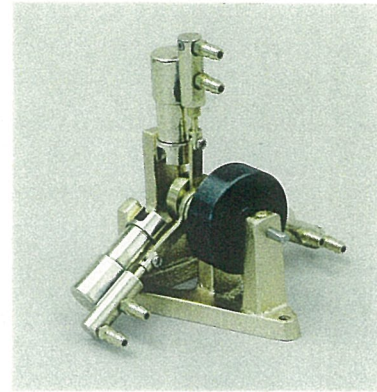


## Instructions for SAITO S3R Engines

We would like to express our sincere thanks for your purchase of the SAITO S3R engine, which is manufactured by Saito Seisakusho, Ltd. Please read our instructions carefully and treat your engine with care. Also please read our instructions for BT-1.



### ① Lubrication

Supply the oiler (OIL) with full of steam oil (green oil provided) before operation.

Supply #50 automobile engine oil to each section of the engine (bearing, crank pin, connecting rod, piston valve rod, piston valve rod pin, piston pin, crank eccen, and etc.).

Adding of molybdenum disulfide or silicone by 5 % will improve lubrication.

Perform this lubrication every time before operation.

\*The steam engine does not require any regular adjusting. The engine just requires sufficient lubrication of specified oil.

### ② Installation

Install the engine on a flat place. (Wood screws function well.)

If the place is not flat, the engine bed becomes loose preventing smooth shaft rotation.

### ③ Maintenance

Occasionally tighten the crank eccen, flywheel, crank pin and piston valve rod pin.

### ④ Disassembly and Assembly

Disassembling the engine is not recommended. If required inevitably, exercise an extreme care for installation direction or tightening torque.

### ⑤ Forward/Reverse Shift Valve

The S3R engine can rotate normally or reversely with the change of intake and exhaust directions of the forward/reverse shift valve. For details of piping, refer to the drawing.

All specifications and models are subject to change without notice.

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# SAITO-S3R-PARTS LIST

NO	Description	Qty	NO	Description	Qty
1	NO1 Cylinder (Center)	1	20	Flywheel SET SCREW (M3X3)	2
2	NO2 Cylinder (Left)	1	21	SET SCREW Nail (t)	5
3	NO3 Cylinder (Right)	1	22	Lubricator	1
4	Piston	3	O-1	Cap	1
5	Piston Pin	3	O-2	O Ring P-7	1
6	Connecting Rod	3	O-3	Tank	1
7	Crankpin	1	23	Forward And Reverse Valve	1
8	Thrust Washer (0.5T)	2	R-1	Body	1
9	Piston Valve	3	R-2	Lever	1
10	Piston Valve Rod	3	R-3	O Ring P-3	1
11	Piston Valve Rod Pin (M2)	3	R-4	Valve	1
12	Nipple	14	R-5	Cap	1
13	Crankshaft	1	R-6	Bracket NO1	1
14	Flywheel	1	R-7	Bracket NO2	1
15	Thrust Washer (1T)	1	R-8	Bracket SET SCREW (M3X6)	1
16	Piston Valve Rod Retainer	1	R-9	Bracket SET Nut (M3)	1
17	Eccentric Crank	1	R-10	Body SET Nut (M5)	1
18	Mount	1	R-11	Washer (M5)	1
19	Cylinder SET SCREW (M2.6X5)	3			

S3R

