

MixRite

DOSING PUMPS

Agriculture | Livestock | Industry



MixRite DOSING PUMPS

About TEFEN

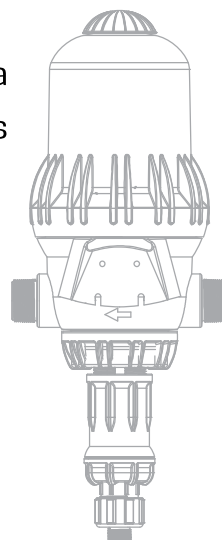
Tefen is a leading manufacturer of environmental friendly, non-electric volumetric equipment and flow products since 1973.

Tefen's MixRite line of water driven proportional dosing pumps, are used to ensure precise additive injection directly into the water or fluid line under various flow rates, feed ratios and different ranges of pressure. These injectors are extremely durable, manufactured from engineered composite materials to withstand the rigors of the elements, as well as chemicals and acids for injection.

Tefen offers the MixRite pumps for a variety of applications such as medication for livestock, cleaning or disinfecting fluid lines, sanitizing water systems, car wash, cost effective fertilizing, and pest control for crops and plants. Tefen's injectors are adaptable simple to use and cost effective, while creating a long-lasting solution for your needs.

The Tefen MixRite water powered dosing pump is a simple, user friendly and ingenious system that has demonstrated its value in over 90 countries.

Tefen is certified by ISO 9001 2008





Applications

Animal Health

The MixRite medicators for Animal Health guarantee control over doses of treatments injected through drinking water, which is the ideal distribution method, from the first day of the flock. In all kinds of Animal (poultry, pigs, cattle, rabbits, etc.), the MixRite proportional dosing medicators will enable you to dose into the water line treatments such as: Medications, Vaccines, Disinfectants, Acidification, Chlorine, Supplements, Vitamins, Minerals. The proportionality of MixRite medicators guarantees the correct dose independently by pressure and water flow variations (animal consumption).

Fertilizing

The objectives of fertigation are to control water quantities and added nutrients necessary for optimum growth of crops. MixRite proportional injection technology means less waste, plus a better mix for fertilizers, pesticides and other water-soluble products.

Cleaning or disinfecting fluid lines

MixRite water powered proportional dosing pumps can be used for automatic preparation of disinfecting, lubricating and detergent solutions. MixRite injectors operate without electricity, they can also be used in remote areas for water purification to prevent and control disease.

Car washing

MixRite pumps are the perfect solution for car wash facilities of all types and sizes. It lowers the cost-per-car expense, while using less energy and chemical waste.

Sanitizing water systems

The sanitation and hygiene industry requires exceedingly accurate and reliable chemical mixing and injection solutions. MixRite injectors are used in market applications like hospitals, restaurants, food services, and supermarkets. MixRite pumps are easily installed in fixed or mobile installations often including static mixers, maturing tanks, flow meters, etc.



MixRite DOSING PUMPS

Features

- Mixes additive and water precisely
- The dosage can be adjusted easily and quickly
- Repair is simple and inexpensive
- Key internal parts are from the highest quality material available (hastelloy spring. Viton Rubber seal)

