

## Suggestions:

A: Seal and fix between a cylinder cover (No.1) and a cylinder (No.5) with a silicone gulue.

B: Seal and fix between a cylinder cover (No.1) and a cylinder (No.5) with a quick drying silicone gulue.

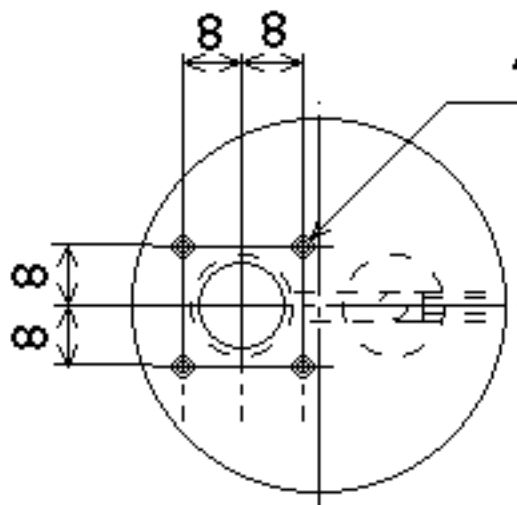
C: Fit Pistons (No.6, No.7) and piston pins (No.9) after assemble connecting rods (No.10) and a piston pins (No.9).

D: Bend a crank shaft (No.8) after put together a flywheel (No.4).

E: Fit a Flywheel (No.4) and a crank shaft (No.8) using a wire (No.16).

1

Number	Name	Material	Number of parts	Notes
1	Cylinder cover	Aluminum	2	

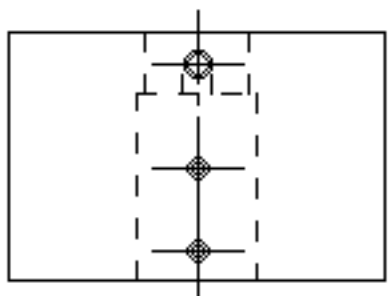
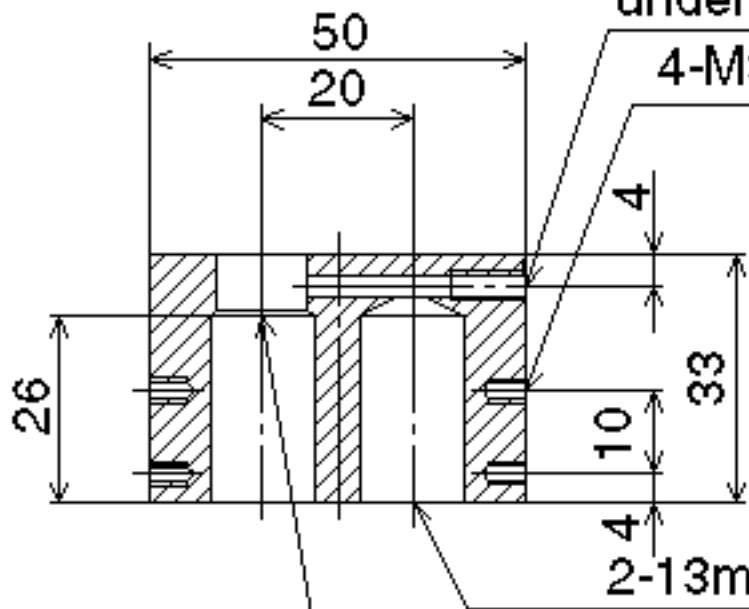


4-M3, 6mm depth

\* Note:  
Fit to diameter of medical syringes.

