EJECT, EJECT-ELL & EJECT-LM

Syphons, Eductors, Exhausters & Injectors

Model	EJECT EJECT-ELL EJECT-LM
Sizes	1/2" – 2"
Connections	NPT
Body Material	Bronze (1/2" - 1 1/2") Cast Iron (2")
PMO Max. Operating Pressure	100 PSIG
TMO Max. Operating Temperature	130°F
PMA Max. Allowable Pressure	250 PSIG up to 450°F
TMA Max. Allowable Temperature	450°F @ 250 PSIG

Note: Minimum Operating Pressure for EJECT-ELL & EJECT-LM is 20 PSIG.

Typical Applications

Watson McDaniel **Ejectors** perform a variety of functions depending upon the application and motive fluid (steam or water) used. See performance charts on the following pages. Applications include: exhausting, agitating, aerating, circulating, pumping and mixing.

How It Works

Using water, steam or air pressure as the motive force, ejectors operate on the principle that a high velocity flow through a nozzle will create a pressure drop in the area around the nozzle discharge. The resulting vacuum will induce flow into the secondary inlet of the ejector.

Features

- No moving parts
- Can be used with water or steam pressure
- Submersible
- Available in cast iron or bronze

Sample Specification

Ejectors shall be constructed from bronze or cast iron. Units shall be capable of using steam, water or air as a motive force.

Installation

See installation examples on following page.

MATERIALS	
Body (1/2" - 1 1/2")	Bronze
Body (2")	Cast Iron
Nozzles (all sizes)	Bronze

Note: ELECT-ELL & ELECT-LM for liquid motive service only.

Model **EJECT** can be used with Steam or Water as the Motive Inlet

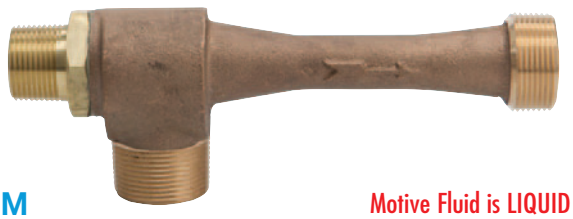
EJECT

Size/Connection NPT	Model Code	Motive Fluid Used	Suction Fluid	Weight lbs
1/2"	EJECT-12-N-S	Steam	Water	0.75
	EJECT-12-N-W	Water	Water	0.75
/4"	EJECT-13-N-S	Steam	Water	0.75
	EJECT-13-N-W	Water	Water	0.75
1"	EJECT-14-N-S	Steam	Water	1.50
	EJECT-14-N-W	Water	Water	1.50
1 1/4"	EJECT-15-N-S	Steam	Water	3.75
	EJECT-15-N-W	Water	Water	3.75
1 1/2"	EJECT-16-N-S	Steam	Water	4.75
	EJECT-16-N-W	Water	Water	4.75
2"	EJECT-17-N-S	Steam	Water	7.50
	EJECT-17-N-W	Water	Water	7.50

EJECT-ELL

Motive Fluid is LIQUID

Size/Connection NPT	Model Code	Motive Fluid Used	Suction Fluid	Weight lbs
3/4"	EJECT-ELL-13-N	Water	Gases	4.00
1"	EJECT-ELL-14-N	Water	Gases	7.00
1 1/4"	EJECT-ELL-15-N	Water	Gases	8.00



EJECT-LM

Motive Fluid is LIQUID

Size/Connection NPT	Model Code	Motive Fluid Used	Suction Fluid	Weight lbs
3/4"	EJECT-LM-13-N	Water	Water	1.00
1"	EJECT-LM-14-N	Water	Water	2.25
1 1/4"	EJECT-LM-15-N	Water	Water	3.50

EJECT, EJECT-ELL & EJECT-LM

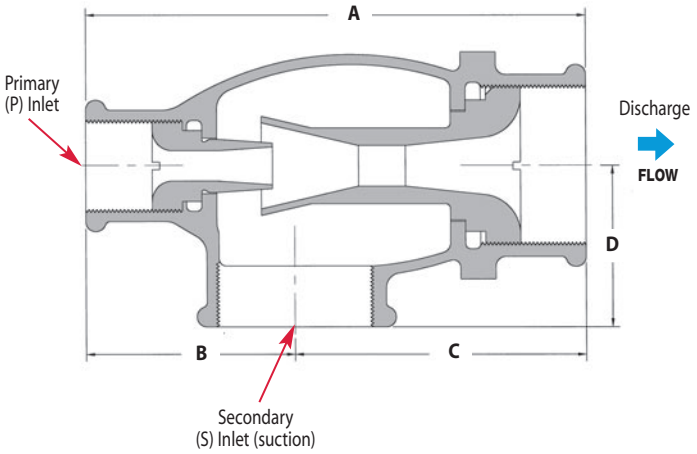
Syphons, Eductors, Exhausters & Injectors

