Mazzei®

World Leader in Mixing and Contacting Technologies

PRODUCT CATALOG
Agriculture

Product Warranty

PERIOD OF WARRANTY. Subject to the limitations set forth below, Mazzei warrants that for a period of twelve (12) months after sale to Customer, as defined by the date of product shipment from Mazzei, Mazzei's Products (except for the specific warranties for polypropylene (PP) plastic injectors and polyvinylidene fluoride (PVDF) plastic injectors, set forth immediately hereafter) shall be free from defects in material and workmanship. With respect to PP injectors and PVDF injectors, Mazzei warrants: (a) for a period of three (3) years after sale to Customer, PP injectors shall be free from defects in material and workmanship; and (b) for a period of six (6) years after sale to Customer, PVDF injectors shall be free from defects in material and workmanship.

PROCEDURE FOR WARRANTY CLAIMS. In the event any Products are found to be defective during the warranty period, Customer must contact an Authorized Mazzei Dealer no later than one (1) month after the expiration of the applicable warranty period to make a warranty claim which arose during the warranty period. Dealer will coordinate with Mazzei to process all warranty claims. In the event the Dealer cannot or will not respond to the Customer, Customer may contact the Mazzei Warranty Department directly. Mazzei will issue a return authorization number ("RMA") after validation of the nature of the claimed defect. No products shall be returned without prior issue by Mazzei of a RMA number. Dealer or Customer, as appropriate, shall return the Product(s) to Mazzei with the RMA clearly affixed to the product and postage prepaid to the following address: 500 Rooster Drive, Bakersfield, CA 93307-9555 USA. Attn: Warranty Claims Division.

MAZZEI'S OPTIONS IN RESPONDING TO WARRANTY CLAIM. Mazzei will, at its sole option, either repair or replace the defective Product(s). Any repair or replacement hereunder may contain newly manufactured or reconditioned used parts which are equivalent to new.

EXCLUSIONS FROM WARRANTY COVERAGE. The foregoing warranty shall become void and will not apply if (a) the Product(s) has/have been tampered with in any way or attempts to repair it/them have been made by any person other than a Mazzei employee or authorized Dealer's technician; or (b) non-Mazzei supplied parts/products used in conjunction with the Product have damaged the Product; or (c) damage which occurred in shipping is apparent or subsequently proved; or (d) the Product(s) is/are damaged by catastrophe, fault or negligence of any person or entity other than Mazzei; or (e) the Product(s) is/are damaged by use of the Product(s) for purposes other than that for which it has been specifically designed.

SUBJECT TO CHANGE. This limited warranty is subject to change by Mazzei from time to time upon thirty (30) days' written notice.

TIME LIMITS. Any action for breach of this warranty shall be brought within three (3) months of the expiration of the warranty period.

LIMITATIONS ON WARRANTY. Mazzei's obligation under this LIMITED warranty is limited to the repair or replacement of defective products at Mazzei's sole discretion, and specifically excludes any consequential damages arising from any defective product. Any and all costs of removal, installation and/or reinstallation, AND freight charges are expressly excluded from this warranty. There are no other express product warranties. Any implied warranties required by law shall last for a period of twelve (12) months after shipment to customer. Mazzei does not warrant that products will meet or continue to meet customer specifications or that any or all errors, malfunctions and defects can or will be corrected. Mazzei does not warrant that the operation of the products will be uninterrupted or error free.

DISCLAIMER. Any recommendations for particular products and/or system design, whether contained in this document, within a drawing, communicated by electronic means, or given verbally, are intended solely as guides to actual system design. Said recommendations are based upon information and intended operating conditions supplied by others, the accuracy of which is beyond verification by Mazzei. Likewise, the actual operation of any system utilizing the products and/or recommendation of Mazzei is equally beyond the control of Mazzei. Therefore, Mazzei cannot, and does not, warrant the suitability of its products for a particular or specific intended purpose or service, nor the performance of any system incorporating components made and/or sold by Mazzei. No representation nor warranty as to any product's specific in the field performance, if different than or broader than that as set forth and limited herein, shall be binding on Mazzei unless set forth in writing and signed by an authorized agent of Mazzei.

CHOICE OF LAW, VENUE AND ATTORNEY FEES. The provisions of this Warranty shall be interpreted according to the laws of the State of California, United States of America, without regard to any conflict of laws provision. The proper forum for any dispute or controversy arising out of any sale shall be the Kern County Superior Court, Bakersfield, California, USA. In the event of litigation, whether on contract or in tort, the prevailing party shall be awarded reasonable attorneys fees and costs of suit.

NOTICE. All notices to be given with respect to this sale agreement and applicable purchase orders hereunder shall be given to Mazzei at the following address: Mazzei Injector Company, LLC, 500 Rooster Drive, Bakersfield, CA 93307-9555 USA. Notices to Buyer will be directed to the addressee appearing on Buyer's Purchase Order or to Buyer at the address appearing on Mazzei's order confirmation.

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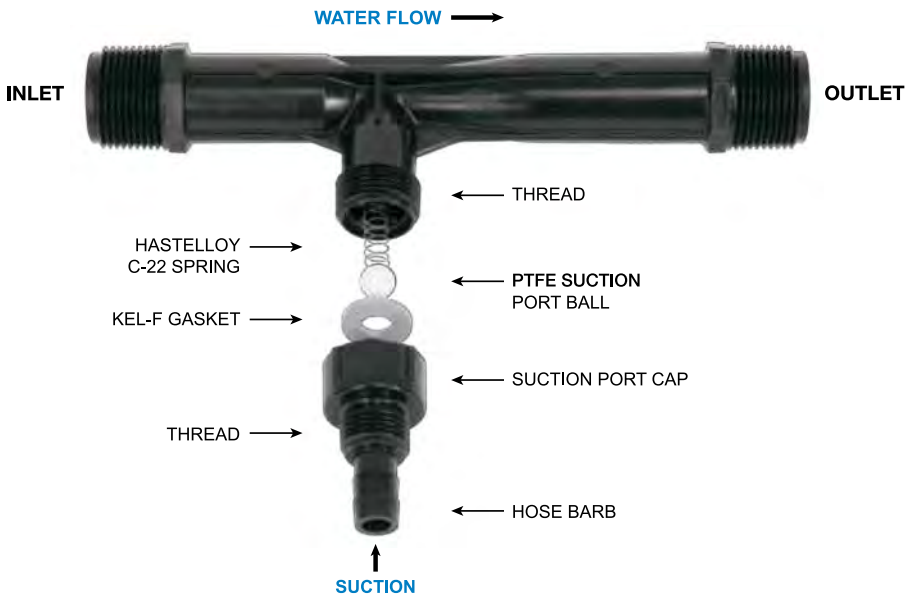
The Mazzei® Injector

World class design, precision performance…nothing works like a Mazzei.

Mazzei Injector Company, LLC is the world's leading manufacturer of high-performance Venturi differential pressure injectors with internal mixing vanes that transfer or mix liquid or gas additives into solution. When a sufficient pressure difference exists between the inlet and outlet sides of the injector, a vacuum is created inside the injector body, which initiates suction of a liquid or gas through the suction port. Mazzei Injectors operate over a wide range of pressures and require only a minimal pressure differential between the inlet and outlet sides to initiate a vacuum at the suction port.

There is no substitute for a Mazzei

Mazzei Injectors are precisely engineered and cannot be duplicated. Imitations and look-alike products simply do not perform like a Mazzei. The U.S. Patent and Trademark Office awarded Mazzei a trademark registration for its unique look and shape. The internal vanes deliver superior suction capacity at low differential pressure. The injector's trademark look represents Mazzei's acquired reputation among consumers for years of quality and performance. The Mazzei look is recognized internationally, so it is important to make sure the injector is a Mazzei. To confirm that an injector is a Mazzei, a customer should check for the Mazzei name on the injector, then buyers can be assured that they are getting the best and most effective mixing and contacting available.



InjectorSelector™

To help select the right injector for irrigation applications, Mazzei has developed a web-based calculator that will assist users in selecting injectors for liquid injection applications. Called the InjectorSelector™, the calculator is accessible for registered and approved users via **www.injectorselector.mazzei.net**. Injector performance data is located on pages 15-20 of catalog and on the Mazzei website: **www.mazzei.net**.

Agricultural Applications

Precise chemical applications for irrigation systems…the low cost solution.

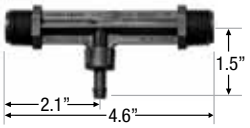
Injecting chemicals into a pressurized irrigation system (chemigation) is the most common application for Mazzei Injectors in agriculture. Mazzei pioneered this simple-to-use and easy to install solution more than 30 years ago. Using high-efficiency patented and trademarked Mazzei Venturi injectors, Mazzei's chemigation technology delivers a uniform distribution of chemicals and fertilizers within the irrigation water. Mazzei Injectors offer the advantages of an easy to maintain non-mechanical system. With no moving parts, and often no supplemental pump system, Mazzei is the cost-effective choice. Because Mazzei Injectors are designed for vacuum transfer of irrigation chemicals, they provide safe chemigation.

