



MixRite TF-25



MixRite TF 25 Proportional Dosing Injectors

We congratulate you on your purchase of one of MixRite's excellent products.

It is important to devote a few minutes to carefully reading the explanations and recommendations in this user's manual in order to get the most from the proportioning dosing injector.

Operation of the injector

The proportioning dosing injector is fitted on the water line. The flow of water passing through the injector activates it and causes the pumping of liquid additive and inserts it in a relative quantity into the water line.

The MixRite TF 25 proportioning dosing injector will operate in the following conditions:

The flow rate of the water passing through the MixRite TF 25 is between 2 and 25 m³/hour (530-6600 gal/hour).

The water pressure is between 1 and 8 bar (14-120 PSI).

Head loss for MixRite TF 25: Minimum flow 0.1 Bar – Maximum flow 1.5 Bar

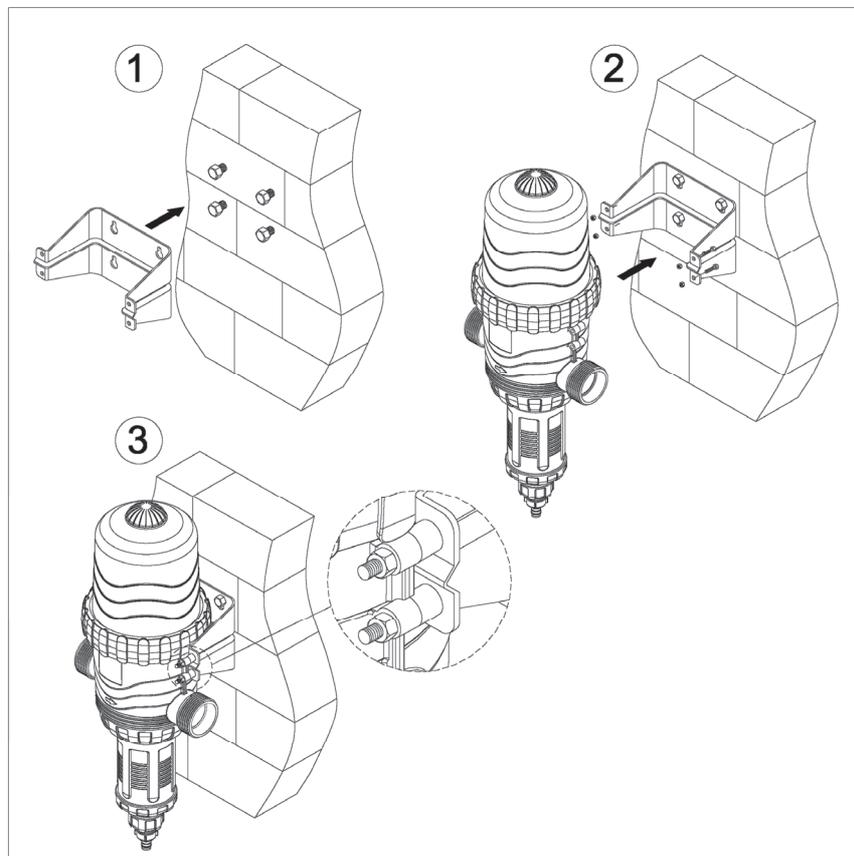
The water & air temperature are not less than 4°C (40°F) and not more than 40°C (104°F)

The flow rate of the additive can be adjusted relative to the flow rate of the water in the range of 0.1% to 1% for Model 001 and of 0.3% to 2.5% for Model 002 and in the range of 1% to 5.5% for Model 005.