EJECT

DIMENSIONS – *inches*

Size	Connection Sizes *			Dimensions			
	S. Inlet	Discharge	P. Inlet	A	B	C	D
Bronze Body & Nozzles							
1/2"	1/2	1/2	1/4	3 1/4	1 7/16	1 13/16	1 1/8
3/4"	3/4	3/4	3/8	4	1 1/2	2 1/2	1 3/8
1"	1	1	1/2	5 1/8	2 1/4	2 7/8	1 5/8
1 1/4"	1 1/4	1 1/4	3/4	5 7/8	2 7/16	3 7/16	1 13/16
1 1/2"	1 1/2	1 1/2	3/4	6 1/4	2 11/16	3 9/16	1 15/16
Cast Iron Body with Bronze Nozzles							
2"	2	2	1	7 1/4	3 1/8	4 1/8	2 3/8

* Connections are female NPT.



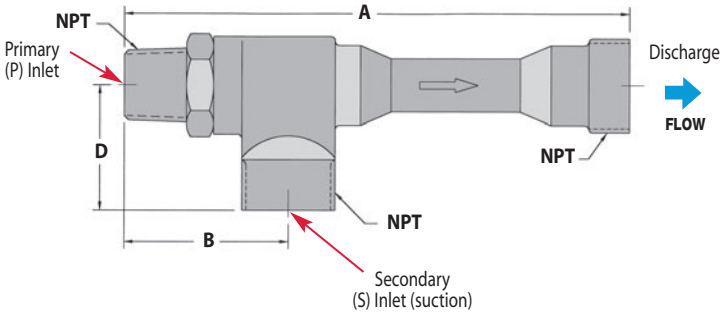
EJECT-ELL / EJECT-LM

Bronze Body & Nozzles

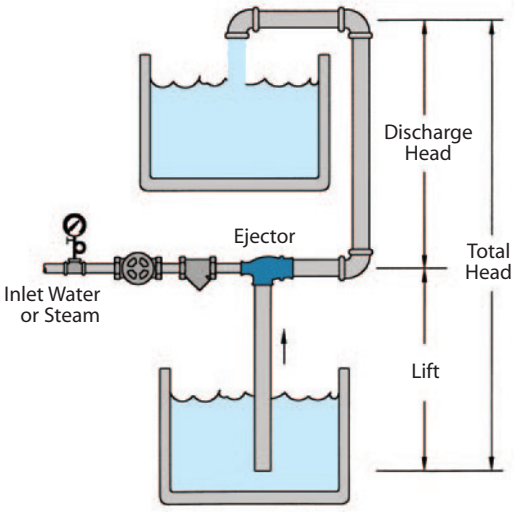
DIMENSIONS – *inches*

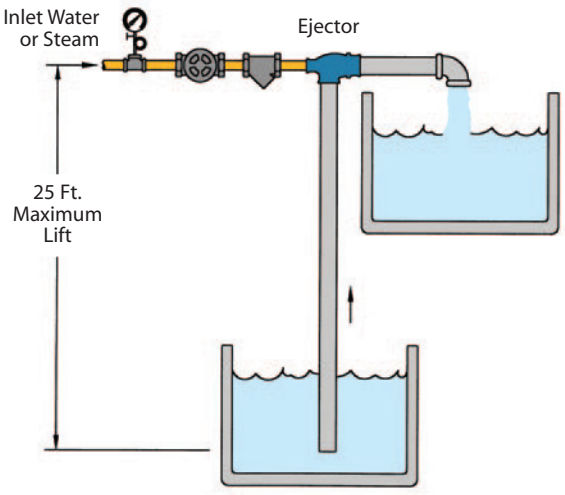
Size	Connection Sizes **			Dimensions		
	S. Inlet	Discharge	P. Inlet	A	B	D
3/4"	3/4	3/4	1/2	5 13/16	2	1 3/8
1"	1	1	3/4	7 1/8	2 5/16	1 3/4
1 1/4"	1 1/4	1 1/4	1	9	2 7/16	2 1/8

** Connections are male NPT.



Ejectors shown Pumping Liquid





It is always desirable to keep the Ejector as close to the actual liquid being pumped as possible. The maximum height the liquid can be pumped depends upon the pressure of the "motive" liquid or steam available. Please refer to the capacity graphs for maximum flow rates and maximum achievable heads.