- Easy to install
- Years of proven performance
- Uniform chemical injection
- Low cost solution to other injection methods
- Injection stops when water flow stops
- Available in polypropylene (PP) or polyvinylidene fluoride (PVDF)

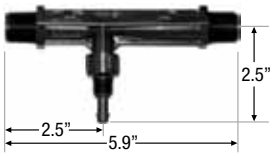
Mazzei® Injectors

NPT

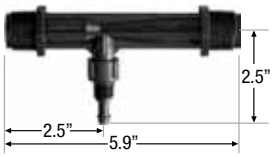
Part Number	Inlet & Outlet (Nominal Pipe Size) **Male NPT**	Suction Port		Weight (with Box)
		Barb (Inner Diameter)	Thread (Nominal Pipe Size)	
Black Polypropylene				
283-PP	½"	¼"	N/A	0.07 lbs
287-PP	½"	¼"	N/A	0.07 lbs
384-PP	½"	¼"	¼"	0.14 lbs
384X-PP	½"	¼"	¼"	0.14 lbs
484-PP	½"	¼"	¼"	0.14 lbs
584C-PP	½"	¼"	¼"	0.14 lbs
484A-PP	¾"	¼"	¼"	0.16 lbs
584-PP	¾"	¼"	¼"	0.16 lbs
878-03-PP	1"	½"	½"	0.34 lbs
885X-03-PP	1"	½"	½"	0.34 lbs
978-03-PP	1"	½"	½"	0.34 lbs
1078-03-PP	1"	½"	½"	0.34 lbs
1583A-PP	1½"	½"	½"	0.61 lbs
1584A-PP	1½"	½"	½"	0.57 lbs
1585X-PP	1½"	½"	½"	0.58 lbs
1587-PP	1½"	½"	½"	0.59 lbs
2081A-PP	2"	N/A	1¼"	0.87 lbs
2083X-PP	2"	N/A	1¼"	0.92 lbs
3090-PP	3"	N/A	1½" each port	2.45 lbs
4091-PP	4"	N/A	2" each port	5.78 lbs



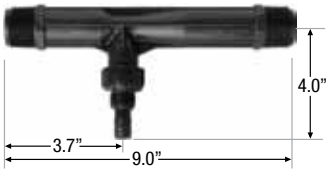
Dimensions for 283-PP thru 287-PP



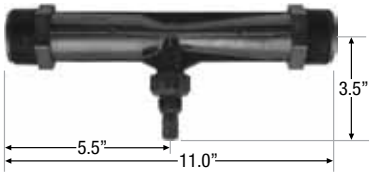
Dimensions for 384-PP thru 584C-PP



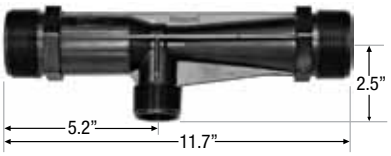
Dimensions for 484A-PP thru 584-PP



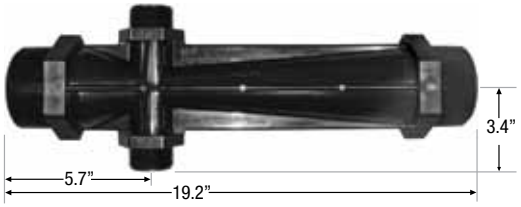
Dimensions for 878-03-PP thru 1078-03 -PP



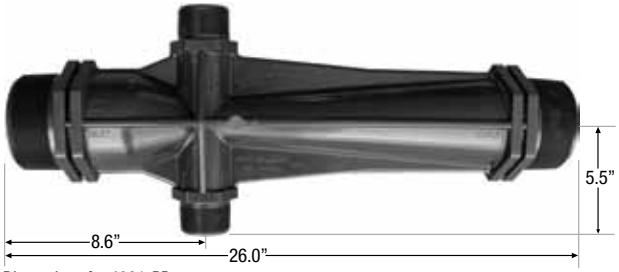
Dimensions for 1583A-PP thru 1587-PP



Dimensions for 2081A-PP thru 2083X-PP



Dimensions for 3090-PP



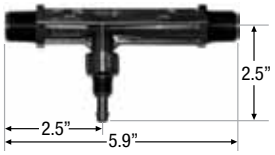
Dimensions for 4091-PP

Mazzei® Injectors

NPT

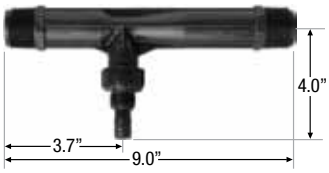
Black PVDF

Dimensions for 283-PVDF thru 287-PVDF

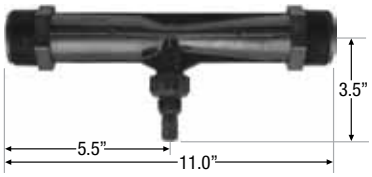


Dimensions for 384-PVDF thru 584C-PVDF

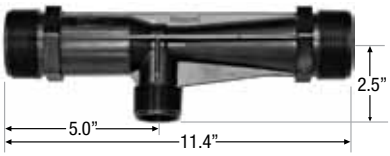
Dimensions for 484A-PVDF thru 784-PVDF



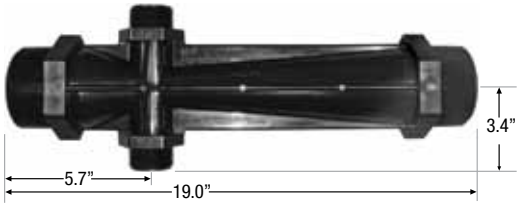
Dimensions for 878-03-PVDF thru 1078-03-PVDF



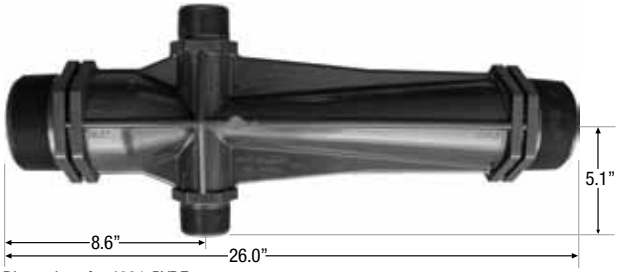
Dimensions for 1583A-PVDF thru 1587-PVDF



Dimensions for 2081A-PVDF thru 2083X-PVDF



Dimensions for 3090-PVDF



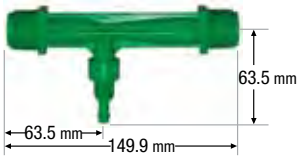
Dimensions for 4091-PVDF

	Part Number	Inlet & Outlet (Nominal Pipe Size) **Male NPT**	Suction Port		Weight (with Box)
			Barb (Inner Diameter)	Thread (Nominal Pipe Size)	
Only available in natural	283-PVDF	½"	¼"	N/A	0.10 lbs
Only available in blue	287-PVDF	½"	¼"	N/A	0.10 lbs
	384-PVDF	½"	¼"	¼"	0.18 lbs
	384X-PVDF	½"	¼"	¼"	0.18 lbs
	484-PVDF	½"	¼"	¼"	0.18 lbs
	584C-PVDF	½"	¼"	¼"	0.18 lbs
	484A-PVDF	¾"	¼"	¼"	0.21 lbs
	484X-PVDF	¾"	¼"	¼"	0.21 lbs
	584-PVDF	¾"	¼"	¼"	0.21 lbs
	684-PVDF	¾"	¼"	¼"	0.20 lbs
	784-PVDF	¾"	¼"	¼"	0.20 lbs
	878-03-PVDF	1"	½"	½"	0.49 lbs
	885X-03-PVDF	1"	½"	½"	0.49 lbs
	978-03-PVDF	1"	½"	½"	0.50 lbs
	1078-03-PVDF	1"	½"	½"	0.49 lbs
	1583A-PVDF	1½"	½"	½"	0.89 lbs
	1584A-PVDF	1½"	½"	½"	0.86 lbs
	1585X-PVDF	1½"	½"	½"	0.84 lbs
	1587-PVDF	1½"	½"	½"	0.84 lbs
	2081A-PVDF	2"	N/A	1¼"	1.30 lbs
	2083X-PVDF	2"	N/A	1¼"	1.42 lbs
	3090-PVDF	3"	N/A	1½" each port	4.28 lbs
	4091-PVDF	4"	N/A	2" each port	10.11 lbs

Mazzei® Injectors

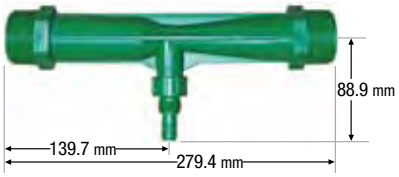
BSPT

Green Polypropylene



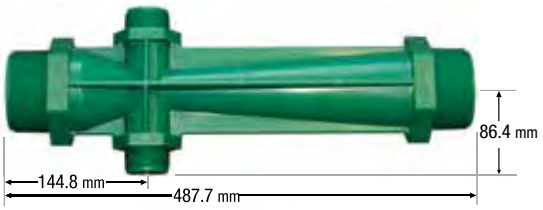
Dimensions for ISO 584-GRPP

Dimensions for ISO 885X-03-GRPP thru ISO 1078-03-GRPP

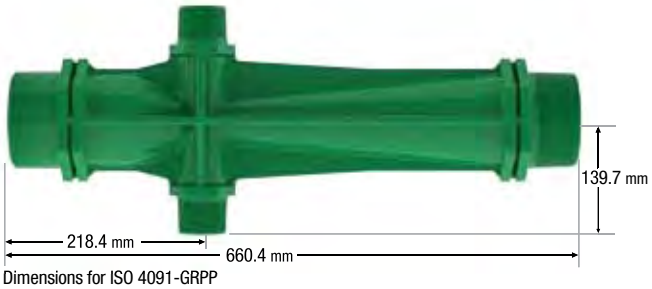


Dimensions for ISO 1583A-GRPP thru ISO 1587-GRPP

Dimensions for ISO 2081A-GRPP



Dimensions for ISO 3090-GRPP



Dimensions for ISO 4091-GRPP

Note: ½" Male NPT polypropylene injectors are interchangeable as 15 mm Male BSPT injectors; both have the same threads per inch. See page 3 for Male NPT polypropylene injectors.

