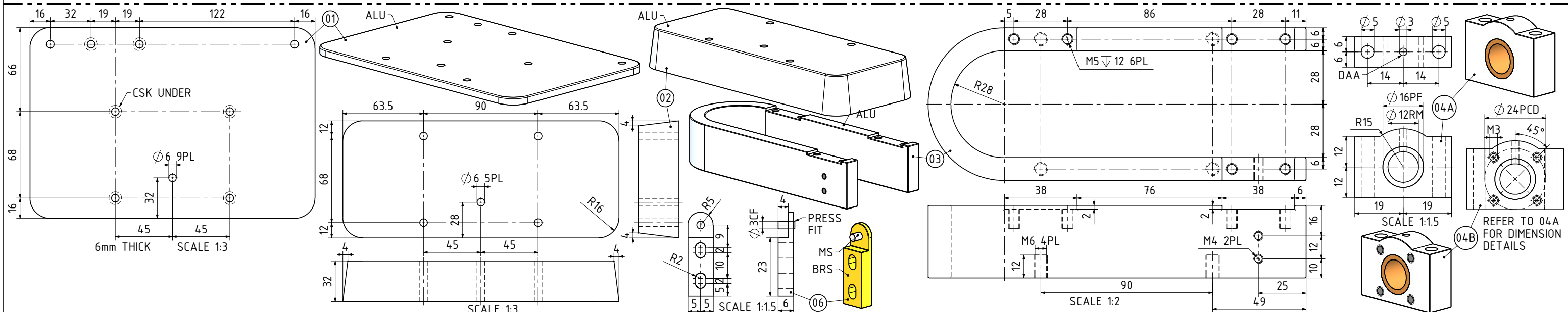
OTHER ABBREVIATIONS
DP = DEEP
PF = PRESS FIT
PCD = PITCH CIRCLE DIAMETER
RM = REAM
HEX = HEXACON, 6SIDED
CP = COMPRESSED
KNL = KNURLED
CSK = COUNTERSINK
PL = PLACES
CF = CLOSE FIT (SIZE FOR SIZE)
DAA= DRILL AFTER ASSEMBLY
PFAA= PRESSFIT AFTER ASSEMBLY
LCT = USE LOCTITE
LPF = LIGHT PRESS FIT
[SA-xxx] = SUB ASSEMBLY-xxx

NOTES:

1. ALL DRAWINGS ARE IN METRIC MEASUREMENTS.
2. ALL ENGINEERING PRACTICES SHALL BE APPLIED WITH REGARDS TO HOLE AND SHAFT TOLERANCES.
3. WHERE SCREWS OR BOLTS ARE USED THE CLEARANCE HOLES SHALL BE APPROXIMATELY 5% TO 8% LARGER THAN THE MATCHING TAPPED HOLE.
4. PREFERABLY ALL TAPPED HOLES AND MATCHING SCREWS AND/OR BOLTS TO BE METRIC FINE (MF)
5. MATERIALS SPECIFIED ON THE DRAWINGS ARE INDICATIVE ONLY. THE BUILDER CAN MAKE HIS/HER OWN MATERIAL CHOICE.
6. N/A
7. ALL CONNECTIONS/JOINTS WHICH HAVE STEAM PRESSURE APPLIED TO IT SHALL BE SILVER/HARD SOLDERED.
8. COMPRESSION SPRINGS ARE DRAWN IN COMPRESSED STATE (CP), UNCOMPRESSED STATE IS APPROX 40% TO 60% LONGER THEN COMPRESSED STATE.
9. 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.
10. 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.
11. THE ORDER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED AND THE MODEL IS ASSEMBLED IS ENTIRELY LEFT TO THE BUILDER/MODEL MAKER.
12. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.
13. A COLOUR SCHEME FOR THIS PROJECT IS ENTIRELY LEFT UP TO THE MODEL MAKER.
14. THE MANNER IN WHICH THE PARTS/COMPONENTS ARE MANUFACTURED IS ENTIRELY LEFT UP TO THE BUILDER.

