

SPECIALTY PRODUCTS

Ejectors

Syphons, Eductors, Exhausters & Injectors

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Revised 7/2002

Model	W-EJECT, W-ELL, W-LM
Sizes	1/2", 3/4", 1", 1-1/4", 1-1/2", 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



**W-ELL
W-LM**

TYPICAL APPLICATION

Watson McDaniel **Ejectors** perform a variety of functions depending on the application and motive force used. Applications include: sterilizing, exhausting, agitating, aerating, circulating, pumping, mixing, condensing, and pasteurizing.

HOW IT WORKS

Commonly employing water, steam or air pressure as the motive force, ejectors operate on the principle of high velocity through a nozzle, which produces a pressure drop in the area around the nozzle discharge. The resulting vacuum induces flow in the desired medium.

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 in bronze or cast iron connections. Units shall be capable of using steam, water or air as a motive force. There shall be no moving parts, packing glands, or need of lubrication.

INSTALLATION

Installation should include a strainer and isolation valves for maintenance purposes. See installation examples on following page.

MATERIALS

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

Used as a syphon, the device is not practical if the motive force pressure is below 30 PSIG or if the motive and suction mediums are both liquids and either has a temperature above 150°F.

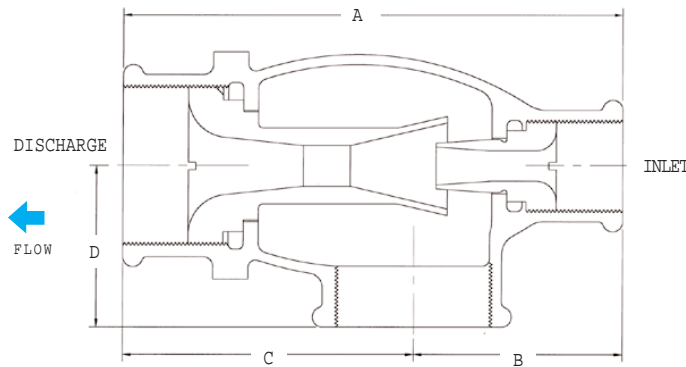
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DIMENSIONS & WEIGHTS – inches/pounds

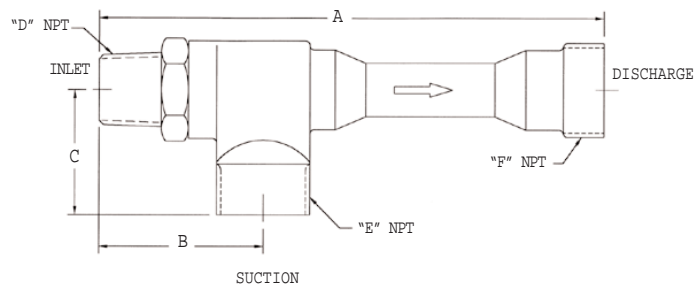
Size	Connection Sizes			Dimensions			
	Suction	Discharge	Inlet	A	B	C	D
Bronze Body & Nozzles							
1/2"	1/2	1/2	1/4	3-1/4	1-7/16	1-13/16	1-1/8
3/4"	3/4	3/4	3/8	4	1-1/2	2-1/2	1-3/8
1"	1	1	1/2	5-1/8	2-1/4	2-7/8	1-5/8
1-1/4"	1-1/4	1-1/4	3/4	5-7/8	2-7/16	3-7/16	1-13/16
1-1/2"	1-1/2	1-1/2	3/4	6-1/4	2-11/16	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



