

Syphons, Educators, Exhausters & Injectors

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

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: EJECT-ELL & EJECT-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
3/4"	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

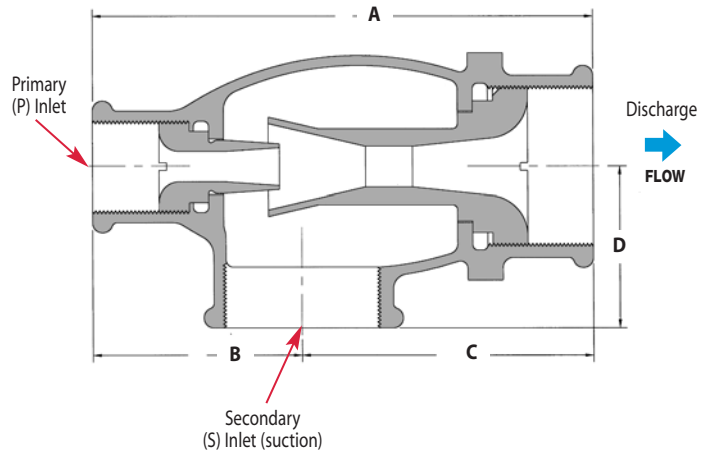
Size/Connection NPT	Model Code	Motive Fluid Used	Suction Fluid	Weight lbs
3/4"	EJECT-LM-13-N	Water	Water	1.00
1"	EJECT-LM-14-N	Water	Water	2.25
1 1/4"	EJECT-LM-15-N	Water	Water	3.50

Syphons, Educutors, Exhausters & Injectors

## EJECT

DIMENSIONS — inches							
Size	Connection Sizes *			Dimensions			
	S. Inlet	Discharge	P. Inlet	A	B	C	D
<b>Bronze Body &amp; Nozzles</b>							
1/2"	1/2	1/2	1/4	3 1/4	17/16	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
<b>Cast Iron Body with Bronze Nozzles</b>							
2"	2	2	1	7 1/4	3 1/8	4 1/8	2 3/8

\* Connections are female NPT.

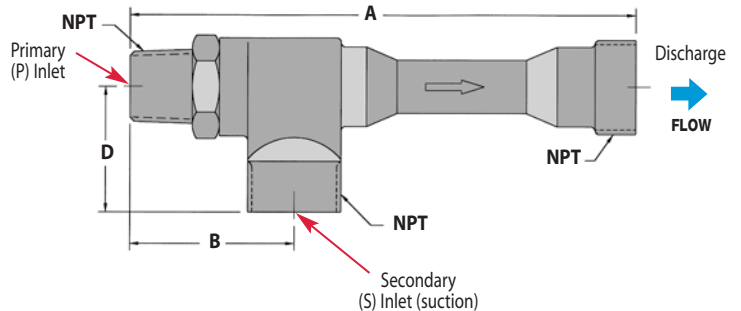


## EJECT-ELL / EJECT-LM

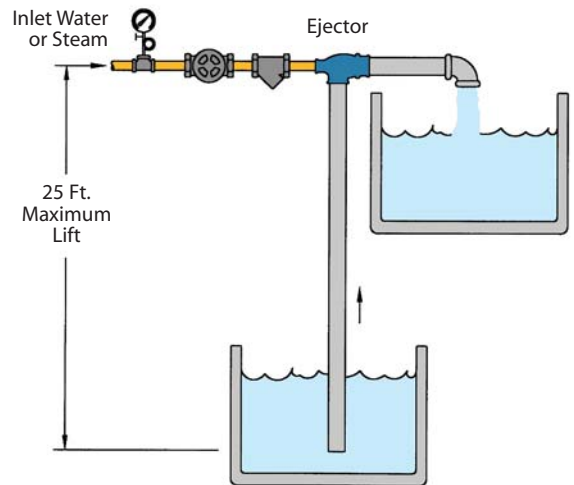
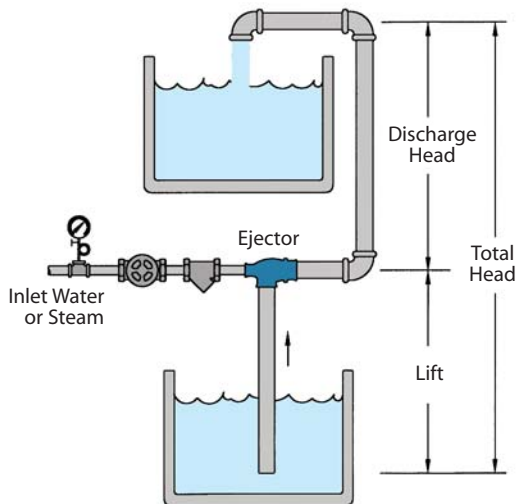
Bronze Body & Nozzles