Installation of the injector

Option A: Wall mounting bracket
(Supplied as standard)
The package should contain:

- A proportioning dosing injector to which are attached two couplings for a 63mm plastic pipe Or two 2" threaded couplings.
- A flexible suction tube to which is attached a flat 1" seal and a filter.
- A Bracket, 4 SS screws M8*45, 4 SS nuts M8.
- Spanner for TF cover nut.
- User's manual



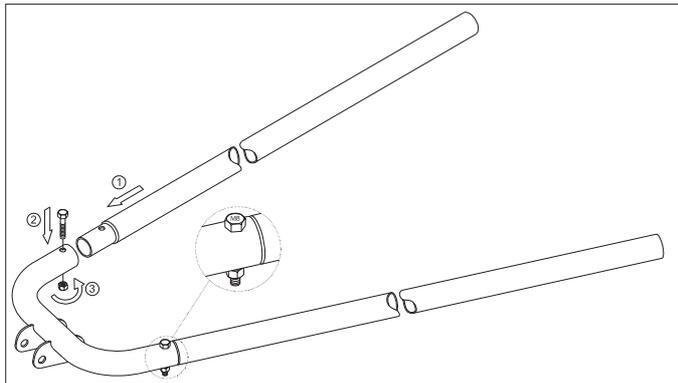
Option B: With stand

Installation of the injector (correct By Tefen) – OPTIONAL

The package should contain:

- A proportioning dosing injector to which are attached two couplings for a 63mm plastic pipe Or two 2" threaded couplings.
- A flexible suction tube to which is attached a flat 1" seal and a filter.
- A stand comprising 4 legs, 2 arched braces, 4 bolts with 8 mm nuts and 4 bolts with 6mm nuts.
- Spanner for TF cover nut.
- User's manual