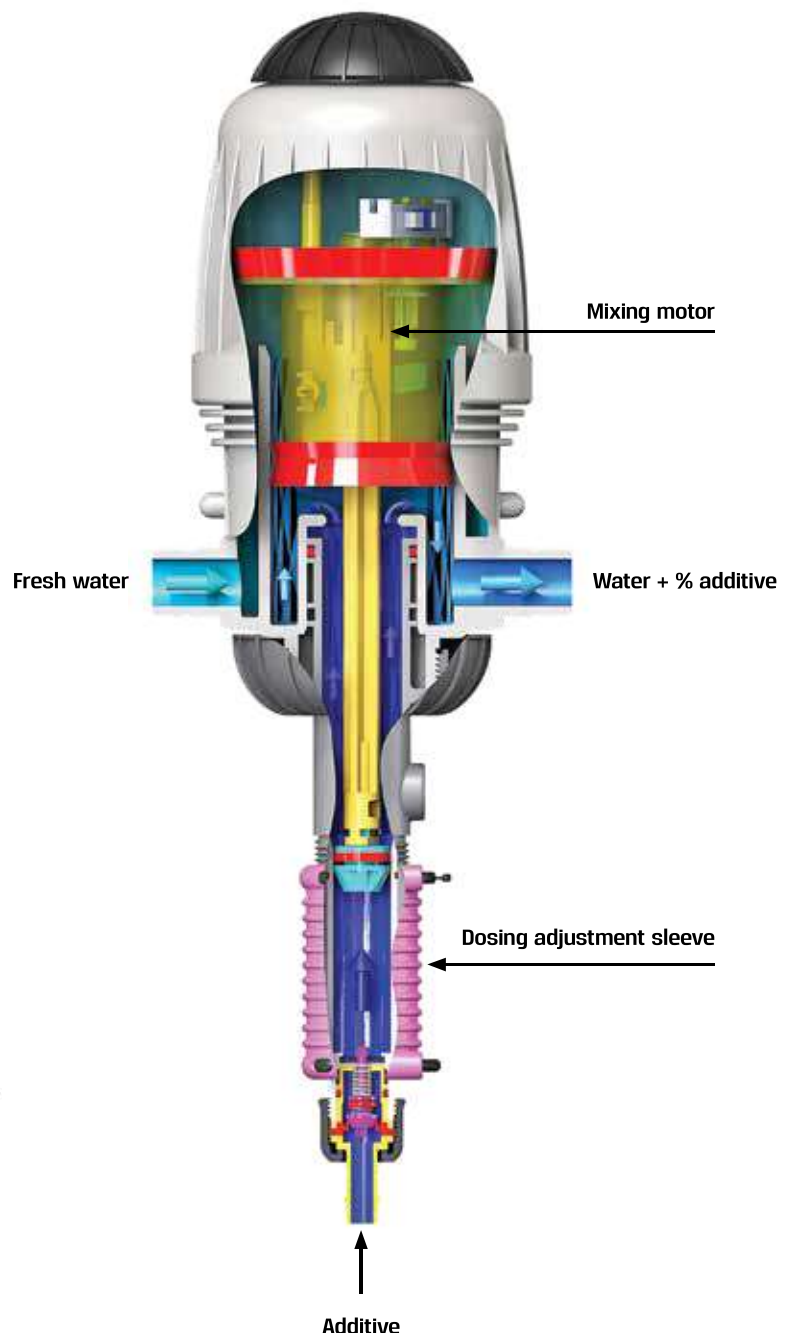
Advantages

- Works at low flow rate
- Easy to field maintenance
- Highly chemical resistant
- Good blending
- Highly resistant to UV damage
- Easy to install
- No electricity needed
- Easy to adjust dosing rate
- Replaceable seals

Determining the right MixRite model for each application is done according to the customer's needs and the system specifications.

Operating principle

The unit will automatically start working when water is flowing in the water line and continue until the flow will stop; it is possible to control the suction (intake) operation by using the models with the On/Off system.



Adjusting the MixRite pump

The injection rate is set up manually by rotating the sleeve to the desired proportion. The amount of injected concentrate is proportional to the amount of water flowing into the MixRite pump.



Simplicity by design

Simple maintenance

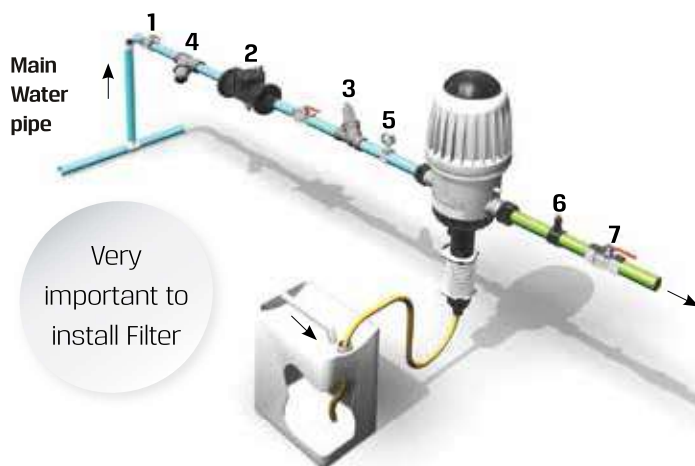
MixRite is the most simple injector to use. Less maintenance is required and no technician is needed for changing spare parts.

Recommended standard Installation inline

1. Main Valve
2. Back flow preventor
3. Pressure regulator
4. Filter - 130 Micron Min. (130 mesh)
5. Manometer (pressure gauge)
6. Anti siphon Valve
7. Operation Valve

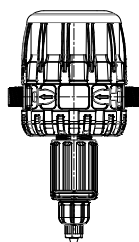
Simple installation

MixRite is a "Plug and Play" unit. Installation of MixRite can be done by using the instructions which are attached to each unit.

