

NOTES: THIS DESIGN IS BASED ON DRAWINGS PUBLISHED ON THE "MODELENGINEERINGWEBSITE" WEBSITE.

TITLE  
A MODEL OF A SUGAR CANE MILL AS  
MANUFACTURED BY MESSERS. ROBEY&CO

DRAWING CONTENTS  
GENERAL ARRANGEMENT

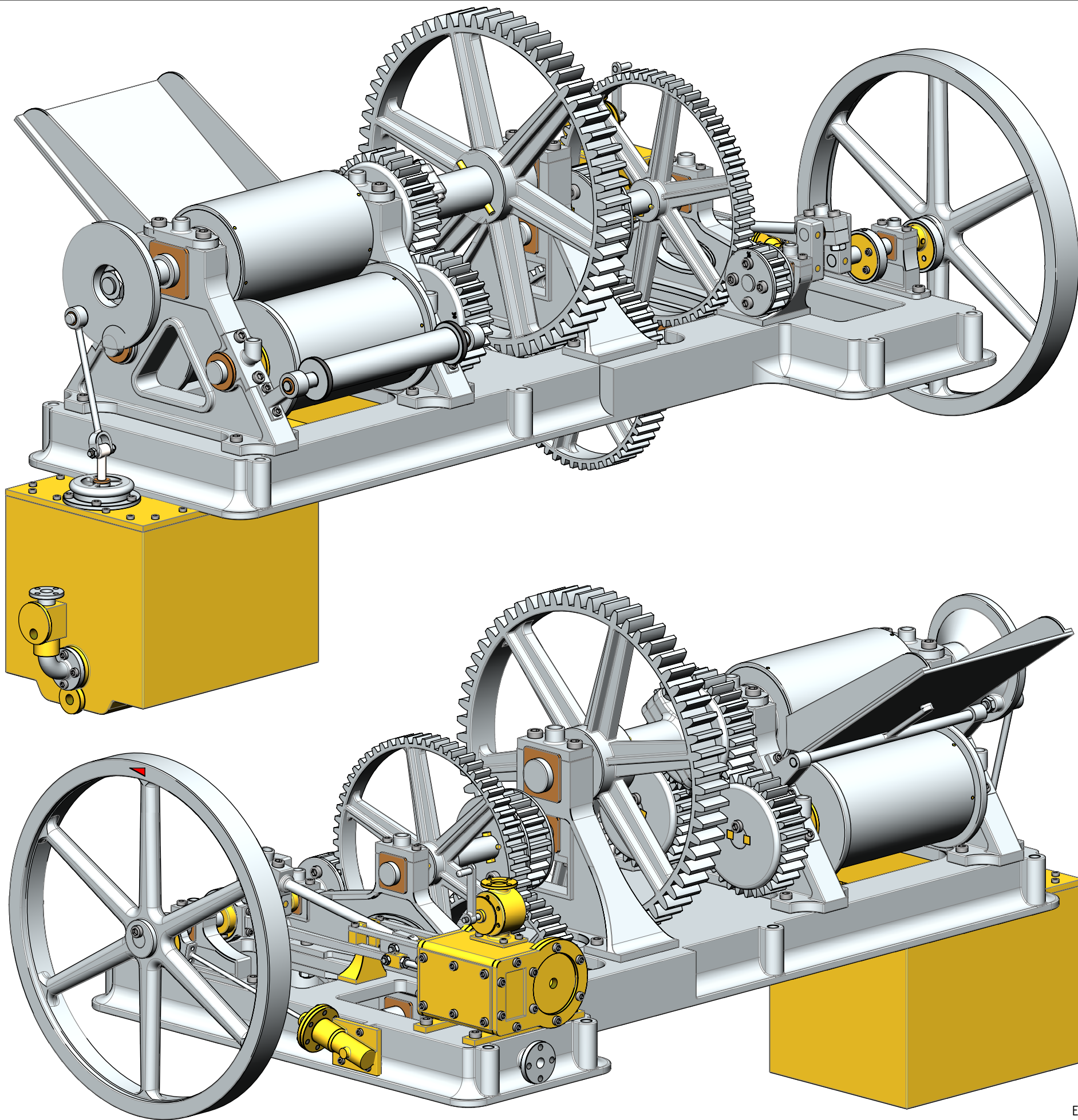
PROJECT No 09B-21-00  
JDW DRAUGHTING SERVICES  
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2110, NEW ZEALAND. PHONE: 0064 09 2988815. MOB:  
0211791000 E-MAIL: dewaal@xtra.co.nz.