The maximum height that water or any liquid with a specific gravity of 1 can be lifted is 25 feet. Increases in the temperature of the liquid being lifted will cause this maximum height to decrease. Pumping liquids in excess of 130°F is not recommended. Please consult factory with any specific application.

Ejector Sizing • EJECT Model

Example 1

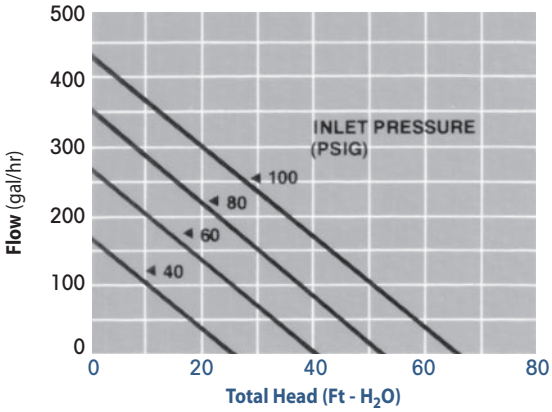
A **#14 1" Ejector** using 60 lbs. of water pressure as a motive force will pump water to a maximum height of 40 ft. When pumping water to a height of 20 ft. using 60 lbs. of water pressure, the amount of water being pumped is 700 gal/hr.

Example 2

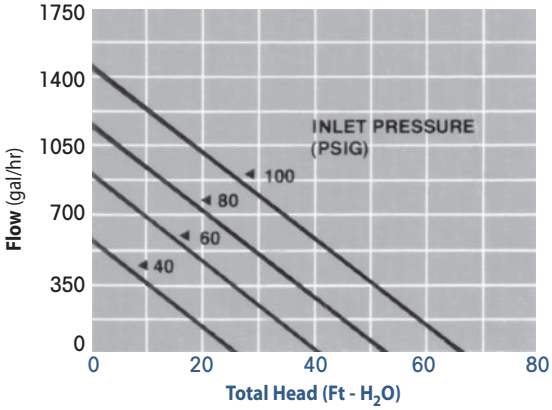
A **#14 1" Ejector** using 60 lbs. of steam pressure as a motive force will pump water to a maximum height of 60 ft. When pumping water to a height of 53 ft. using 60 lbs. of steam pressure, the amount of water being pumped is 650 gal/hr.

for Model EJECT Only (Water)