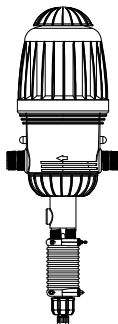


MixRite Range

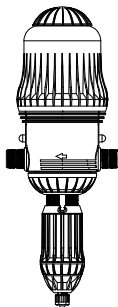
1



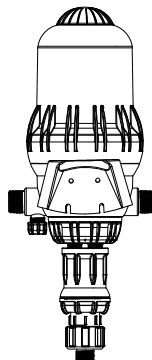
2.5



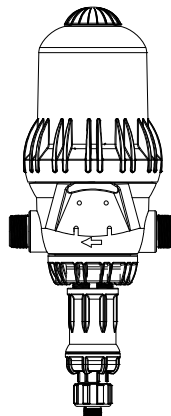
3.5



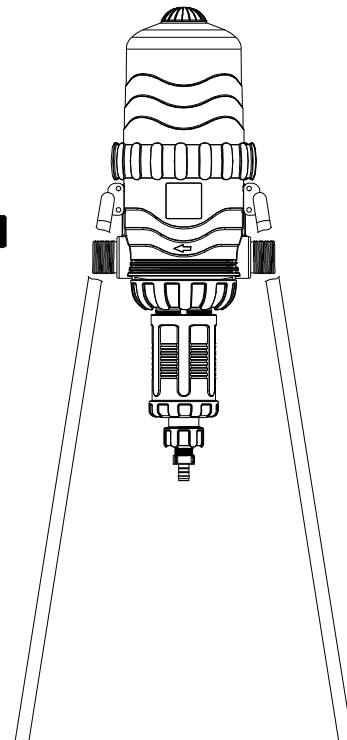
TF - 5



TF - 10



TF - 25



MixRite DOSING PUMPS

2.5 m³/h

MixRite 2.5 Series | Low Flow Rate

Available options

Manual
ON/OFF

Hydraulic
ON/OFF

Electric
ON/OFF



Technical Information

Water pressure	0.2 - 8 bar (2.9 - 120 psi)
Flow Rate	7 - 2500 l/h (1.85 - 660) gal/h
Working temp	4-40° C (39.2-104° F)
Coupling	3/4"



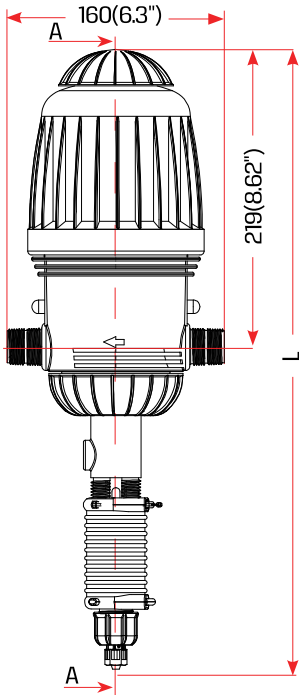
By Pass models



Internal bypass
*Yellow sleeve



External bypass
*Yellow sleeve



L (Height)		
	On/Off	Air Release
Max.	528 (20.7")	496 (19.5")
Min.	497 (19.5")	457 (17.9")

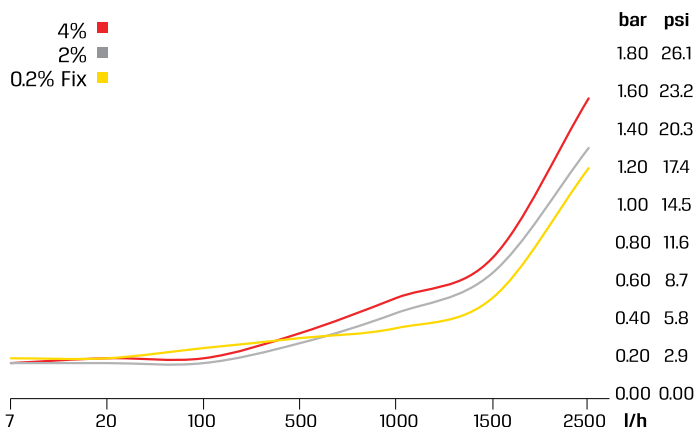
Application Color Code

Application	Sleeve Color	TEFEN Code	Seal Material	Spring Material
Irrigation	Grey	STD	NBR	SST
Livestock	Red	PO	NBR, EPDM	SST, Hastelloy
Acids	White	PVDF	AFLAS	Hastelloy
Chlorine	Purple	CL	Viton	Hastelloy
Industry	Black	C	EPDM, AFLAS	SST, Hastelloy
Car Wash	Cyan	CW	AFLAS	SST, Hastelloy
Landscaping	Green	STD	NBR	SST
By-Pass	Yellow	I / B	EPDM, AFLAS	SST, Hastelloy