2	EVG-P42-M6x15 C-SINK SCREW
4	EVG-P42-M6x50 C-SINK SCREW

QTY.	PART NUMBER
1	EVG-P42-01-BASE PLATE
1	EVG-P42-02-INTERMEDIATE BASE PLATE
1	EVG-P42-03-HORSE SHOE BEARING SUPPORT FRAME
1	EVG-P42-04-SHORT BEARING STAND
3	EVG-P42-04-SHORT BEARING STAND
1	EVG-P42-05-BEARING SUPPORT BRACKET
1	EVG-P42-06-LINK PIVOT BRACKET
1	EVG-P42-07-INLET STEAM CONNECTOR
1	EVG-P42-08-CYLINDER
1	EVG-P42-09-VALVE PORT PLATE
1	EVG-P42-10-VALVE VALVE CHEST
1	EVG-P42-11-VALVE CHEST COVER PLATE
1	EVG-P42-12-CYLINDER FRONT COVER
1	EVG-P42-13-CYLINDER REAR COVER
1	EVG-P42-14-FRONT COVER ROCKER BRACKET
2	EVG-P42-15-CYLINDER SIDE SPACER
1	EVG-P42-16-CRANKSHAFT+ CRANK
1	EVG-P42-17-FLYWHEEL
2	EVG-P42-18-FLYWHEEL SPACER
1	EVG-P42-19-PISTON ROD BIG END
1	EVG-P42-20-PISTON ROS
1	EVG-P42-21-PISTON
1	EVG-P42-22-SLIDE VALVE
1	EVG-P42-23-SLIDE VALVE NUT
1	EVG-P42-24-VALVE SPINDLE
1	EVG-P42-25-ROCKING SHAFT AND CRANK
1	EVG-P42-26-ROCKING SHAFT FORK CRANK
1	EVG-P42-27-ROCKER ARM LINK PLATE
1	EVG-P42-28-STEAM INLET PIPE CONNECTOR
1	EVG-P42-M3x10 GRUB SCREW
4	EVG-P42-M3x20 PAN HEAD SCREW
4	EVG-P42-M4 NUT
4	EVG-P42-M4x6 GRUB SCREW
2	EVG-P42-M4x18 PAN HEAD SCREW
4	EVG-P42-M4x25 HEX BOLT
8	EVG-P42-M5x16 HEX BOLT
8	EVG-P42-M5x33 HEX BOLT
2	EVG-P42-M6x15 C-SINK SCREW
4	EVG-P42-M6x50 C-SINK SCREW



NOTES: THE ORIGINAL DRAWINGS AND ARTICLE OF THIS ENGINE WERE BY ELMER VERBURG AND PUBLISHED IN A BOOK AS CHAPTER 42. THE ORIGINAL DRAWINGS WERE POSTED ON: WWW.JOHN-TOM.COM (THIS ENGINE IS 2 TIMES LARGER THAN THE ORIGINAL)

