# **Jet Ejectors**

## Solution for different industries





Since 1995

PREEMINENT QUALITY. SUPERIOR EFFICIENCY.

# **Ejectors**

KARAJET has been manufacturing various types of ejectors for the process industries for over 20 years. From entire packaged systems to single units, all KARJET's products are custom-designed to meet all customer's special demands.

#### **Optimal for vacuum generation**

Ejectors are devices of rugged and simple construction which are used in a wide range of applications to generate a suction force. This suction force may be used to create vacuum and/or draw a secondary fluid. Pressurized Liquid, Gas or Steam could be used as the motive medium, while any liquid, gas or steam can be introduced as the suction fluid which includes wide range of applications.

#### Types:

KARAJET ejectors include a wide range of applications depending on required operating conditions. According to the motive fluid, ejectors are categorized into three main types, each further divided into subcategories based on their applications as below;

Liquid Ejectors	Steam Ejectors	Gas Ejectors
<ol> <li>1 - Liquid Jet Vacuum Ejector</li> <li>2 - Liquid Jet Compressor</li> <li>3 - Liquid Jet Ventilator</li> <li>4 - Liquid Jet Liquid Ejector</li> <li>(Eductor)</li> <li>5 - Liquid Jet Solid ejector</li> </ol>	<ol> <li>Steam Jet vacuum Ejector</li> <li>Steam Jet Compressor (Thermo- Compressor)</li> <li>Steam Jet Ventilator</li> <li>Steam Jet Liquid ejector (Syphon)</li> <li>Steam jet heater</li> <li>Steam jet solids ejector</li> </ol>	<ol> <li>1 - Gas jet vacuum ejector</li> <li>2 - Gas jet compressor</li> <li>3 - Gas jet ventilator</li> <li>4 - Gas jet Liquid ejector</li> <li>5 - Gas Jet Solid ejector</li> </ol>

#### Advantages:

- No moving parts
- Low maintenance cost
- Simple installation and operation
- Working with all types of fluids

#### Applicable Codes and Standards:

- ASME Sec. VIII, div. 1
- ASME B31.3
- HEI Standard for Steam Jet Vacuum Systems

## **Performance test before deliver to ensure the quality**

### KARAJET ejectors offer:

- lowest consumption
- customized design
- smart solutions for each industry
- first class manufacturing quality
- high reliability during operation



### Many industrial operations can be carried out by Ejectors

PURPOSE	APPLICATION	MOTIVE FLUID	RECOMMENDED PRODUCTS
To move/pump liquids or solids	Emptying a tank/ pit Pumping juices / edibles in a canning plant Supplying heated water to jackets	Steam	Steam Jet Syphons Steam Jet Heaters Steam Solid Ejectors
	Pumping waste liquids containing solids Cleaning sludge from tanks / pits Moving spent filter clay	Air/Gas	Gas Jet Syphons Gas Jet Mixers Gas Solid Ejectors
	Heating and moving slurries Sampling operations	Liquid	Liquid Jet Ejector Liquid Solid Ejector
To move/pump air or gases	Agitating fermentation tanks/ drying drums Priming centrifugal pumps Exhausting air from vacuum pans & evaporators Pressurizing vats	Steam	Steam Vacuum Ejectors Steam Jet Ventilators Steam Jet Compressors
	Handling corrosive gases Aerating/oxygenating wastewater Circulating or recirculating steam Boosting flash steam from condensate receivers	Air/Gas	Gas Vacuum Ejectors Gas Jet Ventilators Gas Jet Compressors
	Compressing waste steam Convey waste gases to flare Exhaust sulfur pits	Liquid	Liquid Vacuum Ejector Liquid Jet Ventilator Liquid Jet Compressor
To produce a vacuum	Filtration, distillation Impregnation, absorption ,Drying, degassing	Steam	Steam Vacuum Ejectors Steam Jet Ventilators
	Dehydration, evacuating Cooking, evaporating, Vacuum transfer, chilling Removing condensate under vacuum	Air/Gas	Gas Vacuum Ejectors Gas Jet Ventilators
	Exhausting air from vacuum pans & evaporators Priming centrifugal pumps	Liquid	Liquid Vacuum Ejector Liquid Jet Ventilator
To mix two materials	Mixing chemicals in desired proportions Leading water-treating compound into boiler feedwater	Steam	Steam Jet Heaters Steam Jet Ventilators
	Mixing powdered dye with gasoline Blending oils in a tank , Scrubbing gases Mixing by-product gases for furnace firing	Air/Gas	Gas Jet Compressors
	Mixing propane, butane, and natural gas Compressing waste steam to a usable process pressure Circulating steam in dryers	Liquid	Liquid Eductors Liquid Solid ejector Gas Scrubbers
To heat a liquid	Submerged heating, Heating and circulating Preventing freezing of water in gas holder tanks, cups Cooking grain, mash, or similar materials Supplying heated water to jackets of stills and graining bowls	Steam	Steam Jet Heaters Steam Jet Syphons
To scrub a gas	Removing SO <sub>2</sub> , SO <sub>3</sub> , Cl <sub>2</sub> , SiF <sub>4</sub> , HCl, NH <sub>3</sub> , HF, H <sub>2</sub> S, HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , COCl <sub>2</sub> , HCN, SOCl <sub>2</sub> , HBr, Br <sub>2</sub> , F <sub>2</sub> , formaldehyde, particulates, reduced sulfur compounds, and many other compounds	Liquid	Gas Scrubbers
To reduce steam temperature	Power plant requirements for desuperheated steam Improve heat transfer of surface-type heat exchangers Reduce & control superheated steam temperatures Control superheat temperatures at partial loads Maintain balance between process steam & power requirements	Steam	Steam Desuperheaters

Investing in a KARAJET ejectors can reduce operating costs significantly on a permanent basis.

## **WORLDWIDE SERVICE & SUPPORT**

Other KARAJET products you might be interested in

- Multi stage vacuum systems
- Condensers
- Heat Exchangers

## **KARAJET**<sup>®</sup>

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