Part Number	Inlet & Outlet (Diameter Nominal) **Male BSPT**	Suction Port: Barb (Inner Diameter)	Suction Port: Thread (Diameter Nominal)	Weight (with Box)
ISO 584-GRPP	20 mm	6.35 mm	8 mm	0.06 kg
ISO 885X-03-GRPP	25 mm	12.70 mm	15 mm	0.15 kg
ISO 878-03-GRPP	25 mm	12.70 mm	15 mm	0.15 kg
ISO 1078-03-GRPP	25 mm	12.70 mm	15 mm	0.15 kg
ISO 1583A-GRPP	40 mm	12.70 mm	15 mm	0.25 kg
ISO 1587-GRPP	40 mm	12.70 mm	15 mm	0.25 kg
ISO 2081A-GRPP	50 mm	N/A	32 mm	0.34 kg
ISO 3090-GRPP	80 mm	N/A	40 mm each port	1.10 kg
ISO 4091-GRPP	100 mm	N/A	50 mm each port	2.62 kg

Mazzei® Injectors

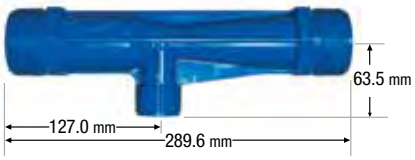
BSPT

Blue PVDF

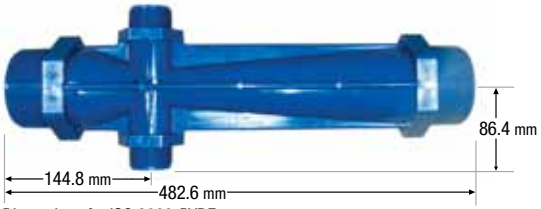
Dimensions for ISO 484A-PVDF thru ISO 684-PVDF

Dimensions for ISO 878-03-PVDF thru ISO 1078-03-PVDF

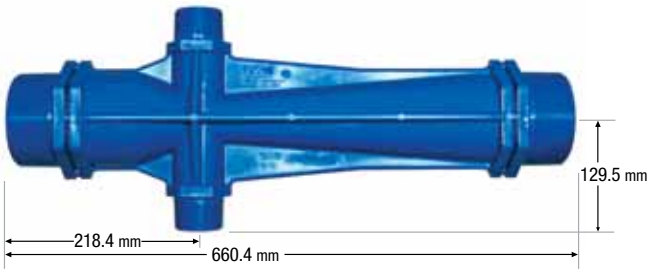
Dimensions for ISO 1583A-PVDF thru ISO 1587-PVDF



Dimensions for ISO 2081A-PVDF thru ISO 2083X-PVDF



Dimensions for ISO 3090-PVDF



Dimensions for ISO 4091-PVDF

Note: ½" Male NPT PVDF injectors are interchangeable as 15 mm Male BSPT injectors; both have the same threads per inch. See page 4 for Male NPT PVDF injectors.

Part Number	Inlet & Outlet (Diameter Nominal) **Male BSPT**	Suction Port Barb (Inner Diameter)	Suction Port Thread (Diameter Nominal)	Weight (with Box)
ISO 484A-PVDF	20 mm	6.35 mm	8 mm	0.09 kg
ISO 484X-PVDF	20 mm	6.35 mm	8 mm	0.09 kg
ISO 584-PVDF	20 mm	6.35 mm	8 mm	0.09 kg
ISO 684-PVDF	20 mm	6.35 mm	8 mm	0.09 kg
ISO 878-03-PVDF	25 mm	12.70 mm	15 mm	0.22 kg
ISO 885X-03-PVDF	25 mm	12.70 mm	15 mm	0.22 kg
ISO 978-03-PVDF	25 mm	12.70 mm	15 mm	0.22 kg
ISO 1078-03-PVDF	25 mm	12.70 mm	15 mm	0.22 kg
ISO 1583A-PVDF	40 mm	12.70 mm	15 mm	0.40 kg
ISO 1584A-PVDF	40 mm	12.70 mm	15 mm	0.39 kg
ISO 1585X-PVDF	40 mm	12.70 mm	15 mm	0.38 kg
ISO 1587-PVDF	40 mm	12.70 mm	15 mm	0.38 kg
ISO 2081A-PVDF	50 mm	N/A	32 mm	0.59 kg
ISO 2083X-PVDF	50 mm	N/A	32 mm	0.64 kg
ISO 3090-PVDF	80 mm	N/A	40 mm each port	1.94 kg
ISO 4091-PVDF	100 mm	N/A	50 mm each port	4.63 kg

Suction Line Kits

Part Number	Description	Weight (lbs)	Weight (kg)
K184	Suction line kit for ½" (15 mm) and ¾" (20 mm) injectors ***KIT INCLUDES:*** (10') ¼" ID x 3/8" OD Clear Vinyl Tubing; (1) MV-25 Polypropylene Metering Valve; (2) CLAMPS#23; (1) S-25HB Strainer	0.45 lbs	0.20 kg
K183	Suction line kit for 1" (25 mm) and 1½" (40 mm) injectors ***KIT INCLUDES:*** (10') ½" ID x ¾" OD Clear Vinyl Tubing; (1) ½" MV-5 Polypropylene Metering Valve; (4) CLAMPS#44; (1) S-50HB Strainer; (2) TA-550F Tubing Adapters	1.60 lbs	0.73 kg
KR183	Economy suction line kit for 1" (25 mm) and 1½" (40 mm) injectors ***KIT INCLUDES:*** (6') ½" ID x ¾" OD Clear Vinyl Tubing; (1) ½" PVC Ball Valve; (4) CLAMPS#44; (1) S-50HB Strainer; (2) TA-550F Tubing Adapters	1.05 lbs	0.48 kg
K282	Suction line kit for 2" (50 mm) injectors ***KIT INCLUDES:*** (10') 1" ID x 1 3/8" OD Clear Vinyl Tubing; (1) 1" PVC Ball Valve; (2) #16 Stainless Steel Clamps; (1) S-87 Strainer; (1) C86 Check Valve; Misc. PVC Fittings	5.15 lbs	2.34 kg
KR282	Economy suction line kit for 2" injectors ***KIT INCLUDES:*** (6') 1" ID x 1 3/8" OD Clear Vinyl Tubing; (1) 1" PVC Ball Valve; (2) #16 Stainless Steel Clamps; (1) S-87 Strainer; (1) C75-CVA Check Valve; Misc. PVC Fittings	4.83 lbs	2.19 kg

Bypass Kits *(includes Suction Line Kit)*

Part Number	Description	Weight (lbs)	Weight (kg)
K184-A	Bypass kit for ½" (15 mm) injectors ***KIT INCLUDES:*** (10') ¼" ID x 3/8" OD Clear Vinyl Tubing; (1) MV-25 Polypropylene Metering Valve; (2) CLAMPS#23; (1) S-25HB Strainer; (2) 13" Pieces of 5/8" High Pressure Hose; (4) #8 Stainless Steel Hose Clamps; Misc. PVC Fittings	1.65 lbs	0.75 kg
K184-B	Bypass kit for ¾" injectors ***KIT INCLUDES:*** (10') ¼" ID x 3/8" OD Clear Vinyl Tubing; (1) MV-25 Polypropylene Metering Valve; (2) CLAMPS#23; (1) S-25HB Strainer; (2) 13" Pieces of ¾" High Pressure Hose; (4) #10 Stainless Steel Hose Clamps; Misc. PVC Fittings	1.80 lbs	0.82 kg
K181-A-02	Bypass kit for 1" injectors ***KIT INCLUDES:*** (10') ½" ID x ¾" OD Clear Vinyl Tubing; (1) MV-5 Polypropylene Metering Valve; (4) CLAMPS#44; (1) S-50HB Strainer; (2) TA-550F Tubing Adapters; (2) 16" Pieces of 1" High Pressure Hose; (4) #16 Stainless Steel Hose Clamps; Misc. PVC & Steel Fittings	3.15 lbs	1.43 kg
K183-A	Bypass kit for 1½" injectors ***KIT INCLUDES:*** (10') ½" ID x ¾" OD Clear Vinyl Tubing; (1) MV-5 Polypropylene Metering Valve; (4) CLAMPS#44; (1) S-50HB Strainer; (2) TA-550F Tubing Adapters; (2) 16" Pieces of 1½" High Pressure Hose; (4) #28 Stainless Steel Hose Clamps; Misc. PVC Fittings	4.95 lbs	2.25 kg
K282-A	Bypass kit for 2" injectors ***KIT INCLUDES:*** (10') 1" ID x 1 3/8" OD Clear Vinyl Tubing; (1) 1" PVC Ball Valve; (2) #16 Stainless Steel Clamps; (1) S-87 Strainer; (1) C86 Check Valve; (2) 19" Pieces of 2" High Pressure Hose; (4) #32 Stainless Steel Hose Clamps; Misc. PVC Fittings	9.15 lbs	4.15 kg

Flowmeters

F-30

F-44 and F-45 Series

Part Number	Scale Range	Length	Thread Size	Weight
F-44250L-8	0.025-0.250 GPM / 0.1-1.0 LPM	6.188"	½" Male NPT	0.44 lbs
F-44375L-8	0.1-1.0 GPM / 0.4-4.0 LPM	6.188"	½" Male NPT	0.42 lbs
F-44376L-8	0.2-2.0 GPM / 0.75-7.5 LPM	6.188"	½" Male NPT	0.45 lbs
F-44500L-8	0.5-5.0 GPM / 1.8-18.0 LPM	6.188"	½" Male NPT	0.46 lbs
F-44750L-8	1.0-10.0 GPM / 5.0-37.5 LPM	7.500"	½" Male NPT	0.60 lbs
F-44750L-12	1.0-10.0 GPM / 5.0-37.5 LPM	7.500"	¾" Male NPT	0.62 lbs
F-45750L-8	1.0-10.0 GPM / 4.0-40.0 LPM	10.00"	½" Male NPT	0.54 lbs
F-45750L-12	1.0-10.0 GPM / 4.0-40.0 LPM	10.00"	¾" Male NPT	0.55 lbs
F-44330L-8	3.0-30.0 GPH / 10-110 LPH	6.188"	½" Male NPT	0.45 lbs
F-44560L-8	5.0-60.0 GPH / 20-220 LPH	6.188"	½" Male NPT	0.45 lbs
F-30	5.0-40.0 GPH / 10.0-150 LPH	6.750"	¼" ID Barbed Connection	0.04 lbs