TITLE
1 CYLINDER HORIZONTAL STEAM ENGINE WITH OSCILLATING CYLINDER AND SLIDE VALVE


DRAWING CONTENTS

G.A., BOM, ISOMETRIC VIEW, NOTES, PARTS AND ASSEMBLIES

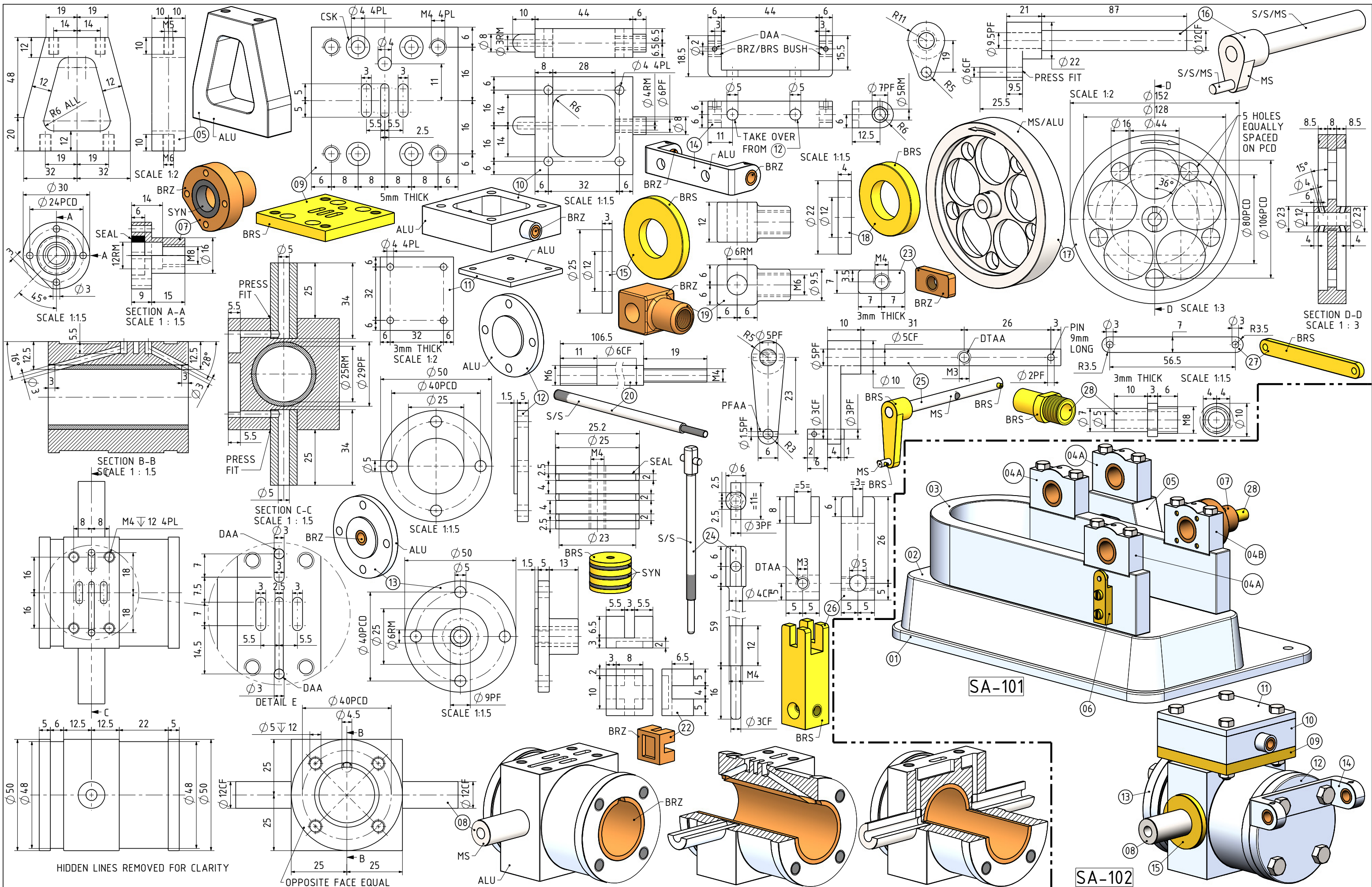
PROJECT No 10-42-00


JDW DRAUGHTING SERVICES

