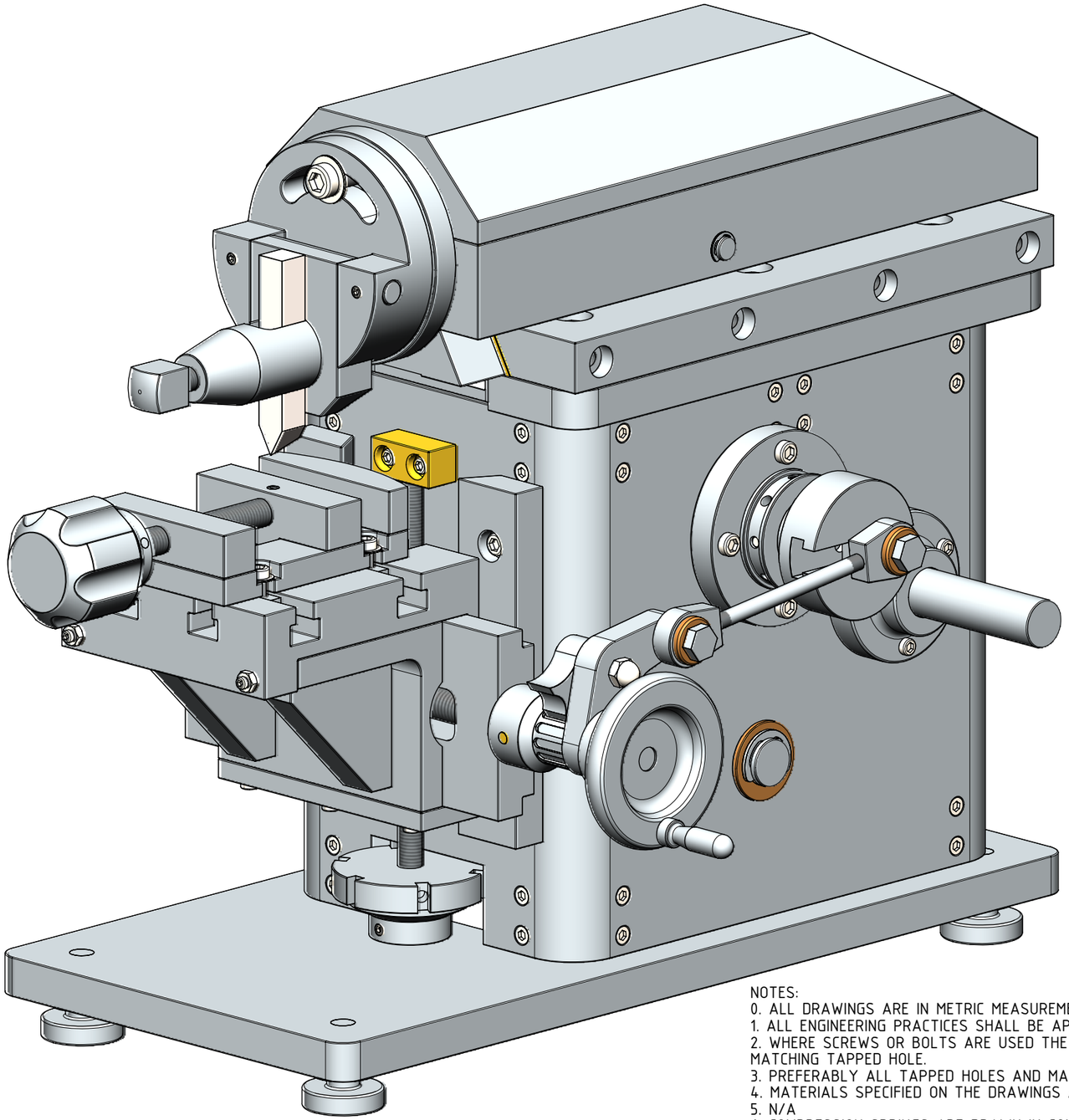

QTY.	PART NUMBER
1	SHAPER-1-01-BASE PLATE
4	SHAPER-1-02-BASE PLATE FOOT
1	SHAPER-1-03-COLUMN BODY
1	SHAPER-1-04-TOP MOUNTING PLATE
1	SHAPER-1-05-RAM GUIDE PLATE
1	SHAPER-1-05-RAM GUIDE PLATE
1	SHAPER-1-06-RAM GUIDE GIB STRIP
1	SHAPER-1-06-RAM GUIDE GIB STRIP
2	SHAPER-1-07-WORKTABLE GUIDE PLATE
1	SHAPER-1-08-JACK SCREW TOP BEARING
2	SHAPER-1-09-OSCILLATING LEVER BEARING BUSH
2	SHAPER-1-10-MOTOR SHAFT BEARING BUSH
1	SHAPER-1-11-MOTOR SHAFT BALL BEARING HOUSING
1	SHAPER-1-12-RED. GEAR BALL BEARING HOUSING
1	SHAPER-2-01-VERTICAL JACK SCREW
1	SHAPER-2-02-MOVABLE DOVE TAIL MOUNTING PLATE
1	SHAPER-2-03-SPACER BLOCK
1	SHAPER-2-04-CROSS SLIDE GUIDE PLATE
1	SHAPER-2-05-CROSS SLIDE BLOCK
1	SHAPER-2-06-CROSS SLIDE SPINDLE
1	SHAPER-2-07-WORK PLATFORM SUPPORT
1	SHAPER-2-08-WORK PLATFORM PLATE
1	SHAPER-2-09-VICE BASE PLATE
1	SHAPER-2-10-VICE MOVABLE JAW
1	SHAPER-2-11-VICE SCREW SPINDLE
4	SHAPER-2-12-VICE T-NUT
1	SHAPER-3-01-RAM
1	SHAPER-3-02-OSCILLATING LEVER TOP SHAFT
1	SHAPER-3-03-CLAPPER BOX HOLDER
1	SHAPER-3-04-CLAPPERBOX
1	SHAPER-3-05-TOOL HOLDER
1	SHAPER-3-06-CUTTING TOOL
1	SHAPER-4-01-OSCILLATING LEVER LOWER SHAFT
1	SHAPER-4-02-OSCILLATING LEVER
1	SHAPER-4-03-DRIVE SHAFT
1	SHAPER-4-04-DRIVE SHAFT GEAR WHEEL
1	SHAPER-4-05-IDLING SHAFT
1	SHAPER-4-06-LOCKING RING
1	SHAPER-4-07-CROSS CUT ADJUSTER DISC
1	SHAPER-4-08-SPACER RING
1	SHAPER-4-09-IDLER SHAFT GEAR WHEEL
1	SHAPER-4-10-IDLER SHAFT GEAR WHEEL COVER
1	SHAPER-4-11-RAM LENGTH ADJUSTER BLOCK
1	SHAPER-4-12-ADJUSTER BLOCK SCREW
1	SHAPER-4-13-ADJUSTER PIVOT AXLE NUT
1	SHAPER-4-14-OSCILLATING SLIDE BLOCK COVER
1	SHAPER-4-15-OSCILLATING SLIDE BLOCK
1	SHAPER-4-16-CROSS CUT ADJUSTER T-NUT
1	SHAPER-4-17-CROSS CUT ADJUSTER ROCKING PLATE
1	SHAPER-4-18-CROSS CUT ADJUSTER PAWL
1	SHAPER-4-19-ADJUSTER CON-ROD
2	SHAPER-M4x30 A-K C-SINK SCREW
2	SHAPER-M5x12 A-K C-SINK SCREW
4	SHAPER-M5x16 A-K CYL HEAD SCREW
1	SHAPER-M5x16 A-K GRUB SCREW
2	SHAPER-M6 NUT