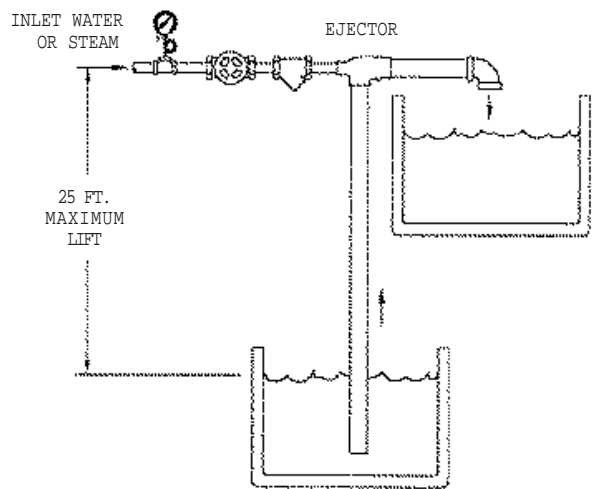
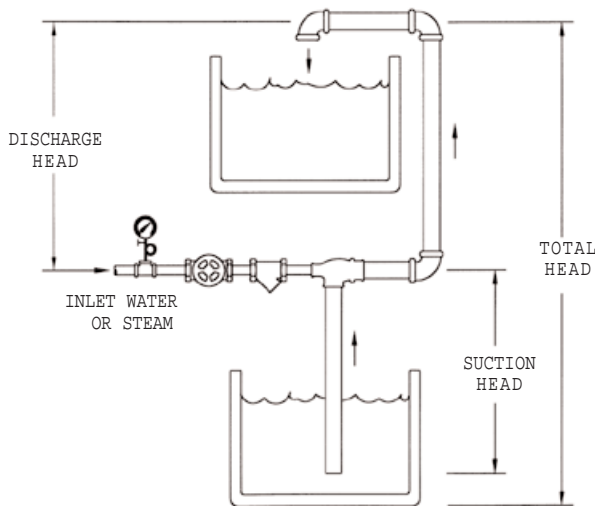
W-EJECT

DIMENSIONS & WEIGHTS – inches/pounds

Size	Material	A	B	C	D	E	F
3/4"	Brass	5-13/16	2	1-3/8	1/2	3/4	3/4
1"	Brass/ Bronze	7-1/8	2-5/16	1-3/4	3/4	1	1
1-1/4"	Brass/ Bronze	9	2-7/16	2-1/8	1	1-1/4	1 - 1/4



W-ELL / W-LM



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 on 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 one can be lifted is 27 ft. Increases in the temperature of the liquid you are trying to lift will cause this maximum height to decrease. We don't recommend pumping liquid in excess of 130°F. Please consult factory with any specific application.