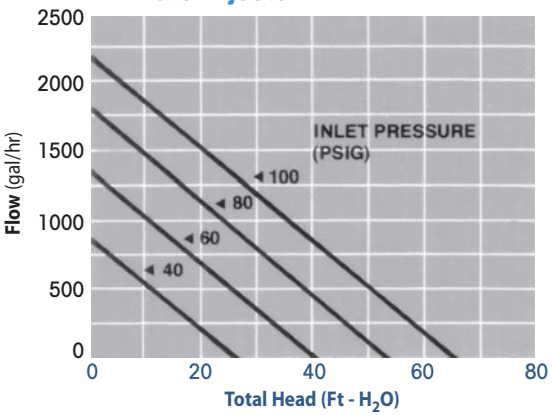
1/2" Water Ejector



3/4" Water Ejector

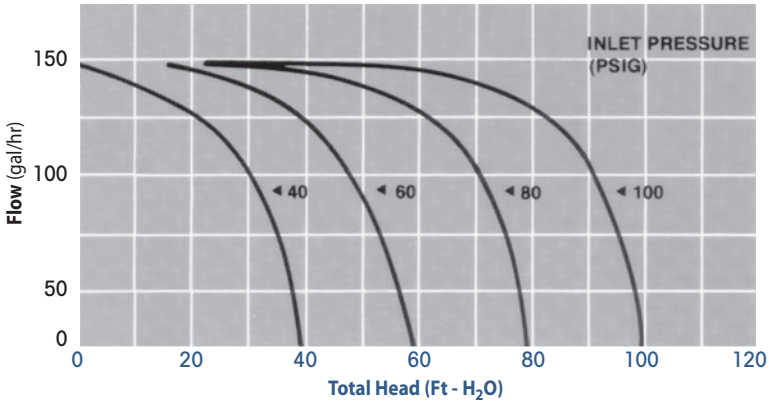


1" Water Ejector

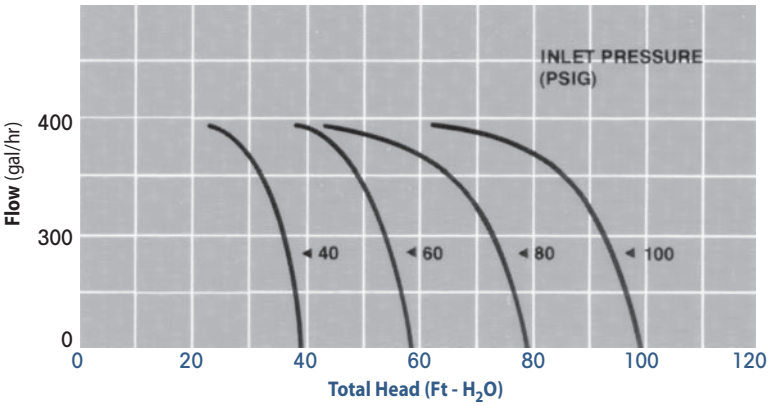


for Model EJECT Only (Steam)

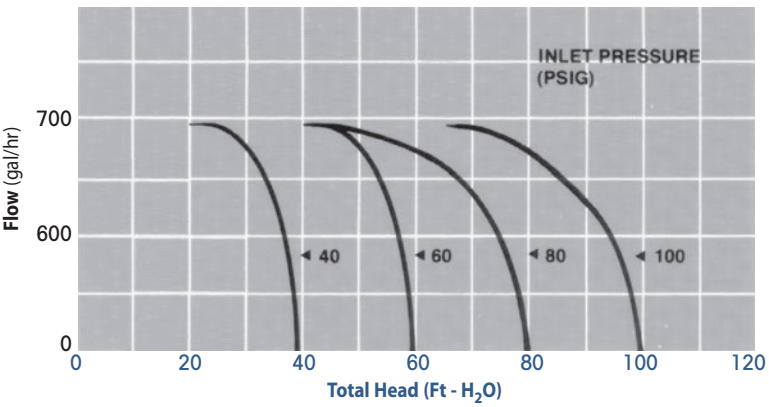
1/2" Steam Ejector



3/4" Steam Ejector



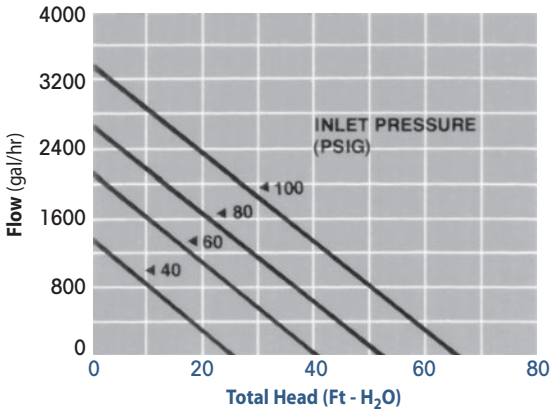
1" Steam Ejector



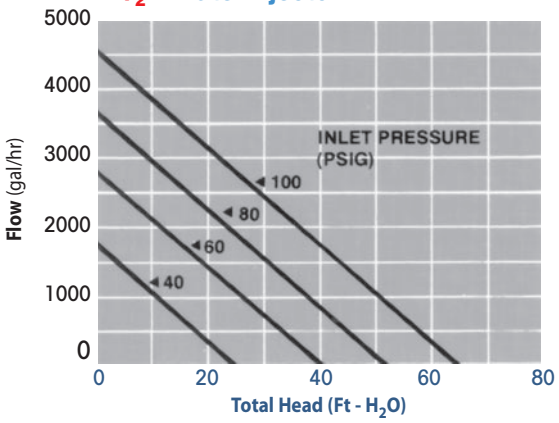
Ejector Sizing • EJECT Model

for Model EJECT Only (Water)