M4, 10mm depth,  
under hole 3.5mm drill

4-M3, 4mm depth



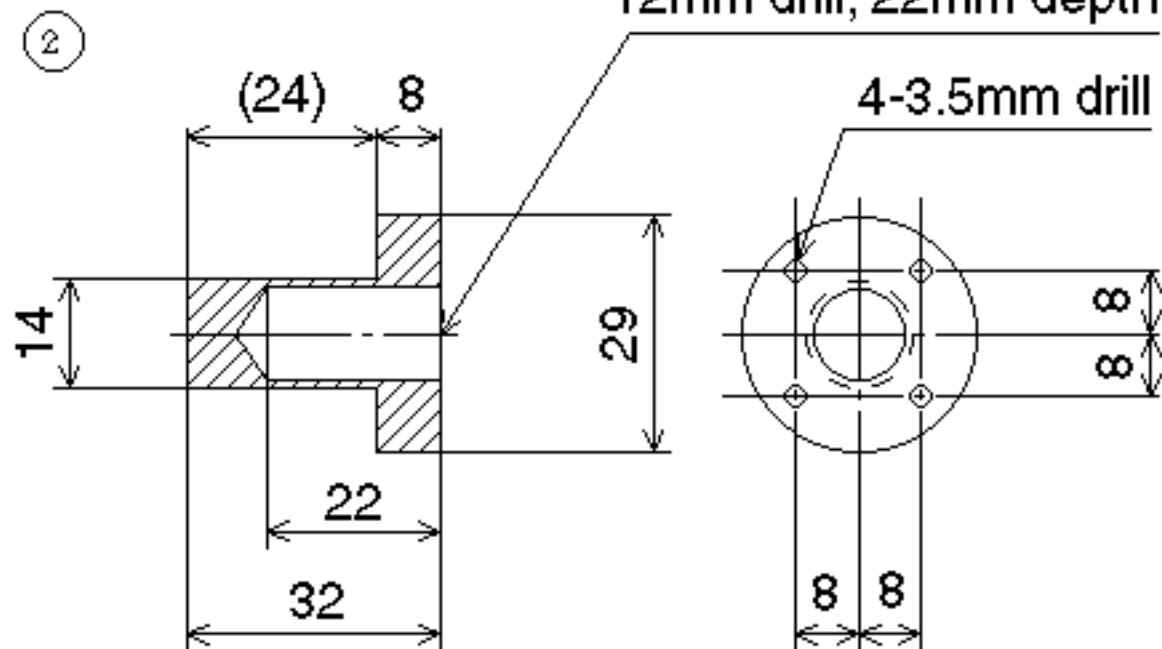
2-13mm\* drill, 26mm depth

12.4mm drill

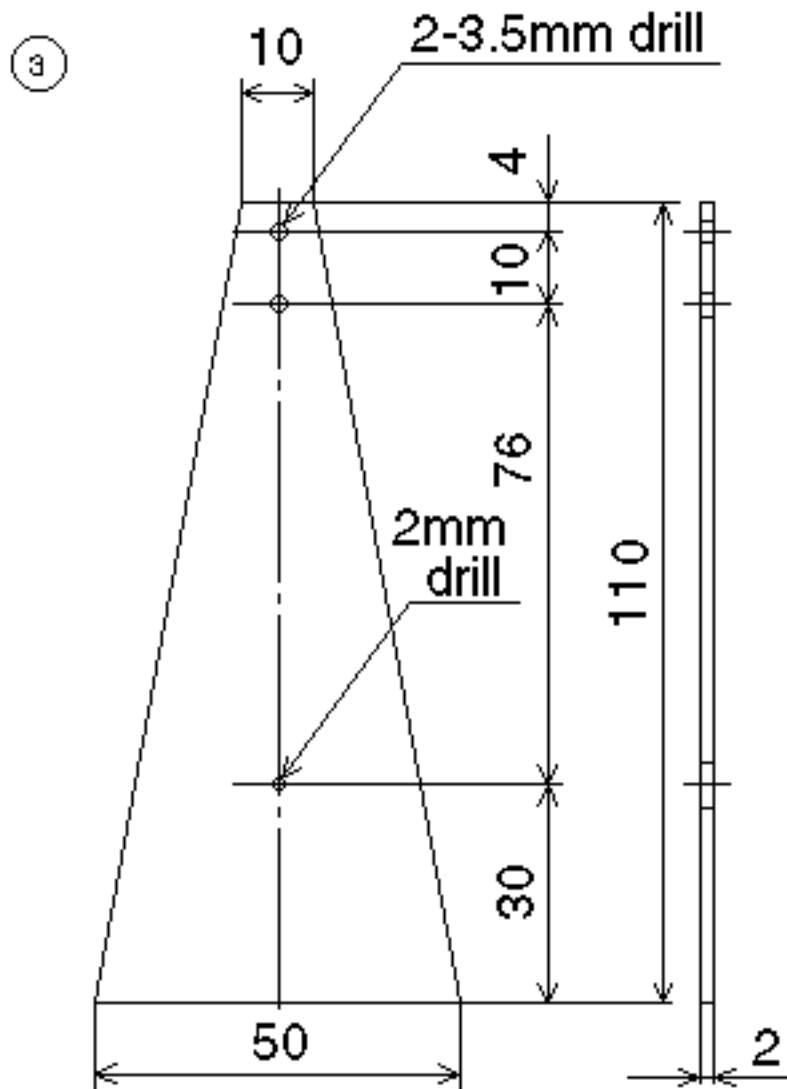
Number	Name	Material	Number of parts	Notes
2	Heater	stainless	1	

