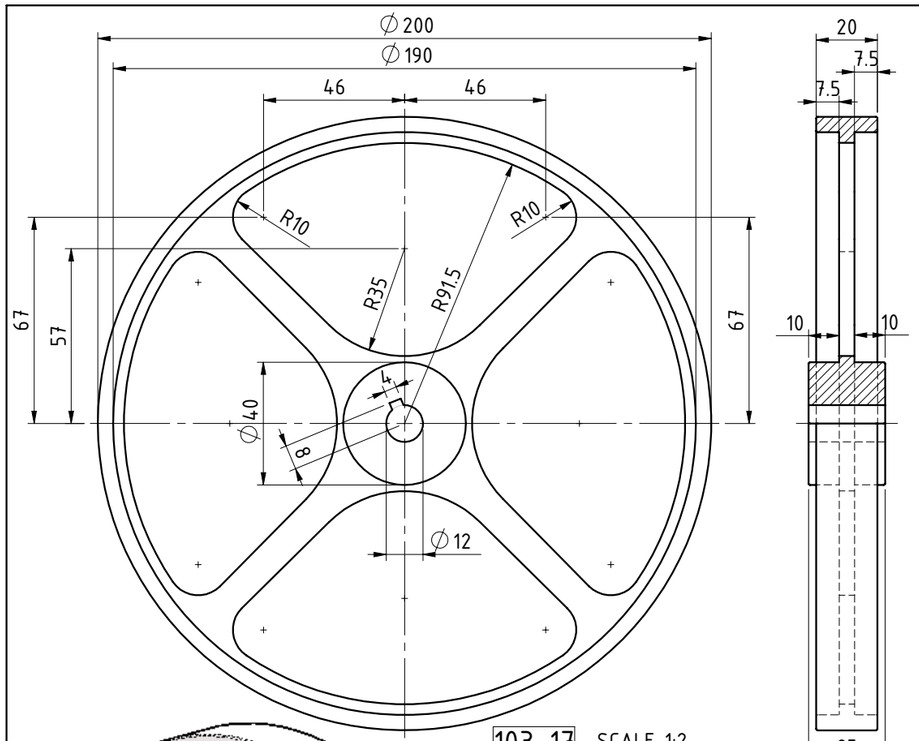
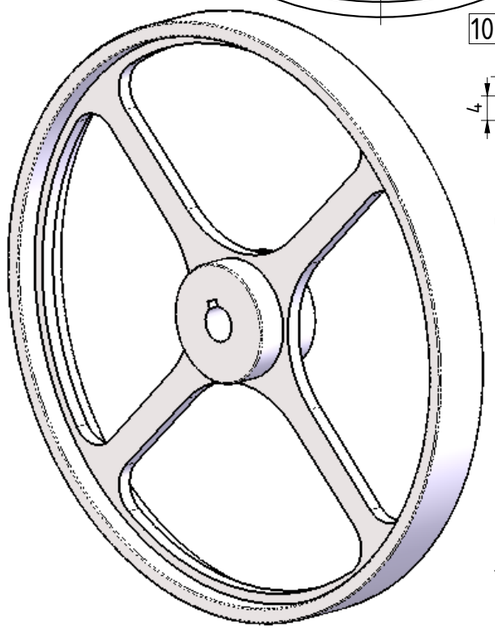
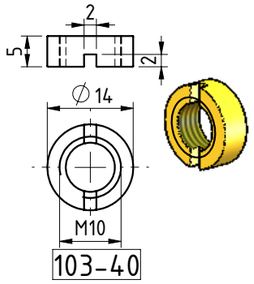


