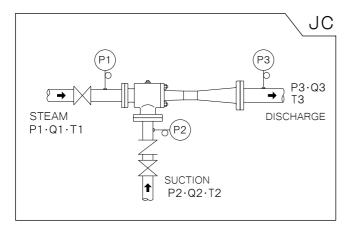
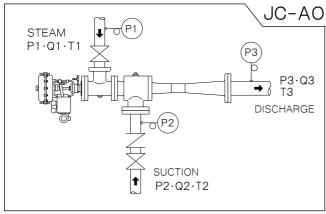
INSTRUCTION MANUAL for THERMO-COMPRESSOR

[1] Basic Conditions

1. Thermo-Compressor is designed and manufactured by required specifications.

Therefore, please confirm whether each pressure, driving press.(P1), suction press(P2), discharge press (P3), is accord with specific condition.





2. When desgin SPEC. don't accord with operating SPEC., the following problems occur.

P1	P2	P3	Q2
Higher *	Design point	Design point	slight decrease
Lower *	Design point	Design point	decrease
Design point	Higher *	Design point	increase
Design point	Lower *	Design point	decrease
Design point	Design point	Higher *	decrease
Design point	Design point	Lower *	no change

(* than design point)

- X It is impossible to increase suction flowrate by changing operating condition.
 - [Case to raise P2 pressure is excluded.]
- When each steam pressure fluctuates, each Design Point is...
 - A. P1 is desgined by the lowest point.
 - B. P2 is desgined by the lowest point.
 - C. P3 is desgined by the highest point.

[2] Installation

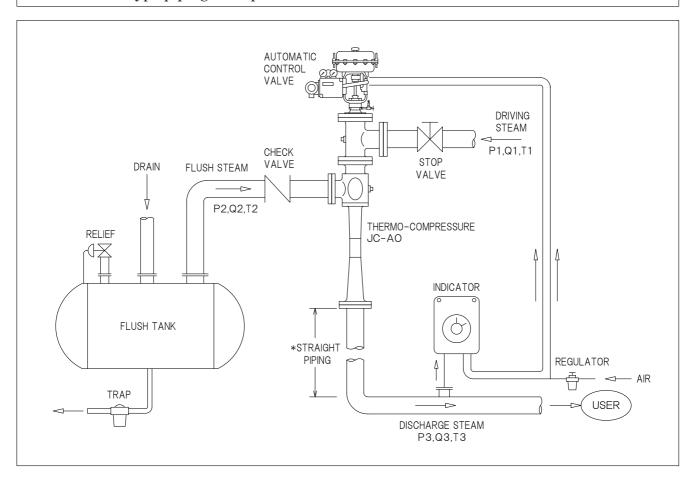
- Thermo-Compressor can be used with piping either in the horizontal or vertical direction.
 however, its direction need to be not saved drain during driving and stopping, or its direction need to be exhausted from drain plug before starting up.
- 2. In case of avoiding back flow into low pressure line, please install a check valve at suction line.
- 3. For adequate performance, please provided the discharge side of a straight pipe length more than diffuser length or same.
- 4. The driving steam pipe need to consider followings, to maintain the pressure and dryness of design value at just right before the nozzle.
 - a) Install a steam trap at nearest of the driving side to remove drain.
 - b) Do thermal insulation of the plumbing enough, to prevent steam from getting wet.
- 5. Prevent JC from receiving stress and distortion of the whole plumbing.
- 6. Steam is jetted at supersonic speed (or subsonic speed) at nozzle to give an "ejector effect". Therefore, the noise occurs. please provide silence box for counter measure of the noise.



[3] How to Operate

- Before starting operation, please discharge air and drain enough in the steam pipeline at first.
 When drain and air are left, it causes degradation and the hammer-ring.
- 2. After opening the valve of suction line and discharge line, please open the drive steam valve slowly.
- 3. As the control valve (needle valve) can not shut off the steam, use a shut-off valve to shutt off the equipment. (JC-MO,JC-AO)
- 4. Confirm whether the control system's steam pressure or flow volum settings are corecct, whether the air pressure of the positioner has been properly set and all other check items using the manufacturing specifications as well as the control valve instruction manual.

[4] JC-AO type piping example



[5] Question

If there are any questions, please contact our company.

E-mail : star@hokuto-mfg.com