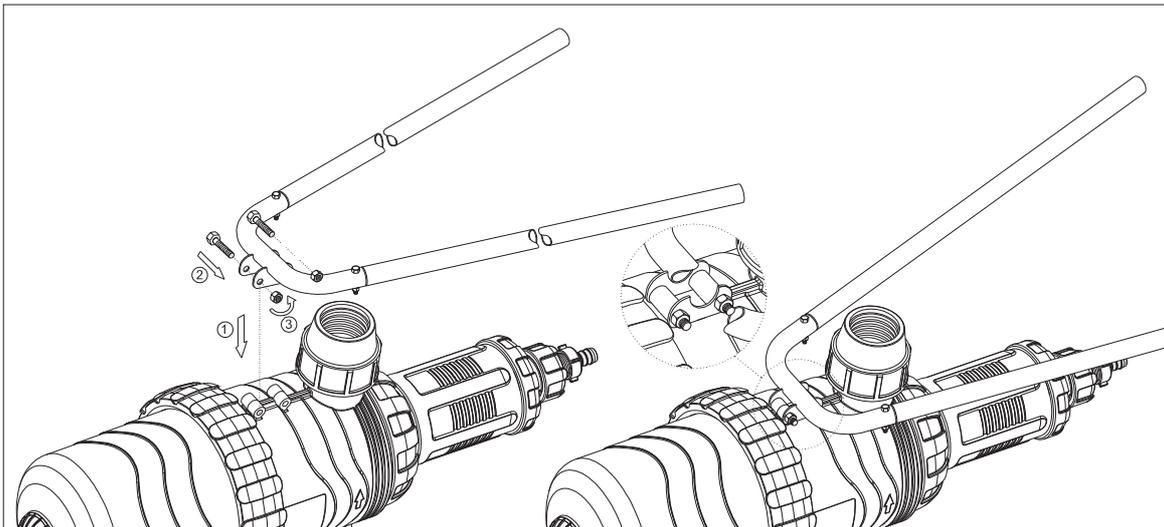
installation is with the stand supplied



To assemble the stand

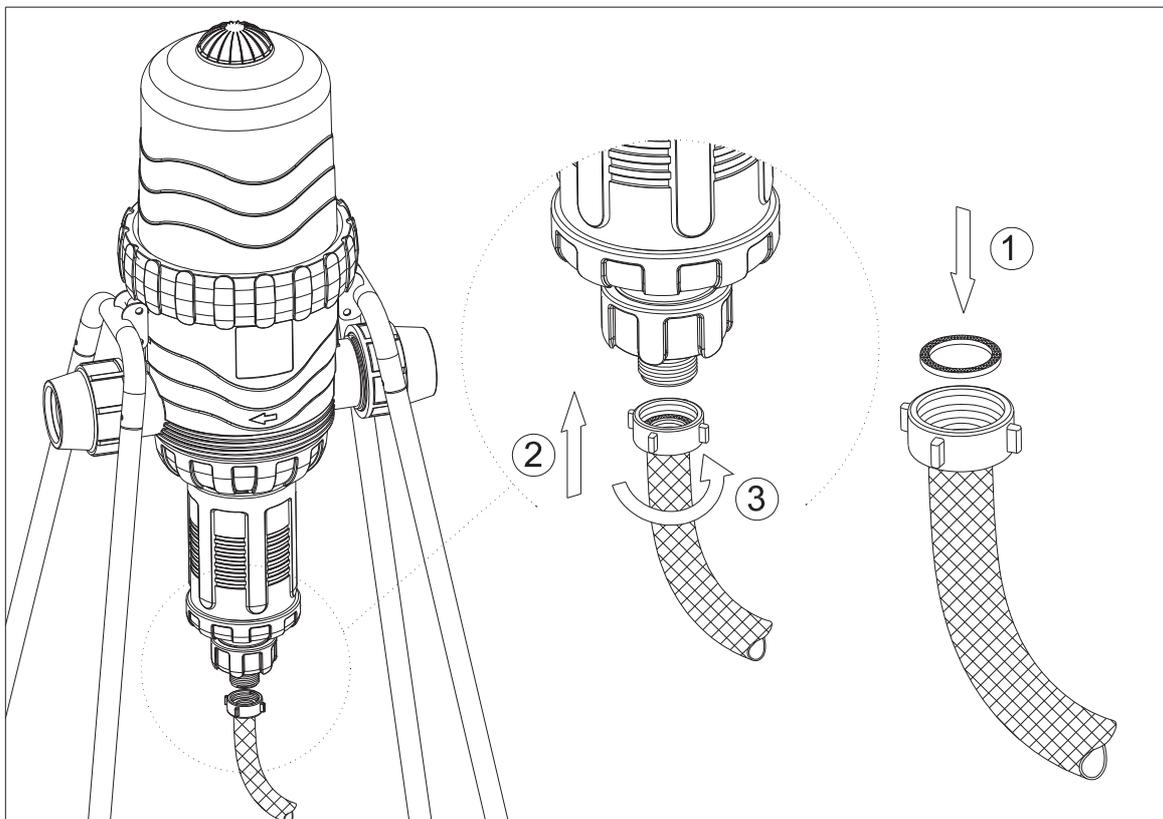
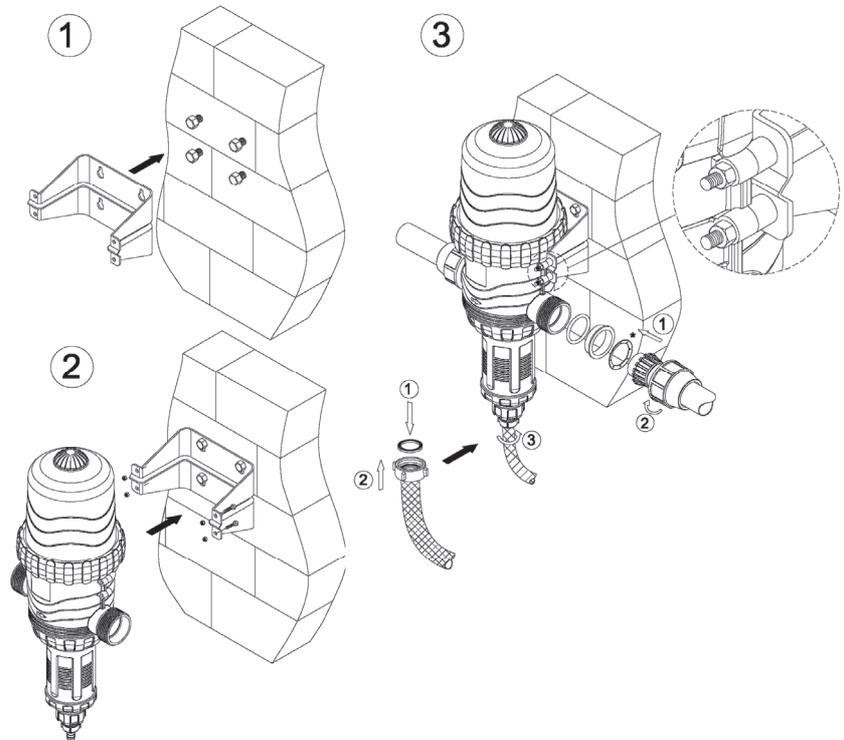
Insert the narrow part of the leg into the opening in the tube in the arched brace. Make sure that the holes in the leg are opposite the holes in the arched brace. Insert the 6mm bolt and tighten the nut. Repeat with the other legs.