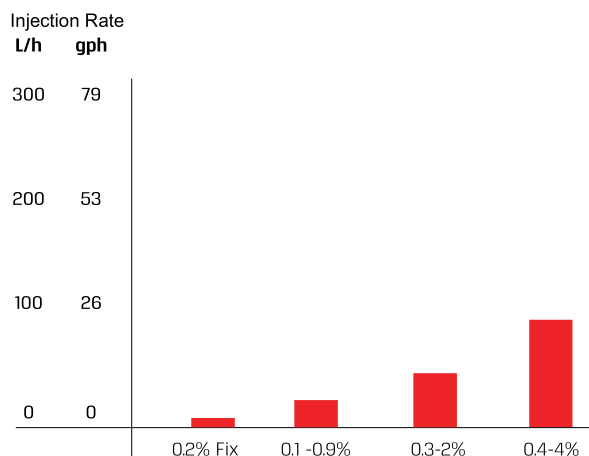
Application Range

Dosage Rate %	Flow Rate Range	Pressure Range	Connectors Dia. Thread	Min-Max Injection Rate Per Hour	Applications	Gross weight std unit
0.2% fix	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.014 - 5 l/h	Landscaping	1.4 KG
0.8% fix	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.056 - 20 l/h	Landscaping / Irrigation / Livestock	1.5 KG
1% fix	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.07 - 25 l/h	Landscaping / Irrigation / Livestock	1.8 KG
2% fix	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.14 - 50 l/h	Acid	2.7 KG
0.1% - 0.9%	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.007 - 22.5 l/h	Irrigation / Livestock / Chlorine / Car Wash / Acid	1.8 KG
0.3% - 2%	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.021 - 50 l/h	Irrigation/Livestock / Chlorine / Car Wash / Industry / Acid	1.8 KG
0.4% - 4%	7 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.028 - 100 l/h	Irrigation/Livestock / Chlorine / Car Wash / Industry / Acid	1.8 KG
0.3% - 2% bypass	20 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.06 - 50 l/h	Irrigation / Livestock / Chlorine / Acid	1.9 KG
0.4% - 4% bypass	20 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.08 - 100 l/h	Irrigation / Livestock / Chlorine / Acid	1.9 KG
0.3% - 2% Internal bypass	20 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.06 - 50 l/h	Irrigation / Livestock / Chlorine / Acid	1.9 KG
0.4% - 4% Internal bypass	20 - 2500 l/h	0.2 - 8 bar	3/4" BSPT	0.08 - 100 l/h	Irrigation / Livestock / Chlorine / Acid	1.9 KG

Pressure Loss



Max. injection rate/h



MixRite DOSING PUMPS

3.5 m³/h

MixRite 3.5 Series | Low Flow Rate

Available options

Manual
ON/OFF

Hydraulic
ON/OFF

Electric
ON/OFF





Technical Information

Water pressure	0.2 - 8 bar (2.9 - 120 psi)
Flow Rate	10 - 3500 l/h (265 - 930) gal/h
Working temp	4-40° C (39.2-104° F)
Coupling	3/4"



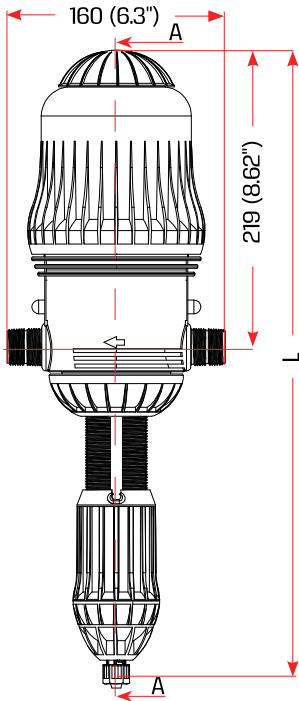
By Pass models



Internal bypass
*Yellow sleeve



External bypass
*Yellow sleeve



L (Height)		
	On/Off	Air Release
Max.	551 (21.7")	486 (19.1")
Min.	471 (18.5")	447 (17.6")