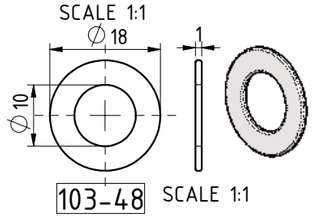


103-17 SCALE 1:2

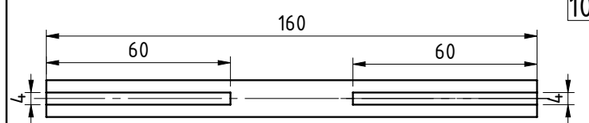
103-18 SCALE 1:1



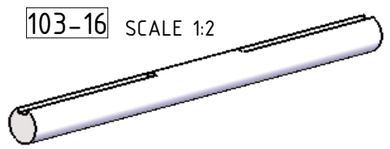
103-40 SCALE 1:1

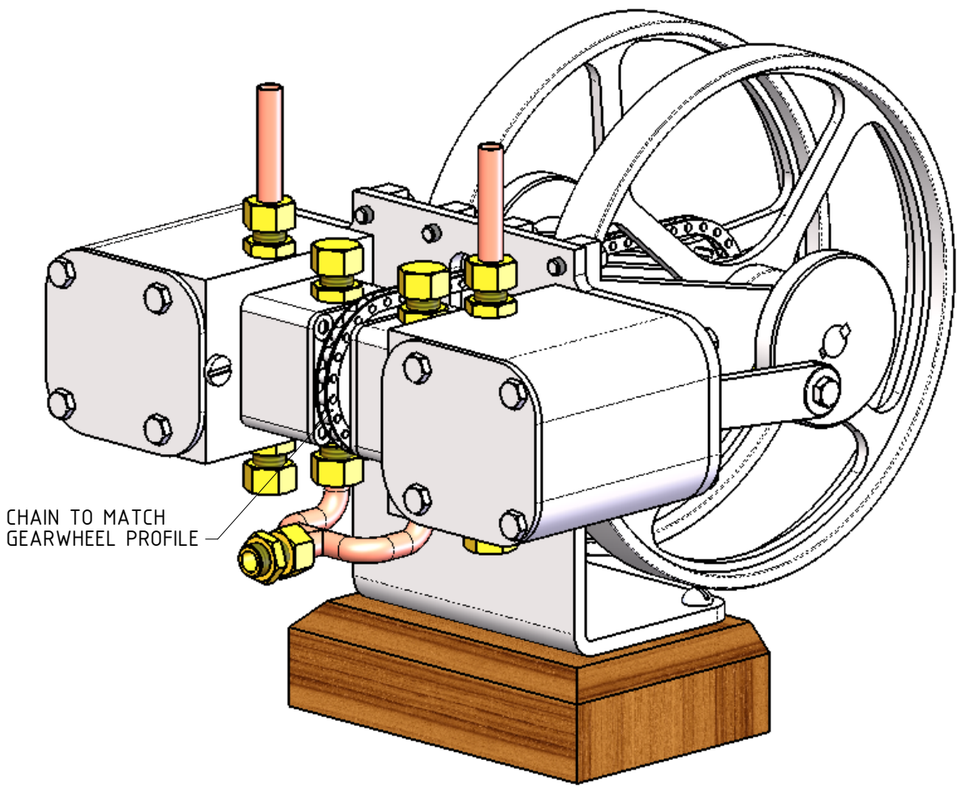


103-48 SCALE 1:1



103-16 SCALE 1:2





QTY	PART NUMBER
1	01-BASE
1	02-BASE PLATE
4	03-SUPPORT BRACKET
4	04-SUPPORT BRACKET BUSH
2	05-CYLINDER BLOCK
2	06-CYLINDER BLOCK FRONT COVER
2	07-VALVE COVER
2	08-VALVE COVER BUSH
2	11-CONNECTING ROD BUSH-2
2	12-CONNECTION ROD
2	13-CRANK DISC
2	14-CRANK PIN
1	15-CRANK SHAFT SPROCKET
1	16-CRANK SHAFT
2	17-FLYWHEEL
4	18-KEY 4x4x25
1	19-INLET PIPE
5	20-M12 CROCKS NUT
9	21-M12 NIPPLE
2	22-PISTON PIN
2	23-PISTON
1	24-CHAIN
1	31-VALVE
1	32-VALVE-1
1	35-VALVE SHAFT SPROCKET
2	38-KEY 2x3x15
2	40-LOCK NUT
8	41-M6x20 ALLEN KEY
2	43-M8 SCREW PLUG
4	44-M12 STOP NUT
2	45-9x8x50 COPPER TUBE
2	46-CONNECTING ROD BUSH-1
4	47-ROLL PIN
4	48-10x18 WASHER
4	49-PISTON RING
2	50-VALVE SHAFT SEAL
2	M4x12 CYLINDERHEAD SCREW
26	M6x20
3	WOOD SCREW

EXPERIMENTAL TWIN CYLINDER STEAM ENGINE WITH ROTATING VALVES

ITEM	DESCRIPTION	MATERIAL	REMARKS
ASSEMBLY 200			
01	BASE	WOOD	PINE
02	BASE PLATE	MILD STEEL (1020)	6MM THICK
05	CYLINDER BLOCK	MILD STEEL (1020)	
06	CYLINDER BLOCK FRONT COVER	MILD STEEL (1020)	
20	M12 CROCKS NUT	BRASS	
21	M12 NIPPLE	BRASS	
41	M6X20 ALLEN KEY C/S SCREW	MILD STEEL (1020)	
43	M8X5 SCREW PLG	MILD STEEL (1020)	
44	M12 STOP NUT	BRASS	
45	9X8050 COPPER TUBE	COPPER	OD=9 ID=8
ASSEMBLY 100			
03	SUPPORT BRACKET	MILD STEEL (1020)	10MM THICK
04	SUPPORT BRACKET BUSH	BRONZE	
ASSEMBLY 101			
31	VALVE	BRASS	
32	VALVE-1	BRASS	
35	VALVE SHAFT SPROCKET	MILD STEEL (1020)	
38	KEY 2X3X15	MILD STEEL (1020)	
50	VALVE SHAFT SEAL	TEFLON	
ASSEMBLY 102			
07	VALVE COVER	MILD STEEL (1020)	
08	VALVE COVER BUSH	BRONZE	PRESS FIT
ASSEMBLY 103			
13	CRANK DISC	MILD STEEL (1020)	
14	CRANK PIN	SILVERSTEEL	S/STEEL
15	CRANK SHAFT SPROCKET	MILD STEEL (1020)	
16	CRANK SHAFT	MILD STEEL (1020)	
17	FLY WHEEL	MILD STEEL (1020)	
18	KEY 4X4X2	MILD STEEL (1020)	
40	LOCK NUT	MILD STEEL (1020)	
48	10X18 WASHER	MILD STEEL (1020)	
ASSEMBLY 104			
19	INLET PIPE	COPPER	
20	M12 CROCKS NUT	BRASS	
21	M12 NIPPLE	BRASS	
ASSEMBLY 105			
27	CHAIN LINK	MILD STEEL (1020)	
29	CHAIN ROLLER	SILVERSTEEL	
ASSEMBLY 106			

TITLE

EXPERIMENTAL TWIN CYLINDER STEAM ENGINE WITH ROTATING VALVES ASSEMBLIES AND PARTS

REV	DESCRIPTION	DATE
A	ISSUED TO NVM	03/2007

JDW DRAUGHTING SERVICES
12 BRIGHTWELL STREET
PAPAKURA NEW ZEALAND
TEL/FAX 0064-09-2988815
E-MAIL:dewaal@xtra.co.nz

DRAWN BY: J.A.M. DE WAAL	PROJECTION	DRAWING NUMBER: RVSTM-003	
DATE: APRIL 2006	SCALE: AS SHOWN	CAD FILE	REV: A