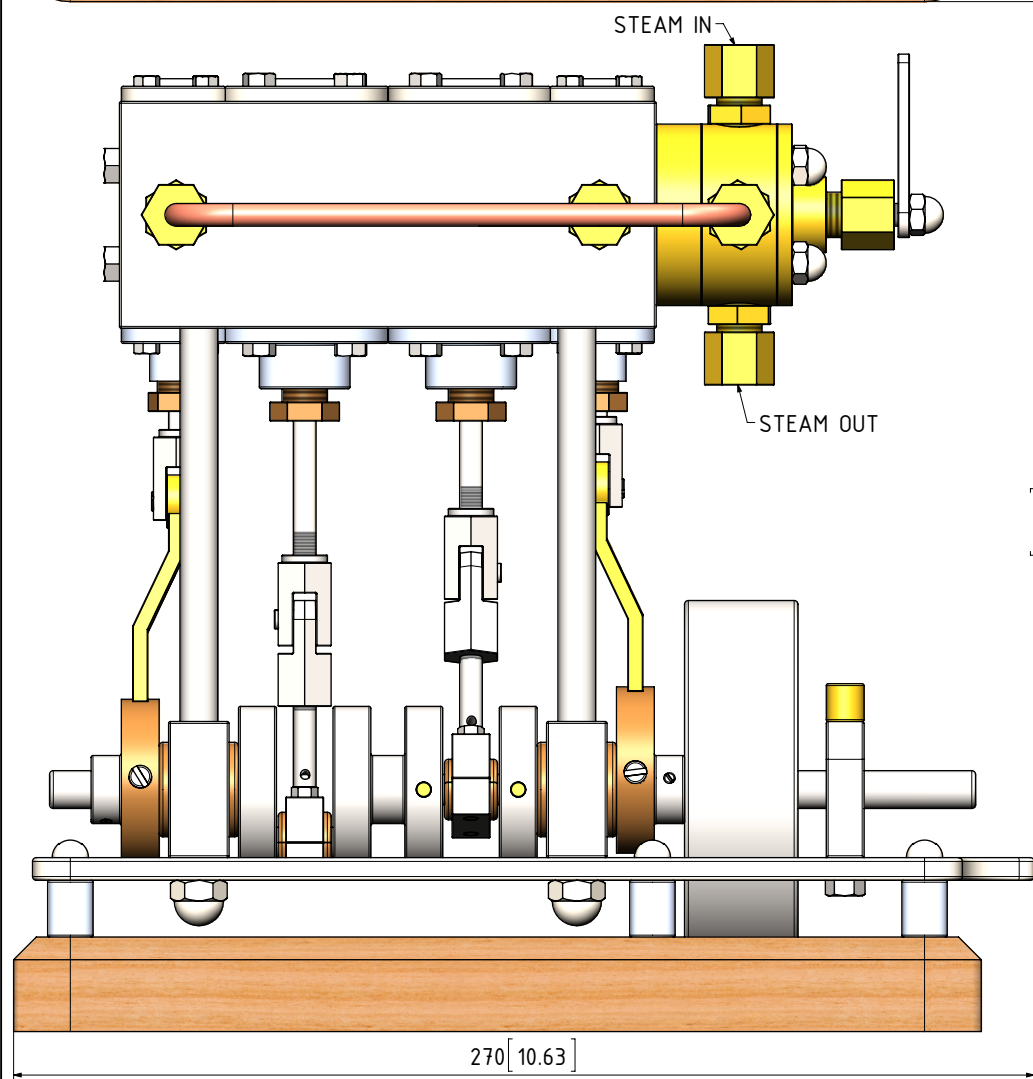
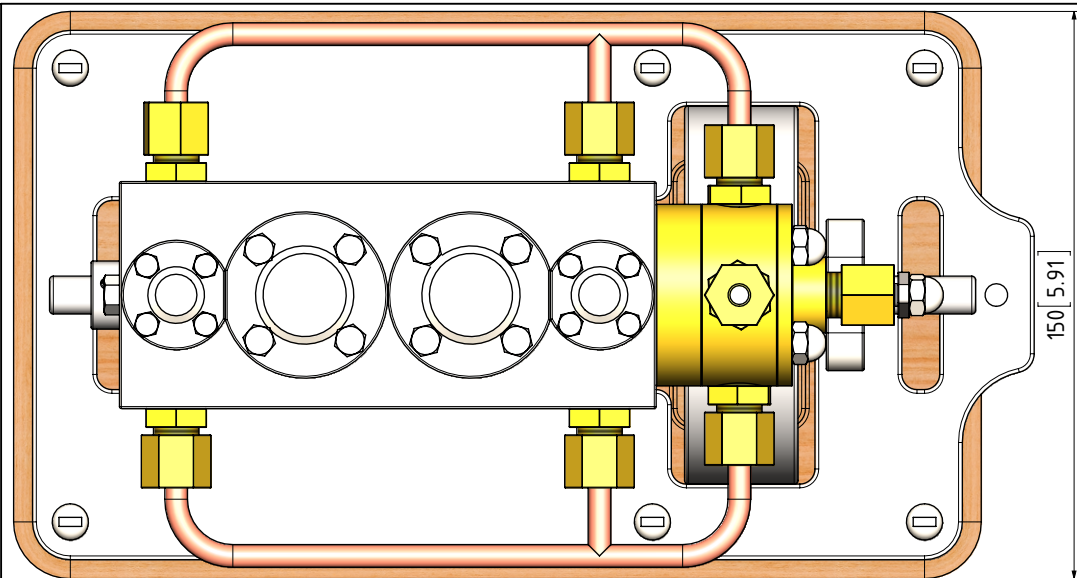