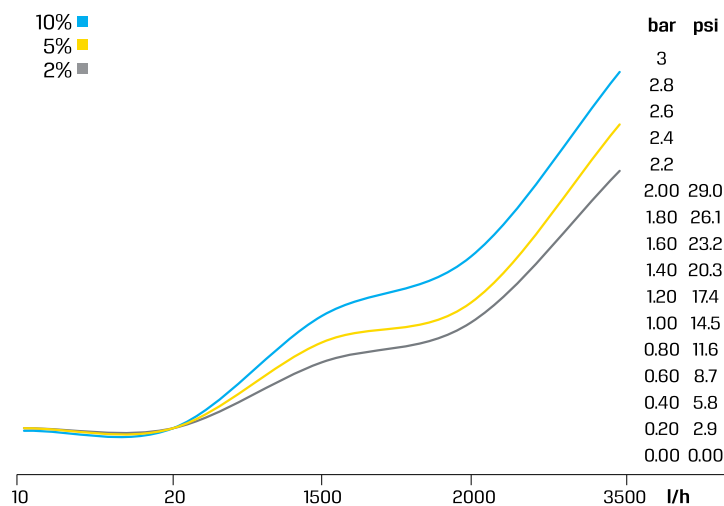
Application Color Code

Application	Sleeve Color	TEFEN Code	Seal Material	Spring Material
Irrigation	Grey	STD	NBR	SST
Livestock	Red	PO	NBR, EPDM	SST, Hastelloy
Acids	White	PVDF	AFLAS	Hastelloy
Chlorine	Purple	CL	Viton	Hastelloy
Industry	Black	C	EPDM, AFLAS	SST, Hastelloy
Car Wash	Cyan	CW	AFLAS	SST, Hastelloy
Landscaping	Green	STD	NBR	SST
By-Pass	Yellow	I / B	EPDM, AFLAS	SST, Hastelloy

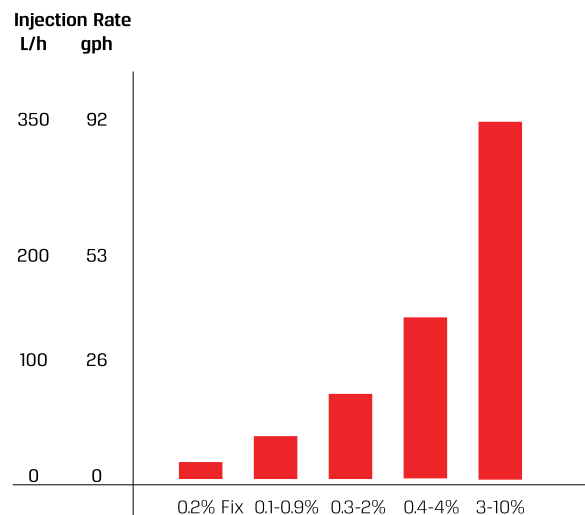
Application Range

Dosage Rate %	Flow Rate Range	Pressure Range	Connectors Dia. Thread	Min-Max Injection Rate Per Hour	Applications	Gross weight std unit
0.03% - 0.2%	10-3500 l/h	0.2 - 8 bar	3/4" BSPT	0.003 -7 l/h	Chlorine / Car Wash	1.9 KG
0.1% - 0.9%	10-3500 l/h	0.2 - 8 bar	3/4" BSPT	0.01 -31.5 l/h	Irrigation / Chlorine / Car Wash / Acid	1.9 KG
0.3% - 2%	10-3500 l/h	0.2 - 8 bar	3/4" BSPT	0.03 - 70 l/h	Irrigation / Livestock / Industry / Chlorine / Acid	1.9 KG
0.5% - 5%	10-3500 l/h	0.2 - 8 bar	3/4" BSPT	0.05 - 175 l/h	Irrigation / Livestock / Industry / Chlorine / Acid	1.9 KG
1% - 10%	10-3500 l/h	0.2 - 8 bar	3/4" BSPT	0.5 - 350 l/h	Industry / Chlorine / Car Wash / Acid	1.9 KG
1% - 10% I.B.P	50-3500 l/h	0.2 - 8 bar	3/4" BSPT	0.5 - 350 l/h	Irrigation / Livestock / Chlorine / Acid	3.0 KG

Pressure Loss



Max. injection rate/h



MixRite DOSING PUMPS

5 m³/h

MixRite TF-5 | Low Flow Rate

Available models

Manual
ON/OFF

Hydraulic
ON/OFF

Electric
ON/OFF





Technical Information

Water pressure

Flow Rate

Working temp

Coupling

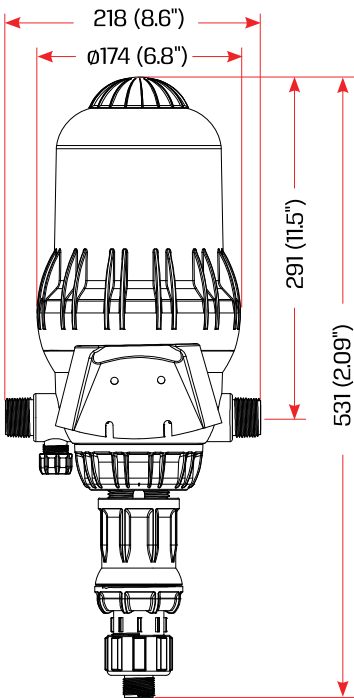
1 - 8 bar (14.7 - 120 PSI)

0.05 - 5 m³/h (0.2 - 22 GPM)

4-40° C (39.2-104° F)

1" or 32 mm

* Legs available upon special request



L (Height)		
	On/Off	Air Release
Max.	680 (26.7")	595 (23.4")
Min.	585 (23")	545 (21.4")