12mm drill, 22mm depth

4-3.5mm drill

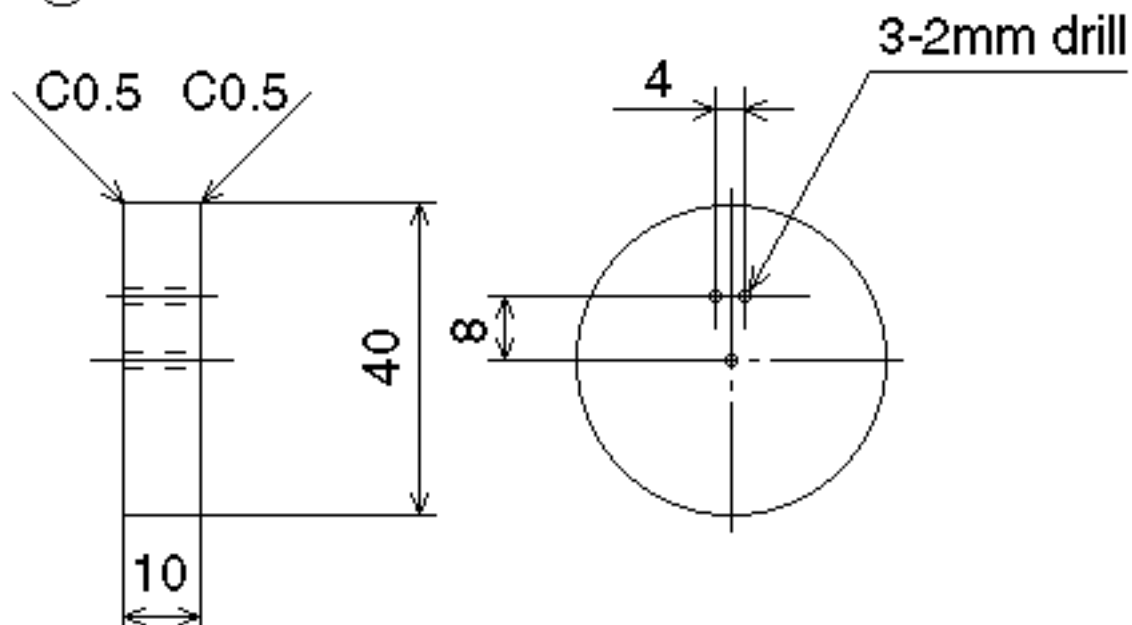


Number	Name	Material	Number of parts	Notes
3	Frame	aluminum	1	

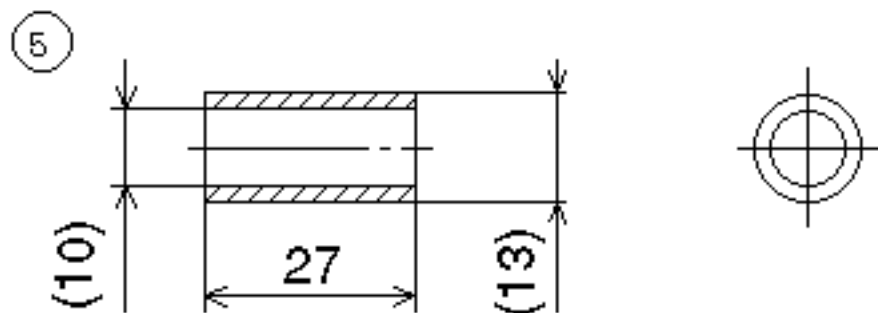


Number	Name	Material	Number of parts	Notes
4	Flywheel	brass	1	

4

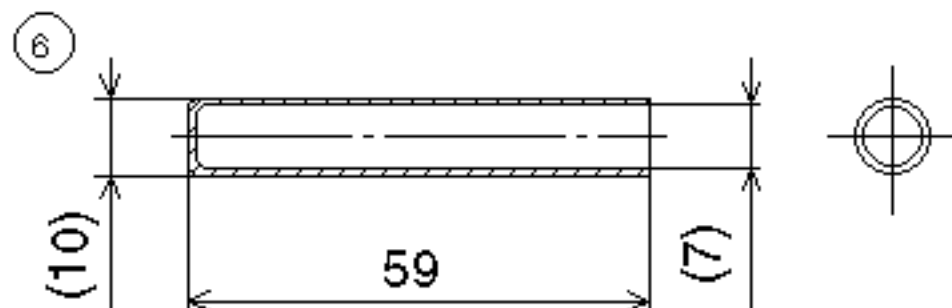


Number	Name	Material	Number of parts	Notes
5	Cylinder	glass	2	Medical syringe