PROJECTION  
DATE JUNE 2019  
SHEET: 01 OF 09

MODEL SCALE: 1:10  
DWG SCALE: 1:1 @A3 OR AS SHOWN  
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A3 No: 09B-21-00-SHT01

DRAWINGS ARE FOR PERSONAL USE ONLY NOT FOR COMMERCIAL PURPOSES





- 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.
  - 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.

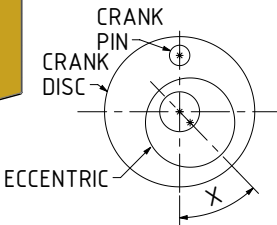
MATERIAL ABBREVIATIONS:

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



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

QTY.	PART NUMBER
1	09B-21-00-1-01-BEDPLATE
1	09B-21-00-1-02-CRANKSHAFT BEARING-A
1	09B-21-00-1-03-CRANKSHAFT BEARING-B
1	09B-21-00-1-04-CENTER DRIVE SHAFT BEARING-C
1	09B-21-00-1-05-LOWER BEARING-D1
1	09B-21-00-1-06-LOWER BEARING-D2
2	09B-21-00-1-07-CRUSHING ROLLERS BEARING
1	09B-21-00-1-08-CYLINDER+VALVE CHEST
1	09B-21-00-1-09-CYLINDER FRONT COVER
1	09B-21-00-1-10-CYLINDER REAR COVER
1	09B-21-00-1-11-VALVE CHEST COVER
1	09B-21-00-1-12-CROSSHEAD GUIDE
1	09B-21-00-1-13-DUMMY WATER PUMP
1	09B-21-00-1-14-CANE JUICE COLLECTOR TANK
1	09B-21-00-1-15-REGULATOR HOUSING
1	09B-21-00-1-16-REGULATOR VALVE
1	09B-21-00-1-17-LOADING TRAY
1	09B-21-00-1-18-DUMMY JUICE PUMP
1	09B-21-00-1-19-EXHAUST PIPE
1	09B-21-00-2-01-CRANKSHAFT+FLYWHEEL
1	09B-21-00-2-02-WATER PUMP ECCENTRIC
1	09B-21-00-2-03-WATER PUMP ECCENTRIC STRAP
1	09B-21-00-2-04-WATER PUMP PISTON
1	09B-21-00-2-05-SLIDE VALVE
1	09B-21-00-2-06-VALVE SPINDLE
1	09B-21-00-2-07-SLIDE VALVE ECCENTRIC
1	09B-21-00-2-08-SLIDE VALVE ECCENTRIC STRAP
1	09B-21-00-2-09-PISTON+ROD
1	09B-21-00-2-10-CON ROD
1	09B-21-00-2-11-ILDER SHAFT-1
1	09B-21-00-2-12-ILDER SHAFT-2
1	09B-21-00-2-13-ILDER SHAFT-3
1	09B-21-00-2-14-TOP MILL ROLLER
2	09B-21-00-2-15-LOWER MILL ROLLER
1	09B-21-00-2-16-IDLER MILL ROLLER
1	09B-21-00-2-17-DUMMY JUICE PUMP PISTON
1	09B-21-00-2-18-DUMMY JUICE PUMP CON-ROD
8	09B-21-00-M2.5 NUT
4	09B-21-00-M2.5x12 A-K CYL HEAD SCREW
8	09B-21-00-M2.5x4 A-K CYL HEAD SCREW
2	09B-21-00-M2.5x5 A-K C-SINK SCREW
19	09B-21-00-M2.5x6 A-K CYL HEAD SCREW
5	09B-21-00-M3 NUT
8	09B-21-00-M3x10 A-K CYL HEAD SCREW
41	09B-21-00-M3x6 A-K CYL HEAD SCREW
18	09B-21-00-M4 NUT
25	09B-21-00-M4x10 A-K CYL HEAD SCREW
14	09B-21-00-M4x16 A-K CYL HEAD SCREW
6	09B-21-00-M4x20 A-K CYL HEAD SCREW
8	09B-21-00-M4x6 A-K CYL HEAD SCREW
6	09B-21-00-M5x12 A-K CYL HEAD SCREW
8	09B-21-00-M5x8 A-K CYL HEAD SCREW
1	09B-21-00-M8 NUT