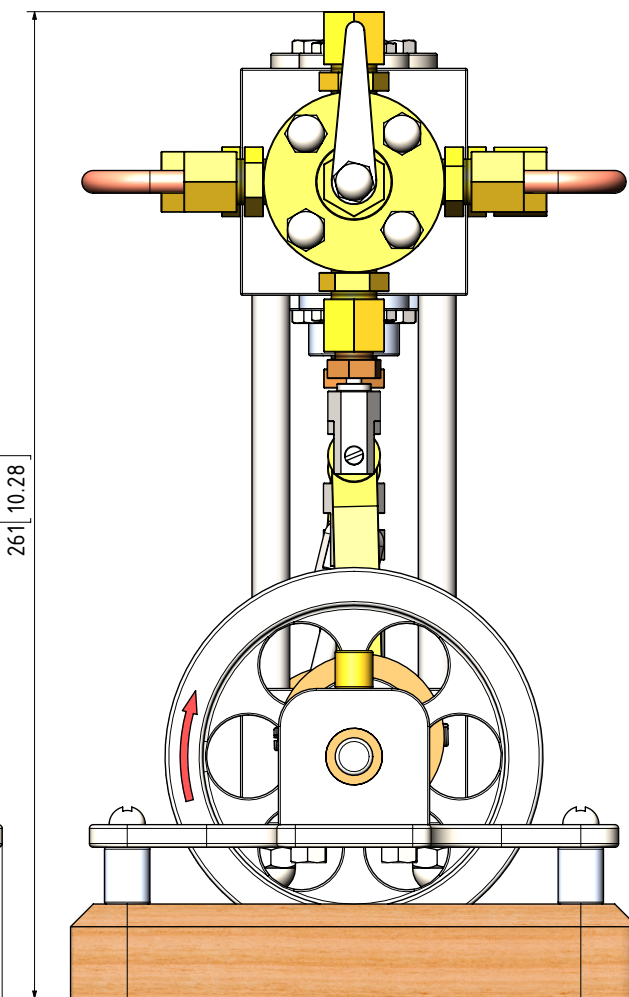


#### MATERIAL ABBREVIATIONS:

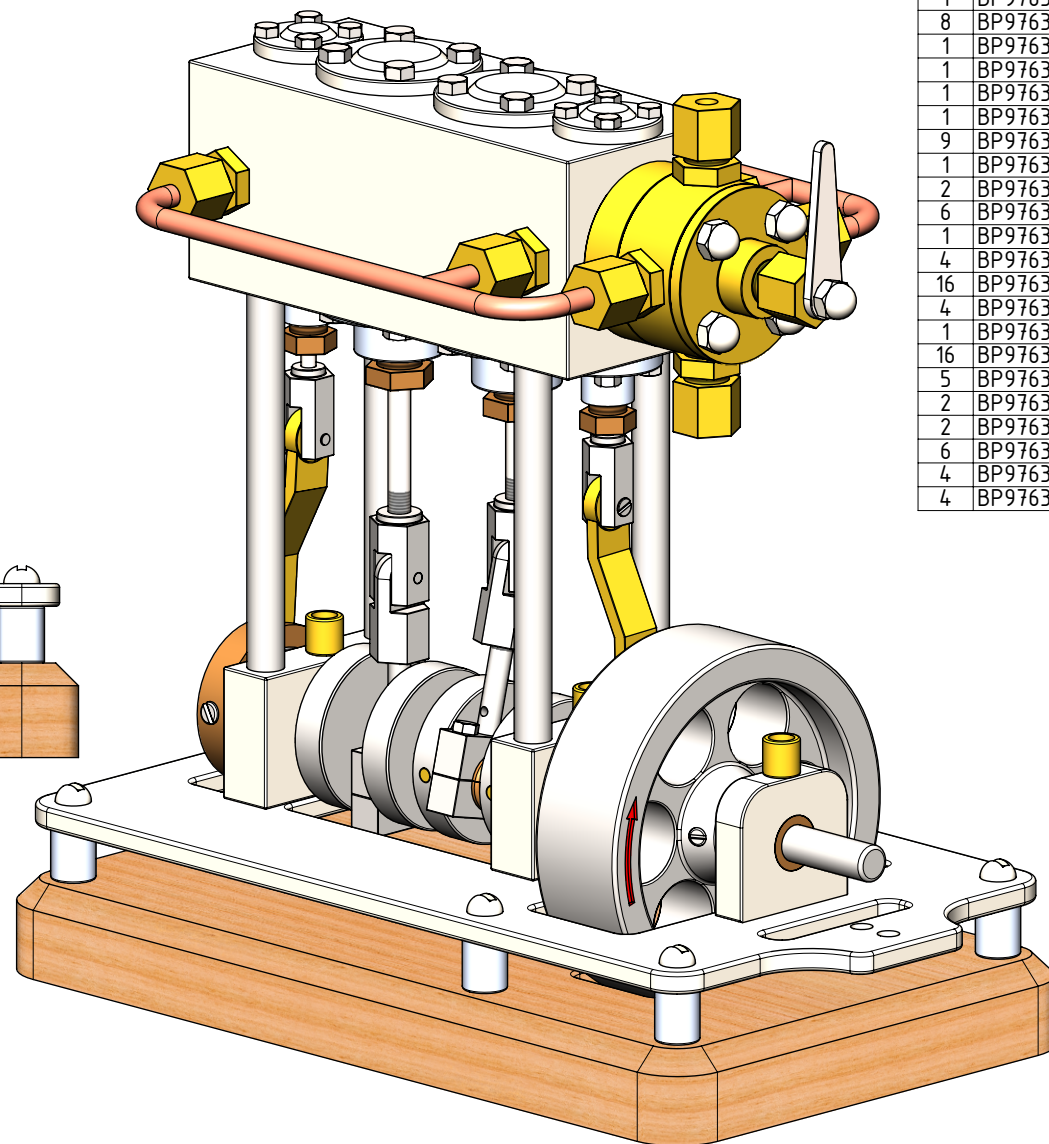
ALU = ALUMINIUM  
BRS = BRASS  
BRZ = BRONZE OR GUNMETAL (BRZ/GM)  
CI = CAST IRON  
CU = COPPER  
GRA = GRAPHITE  
MS = MILD STEEL/BRIGHT MILD STEEL  
S/S = SILVER STEEL OR STAINLESS STEEL  
SPS = SPRING STEEL  
PEEK= POLYETHER ETHER KETONE  
SYN = SYNTHETIC MATERIAL SUCH AS VETON, NYLON, TEFLON OR RUBBER  
IN GENERAL SYNTHETIC MATERIALS SHOULD BE ABLE TO WITHSTAND THE HEAT AND PRESSURE(S) APPLIED TO THEM.  
nnn/nnn MEANS THAT EITHER MATERIAL CAN BE USED

#### 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. WASHER SHALL BE USED WHERE DEEMED NECESSARY.
  14. N/A
- XX. ERRORS AND/OR OMISSIONS MAY OCCUR IN THE DRAWINGS, DO NOT HESITATE TO CONTACT ME SO THAT THE ERRORS/OMISSIONS CAN BE RECTIFIED.



THE OFF SET ANGLE OF THE ECCENTRIC(S)  
IN RELATION TO THE CRANK AXIS TO BE  
EXPERIMENTALLY DETERMINED FOR THE  
SMOOTH RUNNING IN BOTH DIRECTIONS OF  
THE ENGINE AND TO THE SATISFACTION OF  
THE BUILDER