Flowmeter Assembly Kit

Part Number	Description	Weight
KR-F-30L	***KIT INCLUDES:*** (1) F-30 Flowmeter; (6') ¼" ID x ⅜" OD Clear Vinyl Tubing; (4) CLAMPS#23; (1) TA-225 Tubing Adapter; (1) S-25HB Strainer; (1) Ball Valve	0.30 lbs

Bell Reducers

Part Number	Description	Weight
Black PVDF – NPT		
BR125-PVDF	1¼" Female NPT x ½" Female NPT bell reducer	0.20 lbs
BR125-1-PVDF	1¼" Female NPT x 1" Female NPT bell reducer	0.21 lbs
BR150-PVDF	1½" Female NPT x ½" Female NPT bell reducer	0.24 lbs
BR151-PVDF	1½" Female NPT x 1" Female NPT bell reducer	0.26 lbs
Blue PVDF – BSPT		
ISO BR125-PVDF	32 mm Female BSPT x ½" Female NPT bell reducer	0.09 kg
ISO BR150-PVDF	40 mm Female BSPT x ½" Female NPT bell reducer	0.11 kg
ISO BR205-PVDF	50 mm Female BSPT x ½" Female NPT bell reducer	0.16 kg

Suction Port Replacement Caps

	Part Number	Injector Replacement Caps For Models:	Weight (lbs)	Weight (kg)
Black PVDF – NPT / BSPT				
	CAP-PVDF 0.375	384-784	0.014 lbs	0.006 kg
	CAP-PVDF 0.75	878-1587	0.036 lbs	0.016 kg
Blue PVDF – NPT /BSPT				
Only available in natural	ISO CAP-PVDF 0.25	283	0.016 lbs	0.007 kg
	ISO CAP-PVDF 0.25	287	0.016 lbs	0.007 kg
	ISO CAP-PVDF 0.375	384-784	0.026 lbs	0.012 kg
	ISO CAP-PVDF 0.75	878-1587	0.036 lbs	0.016 kg
Black Polypropylene - NPT / BSPT				
	CAP-PP 0.25	283-287	0.004 lbs	0.002 kg
	CAP-PP 0.375	384-584	0.010 lbs	0.005 kg
	CAP-PP 0.75	878-1587	0.024 lbs	0.011 kg
Green Polypropylene - NPT / BSPT				
	ISO CAP-GRPP 0.375	584	0.010 lbs	0.005 kg
	ISO CAP-GRPP 0.75	885X-1583	0.240 lbs	0.109 kg

Suction Port Caps

	Part Number	Injector Caps For Models:	Weight (lbs)	Weight (kg)
Black PVDF – NPT / BSPT				
	CAP-PVDF 1.50	3090	0.224 lbs	0.102 kg
	CAP-PVDF 2.00	4091	0.316 lbs	0.143 kg
Blue PVDF – NPT /BSPT				
	ISO CAP-PVDF 1.50	3090	0.224 lbs	0.102 kg
	ISO CAP-PVDF 2.00	4091	0.316 lbs	0.143 kg

Check Valves

	Part Number	Description	Weight (lbs)	Weight (kg)
 C83  C86  C75-CVA	C83-PP	½" check valve for old-style 1" (25 mm) injectors – *polypropylene* (½" Male NPT x 3/8" hose barb connections)	0.05 lbs	0.02 kg
	C83-PVDF	½" check valve for old-style 1" (25 mm) injectors – *PVDF* (½" Male NPT x 3/8" hose barb connections)	0.06 lbs	0.03 kg
	C75-CVA	1¼" check valve for 2" injectors - *PVC* (1¼" Female NPT x 1" hose barb connections)	0.39 lbs	0.18 kg
	C75R-BSPT	1¼" check valve for 50 mm injectors - *PVC* (1¼" BSPT x 1" hose barb connections)	0.40 lbs	0.18 kg
	C86	1¼" check valve for 2" injectors – *PVC* (1¼" Female NPT x 1" Female NPT)	0.66 lbs	0.30 kg

Check Valve Repair Kits

Ball, spring and gasket	Part Number	Description	Weight (lbs)	Weight (kg)
	CR-1	For use with injector models 283 & 287 – *spring not required*	0.002 lbs	0.001 kg
	CR-2	For use with injector models 384, 384X, 484, 584C, 484A, 484X, 584,684 & 784	0.004 lbs	0.002 kg
	CR-3	For use with check valve C83	0.006 lbs	0.003 kg
	CR-4	For use with injector models 878, 885X, 978, 1078, 1583A, 1584A, 1585X & 1587	0.008 lbs	0.004 kg

Metering Valves

	Part Number	Description	Weight (lbs)	Weight (kg)
 MV-5 PVDF  MV-5 PP  MV-50 PP  MV-25 PP  CP-5 PVC	MV-5 PP	½" Metering valve with custom"V Port" characterized seat control for 1" (25 mm) & 1½" (40 mm) injectors	0.126 lbs	0.057 kg
	MV-5 PVDF	½" Metering valve with custom "V Port" characterized seat control for 1" (25 mm) & 1½" (40 mm) injectors	0.200 lbs	0.091 kg
	MV-25 PP	¼" Metering valve for ½" (15 mm) & ¾" (20 mm) injectors	0.050 lbs	0.023 kg
	MV-50 PP	½" Metering valve for 1" (25 mm) & 1½" (40 mm) injectors	0.126 lbs	0.057 kg
	CP-5 PVC	PVC Coupling for MV-5 PP	0.032 lbs	0.015 kg
	CP-5 PVDF	PVDF Coupling for MV-5 PVDF	0.048 lbs	0.022 kg

Suction Port Screen Assemblies

	Part Number	Description	Weight (lbs)
	SPSA-1.25-A	Suction port screen with check valve – 1¼" Female NPT connection for 2" injectors	0.544 lbs
	SPSA-1.50-A	Suction port screen with check valve – 1½" Female NPT connection for 3" injectors	0.680 lbs
	SPSA-2.00-A	Suction port screen with check valve – 2" Female NPT connection for 4" injectors	1.298 lbs

Strainers


S-25HB & S-50HB S-84 S-84 FV S-87

Part Number	Description	Weight (lbs)	Weight (kg)
S-25HB	Strainer for suction lines, ¼" ID hose barb connection for ½" (15 mm) and ¾" (20 mm) injectors	0.02 lbs	0.01 kg
S-50HB	Strainer for suction lines, ½" ID hose barb connection for 1" (25 mm) and 1½" (40 mm) injectors	0.02 lbs	0.01 kg
S-84	Strainer for suction lines, less tubing adapter, with ½" Female NPT connection	0.05 lbs	0.02 kg
S-84 ¼"	Strainer for suction lines with tubing adapter TA-525 for ½" (15 mm) and ¾" (20 mm) injectors	0.05 lbs	0.02 kg
S-84 ½"	Strainer for suction lines with tubing adapter TA-550 for 1" (25 mm) and 1½" (40 mm) injectors	0.05 lbs	0.02 kg
S-84FV	Strainer with foot valve, 3/8" ID hose barb and ½" Male NPT connectors	0.10 lbs	0.05 kg
S-87	PVC strainer for 1" ID hose barb connection for 2" (50 mm) injectors	0.10 lbs	0.05 kg

Tubing Adapters


TA-225 TA-525 TA-550

Part Number	Description	Weight
Polyethylene		
TA-225	¼" Male NPT x ¼" ID hose barb connection	0.004 lbs
TA-525	½" Male NPT x ¼" ID hose barb connection	0.008 lbs
TA-537	½" Male NPT x 3/8" ID hose barb connection	0.008 lbs
TA-550	½" Male NPT x ½" ID hose barb connection	0.008 lbs
TA-550F	½" Female NPT x ½" ID hose barb connection	0.016 lbs

Tubing Clamps

Part Number	Description	Weight
Polypropylene		
CLAMP#23	Clamp for ¼" ID x 3/8" OD tubing	0.002 lbs
CLAMP#32	Clamp for 3/8" ID x ½" OD tubing	0.002 lbs
CLAMP#44	Clamp for ½" ID x ¾" OD tubing	0.004 lbs

Vinyl Tubing

Part Number	Description	Weight
VT-025	Clear vinyl tubing, ¼" ID x 3/8" OD – 100' roll	3.40 lbs
VT-050	Clear vinyl tubing, ½" ID x ¾" OD – 100' roll	13.40 lbs
VT-100	Clear vinyl tubing, 1" ID x 1 3/8" OD – 100' roll	38.80 lbs

Typical Installations for Irrigation Systems

Mazzei Injectors require differential pressure to create suction. The injector's outlet pressure (backpressure) must be sufficiently lower than the inlet pressure. For most models, significant suction occurs with 25-30% pressure differential.

Mazzei Injectors can be installed with the main body in a horizontal position or vertically with the outlet up. The injector suction port can be oriented in any position.

To insure consistent suction, the outlet side of the injector should be flooded or have some restriction downstream (backpressure).

Always use full flow isolation valves and non-restrictive fittings when connecting to the injector. These valves and fittings should be at least the same size as the inlet/outlet connections of the injector. Isolation valves are optional, but recommended.

Do not over-tighten the injector when attaching piping and fittings. The use of an appropriate thread sealant is recommended.

Install pressure gauges near the inlet and outlet of the injector to monitor operating conditions.

Diagrams 1 and 2

The injector is installed around a point of restriction, such as a regulator valve or a gate/ball valve. These create a differential pressure across the injector, thereby allowing the injector to produce a vacuum and draw in material.

Diagram 3

When mainline pressure cannot be reduced, a small booster pump can be used to create a sufficient differential to operate the injector.

For additional information, including troubleshooting tips, please visit our website at **www.mazzei.net**. Always follow environmental regulations regarding backflow prevention and chemical use.

