

INSTRUCTION MANUAL for EJECTOR

Cautions on piping connection

- ① Direction of ejector installation may be optional. However, in case of Steam-ejector, the positioning which avoid water staying inside while operation stoppage is required and in case of Water-ejector, the positioning of bottom discharge is required to avoid reverse flow to suction end.
- ② Piping and piping components of less resistance are preferable. Selection of Ejector performances shall include such pressure losses of piping and piping components.
- ③ Provision of pressure indicators (or nozzles preparation) on Driving end, Suction end and Discharge end is recommended.
Pressure check at each ends is required for trouble shooting.
- ④ Discharge pipe should be short enough and of less turnings and resistance.
Pressure losses for Discharge piping shall also be include for Ejector selection.
Bigger piping size is preferable for resistance decreasing.
- ⑤ In case of water suction, Suction pipe size should be selected maintaining the velocity 2m/sec and less. That can be attained by selecting suction size of the same as ejector.
- ⑥ Check valve should be provided on the suction line, near to ejector, when to avoid reverse flow to suctionline is required. Pressure losses of check valve shall also be include for ejector selection.
- ⑦ Valve to be provided on suction line for the following conditions.
 - 1) To throttle suction flowrate is required.
 - 2) To avoid reverse flow to suctionline, when operation start and stop.
 - 3) To use for priming device of pumps.
- ⑧ Ejector of water driven (PS-W.WG) require a little resistance on discharge end.
When non-resistance, provision of two sets of 90 degree Elbow on discharge line is recommended.
- ⑨ Take care of the Ejector not to be affected of deformation and stresses from piping.
- ⑩ Take care while piping installation, not to clog Ejector nozzle and diffuser with scale particles in pipingline.



Operation

① Checking before operation.

- 1) Proper piping for all required nozzles.
- 2) All discharge line valves to be opened.
- 3) Suction end valve closed (in case of provided).

② Operation sequence

- 1) Open the Drive end valve, quickly.
- 2) Open the Suction end valve (In case of provided) .
- 3) When adjusting suction flowrate is required, that shall be control by suction end valve.
- 4) When the Ejector is used for priming device of pumps, after completion of air-
evacuation, shut the suction end valve, and start the pump immediately, then
shut the driving end valve.

Trouble shooting

Case of less suction volume or not capable of suction.

Reason	Countermeasure
• Low driving pressure	• Pressure increase
• High discharge pressure	• Reduce resistance
• Higher resistance in suction	• Reduce resistance
• Leak on suction piping	• Tighten connection
• Higher water temperature in suction and diving	• Reduce water temperature or select bigger ejector

Inquiry

If there are any questions, please refer to our company.

E-mail : star@hokuto-mfg.com



HOKUTO MFG.CO.,LTD.