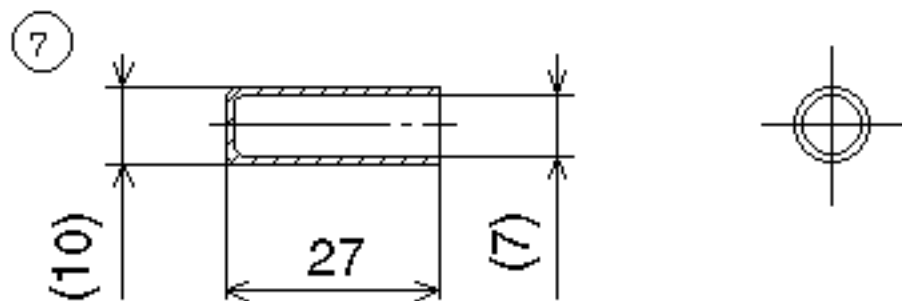
Note:  
Use 3cc medical syringes.

Number	Name	Material	Number of parts	Notes
6	Hot piston	glass	1	Medical syringe



Note:  
Use 3cc medical syringes.

Number	Name	Material	Number of parts	Notes
7	Cold piston	glass	1	Medical syringe

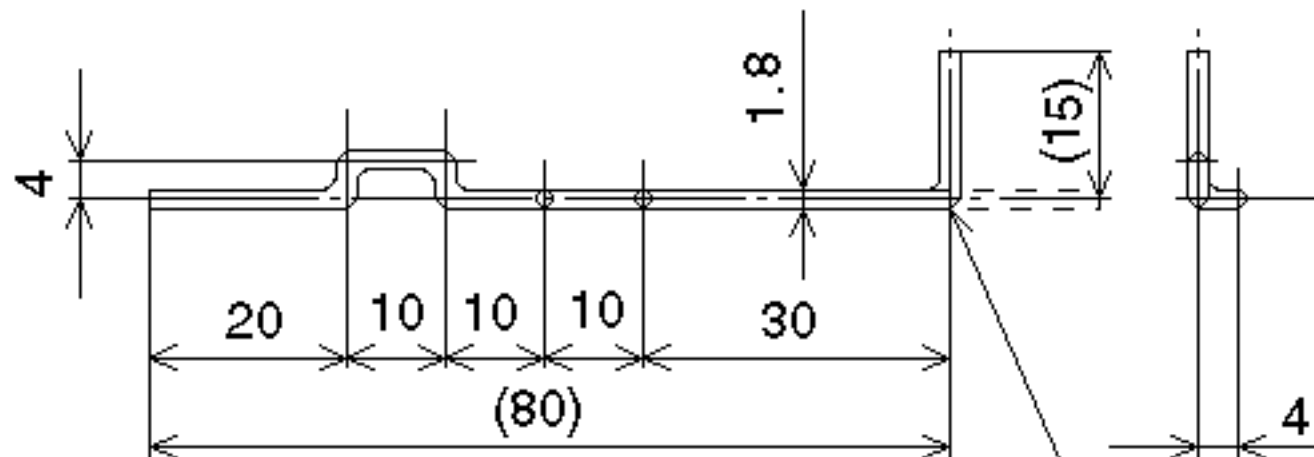


Note:  
Use 3cc medical syringes.