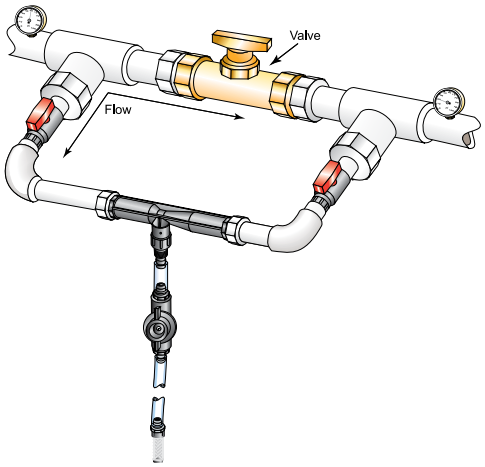


Diagram 1
Bypass Assembly "A"

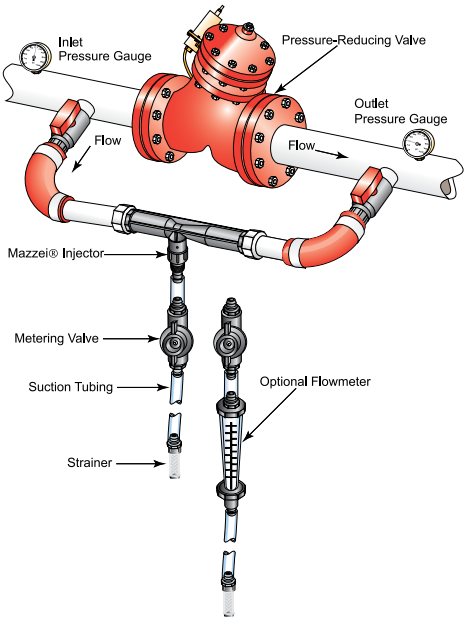


Diagram 2
With Pressure-Reducing Valve

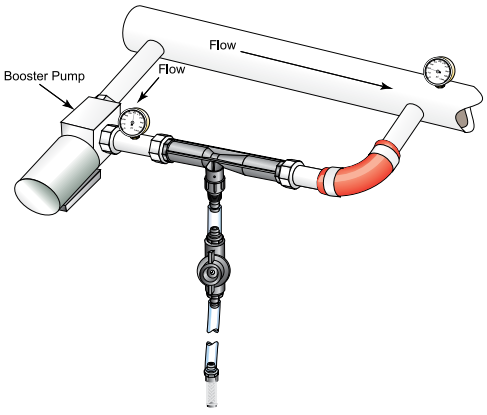


Diagram 3
Bypass with Booster Pump

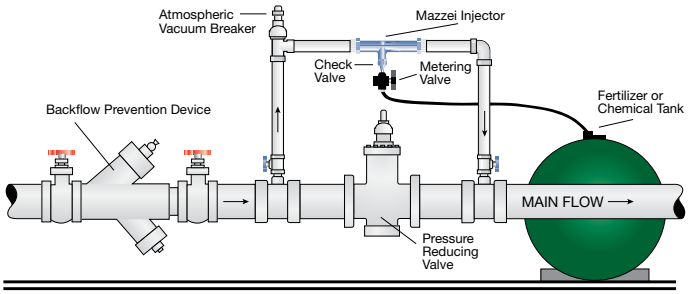
Use of Anti-Siphon and Backflow Prevention Equipment with Mazzei Injectors

Recently, the Environmental Protection Agency and other Federal and State regulatory bodies have voiced concerns (and in some states have already adopted regulations) regarding backflow prevention and anti-siphoning in conjunction with the injection of fertilizers or other chemicals into irrigation systems. Generally, these regulations are designed to safeguard individual household or community water supplies and underground aquifers from contamination. This is accomplished by eliminating the possibility of backflow into a well or siphoning into a water system once the irrigation water is shut off.

The following illustrations depict methods of installing Mazzei Injectors in conjunction with anti-siphon and backflow prevention equipment.

Example #1

This first example depicts a Mazzei Injector installed around a point of restriction such as a regulator valve, which creates a differential pressure in the main flow line, thereby allowing the injector to produce a vacuum for chemical induction into the system.



NOTE:

The injector is installed above the level of the fertilizer or chemical tank.

A simple atmospheric vacuum breaker is placed on the injector bypass line, also above the level of the chemical tank. (This assures a positive anti-siphon system during main flow shutdown.)

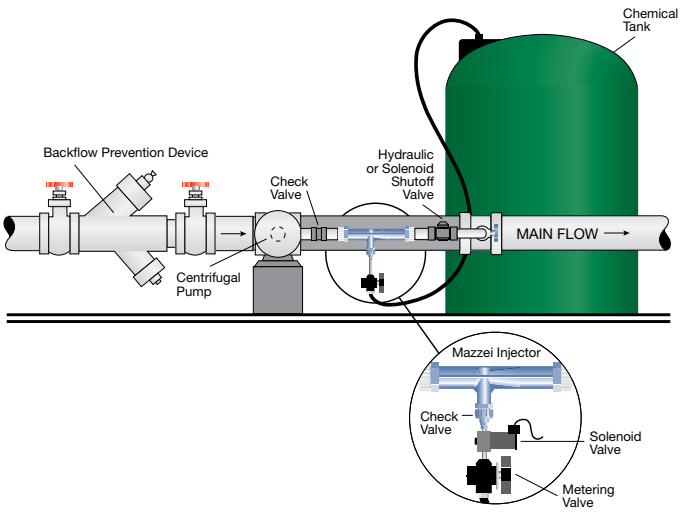
A Reduced Pressure Principle backflow prevention device is installed on the main flow line upstream from the injection equipment to prevent any possible backflow from that point. (Most areas in the U.S. require some type of backflow prevention on all irrigation systems whether they include injection equipment or not.)

Example #2

This example depicts a Mazzei Injector installed in conjunction with a straight centrifugal pump, which boosts a portion of the main flow through the injector, thereby creating a differential pressure, allowing the injector to produce a vacuum for chemical induction downstream from the pump.

When employing this method, the auxiliary centrifugal pump must be interlocked electrically with the main supply pump so it can be operational only while the main supply pump is running.

Since it may not always be practical to install the injector above the level of the chemical tank, this illustration shows methods of isolating the injection system from the main flow line (during shutdown) when the injector is installed below the tank level.



NOTE:

A one-way check valve is installed on the injector bypass line prior to the inlet of the injector.

A normally closed hydraulic shut-off valve is installed on the injector bypass downstream from the outlet of the injector. (This valve will automatically close during shutdown of the main flow line.) A normally-closed solenoid valve (electrically interlocked with the pump) can also be used at this point.

As in example #1, a Reduced Pressure Principle backflow prevention device should always be installed in the main flow line upstream from any injection equipment.

INSET:

Another method of isolating the chemical from the main flow line, during shutdown, is the use of a small, normally-closed solenoid valve on the chemical suction line between the injector and the chemical tank. This valve must also be electrically interlocked with the pump. A positive shut-off of the chemical line will then occur during a power or breaker failure or at any time the pump is stopped.

Injector Performance Table *(Rev. G June 2010)*

**Numbers in parenthesis indicate the injector outlet pressure when suction stops (Zero Suction Point).*

Water Suction Capacity

Operating Pressure PSIG		Model 283 ½" Threads		Model 287 ½" Threads		Model 384 ½" Threads		Model 384X ½" Threads		Model 484 ½" & ¾" Threads		Model 484X ¾" Threads	
Injector Inlet	Injector Outlet	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH
20	0	0.32	5.8	0.51	7.0	1.4	13.1	1.4	29.7	2.4	18.0	2.4	39.5
	5		3.7		6.1		13.2		17.2		15.7		27.7
	10		2.0		3.4		9.3		3.0		9.5		13.4
	12		0.6		1.9		6.4				7.8		8.4
	15	*(15.0)		*(16.0)	0.5	*(16.5)	2.5	*(12.4)		*(17.0)	1.0	*(13.2)	
30	0	0.39	6.0	0.65	8.0	1.7	14.2	1.7	33.9	2.9	17.2	2.9	39.8
	5		5.8		7.9		14.4		24.7		17.0		38.1
	10		3.8		5.6		13.9		17.3		16.6		28.8
	15		2.4		3.6		10.7		7.0		11.3		17.0
	20		0.8		1.7		4.5				7.1		
	25	*(22.5)		*(24.5)		*(25.2)		*(18.0)		*(25.5)		*(19.8)	
40	0	0.43	6.0	0.75	8.1	2.0	14.2	2.0	34.0	3.4	17.1	3.4	40.8
	5		6.0		8.1		14.2		31.6		17.7		38.7
	10		5.5		7.4		14.0		24.1		17.7		38.5
	15		4.2		6.3		14.0		14.3		17.7		29.9
	20		2.6		4.3		12.6		3.6		15.2		20.7
	25		1.2		2.7		7.5				11.4		6.5
	30	*(29.5)		*(31.0)	0.3	*(32.0)	2.0	*(22.8)		*(33.3)	4.0	*(26.1)	
50	0	0.48	6.0	0.85	8.3	2.2	14.1	2.2	33.9	3.8	17.4	3.8	41.7
	10		6.0		8.3		14.1		31.7		17.7		39.2
	20		4.7		5.9		13.6		15.2		17.7		29.5
	25		3.5		4.5		13.6		6.7		16.5		20.3
	30		2.1		3.0		10.1				12.7		8.2
	35		0.7		1.2		6.1				7.8		
	40	*(37.0)		*(39.0)		*(39.6)		*(28.7)		*(41.0)		*(32.6)	
60	0	0.54	6.0	0.92	8.3	2.5	13.8	2.5	34.4	4.1	17.7	4.1	42.4
	10		6.0		7.8		13.6		34.0		17.7		38.3
	20		5.7		7.8		13.4		24.2		17.7		37.5
	30		3.8		5.7		12.4		9.1		17.2		23.1
	35		2.4		4.1		11.7		1.6		15.2		11.2
	40		1.3		2.7		8.4				12.0		
	45	*(45.5)		*(47.0)	0.7	*(47.3)	2.5	*(35.4)		*(50.7)	4.0	*(38.4)	
70	0	0.58	6.0	0.99	8.3	2.7	12.2	2.7	35.2	4.5	18.0	4.5	42.3
	10		6.0		8.3		12.2		34.7		17.2		39.5
	20		6.0		8.3		12.2		30.7		17.2		35.7
	30		5.2		7.4		12.2		18.0		17.2		31.3
	40		2.9		4.7		11.9		3.4		16.3		16.3
	50		0.9		1.7		7.5				11.4		
	55	*(54.0)		*(55.0)		*(54.6)		*(41.5)		*(58.5)	1.5	*(45.9)	
80	0	0.60	6.0	1.06	8.3	2.8	11.7	2.8	34.6	4.8	17.0	4.8	42.3
	10		6.0		8.3		11.7		34.7		17.0		41.9
	20		6.0		8.3		11.7		31.7		16.2		40.8
	30		6.0		8.1		11.7		26.4		16.3		39.7
	40		4.5		6.4		11.7		11.7		15.8		27.0
	50		2.3		4.1		11.3				14.9		6.8
	60				0.9		6.8				6.2		
	65	*(60.5)		*(63.0)		*(61.9)		*(47.2)		*(66.0)		*(51.9)	
90	0	0.65	6.0	1.13	8.3	3.0	11.2	3.0	34.9	5.1	13.7	5.1	42.3
	10		6.0		8.3		11.2		34.5		13.7		40.8
	20		6.0		8.3		11.2		32.9		13.7		40.8
	30		6.0		8.3		11.2		29.6		13.7		39.5
	40		6.0		7.9		11.2		18.5		13.7		33.4
	50		3.5		5.7		11.2		4.8		13.7		26.3
	60		1.6		3.5		11.0				13.3		
	70				0.2		4.7				4.2		
	75	*(68.0)		*(71.0)		*(71.0)		*(53.1)		*(74.0)		*(58.8)	
100	0	0.69	6.0	1.19	7.7	3.2	11.0	3.2	33.6	5.3	13.3	5.3	42.5
	10		6.0		7.7		11.0		32.6		13.3		40.8
	20		6.0		7.7		11.0		31.8		13.3		39.7
	30		6.0		7.7		11.0		31.7		13.3		40.7
	40		6.0		7.4		11.0		29.4		13.3		35.0
	50		5.0		7.2		11.0		12.2		13.2		27.1
	60		3.0		5.2		11.0				13.3		15.1
	70		1.2		3.0		10.5				12.9		
	80	*(76.0)		*(79.0)		*(78.9)		*(59.0)		*(82.9)	1.0	*(65.4)	