| QTY. | PART NUMBER                               |
|------|-------------------------------------------|
| 1    | BP9763-01-BASE PLATE                      |
| 2    | BP9763-02-CRANKSHAFT BEARING TYPE-1       |
| 1    | BP9763-03-CRANKSHAFT BEARING TYPE-2       |
| 3    | BP9763-04-BEARING OIL POT                 |
| 4    | BP9763-05-CYLINDER BLOCK PILLAR           |
| 1    | BP9763-06-CYLINDER BLOCK                  |
| 2    | BP9763-07-CYLINDER TOP COVER              |
| 2    | BP9763-08-CYLINDER BOTTOM COVER           |
| 2    | BP9763-09-VALVE CHAMBER TOP COVER         |
| 2    | BP9763-10-VALVE CHAMBER BOTTOM COVER      |
| 2    | BP9763-11-PISTON ROD GLAND                |
| 2    | BP9763-12-VALVE ROD GLAND                 |
| 1    | BP9763-13-CRANKSHAFT END-1                |
| 1    | BP9763-14-CRANKSHAFT END-2                |
| 2    | BP9763-15-OUTER CRANK WEB                 |
| 1    | BP9763-16-INNER CRANK WEB                 |
| 2    | BP9763-17-CRANKPIN                        |
| 2    | BP9763-18-ECCENTRIC SHEAVE                |
| 2    | BP9763-19-PISTON                          |
| 2    | BP9763-20-PISTON ROD                      |
| 2    | BP9763-21-PISTON ROD YOKE                 |
| 2    | BP9763-22-CON-ROD                         |
| 2    | BP9763-23-CON-ROD BIG END PART-1          |
| 2    | BP9763-24-CON-ROD BIG END PART-2          |
| 4    | BP9763-25-CON-ROD BIG END BEARING         |
| 2    | BP9763-26-CON-ROD YOKE CONNECTOR          |
| 2    | BP9763-27-PISTON ROD YOKE PIVOT PIN       |
| 2    | BP9763-28-PISTON VALVE                    |
| 2    | BP9763-29-PISTON VALVE ROD                |
| 2    | BP9763-30-PISTON VALVE ROD YOKE           |
| 2    | BP9763-31-PISTON VALVE ROD YOKE PIVOT PIN |
| 2    | BP9763-32-ECCENTRIC STRAP                 |
| 2    | BP9763-33-ECCENTRIC STRAP ROD             |
| 4    | BP9763-34-ECCENTRIC STRAP LOCATION SCREW  |
| 1    | BP9763-35-FLYWHEEL                        |
| 8    | BP9763-36-IN-OUTLET PIPE NIPPLE           |
| 1    | BP9763-37-REVERSER BASE PLATE             |
| 1    | BP9763-38-REVERSER PORT PLATE             |
| 1    | BP9763-39-REVERSER TOP PLATE              |
| 1    | BP9763-40-REVERSER VALVE                  |
| 9    | BP9763-41-IN-OUTLET PIPE NUT              |
| 1    | BP9763-42-REVERSER VALVE OPERATOR HANDLE  |
| 2    | BP9763-43-IN-OUT LET PIPE                 |
| 6    | BP9763-44-BASE STAND-OFF                  |
| 1    | BP9763-45-BASE                            |
| 4    | BP9763-M3x4 GRUB SREW                     |
| 16   | BP9763-M4x18 HEX BOLT                     |
| 4    | BP9763-M4x22 HEX BOLT                     |
| 1    | BP9763-M5x9 GRUB SREW                     |
| 16   | BP9763-M5x18 HEX BOLT                     |
| 5    | BP9763-M6 DOME NUT                        |
| 2    | BP9763-M6x6 HEX BOLT                      |
| 2    | BP9763-M6x18 HEX BOLT                     |
| 6    | BP9763-M6x40-WOOD SCREW                   |
| 4    | BP9763-M6x52 THREADED ROD                 |
| 4    | BP9763-M8 DOME NUT                        |

#### 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  
(T)HESOP=(TAPPED)HOLES EQUALLY  
SPACED ON PCD  
(T)HESOC=(TAPPED)HOLES EQUALLY  
SPACED ON CIRCUMFERENCE  
[SA-xxx]= SUB ASSEMBLY-xxx

NOTES: FOUND ORIGINAL DRAWINGS ON INTERNET, GERMAN ORIGIN. REFERENCE "BAUPLAN Nr. 9763 VOM NECKAR-VERLAG, KONSTRUKTION: K.-E. JENCZOK"

TITLE  
**2 CYLINDER VERTICAL MARINE TYPE STEAM  
ENGINE (BORE 24 X STROKE 28)**

DRAWING CONTENTS  
**GENERAL ARRANGEMENT, ISOMETRIC  
VIEW, BOM AND NOTES**

PROJECT No 09C-22-00  
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PROJECTION  
DATE  
NOVEMBER 2016  
SHEET: 01 OF 03

MODEL SCALE: 1:1  
DWG SCALE: NTS @A3 OR AS SHOWN  
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A3 No: BP-9763-01