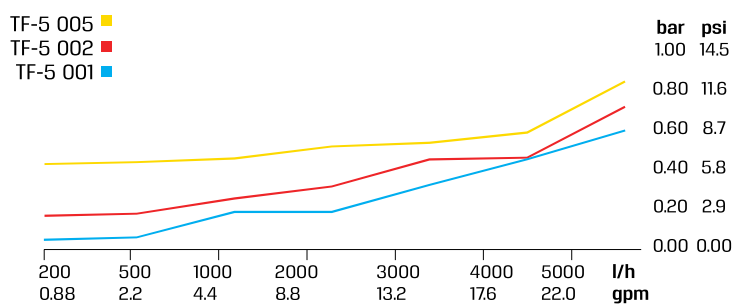
Application Color Code

Application	Sleeve Color	TEFEN Code	Seal Material	Spring Material
Irrigation			NBR	SST, Hastelloy
Livestock		PO	EPDM	SST, Hastelloy
Chlorine		CL	Viton	Hastelloy

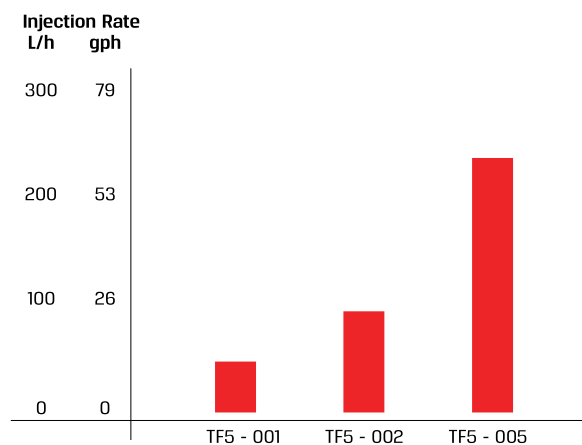
Application Range

Dosage Rate %	Flow Rate Range	Pressure Range	Connectors Dia. Thread	Min-Max Injection Rate Per Hour	Applications	Gross weight std unit
0.1% - 1%	0.05 - 5 m³/h	1 - 8 bar	1" BSPT/NPT	0.05 - 50 l/h	Irrigation / Chlorine / Livestock	5 KG
0.2% - 2%	0.05 - 5 m³/h	1 - 8 bar	1" BSPT/NPT	0.25 - 250 l/h	Irrigation / Chlorine / Livestock	5 KG
0.5% - 5%	0.05 - 5 m³/h	1 - 8 bar	1" BSPT/NPT	0.1 - 250 l/h	Irrigation / Chlorine / Livestock	5 KG

Pressure Loss



Max. injection rate/h



MixRite DOSING PUMPS

10 m³/h

MixRite TF-10 | Low Flow Rate

Available options

Manual
ON/OFF

Hydraulic
ON/OFF

Electric
ON/OFF





Technical Information

Water pressure

Flow Rate

Working temp

Coupling

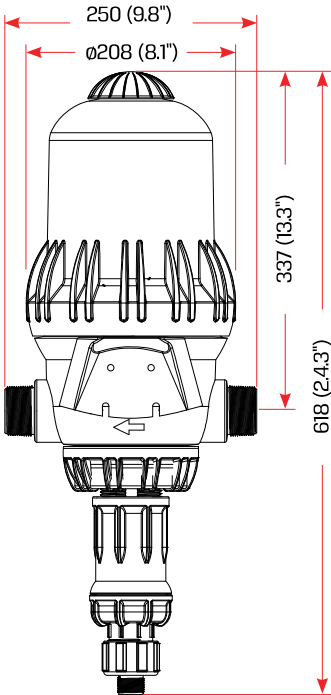
1 - 8 bar (14.7 - 120 PSI)

0.05 - 10 m3/h (0.2 - 45 GPM)

4-40° C (39.2-104° F)

1.5" or 50 mm

* Legs available upon special request



L (Height)		
	On/Off	Air Release
Max.	760 (29.9")	660 (26")
Min.	720 (28.34")	625 (24.6")