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TITLE  
A MODEL OF A SUGAR CANE MILL AS  
MANUFACTURED BY MESSERS. ROBEY&CO

DRAWING CONTENTS  
ISOMETRIC VIEWS, NOTES AND  
BILL OF MATERIALS

PROJECT No 09B-21-00  
JDW DRAUGHTING SERVICES  
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PROJECTION  
DATE JUNE 2019  
SHEET: 02 OF 09  
JDWDS  
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MODEL SCALE: 1:10  
DWG SCALE: 1:1 @A3 OR AS SHOWN  
A3 No: 09B-21-00-SHT02

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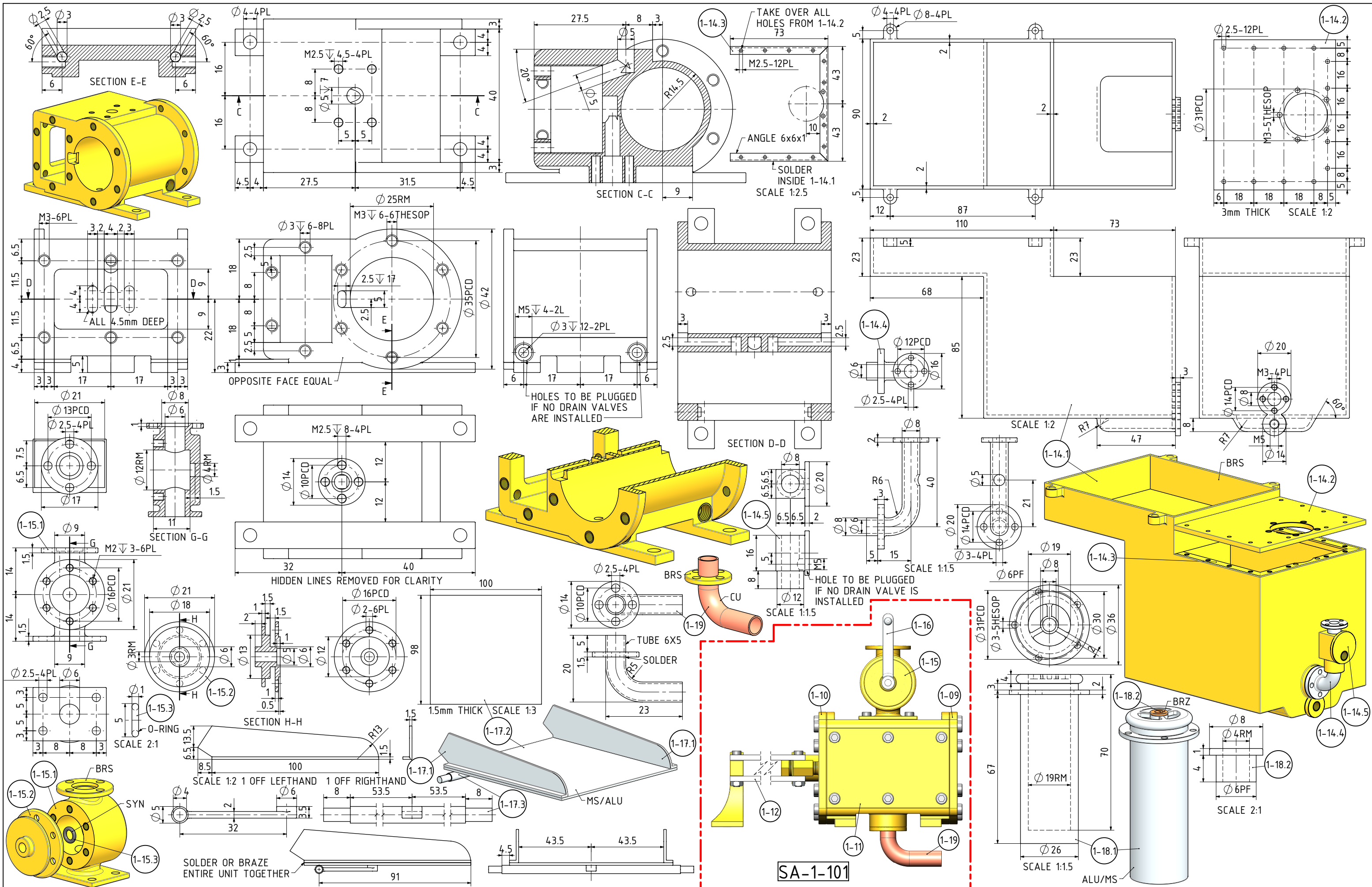