Attach the arched brace to the body of the injector (1) with the 8 mm bolt (2) and tighten the nut (3). Repeat with the other arched brace.



Connection of the suction tube

Insert the flat seal into the nut of the coupling on the end of the tube (1). Thread and tighten the nut to the inlet valve on the underside of the injector. Make sure that the nut is threaded and tightened properly (2,3).



Connection of the injector to a 2" line

Note the direction of the water flow. Assemble the injector with the arrow stamped on the body of the injector pointing in the direction of the water flow. Connect the injector using the plastic couplings.

For a drinking water line all injectors must have a backflow prevention valve installed in front of the injector on the main water line, in accordance with local regulations.

Connection of the injector to a 63mm plastic pipeline

Note the direction of the water flow. Assemble the injector with the arrow stamped on the body of the injector pointing in the direction of the water flow.

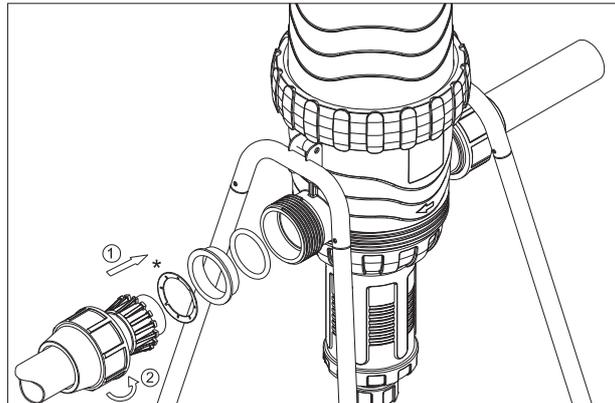
Cut and round the edges of the inlet and outlet pipes. The distance between the end of the inlet pipe and the end of the outlet pipe should be 22cm.

Remove the 63mm nut and the white ring from the injector, and fit them on to the pipe a short distance from the end.

Check that inside the injector there is the seal for 63mm accessories and that the bushing for the 63mm seal closes it from the outside.

Insert the pipe into the inlet and outlet opening and push hard so that the pipe penetrates, and passes the seal, and is stopped at the end of the route. To ease insertion apply a little silicon grease to the end of the pipe.

Push the white ring until it contacts the threaded part, and tighten the nut. Repeat the process in order to connect the pump to the pipe on the other side.



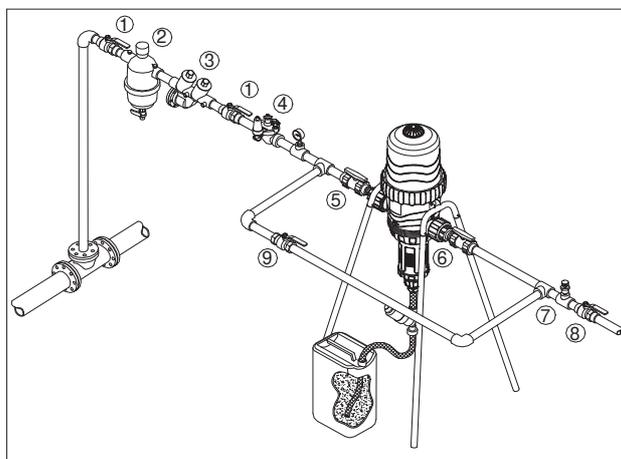
* Optional Special grip ring for P.V.C pipes