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Ejector Sizing

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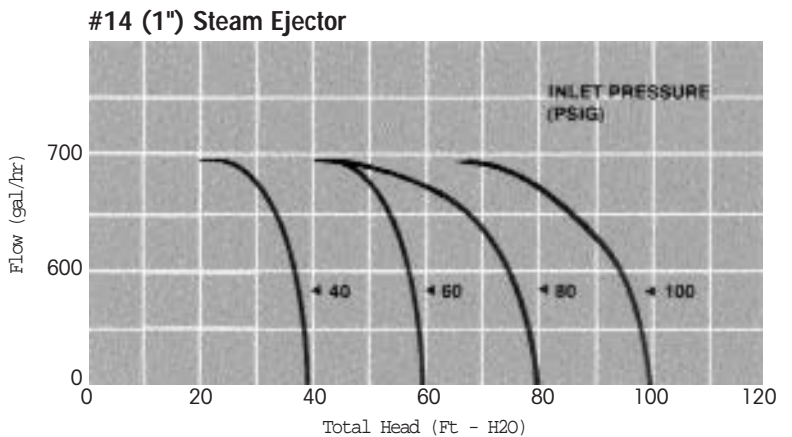
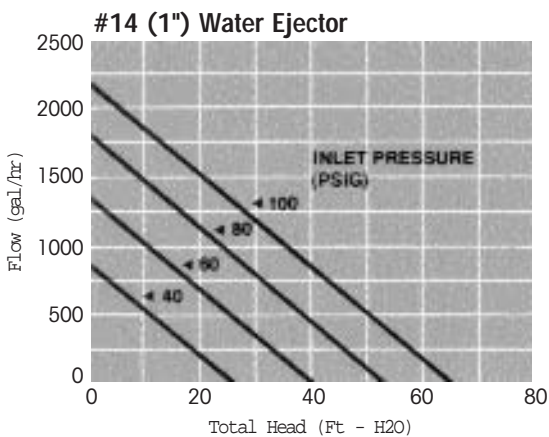
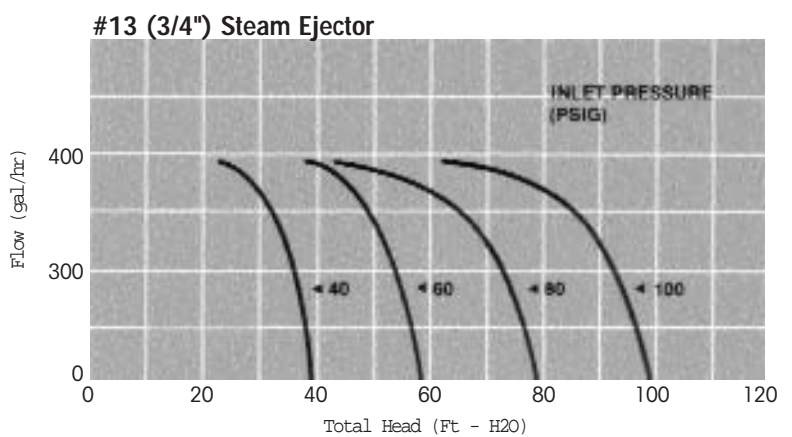
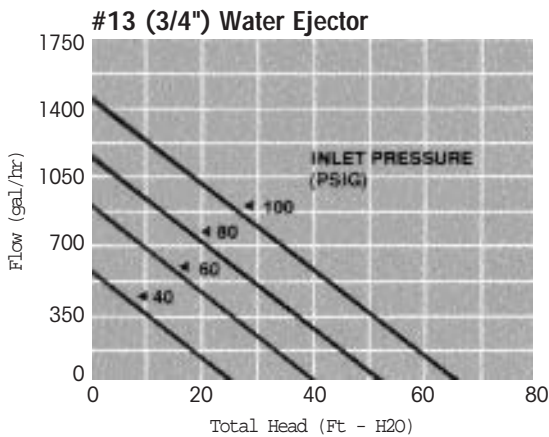
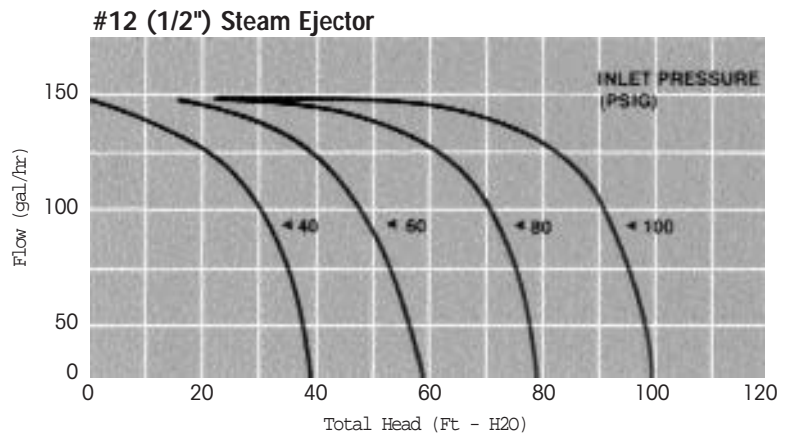
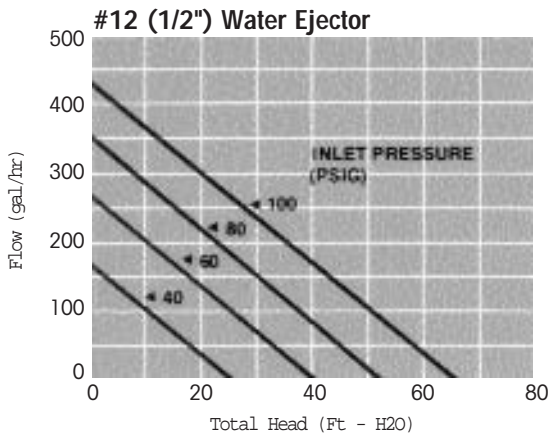
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Example 1

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.

Example 2

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 maximum amount of water being pumped is 700 Gal/hr.



Ejector Sizing