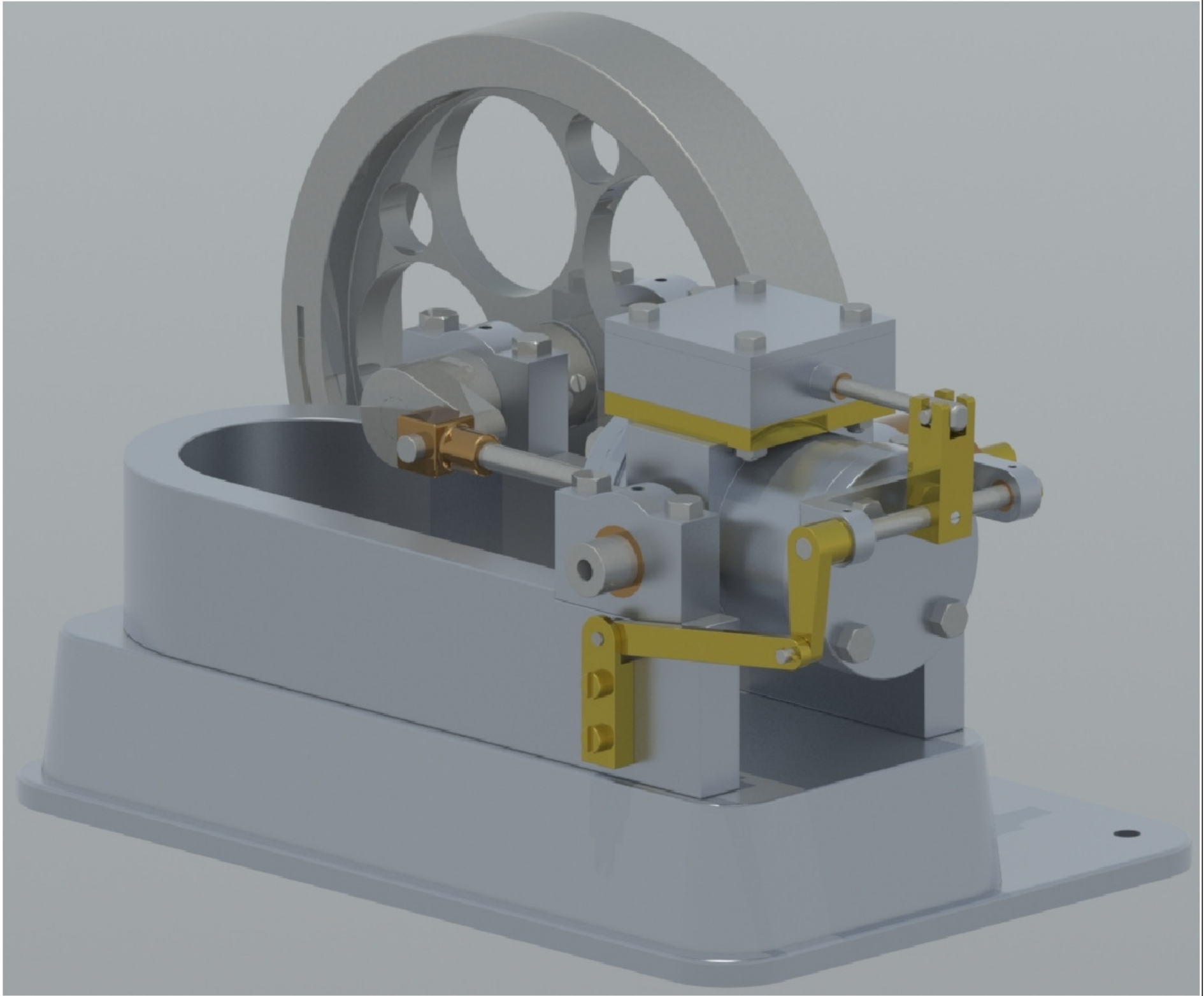
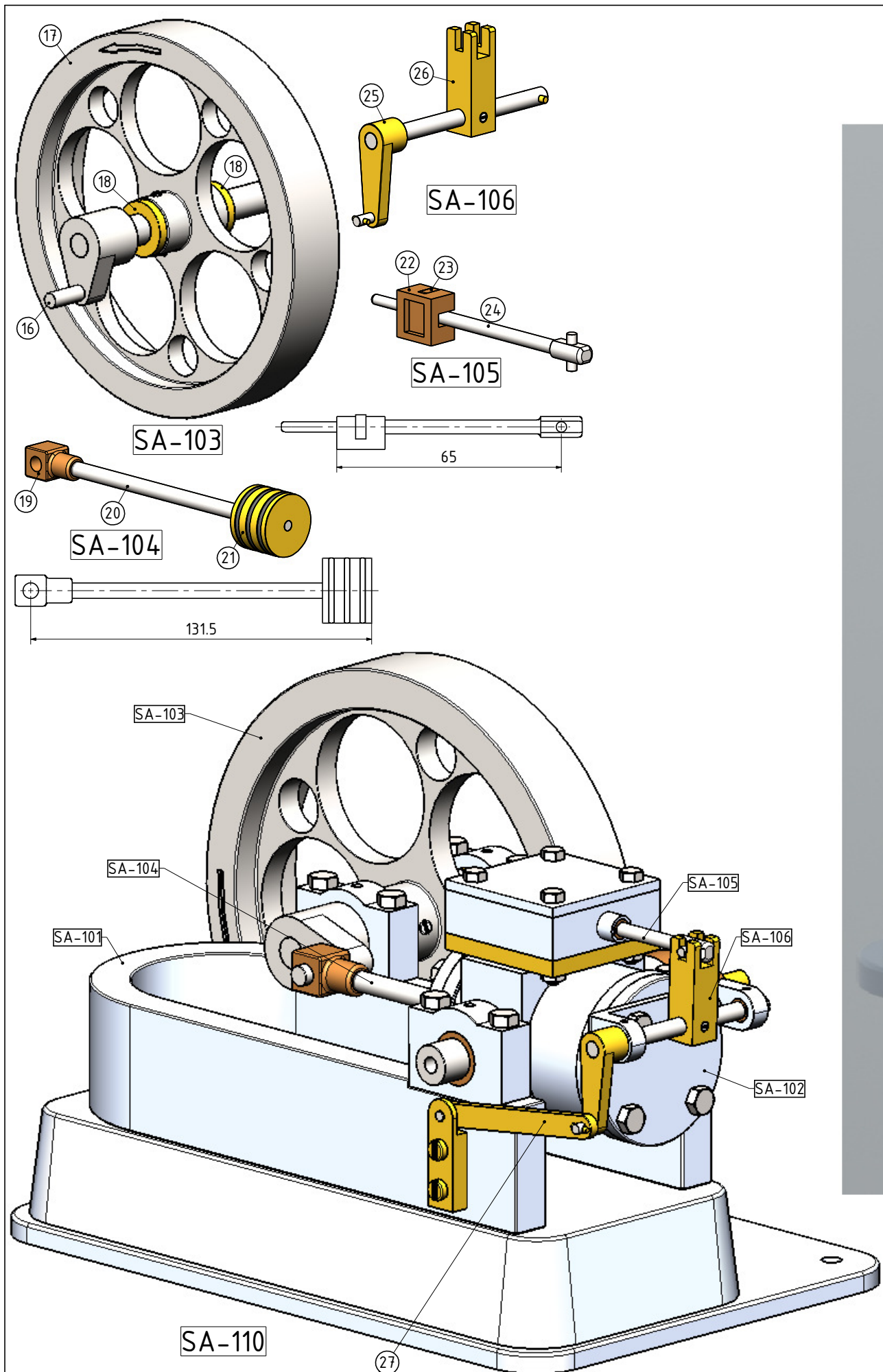
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAKAPAKURA 2110.
NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000
E-MAIL: dewaal@xtra.co.nz.