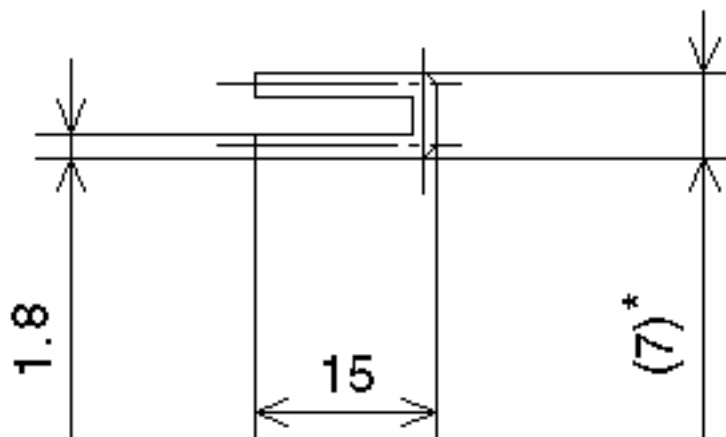
Number	Name	Material	Number of parts	Notes
8	Crank shaft	steel wire	1	1.8mm diameter

8



Number	Name	Material	Number of parts	Notes
9	Piston pin	steel wire	2	1.8mm diameter

9

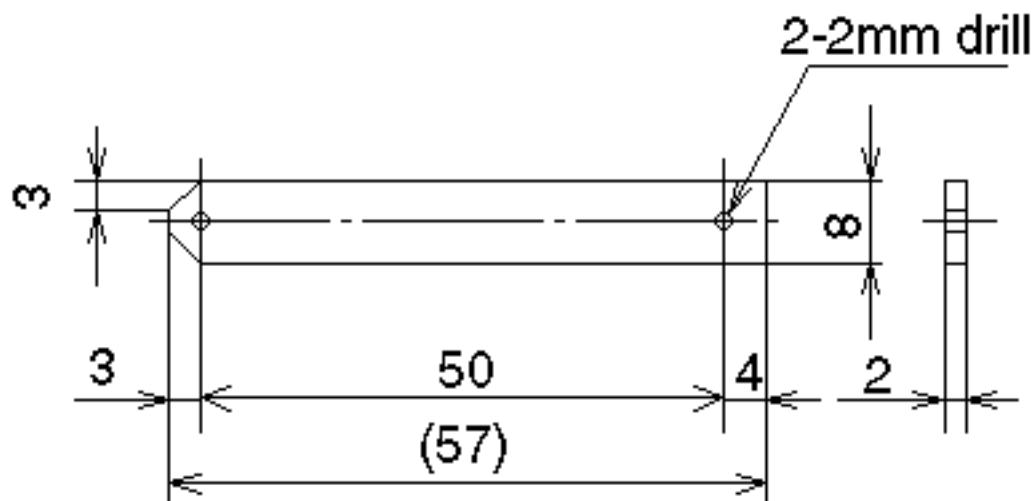


\* Note:

