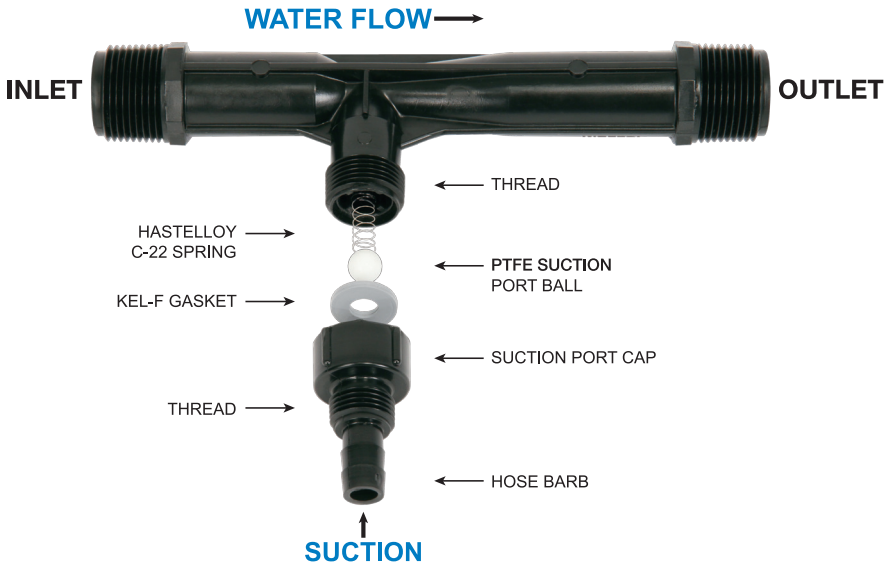
Guide to Injector Performance Tables

Mazzei injectors are extremely efficient, compact differential pressure injectors with internal mixing vanes. When sufficient pressure difference exists between the inlet and outlet ports of the patented injector, a vacuum is created inside the injector body, which initiates suction through the suction port.

Mazzei injectors are available in both polypropylene, polyvinylidene fluoride (PVDF), and ethylene chlortrifluoroethylene (ECFTE) – all are high quality thermoplastics with superior strength, high temperature capability and are resistant to most chemicals. It is important to choose the correct material to be compatible with your chemical additives. When specified and applied correctly, Mazzei injectors will provide years of trouble-free operation.



To choose the Mazzei injector that fits your needs, reference the Mazzei Injector Performance Tables located on the Mazzei website, **www.mazzei.net**, and in the Mazzei Agriculture Product Catalog, or use our online calculator, the Injector Selector Tool™, at: **http://injectorselector.mazzei.net**, to aid in injector selection.

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Information Needed to Select an Injector

1. **INLET PRESSURE** (Upstream Pressure Available): What is the pressure upstream from the injector?
2. **MOTIVE FLOW RATE** (Flow through the Injector): How much water needs to go through the injector?
3. **OUTLET PRESSURE** (Downstream Pressure): What pressure will the injector see downstream after installation?
4. **INJECTION RATE** (Suction Rate): How much do you want to inject?

Example

A grower plans to inject **7.57 l/min** of a liquid fertilizer through a by-pass into his irrigation system. He has **2.81 Kg/cm²** available and needs to maintain **1.76 Kg/cm²** downstream. He also wants to maintain a water flow rate of around **116 l/min** through the by-pass. Going by the grower's requirements, refer to the Injector Performance Table below:

Water Suction Capacity (METRIC)

Operating Pressure Kg/cm²		Model 584 20 mm Threads		Model 684 20 mm Threads		Model 878-03 25 mm Threads		Model 885X-03 25 mm Threads		Model 1078-03 25 mm Threads		Model 1583 40 mm Threads	
Injector Inlet	Injector Outlet	Motive Flow l/min	Water Suction l/min	Motive Flow l/min	Water Suction l/min	Motive Flow l/min	Water Suction l/min	Motive Flow l/min	Water Suction l/min	Motive Flow l/min	Water Suction l/min	Motive Flow l/min	Water Suction l/min
1.41	0.00	15.82	1.57	26.53	1.59	27.67					6.20	81.2	14.39
	0.35		1.57		1.59						6.02		12.96
	0.70		1.50		1.59						4.42		9.06
	0.84		1.21		1.16						3.25		8.31
	1.05	*(1.27)	0.92	*(1.16)	0.66	*(1.16)					1.91	*(1.26)	4.18
2.11	0.00	19.38	1.60	32.48	1.55	33.88					5.95	99.5	14.29
	0.35		1.60		1.55						5.96		14.28
	0.70		1.57		1.55						5.96		13.35
	1.05		1.59		1.55						5.18		10.55
	1.41		1.15		0.93						3.50		7.92
	1.76	*(1.90)	0.73	*(1.83)	0.43	*(1.84)		*(1.44)		*(1.83)		*(1.83)	1.15
2.81	0.00	22.37	1.62	37.51	1.57	39.10	4.89	38.15	8.89	58.63	5.88	115	14.34
	0.35		1.61		1.58		4.89		8.90		5.88		14.43
	0.70		1.62		1.59		4.89		8.77		5.88		14.33
	1.05		1.61		1.58		4.89		8.08		5.88		13.91
	1.41		1.59		1.58		4.64		5.71		5.79		12.17
	1.76		1.35		1.56		3.19		2.33		4.56		9.68
	2.11	*(2.50)	0.95	*(2.46)	0.68	*(2.42)	1.78	*(1.90)		*(2.42)	2.69	*(2.35)	5.14
3.52	0.00	25.02	1.61	41.94	1.58	43.72	4.72	42.66	8.81	65.56	5.83	126	14.35
	0.70		1.61		1.58		4.72		8.86		5.83		14.28
	1.41		1.60		1.57		4.72		8.08		5.83		14.16
	1.76		1.54		1.57		4.31		6.73		5.83		12.85
	2.11		1.36		1.08		3.54		3.72		5.45		10.88
	2.46		0.99		0.58		2.31		0.82		4.06		7.61
	2.81	*(3.16)	0.18	*(2.95)	0.42	*(2.97)	0.60	*(2.53)		*(3.09)	2.21	*(2.95)	2.55

Model 1583 will work. This model has enough suction to provide a maximum of **9.68 l/min** @ **1.76 Kg/cm²** with a motive (water) flow of **115 l/min**

Other Factors Affecting Liquid Injection

Suction capacity will differ from listed suction capacity under non-standard conditions (i.e. if not at sea level; if the injector placement and liquid additive are not at the same elevation; if the additive is heavier or more viscous than water; if temperatures differ significantly from 21° C; etc). *See* **Mazzei Technical Bulletin No. 1** – *available on the Mazzei website,* **www.mazzei.net** –*for correction calculations.*