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

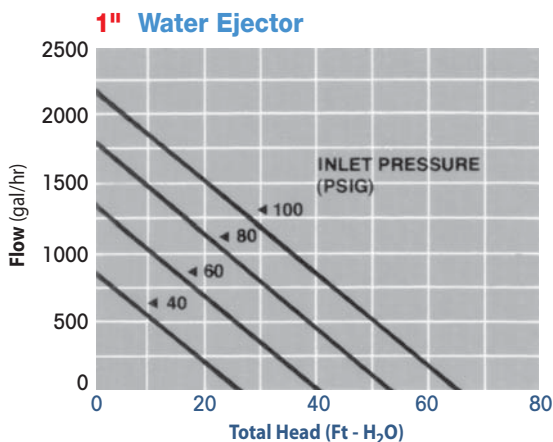
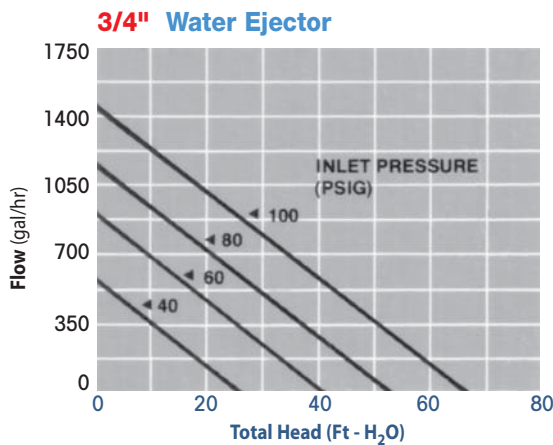
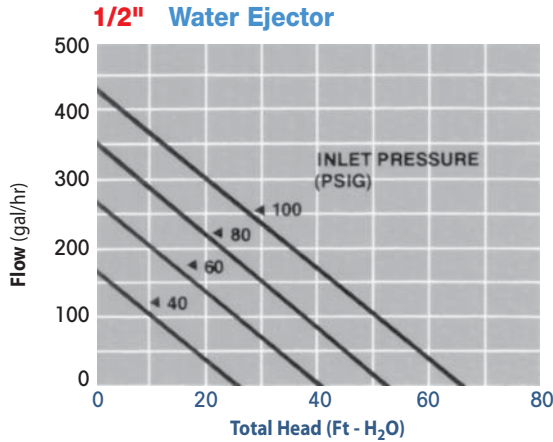
### Example 1

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.