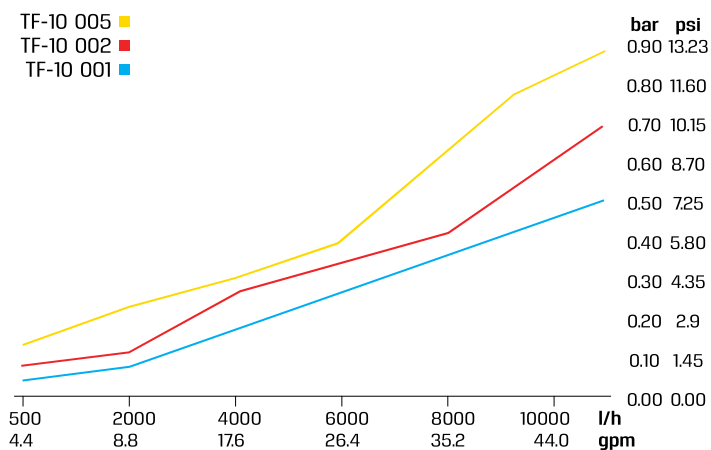
Application Color Code

Application	Sleeve Color	TEFEN Code	Seal Material	Spring Material
Irrigation	<div></div>		NBR	SST, Hastelloy
Chlorine	<div></div>	CL	Viton	Hastelloy

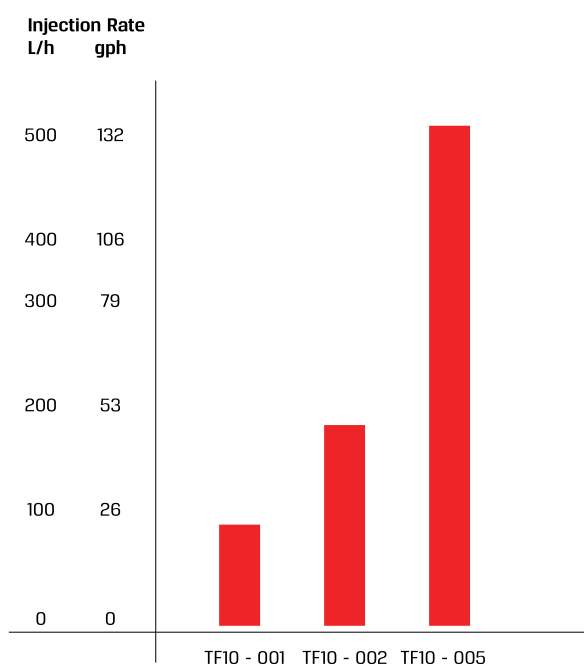
Application Range

Dosage Rate %	Flow Rate Range	Pressure Range	Connectors Dia. Thread	Min-Max Injection Rate Per Hour	Applications	Gross weight std unit
0.1% - 1%	0.05 - 10 m³/h	1 - 8 bar	1½" BSPT	0.05 - 100 l/h	Irrigation / Chlorine / Livestock	7.3 KG
0.2% - 2%	0.05 - 10 m³/h	1 - 8 bar	1½" BSPT	0.1 - 200 l/h	Irrigation / Chlorine / Livestock	7.3 KG
1% - 5%	0.05 - 10 m³/h	1 - 8 bar	1½" BSPT	0.5 - 500 l/h	Irrigation / Chlorine / Livestock	7.3 KG

Pressure Loss



Max. injection rate/h



MixRite DOSING PUMPS

25 m³/h

MixRite TF-25 | Low Flow Rate

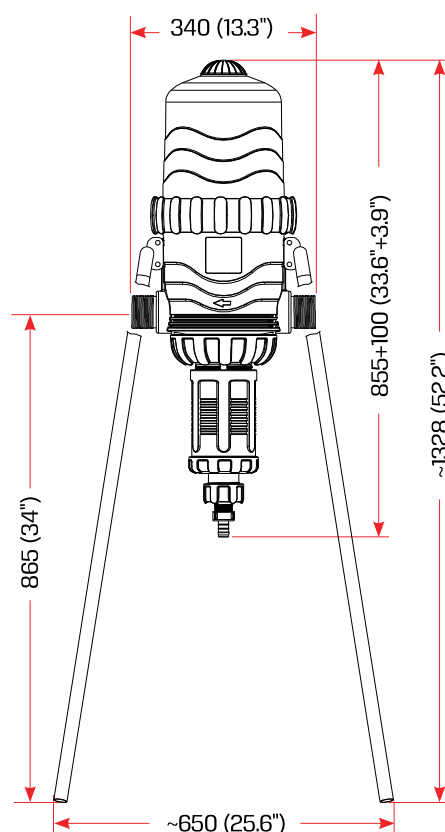
Available options

Manual ON/OFF Hydraulic ON/OFF Electric ON/OFF



Technical Information

Water pressure | 1 - 8 bar (14.7 - 120 PSI)
 Flow Rate | 0.2 - 25 m³/h (9-110 GPM)
 Working temp | 4-40° C (39.2-104° F)
 Coupling | 2" or 63 mm
 * Legs - Standard supply



L (Height)		
	On/Off	Air Release
Max.	1030 (40.5")	1000 (39.3")
Min.	880 (34.6")	900 (35.4")