Injector Performance Table *(Rev. G June 2010)*

**Numbers in parenthesis indicate the injector outlet pressure when suction stops (Zero Suction Point).*

Water Suction Capacity

Operating Pressure PSIG		Model 584 ½" & ¾" Threads		Model 684 ¾" Threads		Model 878-03 1" Threads		Model 885X-03 1" Threads		Model 1078-03 1" Threads		Model 1583 1½" Threads	
Injector Inlet	Injector Outlet	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH
20	0	**4.2**	24.8	**7.0**	25.1	**7.3**	82.9	**7.1**	142	**11.0**	98.2	**21.5**	228
	5		24.8		25.2		80.5		117		95.4		205
	10		23.7		25.2		48.6		57.7		70.0		144
	12		19.2		18.4		33.6		36.2		51.5		132
	15	*(18.0)	14.6	*(16.5)	10.4	*(16.5)	21.0	*(14.0)		*(17.3)	30.3	*(17.9)	66.2
30	0	**5.1**	25.3	**8.6**	24.5	**9.0**	79.9	**8.7**	144	**13.4**	94.4	**26.3**	227
	5		25.4		24.6		79.2		141		94.5		226
	10		24.9		24.6		77.0		125		94.5		212
	15		25.2		24.6		65.4		69.3		82.1		167
	20		18.2		14.7		35.4		14.3		55.4		126
	25	*(27.0)	11.6	*(26.0)	6.8	*(26.1)	9.1	*(20.5)		*(26.0)	17.9	*(26.0)	18.3
40	0	**5.9**	25.6	**9.9**	25.0	**10.3**	77.5	**10.1**	141	**15.5**	93.2	**30.3**	227
	5		25.6		25.0		77.5		141		93.2		229
	10		25.6		25.1		77.5		139		93.2		227
	15		25.5		25.0		77.5		128		93.2		221
	20		25.2		25.1		73.6		90.5		91.9		193
	25		21.3		24.7		50.6		36.9		72.2		153
	30	*(35.5)	15.0	*(35.0)	10.8	*(34.4)	28.2	*(27.0)		*(34.4)	42.7	*(33.4)	81.5
50	0	**6.6**	25.6	**11.1**	25.0	**11.6**	74.8	**11.3**	140	**17.3**	92.4	**33.9**	227
	10		25.6		25.0		74.8		141		92.4		226
	20		25.4		24.9		74.8		128		92.4		224
	25		24.5		25.0		68.3		107		92.4		204
	30		21.6		17.1		56.2		59.0		86.4		172
	35		15.8		9.2		36.6		12.9		64.3		121
	40	*(45.0)	2.8	*(42.0)	6.7	*(42.3)	9.6	*(36.0)		*(43.9)	35.0	*(41.9)	40.5
60	0	**7.2**	26.4	**12.1**	25.2	**12.7**	72.5	**12.3**	141	**19.0**	92.7	**37.2**	230
	10		26.4		25.4		72.5		141		92.7		229
	20		26.2		25.2		72.5		139		92.7		228
	30		25.4		25.2		71.2		110		93.1		207
	35		23.8		25.2		63.3		73.3		91.7		182
	40		20.1		13.5		41.5		33.3		77.1		148
	45	*(53.5)	14.4	*(50.0)	7.1	*(51.2)	16.4	*(43.0)		*(51.0)	44.4	*(49.4)	82.2
70	0	**7.8**	25.9	**13.1**	25.4	**13.7**	73.7	**13.3**	141	**20.5**	93.4	**40.1**	229
	10		25.9		25.5		73.7		141		93.4		229
	20		25.9		25.6		73.7		141		93.4		229
	30		25.7		25.5		73.7		136		93.5		226
	40		25.6		25.5		67.5		87.7		92.3		199
	50		16.7		10.6		30.7				54.5		124
	55	*(63.0)	9.1	*(58.3)	6.9	*(58.3)	12.9	*(51.0)		*(58.9)	28.8	*(56.7)	43.3
80	0	**8.4**	26.2	**14.0**	25.5	**14.6**	74.2	**14.3**	140	**21.9**	93.9	**42.9**	232
	10		26.2		25.6		74.2		141		93.9		232
	20		26.3		25.6		74.2		141		93.9		232
	30		26.3		25.6		74.2		140		93.9		232
	40		26.3		25.6		73.7		124		94.8		221
	50		25.0		25.7		56.9		60.1		91.5		177
	60		17.2		15.7		25.8				52.9		93.2
	65	*(72.5)	7.9	*(67.0)	5.1	*(67.5)	7.9	*(57.0)		*(68.5)	33.0	*(65.0)	12.0
90	0	**8.9**	27.1	**14.9**	25.8	**15.5**	74.3	**15.1**	141	**23.2**	94.5	**45.5**	229
	10		27.1		25.7		74.3		141		94.5		229
	20		27.5		25.8		74.3		140		94.5		229
	30		27.3		25.8		74.3		140		94.5		229
	40		27.3		25.9		74.3		137		95.6		229
	50		27.3		25.8		70.1		103		94.4		218
	60		24.4		25.9		47.9		34.8		84.7		178
	70		13.2		25.7		18.2				39.6		49.1
	75	*(80.5)	5.2	*(76.0)	13.4	*(75.6)	0.8	*(66.0)		*(76.9)	20.6	*(73.1)	
100	0	**9.4**	28.8	**15.7**	23.5	**16.3**	76.4	**15.9**	141	**24.5**	94.2	**48.0**	232
	10		28.8		24.2		76.4		141		94.2		232
	20		29.2		23.9		76.4		141		94.2		232
	30		29.0		24.0		76.4		140		94.2		232
	40		28.9		24.0		76.4		140		94.2		232
	50		28.8		23.9		74.5		131		94.0		228
	60		28.4		23.9		67.8		87.7		94.9		206
	70		23.3		24.1		44.7		32.6		81.4		147
	80	*(90.0)	16.9	*(85.0)	21.6	*(84.5)	13.0	*(73.0)		*(86.0)	30.6	*(81.3)	25.7

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Injector Performance Table *(Rev. G June 2010)*