Installation of the injector on a direct line

It is recommended to fit a main valve at the beginning of the line (1), and a water filter of 200 mesh (2). A backflow prevention valve (3) must be fitted to a drinking water line, in accordance with local regulations, in order to prevent entry of chemicals into the drinking water. Then place the following pressure reducer (4),

to protect the injector from excess pressure; a valve before the inlet to the injector (5); a valve after the outlet (6); an anti vacuum valve (7) to prevent a siphon effect when the injector is not working; and operating valves (8) for the branch lines.

It is advisable to add a bypass pipe (9) that will permit diverting the water flow through the bypass pipe if there is a need for irrigation without any additives, or for dismantling the injector.



Installation of the injector on a bypass line

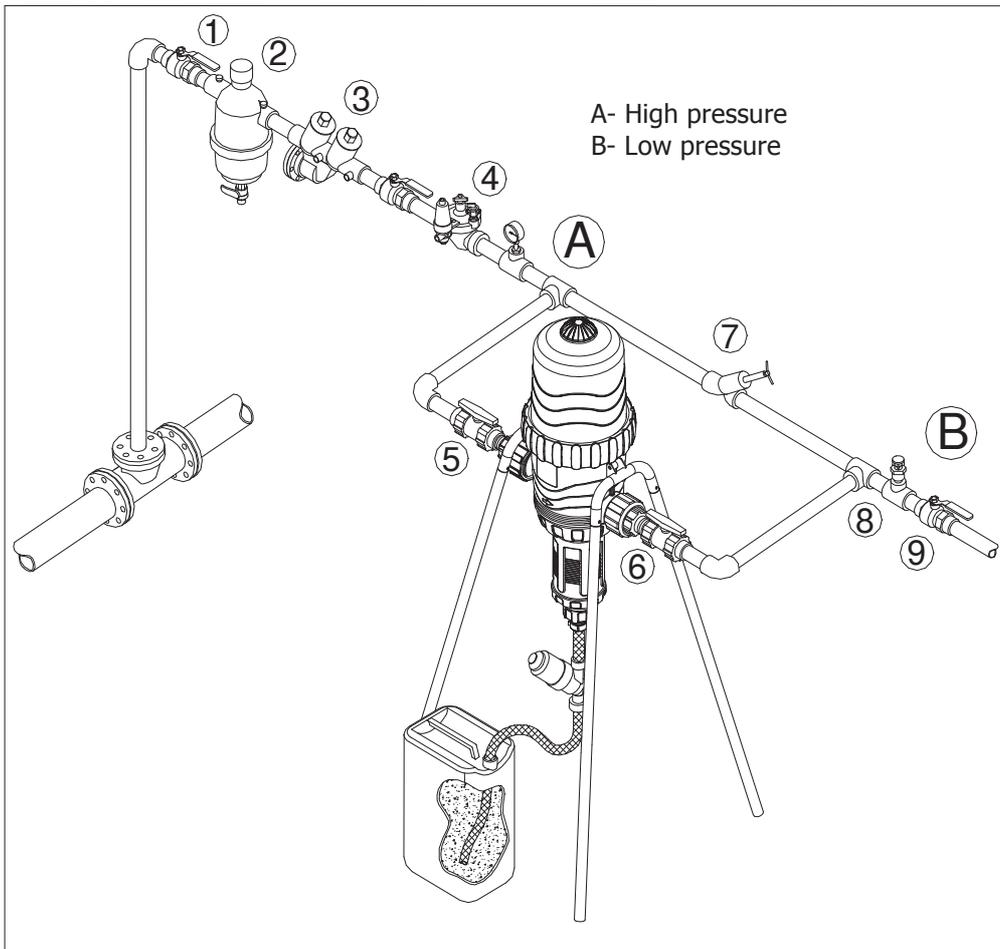
It is necessary to fit the proportional dosing injector on a bypass line when irrigating with a flow rate higher than 25 m³/hour. The bypass enables only part of the water flow to pass to the

Injector and activate it, while the rest passes through the main line. Using the choke valve on the main line, the flow of water passing through the main line is regulated so that only

A proportion of the flow passes through the bypass and activates the injector. The metering must be calculated in accordance with the flow rate passing through both lines.