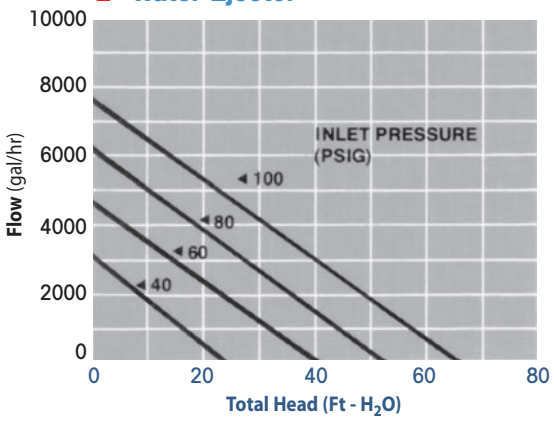
1 1/4" Water Ejector



1 1/2" Water Ejector

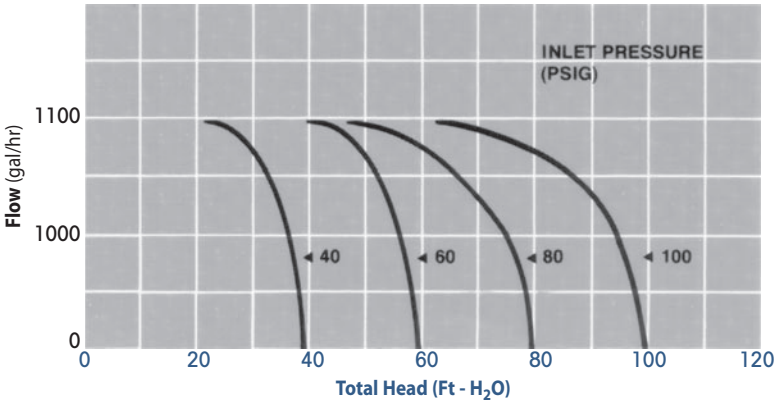


2" Water Ejector

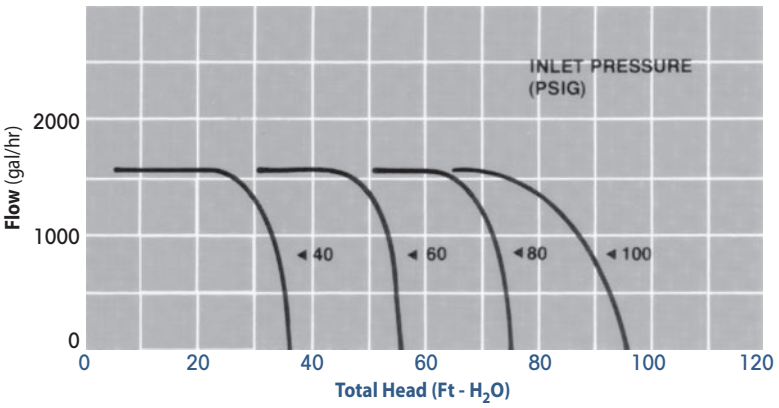


for Model EJECT Only (Steam)

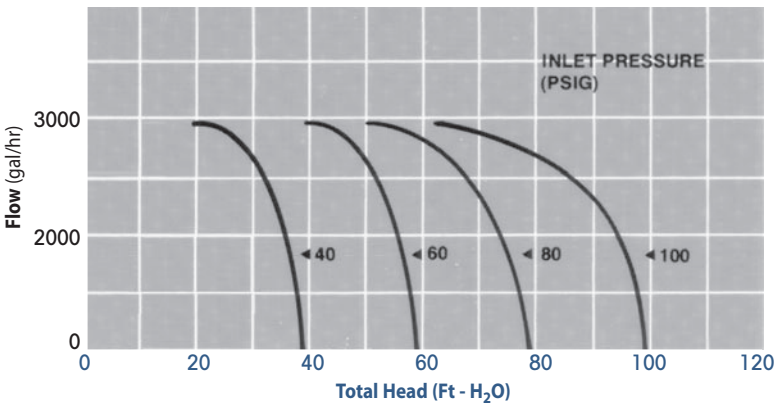
1 1/4" Steam Ejector



1 1/2" Steam Ejector



2" Steam Ejector



PIPELINE ACCESSORIES