TITLE

A MODEL OF A SUGAR CANE MILL AS  
MANUFACTURED BY MESSERS. ROBEY&CO

DRAWING CONTENTS

PARTS AND ASSEMBLIES

PROJECT No 09B-21-00

JDW DRAUGHTING SERVICES

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PROJECTION

DATE JUNE 2019

SHEET: 05 OF 09

JDWDS

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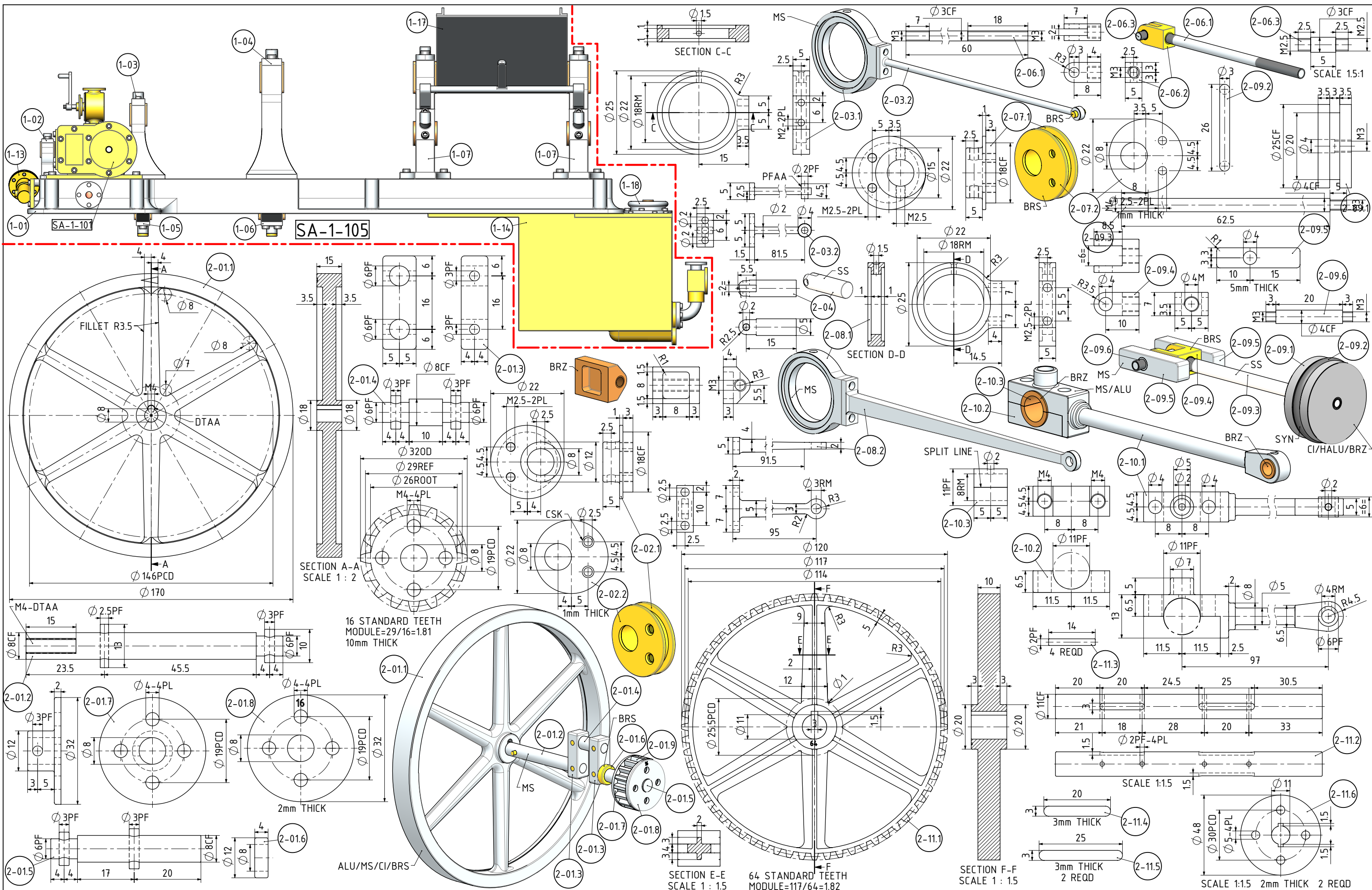
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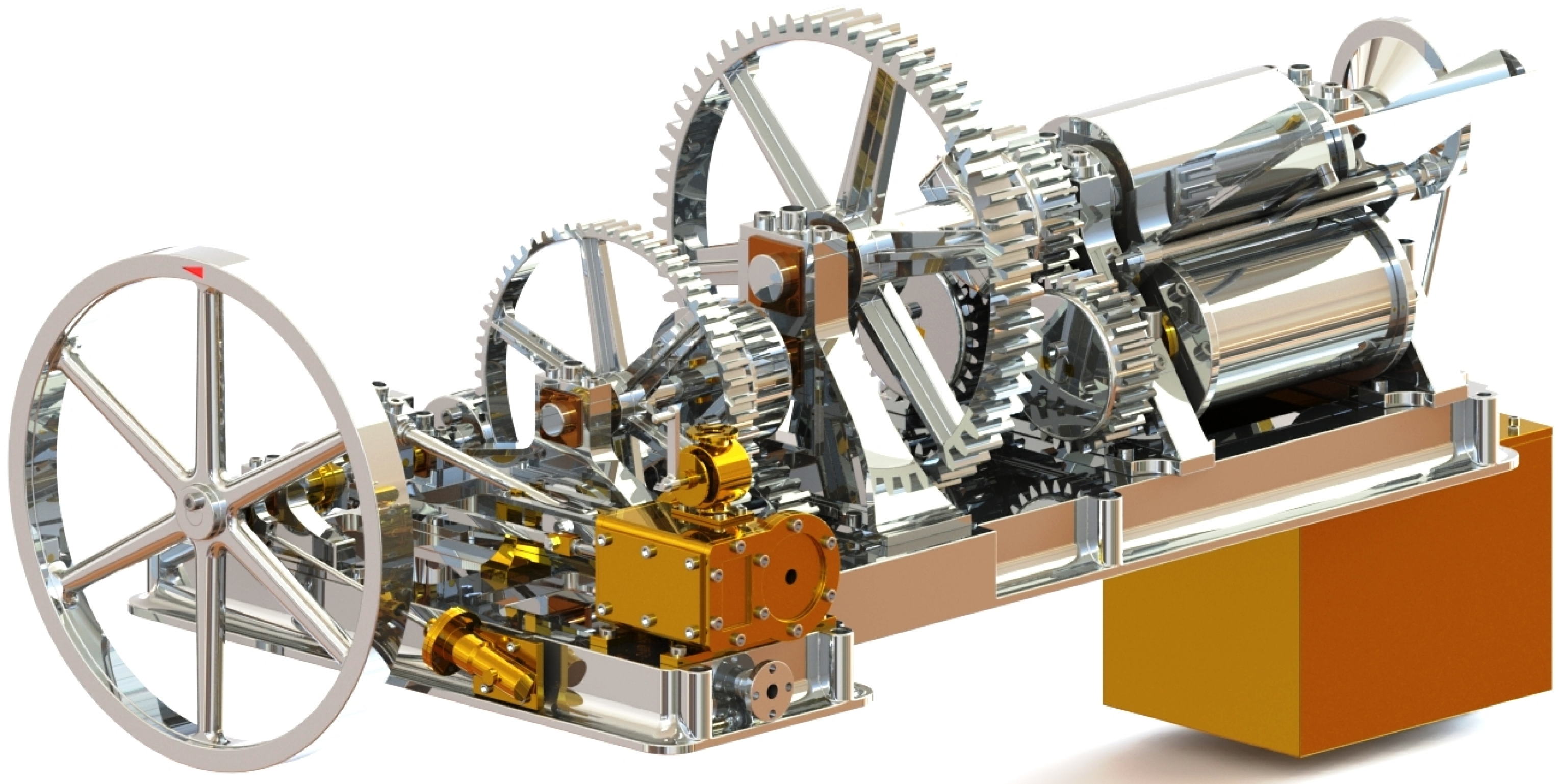












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A MODEL OF A SUGAR CANE MILL AS  
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DRAWING CONTENTS  
RENDERED PICTURE

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JDW DRAUGHTING SERVICES  
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PROJECTION DATE JUNE 2019	<b>JDWDS</b> Copyright © J.A.M. DE WAAL PAKAPURA NZ	MODEL SCALE: 1:10 DWG SCALE: 1:1 @A3 OR AS SHOWN
SHEET: 09 OF 09		A3 No: 09B-21-00-SHT09

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