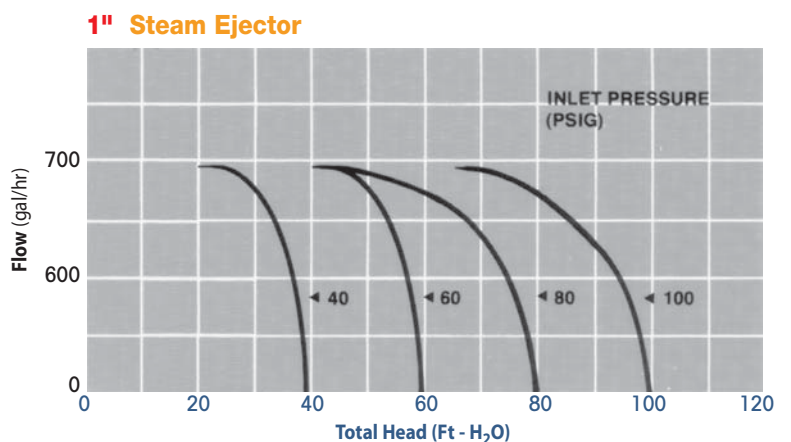
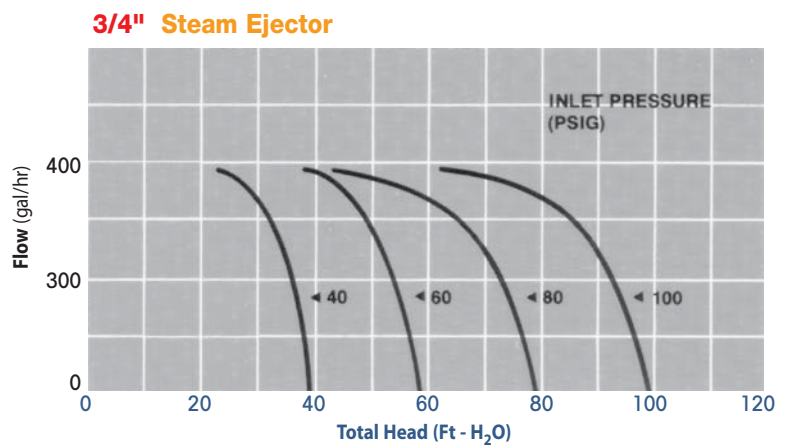
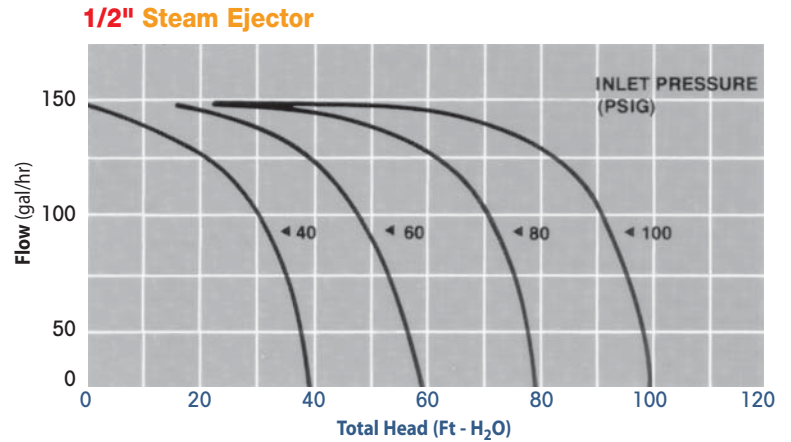
### Example 2

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)



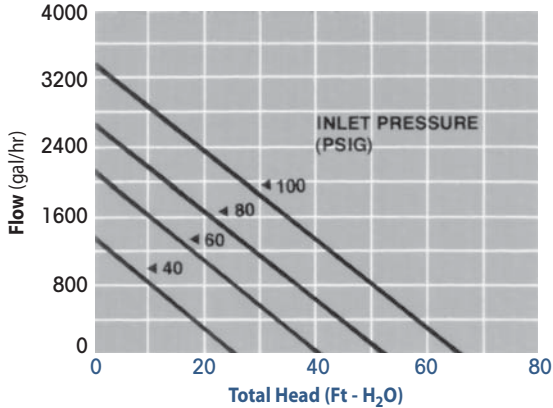
#### for Model EJECT Only (Steam)