It is necessary to fit a main valve at the beginning of the line (1), water filter of 200 mesh (2), backflow prevention valve (3) must be fitted to a drinking water line, according to local regulations, in order to prevent entry of chemicals to the drinking water. A pressure reducer (4), a T connection for diversion from the main line to the bypass, a valve(5)on the bypass before the inlet to the proportioning dosing injector, a valve (6) after the outlet from the injector on the bypass, and a T connector for the return to the main line. On the main line between the bypass junction and the return connection a choke valve should be fitted (7), preferably an angled valve, to regulate the flow rates between the main line and the bypass.

After the return connection from the bypass there should be fitted anti vacuum valve (8) and valves for the branch lines (9).

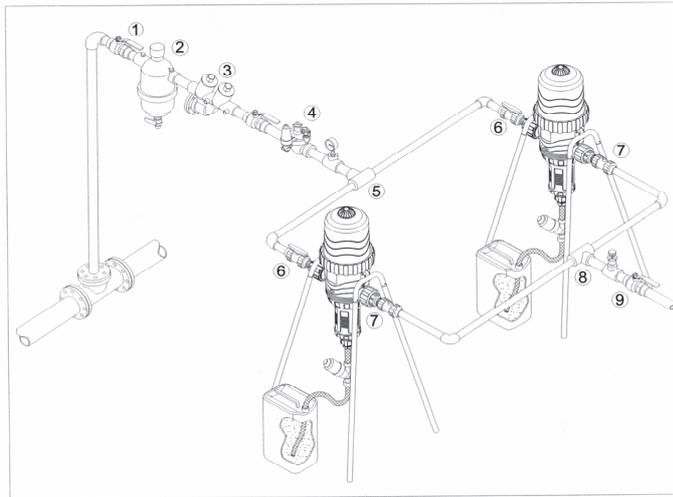


Installation of two injectors in parallel

When the water flow rate in the irrigation line is higher than the maximum nominal flow rate of the injectors, the water may be divided between two units. If the 2 injectors are used for pumping the same type of additive the scales should be adjusted in an identical manner to the same level of metering. Two different additives may be metered at different levels. The metering in each unit must be calculated for each flow rate passing through the two injectors.

It is necessary to fit a main valve at the beginning of the line (1), water filter of 200 mesh (2), backflow prevention valve (3) must be fitted to a drinking water line, according to local regulations, in order to prevent entry of chemicals to the drinking water. A pressure reducer (4), a T junction from the main line into 2 lines (5). On each branch there should be fitted a regulation valve (6), the injector, a non-return valve (7) after the outlet from the injector and a return connection to the main line (8) anti vacuum valve (9).

Both sides of the instillation must be identical.



Connection to the additive tank

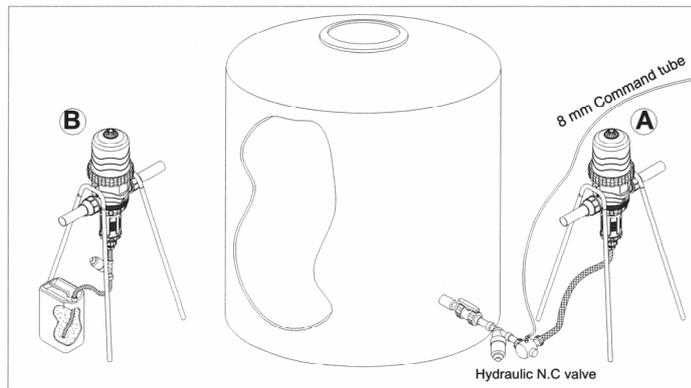
The suction tube should be connected to the additive tank (preferably about 5cm above the bottom) – diagram A. The liquid additive must pass through a chemical resistant filter of 200 mesh, which must be cleaned regularly.