**Numbers in parenthesis indicate the injector outlet pressure when suction stops (Zero Suction Point).*

Water Suction Capacity

Operating Pressure PSIG		Model 1585X 1½" Threads		Model 1587 1½" Threads		Model 2081 2" Threads		Model 2083X 2" Threads		Model 3090 3" Threads		Model 4091 4" Threads	
Injector Inlet	Injector Outlet	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH	Motive Flow GPM	Water Suction GPH
20	0	21.5	309	35.4	267	68	631	18.9	757	153	1416	272	2820
	5		232		266		631		237		1416		2820
	10		120		175		468				1170		2700
	12		39.3		142		299				792		1800
	15	*(12.7)		*(17.0)	88.0	*(17.5)	152	*(5.7)		*(17.0)	432	*(17.5)	720
30	0	26.3	323	43.3	264	84	631	23.1	849	187	1308	332	2820
	5		300		262		631		780		1308		2820
	10		251		268		631				1308		2820
	15		138		200		511				1284		2580
	20				165		341				576		1380
	25	*(19.3)		*(25.6)	33.4	*(26.0)	62.0	*(8.8)		*(25.5)		*(26.0)	240
40	0	30.3	324	50.0	287	97	631	26.4	897	216	1254	382	2820
	5		321		285		631		920		1254		2820
	10		308		283		631		389		1254		2820
	15		257		278		631				1254		2820
	20		147		245		524				1110		2820
	25		11.9		180		394				714		1860
	30	*(25.5)		*(33.2)	116	*(33.5)	169	*(11.6)		*(32.5)	228	*(35.0)	900
50	0	33.9	323	56.0	261	108	631	28.6	1175	242	1236	416	2820
	10		316		260		631		579		1236		2820
	20		252		257		631				1236		2820
	25		157		252		588				1194		2820
	30		45.4		205		453				882		2640
	35				137		300				498		1620
	40	*(32.4)		*(41.0)	75.1	*(41.5)	115	*(14.4)		*(40.5)		*(43.1)	360
60	0	37.2	320	61.3	276	119	631	31.5	1350	265	1242	460	2820
	10		318		276		631		851		1242		2820
	20		289		276		631				1242		2820
	30		175		271		600				1236		2820
	35		76.4		259		509				1128		2760
	40				213		381				762		2520
	45	*(38.2)		*(49.9)	118	*(50.0)	217	*(17.9)		*(49.0)	342	*(51.0)	1680
70	0	40.1	317	66.2	277	128	631	33.8	1430	286	1230	495	2760
	10		317		277		631		1261		1230		2760
	20		301		277		631		439		1230		2760
	30		260		275		631				1230		2760
	40		68.3		264		529				1206		2760
	50				151		326				720		1860
	55	*(44.7)		*(57.0)	58.2	*(58.5)	142	*(20.9)		*(58.5)	402	*(60.5)	960
80	0	42.9	322	70.8	276	137	631	34.8	1454	306	1230	532	2700
	10		322		276		631		1397		1230		2700
	20		311		276		631		575		1230		2700
	30		287		276		631				1230		2700
	40		210		273		604				1230		2700
	50				230		506				1158		2700
	60				92.5		270				594		1800
	65	*(51.1)		*(66.0)	51.4	*(66.5)	61	*(24.2)		*(67.5)	300	*(69.5)	840
90	0	45.5	309	75.1	275	145	631	36.6	1486	324	1230	569	2520
	10		309		275		631		1481		1230		2520
	20		303		275		631		1086		1230		2520
	30		296		275		631		638		1230		2520
	40		271		275		631				1230		2520
	50		106		272		602				1230		2400
	60				208		459				1092		2340
	70				62.6		179				468		1680
	75	*(57.5)		*(74.0)		*(75.5)		*(26.5)		*(76.5)		*(79.1)	840
100	0	48.0	305	79.1	275	153	631	39.3	1448	342	1230	600	2520
	10		305		275		631		1450		1230		2520
	20		300		275		631		1010		1230		2520
	30		283		275		631		886		1230		2520
	40		274		275		631				1230		2520
	50		194		274		622				1230		2520
	60		14.7		266		594				1224		2520
	70				180		412				942		2340
	80	*(63.2)		*(81.9)	62.6	*(83.0)	121	*(29.7)		*(85.0)	378	*(88.6)	900

Injector Performance Table *(Rev. G June 2010)*

**Numbers in parenthesis indicate the injector outlet pressure when suction stops (Zero Suction Point).*

Water Suction Capacity (METRIC)

Operating Pressure Kg/cm²		Model 283 15 mm Threads		Model 287 15 mm Threads		Model 384 15 mm Threads		Model 384X 15 mm Threads		Model 484 20 mm Threads		Model 484X 20 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	**1.21**	0.37	**1.93**	0.44	**5.37**	0.82	**5.37**	1.87	**9.01**	1.14	**9.01**	2.49
	0.35		0.23		0.38		0.83		1.08		0.99		1.74
	0.70		0.13		0.21		0.58		0.19		0.60		0.84
	0.84		0.04		0.12		0.40				0.49		0.53
	1.05	*(1.06)		*(1.13)	0.03	*(1.16)	0.16	*(0.87)		*(1.20)	0.06	*(0.93)	
2.11	0.00	**1.48**	0.38	**2.46**	0.50	**6.59**	0.90	**6.59**	2.14	**11.05**	1.09	**11.05**	2.51
	0.35		0.37		0.50		0.91		1.56		1.08		2.41
	0.70		0.24		0.35		0.88		1.09		1.05		1.82
	1.05		0.15		0.23		0.68		0.44		0.71		1.07
	1.41		0.05		0.11		0.29				0.45		
	1.76	*(1.58)		*(1.72)		*(1.77)		*(1.27)		*(1.79)		*(1.39)	
2.81	0.00	**1.63**	0.38	**2.84**	0.51	**7.61**	0.89	**7.61**	2.14	**12.76**	1.08	**12.76**	2.57
	0.35		0.38		0.51		0.89		1.99		1.12		2.44
	0.70		0.35		0.47		0.88		1.52		1.12		2.43
	1.05		0.26		0.40		0.88		0.90		1.12		1.89
	1.41		0.16		0.27		0.80		0.22		0.96		1.31
	1.76		0.08		0.17		0.47				0.72		0.41
	2.11	*(2.07)		*(2.18)	0.02	*(2.25)	0.13	*(1.60)		*(2.34)	0.25	*(1.84)	
3.52	0.00	**1.82**	0.38	**3.22**	0.52	**8.48**	0.89	**8.48**	2.14	**14.27**	1.10	**14.27**	2.63
	0.70		0.38		0.52		0.89		2.00		1.12		2.47
	1.41		0.30		0.37		0.86		0.96		1.12		1.86
	1.76		0.22		0.28		0.86		0.42		1.04		1.28
	2.11		0.13		0.19		0.64				0.80		0.52
	2.46		0.04		0.08		0.38				0.49		
	2.81	*(2.60)		*(2.74)		*(2.78)		*(2.02)		*(2.88)		*(2.29)	
4.22	0.00	**2.04**	0.38	**3.48**	0.52	**9.31**	0.87	**9.31**	2.17	**15.63**	1.12	**15.63**	2.68
	0.70		0.38		0.49		0.86		2.15		1.12		2.42
	1.41		0.36		0.49		0.85		1.53		1.12		2.37
	2.11		0.24		0.36		0.78		0.57		1.09		1.46
	2.46		0.15		0.26		0.74		0.10		0.96		0.71
	2.81		0.08		0.17		0.53				0.76		
	3.16	*(3.20)		*(3.30)	0.04	*(3.33)	0.16	*(2.49)		*(3.57)	0.25	*(2.70)	
4.92	0.00	**2.20**	0.38	**3.75**	0.52	**10.03**	0.77	**10.03**	2.22	**16.88**	1.14	**16.88**	2.67
	0.70		0.38		0.52		0.77		2.19		1.08		2.49
	1.41		0.38		0.52		0.77		1.94		1.08		2.25
	2.11		0.33		0.47		0.77		1.13		1.08		1.98
	2.81		0.18		0.30		0.75		0.22		1.03		1.03
	3.52		0.06		0.11		0.47				0.72		
	3.87	*(3.80)		*(3.87)		*(3.84)		*(2.92)		*(4.11)	0.09	*(3.23)	
5.62	0.00	**2.27**	0.38	**4.01**	0.52	**10.75**	0.74	**10.75**	2.18	**18.05**	1.07	**18.05**	2.67
	0.70		0.38		0.52		0.74		2.19		1.07		2.64
	1.41		0.38		0.52		0.74		2.00		1.02		2.57
	2.11		0.38		0.51		0.74		1.66		1.03		2.51
	2.81		0.28		0.40		0.74		0.74		1.00		1.70
	3.52		0.15		0.26		0.71				0.94		0.43
	4.22				0.06		0.43				0.39		
	4.57	*(4.25)		*(4.43)		*(4.35)		*(3.32)		*(4.64)		*(3.65)	
6.33	0.00	**2.46**	0.38	**4.28**	0.52	**11.39**	0.71	**11.39**	2.20	**19.15**	0.86	**19.15**	2.67
	0.70		0.38		0.52		0.71		2.17		0.86		2.57
	1.41		0.38		0.52		0.71		2.08		0.86		2.57
	2.11		0.38		0.52		0.71		1.87		0.86		2.49
	2.81		0.38		0.50		0.71		1.17		0.86		2.11
	3.52		0.22		0.36		0.71		0.31		0.86		1.66
	4.22		0.10		0.22		0.69				0.84		
	4.92				0.01		0.30				0.27		
	5.27	*(4.78)		*(4.99)		*(4.99)		*(3.73)		*(5.20)		*(4.13)	
7.03	0.00	**2.61**	0.38	**4.50**	0.49	**12.00**	0.69	**12.00**	2.12	**20.17**	0.84	**20.17**	2.68
	0.70		0.38		0.49		0.69		2.06		0.84		2.57
	1.41		0.38		0.49		0.69		2.01		0.84		2.50
	2.11		0.38		0.49		0.69		2.00		0.84		2.57
	2.81		0.38		0.47		0.69		1.85		0.84		2.21
	3.52		0.32		0.45		0.69		0.77		0.83		1.71
	4.22		0.19		0.33		0.69				0.84		0.96
	4.92		0.08		0.19		0.66				0.81		
	5.62	*(5.34)		*(5.55)		*(5.55)		*(4.15)		*(5.83)	0.06	*(4.60)	

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Injector Performance Table *(Rev. G June 2010)*