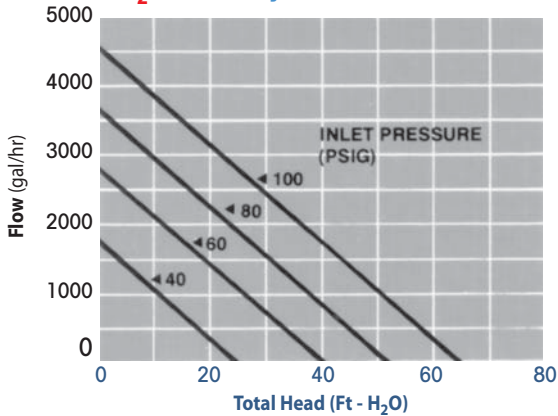
# Ejector Sizing • EJECT Model

for Model EJECT Only (Water)

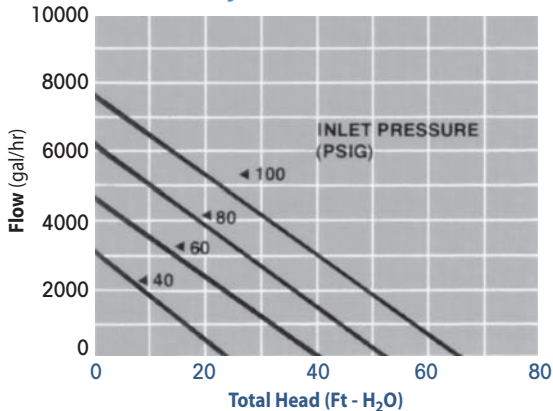
**1 1/4" Water Ejector**



**1 1/2" Water Ejector**

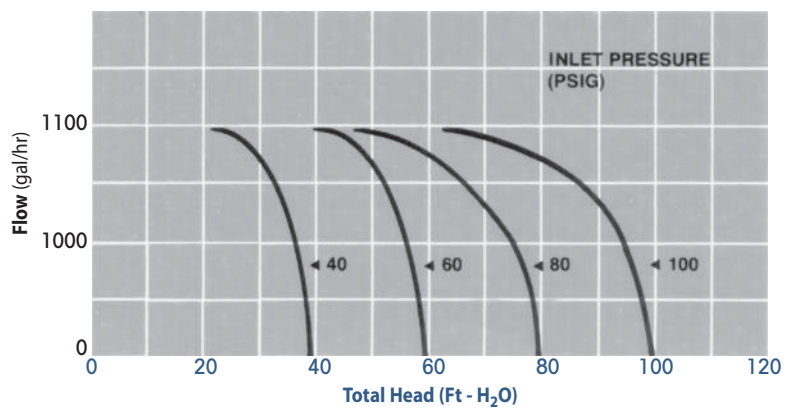


**2" Water Ejector**

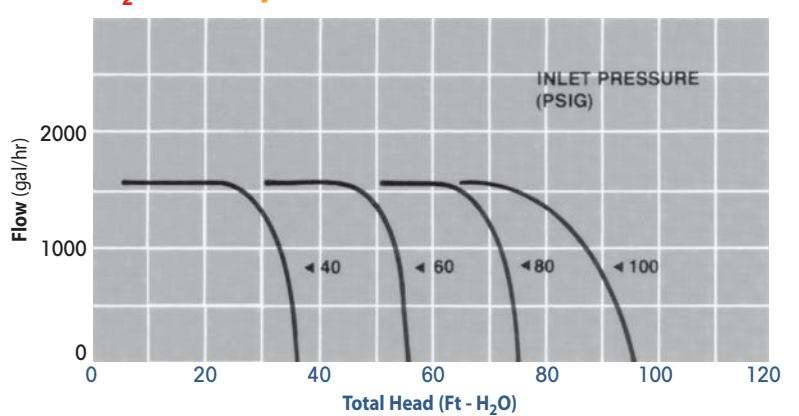


for Model EJECT Only (Steam)

**1 1/4" Steam Ejector**



**1 1/2" Steam Ejector**



**2" Steam Ejector**