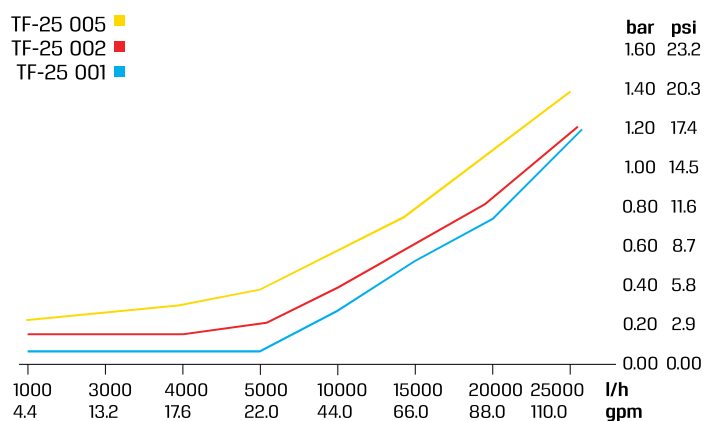
Application Color Code

Application	Sleeve Color	TEFEN Code	Seal Material	Spring Material
Irrigation			NBR	SST, Hastelloy
Chlorine		CL	Viton	Hastelloy

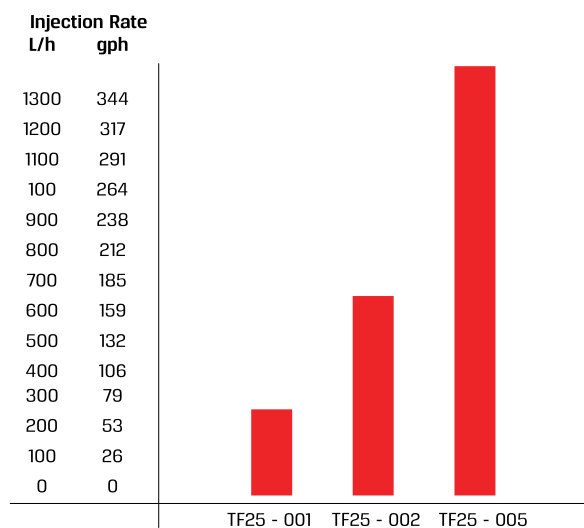
Application Range

Dosage Rate %	Flow Rate Range	Pressure Range	Connectors Dia. Thread	Min-Max Injection Rate Per Hour	Applications	Gross weight std unit
0.1% - 1%	0.2 - 25 m³/h	1 - 8 bar	2" BSPT	0.2 - 250 l/h	Irrigation / Chlorine / Livestock	18.5 KG
0.3% - 2.5%	0.2 - 25 m³/h	1 - 8 bar	2" BSPT	0.6 - 625 l/h	Irrigation / Chlorine / Livestock	18.5 KG
1% - 5.5%	0.2 - 25 m³/h	1 - 8 bar	2" BSPT	2.0 - 1375 l/h	Irrigation / Chlorine / Livestock	18.5 KG

Pressure Loss



Max. injection rate/h



Flow Range m3/h (GPM)	Dosage Range		A	B	C
	(%)	L/h (GPM)			
6-25 (26-110)	0.003-1	0.18-250 (0.0008-1.1)	2"	3/4"	MixRite™ 2.5/3.5
15-50 (66-220)	0.01-0.5	1.5-250 (0.0066-1.1)	3"	1"	MixRite™ TF5
30-100 (122-440)	0.01-0.5	3-500 (0.0132-2.2)	4"	1 1/2"	MixRite™ TF10

MixRite™ range:

2.5



3.5



TF-5



TF-10



Operating Principle:

- The pilot operating valve samples the pressure level at multiple points, and controls the opening condition of the diaphragm.
- This operation governs the flow rates to generate a stable 1:10 ratio between lines.

Case Study (Water Treatment)

- Total water flow rate: 673 m3/h
- Desired dosage rate: 0.1%
- Additive amount: $673 \times 0.1\% = 0.0673$ m3/h
- Relevant configuration: 4", 1.5"
- Main line water flow: $673 \times 0.9 = 60.57$ m3/h
- By-Pass water flow: $673 \times 0.1 = 6.73$ m3/h
- Relevant injector: TF10 0.2%-2%
- Dosage setting on injector: $0.0673 / 6.73 = 1\%$

Features and Benefits

- Keeps constant proportional flow rate
- Hydraulic, Volumetric and non-electric
- Dosing proportional to flowrate
- Precision: surface quality optimized with no waste
- Flow rate between main line and sub-main line will remain 10:1 at wide flow rates
- Working pressure up to 8 bar (116 PSI)
- High UV resistance
- High chemical resistance
- Supplied pre - set. No need for calibration
- Excellent dosing repeatability and homogeneity
- Easy to install, operate and maintain, with no electricity risk