**Numbers in parenthesis indicate the injector outlet pressure when suction stops (Zero Suction Point).*

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**	5.23	**26.99**	8.95	**41.45**	6.20	**81.2**	14.39
	0.35		1.57		1.59		5.08		7.40		6.02		12.96
	0.70		1.50		1.59		3.07		3.64		4.42		9.06
	0.84		1.21		1.16		2.12		2.28		3.25		8.31
	1.05	*(1.27)	0.92	*(1.16)	0.66	*(1.16)	1.33	*(0.98)		*(1.22)	1.91	*(1.26)	4.18
2.11	0.00	**19.38**	1.60	**32.48**	1.55	**33.88**	5.04	**33.04**	9.09	**50.76**	5.95	**99.5**	14.29
	0.35		1.60		1.55		5.00		8.88		5.96		14.28
	0.70		1.57		1.55		4.86		7.90		5.96		13.35
	1.05		1.59		1.55		4.12		4.37		5.18		10.55
	1.41		1.15		0.93		2.23		0.91		3.50		7.92
	1.76	*(1.90)	0.73	*(1.83)	0.43	*(1.84)		*(1.44)		*(1.83)	1.13	*(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	**128**	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
4.22	0.00	**27.40**	1.67	**45.95**	1.59	**47.88**	4.57	**46.71**	8.88	**71.80**	5.85	**141**	14.49
	0.70		1.67		1.60		4.57		8.89		5.85		14.45
	1.41		1.65		1.59		4.57		8.74		5.85		14.37
	2.11		1.60		1.59		4.49		6.95		5.87		13.03
	2.46		1.50		1.59		4.00		4.62		5.79		11.50
	2.81		1.27		0.85		2.62		2.10		4.87		9.33
	3.16	*(3.76)	0.91	*(3.52)	0.45	*(3.60)	1.03	*(3.02)		*(3.59)	2.80	*(3.47)	5.18
4.92	0.00	**29.60**	1.63	**49.62**	1.60	**51.74**	4.65	**50.45**	8.90	**77.55**	5.89	**152**	14.43
	0.70		1.64		1.61		4.65		8.86		5.89		14.43
	1.41		1.63		1.61		4.65		8.87		5.89		14.43
	2.11		1.62		1.61		4.65		8.55		5.90		14.24
	2.81		1.62		1.61		4.26		5.53		5.83		12.53
	3.52		1.06		0.67		1.94				3.44		7.85
	3.87	*(4.43)	0.57	*(4.10)	0.44	*(4.10)	0.81	*(3.59)		*(4.14)	1.82	*(3.99)	2.73
5.62	0.00	**31.64**	1.65	**53.07**	1.61	**55.30**	4.68	**53.94**	8.82	**82.89**	5.92	**162**	14.61
	0.70		1.65		1.61		4.68		8.88		5.92		14.61
	1.41		1.66		1.62		4.68		8.88		5.92		14.61
	2.11		1.66		1.62		4.68		8.80		5.92		14.61
	2.81		1.66		1.62		4.65		7.83		5.98		13.91
	3.52		1.58		1.62		3.59		3.79		5.77		11.19
	4.22		1.08		0.99		1.63				3.34		5.88
	4.57	*(5.10)	0.50	*(4.71)	0.32	*(4.75)	0.50	*(4.01)		*(4.82)	2.08	*(4.57)	0.76
6.33	0.00	**33.57**	1.71	**56.28**	1.63	**58.67**	4.68	**57.23**	8.92	**87.93**	5.96	**172**	14.47
	0.70		1.71		1.62		4.68		8.92		5.96		14.47
	1.41		1.73		1.63		4.68		8.82		5.96		14.47
	2.11		1.72		1.63		4.68		8.85		5.96		14.47
	2.81		1.72		1.63		4.68		8.63		6.03		14.45
	3.52		1.72		1.63		4.42		6.52		5.95		13.74
	4.22		1.54		1.63		3.02		2.19		5.34		11.22
	4.92		0.84		1.62		1.15				2.50		3.10
	5.27	*(5.66)	0.33	*(5.34)	0.84	*(5.32)	0.05	*(4.64)		*(5.41)	1.30	*(5.14)	
7.03	0.00	**35.39**	1.81	**59.31**	1.48	**61.85**	4.82	**60.30**	8.90	**92.69**	5.94	**182**	14.64
	0.70		1.81		1.53		4.82		8.90		5.94		14.64
	1.41		1.84		1.51		4.82		8.92		5.94		14.64
	2.11		1.83		1.51		4.82		8.85		5.94		14.64
	2.81		1.82		1.51		4.82		8.81		5.94		14.64
	3.52		1.82		1.51		4.70		8.26		5.93		14.41
	4.22		1.79		1.51		4.28		5.53		5.99		13.01
	4.92		1.47		1.52		2.82		2.06		5.13		9.25
	5.62	*(6.33)	1.06	*(5.98)	1.36	*(5.94)	0.82	*(5.13)		*(6.05)	1.93	*(5.72)	1.62

Injector Performance Table *(Rev. G June 2010)*

**Numbers in parenthesis indicate the injector outlet pressure when suction stops (Zero Suction Point).*

Water Suction Capacity (METRIC)

Operating Pressure Kg/cm²		Model 1585X 40 mm Threads		Model 1587 40 mm Threads		Model 2081 50 mm Threads		Model 2083X 50 mm Threads		Model 3090 80 mm Threads		Model 4091 100 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	81.2	19.5	134	16.8	259	39.8	71.5	47.8	579	89.3	1030	178
	0.35		14.6		16.8		39.8		14.9		89.3		178
	0.70		7.6		11.0		29.5				73.8		170
	0.84		2.5		9.0		18.8				50.0		114
	1.05	*(0.89)		*(1.20)	5.5	*(1.23)	9.6	*(0.40)		*(1.20)	27.3	*(1.23)	45.4
2.11	0.00	99.5	20.4	164	16.6	317	39.8	87.4	53.6	708	82.5	1257	178
	0.35		18.9		16.5		39.8		49.2		82.5		178
	0.70		15.8		16.9		39.8				82.5		178
	1.05		8.7		12.6		32.3				81.0		163
	1.41				10.4		21.5				36.3		87.1
	1.76	*(1.36)		*(1.80)	2.1	*(1.83)	3.9	*(0.62)		*(1.79)		*(1.83)	15.1
2.81	0.00	115	20.5	189	18.1	366	39.8	99.9	56.6	818	79.1	1446	178
	0.35		20.3		18.0		39.8		58.0		79.1		178
	0.70		19.4		17.8		39.8		24.5		79.1		178
	1.05		16.2		17.6		39.8				79.1		178
	1.41		9.2		15.4		33.0				70.0		178
	1.76		0.8		11.4		24.9				45.0		117
	2.11	*(1.79)		*(2.33)	7.3	*(2.36)	10.7	*(0.82)		*(2.29)	14.4	*(2.46)	56.8
3.52	0.00	128	20.4	212	16.4	410	39.8	108	74.1	916	78.0	1575	178
	0.70		19.9		16.4		39.8		36.5		78.0		178
	1.41		15.9		16.2		39.8				78.0		178
	1.76		9.9		15.9		37.1				75.3		178
	2.11		2.9		13.0		28.6				55.6		167
	2.46				8.7		18.9				31.4		102
	2.81	*(2.28)		*(2.88)	4.7	*(2.92)	7.3	*(1.01)		*(2.85)		*(3.03)	22.7
4.22	0.00	141	20.2	232	17.4	449	39.8	119	85.2	1003	78.3	1741	178
	0.70		20.0		17.4		39.8		53.7		78.3		178
	1.41		18.2		17.4		39.8				78.3		178
	2.11		11.0		17.1		37.9				78.0		178
	2.46		4.8		16.4		32.1				71.2		174
	2.81				13.4		24.0				48.1		159
	3.16	*(2.69)		*(3.51)	7.4	*(3.52)	13.7	*(1.26)		*(3.45)	21.6	*(3.59)	106
4.92	0.00	152	20.0	251	17.5	485	39.8	128	90.2	1083	77.6	1874	174
	0.70		20.0		17.5		39.8		79.6		77.6		174
	1.41		19.0		17.5		39.8		27.7		77.6		174
	2.11		16.4		17.3		39.8				77.6		174
	2.81		4.3		16.6		33.4				76.1		174
	3.52				9.5		20.6				45.4		117
	3.87	*(3.14)		*(4.01)	3.7	*(4.11)	9.0	*(1.47)		*(4.11)	25.4	*(4.25)	60.6
5.62	0.00	162	20.3	268	17.4	518	39.8	132	91.7	1158	77.6	2014	170
	0.70		20.3		17.4		39.8		88.1		77.6		170
	1.41		19.6		17.4		39.8		36.3		77.6		170
	2.11		18.1		17.4		39.8				77.6		170
	2.81		13.2		17.2		38.1				77.6		170
	3.52				14.5		31.9				73.1		170
	4.22				5.8		17.0				37.5		114
	4.57	*(3.59)		*(4.64)	3.2	*(4.68)	3.8	*(1.70)		*(4.75)	18.9	*(4.89)	53.0
6.33	0.00	172	19.5	284	17.3	550	39.8	139	93.8	1226	77.6	2154	159
	0.70		19.5		17.3		39.8		93.5		77.6		159
	1.41		19.1		17.3		39.8		68.5		77.6		159
	2.11		18.7		17.3		39.8		40.3		77.6		159
	2.81		17.1		17.3		39.8				77.6		159
	3.52		6.7		17.2		38.0				77.6		151
	4.22				13.1		28.9				68.9		148
	4.92				3.9		11.3				29.5		106
	5.27	*(4.04)		*(5.20)		*(5.31)		*(1.86)		*(5.38)		*(5.56)	53.0
7.03	0.00	182	19.2	300	17.4	579	39.8	149	91.3	1294	77.6	2271	159
	0.70		19.2		17.4		39.8		91.5		77.6		159
	1.41		18.9		17.4		39.8		63.7		77.6		159
	2.11		17.8		17.4		39.8		55.9		77.6		159
	2.81		17.3		17.4		39.8				77.6		159
	3.52		12.2		17.3		39.2				77.6		159
	4.22		0.9		16.8		37.5				77.2		159
	4.92				11.3		26.0				59.4		148
	5.62	*(4.44)		*(5.76)	3.9	*(5.84)	7.6	*(2.09)		*(5.98)	23.8	*(6.23)	56.8

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