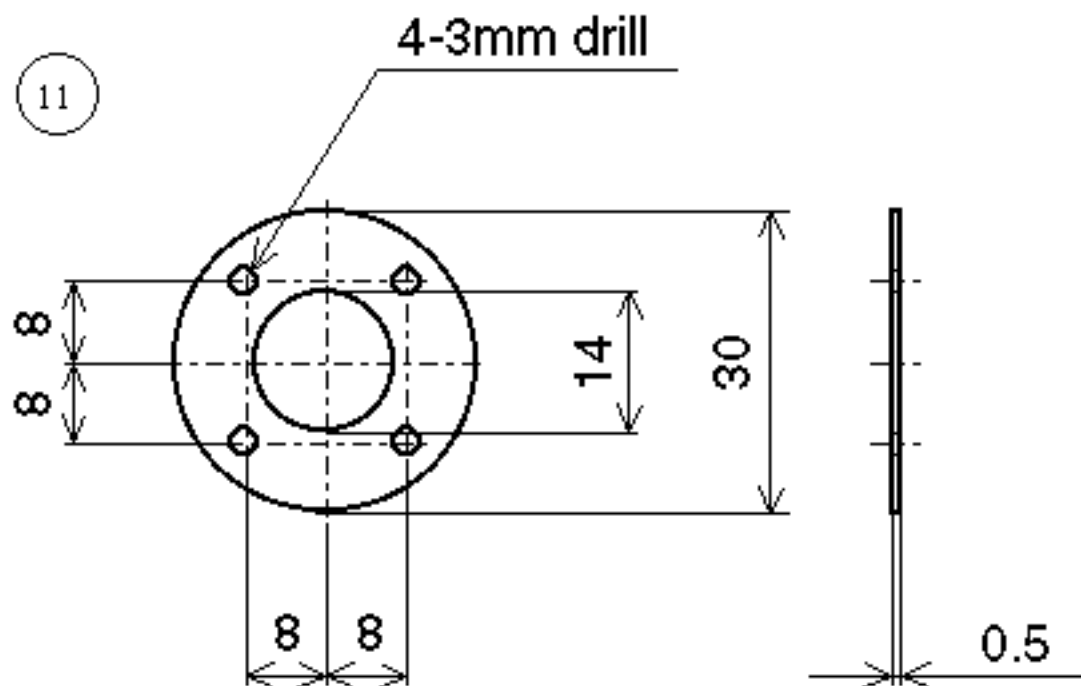
Fit to diameter of  
medical syringes.

Number	Name	Material	Number of parts	Notes
10	Connecting rod	Teflon	2	

10

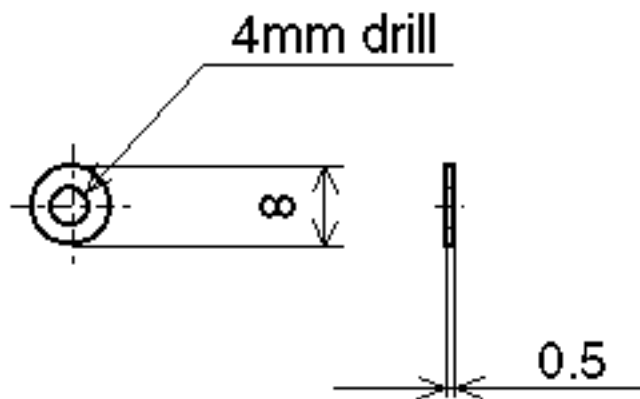


Number	Name	Material	Number of parts	Notes
11	Gasket	silicone rubber	3	



Number	Name	Material	Number of parts	Notes
12	Gasket	silicone rubber	1	

12



Number	Name	Material	the number of parts	Notes
1	Cylinder cover	aluminum	2	
2	Heater	stainless	1	
3	Frame	aluminum	1	
4	Flywheel	brass	1	
5	Cylinder	glass	2	Medical syringe
6	Hot piston	glass	1	Medical syringe
7	Cold piston	glass	1	Medical syringe
8	Crank shaft	steel wire	1	1.8mm diameter
9	Piston pin	steel wire	2	1.8mm diameter
10	Connecting rod	Teflon	2	
11	Gasket	silicone rubber	3	
12	Gasket	silicone rubber	1	
13	Bolt	steel	1	M4 x 8mm
14	Bolt	steel	4	M3 x 12mm
15	Bolt	steel	4	M3 x 5mm
16	Wire	steel	1	0.5mm diameter

## TSE-03 Drawing Figures

Thank you very much for down load this file. I don't know how to draw English figures. Please feel free to mail me when you have any question.

Koichi Hirata  
2 March, 1996

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### File list:

README.TXT: This file  
T03\_K1.GIF: Assembly Drawing of TSE-03  
T03\_K2.GIF: Suggestions to Assemble TSE-03  
T03\_K2.TXT: Suggestions to Assemble TSE-03  
PARTSE.GIF: Parts list of TSE-03  
PARTS01E.GIF - PARTS12E.GIF: Parts Drawing of TSE-03

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URL: <http://www.bekkoame.pr.jp/~khirata/indexe.htm>