PROJECTION		<i>JDWDS</i>
DATE	APRIL-2016	
SHEET: 01 OF 03		

MODEL SCALE: 1:1	
DWG SCALE: 1:1 @A3 OR AS SHOWN	
Copyright © J.A.M. DE WAAL PAKAPURA NZ	
A3	No: EVG-P42-01



NOTES: THE ORIGINAL DRAWINGS AND ARTICLE OF THIS ENGINE WERE BY ELMER VERBURG AND PUBLISHED IN A BOOK AS CHAPTER 42. THE ORIGINAL DRAWINGS WERE POSTED ON: WWW.JOHN-TOM.COM (THIS ENGINE IS 2 TIMES LARGER THAN THE ORIGINAL)											
TITLE			DRAWING CONTENTS			PROJECT No 10-42-00		PROJECTION	JDWDS	MODEL SCALE: 1:1	
1 CYLINDER HORIZONTAL STEAM ENGINE WITH OSCILLATING CYLINDER AND SLIDE VALVE			PARTS AND ASSEMBLIES			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.			DATE	APRIL-2016	Copyright © J.A.M. DE WAAL PAPA KURA NZ
SHEET: 02 OF 03		A3	No: EVG-P42-02								



NOTES: THE ORIGINAL DRAWINGS AND ARTICLE OF THIS ENGINE WERE BY ELMER VERBURG AND PUBLISHED IN A BOOK AS CHAPTER 42. THE ORIGINAL DRAWINGS WERE POSTED ON: WWW.JOHN-TOM.COM (THIS ENGINE IS 2 TIMES LARGER THAN THE ORIGINAL)			
TITLE		DRAWING CONTENTS	
1 CYLINDER HORIZONTAL STEAM ENGINE WITH OSCILLATING CYLINDER AND SLIDE VALVE		PARTS AND ASSEMBLIES RENDERED PICTURE	
PROJECT No 10-42-00		PROJECTION	
JDW DRAUGHTING SERVICES		JDWDS	
J.A.M. DE WAAL, 12 BRIGHTWELL STREET PAKAPURA 2110, NEW ZEALAND. PHONE: 0064 09 2988815. MOB: 0211791000		DATE APRIL-2016	
E-MAIL: dewaal@xtra.co.nz		Copyright © J.A.M. DE WAAL PAKAPURA NZ	
SHEET: 03 OF 03		A3 No: EVG-P42-03	