1	SHAPER-M6x10 A-K GRUB SCREW
2	SHAPER-M6x16 A-K GRUB SCREW
4	SHAPER-M6x20 A-K C-SINK SCREW
8	SHAPER-M6x24 A-K CYL HEAD SCREW
4	SHAPER-M6x24 A-K GRUB SCREW
50	SHAPER-M6x26 A-K C-SINK SCREW
2	SHAPER-M6x30 A-K GRUB SCREW
3	SHAPER-M6x40 A-K GRUB SCREW
1	SHAPER-M6x54 A-K GRUB SCREW
1	SHAPER-M8 DOME NUT
4	SHAPER-M8 WASHER
2	SHAPER-M8x10 A-K CYL HEAD SCREW
4	SHAPER-M8x20 A-K CYL HEAD SCREW
8	SHAPER-M8x24 A-K CYL HEAD SCREW
10	SHAPER-M8x26 A-K CYL HEAD SCREW
8	SHAPER-M8x40 A-K GRUB SCREW
1	SHAPER-M10x20 A-K C-SINK SCREW
1	SHAPER-M10x30 A-K CYL HEAD SCREW
4	SHAPER-M10x40 A-K CYL HEAD SCREW
1	SHAPER-M10x46 A-K CYL HEAD SCREW
4	SHAPER-M10x56 A-K CYL HEAD SCREW
6	SHAPER-M10x70 A-K CYL HEAD SCREW
1	SHAPER-M12 DOME NUT
2	SHAPER-M12 WASHER
3	SHAPER-M12x44 A-K CYL HEAD SCREW

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

OTHER ABBREVIATIONS
DP = DEEP
DAA= DRILL AFTER ASSEMBLY
D&TAA= DRILL AND TAP AFTER ASSEMBLY
CB = COUNTER BORE
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
(T)HESOP=(TAPPED)HOLES EQUALLY SPACED ON PCD
(T)HESOC=(TAPPED)HOLES EQUALLY SPACED ON CIRCUMFERENCE
SA-xxx = SUB ASSEMBLY-xxx

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. N/A
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. N/A
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. WASHER AND/OR SPRINGWASHER 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.

ADDITIONAL NOTES:
GREASE NIPPLES AND/OR OILS HOLES CAN BE ADDED AT THE APPROPRIATE PLACES CHOSEN BY THE BUILDER

NOTES: FOUND THE ORIGINAL DRAWINGS ON THE INTERNET. THE ORIGINAL DESIGN IS BY BARRY MIDGRLEY OF AUSTRALIA AND DRAFTING WORK BY BRIAN RUPNO OF CANADA. MY DESIGN IS TWICE THE SIZE THAN THE ORIGINAL.

TITLE
A SIMPLE SMALL METALWORKING SHAPER

DRAWING CONTENTS
ISOMETRIC VIEW, NOTES, BILL OF MATERIALS

PROJECT No 01-29-00
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PROJECTION JDWDS
DATE MAY 2018
SHEET: 02 OF 07

MODEL SCALE: 1:1
DWG SCALE: 1:1 @A3 OR AS SHOWN

A3 No: 01-29-00-SHT02