When making the connection to a large additive tank, use a chemical resistant valve and a normally closed hydraulic valve to prevent a siphon effect.

The normally closed hydraulic valve should be connected to a hydraulic command tube.

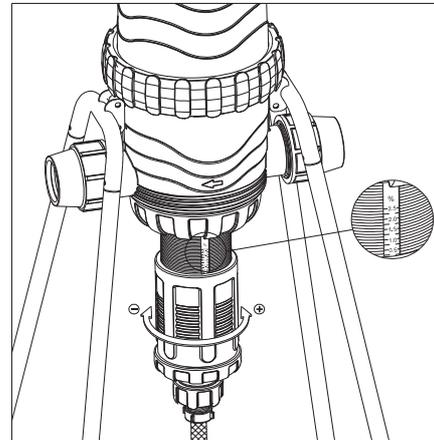
If the additive is pumped from inside an open tank (diagram B) a heavy weight should be attached to the end of the suction tube that will keep the opening of the suction tube inside the additive and prevent the tube from floating and falling outside the tank.

Make sure that the level of the additive is always below the injector. Otherwise uncontrolled flow of the additive may occur.



Adjustment of metering

On the metering cylinder there is a scale indicating the percentage of additives. When the injector is not operating and there is no pressure in the unit, turn the adjustment sleeve clockwise to increase the amount of additive or turn counterclockwise to decrease the amount of additive. The actual rate should be checked. If necessary, adjust by increasing or decreasing the adjustment sleeve.



Servicing

The water filter at the inlet to the injector and the additive inlet filter should be cleaned frequently.

* NOTE: If it is planned not to use the injector for a long time, it should be operated for a few minutes with the suction tube inside a tank of clean water, in order to flush away traces of additive from inside the injector and prevent them from adhering to it.

If there is a drop in temperature below 4°C (40°F) risk or a risk of freezing, the injector should be drained. In order to drain the unit, close the inlet and outlet valves properly. Unscrew and dismantle the 1" coupling nut that connects the suction tube, press on the non-return valve (insert your finger or a small rod) in order to drain all the water trapped in the unit, while pressing the air bleed valve at the top of the injector (with your other hand).

Suggested maintenance

Replace injection seals every 12 months:

Kit # 1- seals 0.1-1% (Catalog No. 35000000008)

Kit # 2-TF seals 0.2-2.5% (Catalog No. 35000000002)

Kit # 3-TF seals 1-5% (Catalog No. 35000000003)

Troubleshooting guide

| Problem | Check | Solution |
|---|---|---|
| The injector does not work | The injector is fitted with the arrows in the opposite direction to the water flow direction. | Fit the injector with the arrows in the direction of flow. |
| | The inlet and outlet valves are closed. | Open the valves. |
| | The inlet filter is blocked. | Clean the filter. |
| | There is no water flow at the appropriate pressure. | Open the main valve. |
| The injector has stopped working | Open the nut locking the motor cover, remove the motor cover, and remove the mechanism. Check if the motor seals are defective. | Replace the motor seals. |
| | Check if the toggle springs are broken. | Replace the toggle springs. |
| | Check if the seals above the valves are defective or have been displaced. | Replace the seals. |
| | Check if one of the parts of the mechanism is broken. | Replace the broken part. |
| There is a leak from the injector | The leak is from the connection between the body and the cover. | Open and remove the motor cover, replace the seal, fit the cover, and thoroughly tighten the cover locking nut. |
| | The leak is from the connection of the suction tube. | Remove the suction tube, replace the defective seal and reconnect. |
| | The leak is from the non-return valve. | Dismantle the non-return valve and replace the defective seal. |
| There is no suction in the additive inlet | The suction filter is blocked. | Clean the filter. |
| | Dismantle the injector unit and check if the suction seal is defective. | Replace the suction seal. |
| | The non-return valve is defective. | Replace the non-return valve. |

For advice, technical support and purchase of spare parts, contact the authorized sales representative in your area.

PARTS

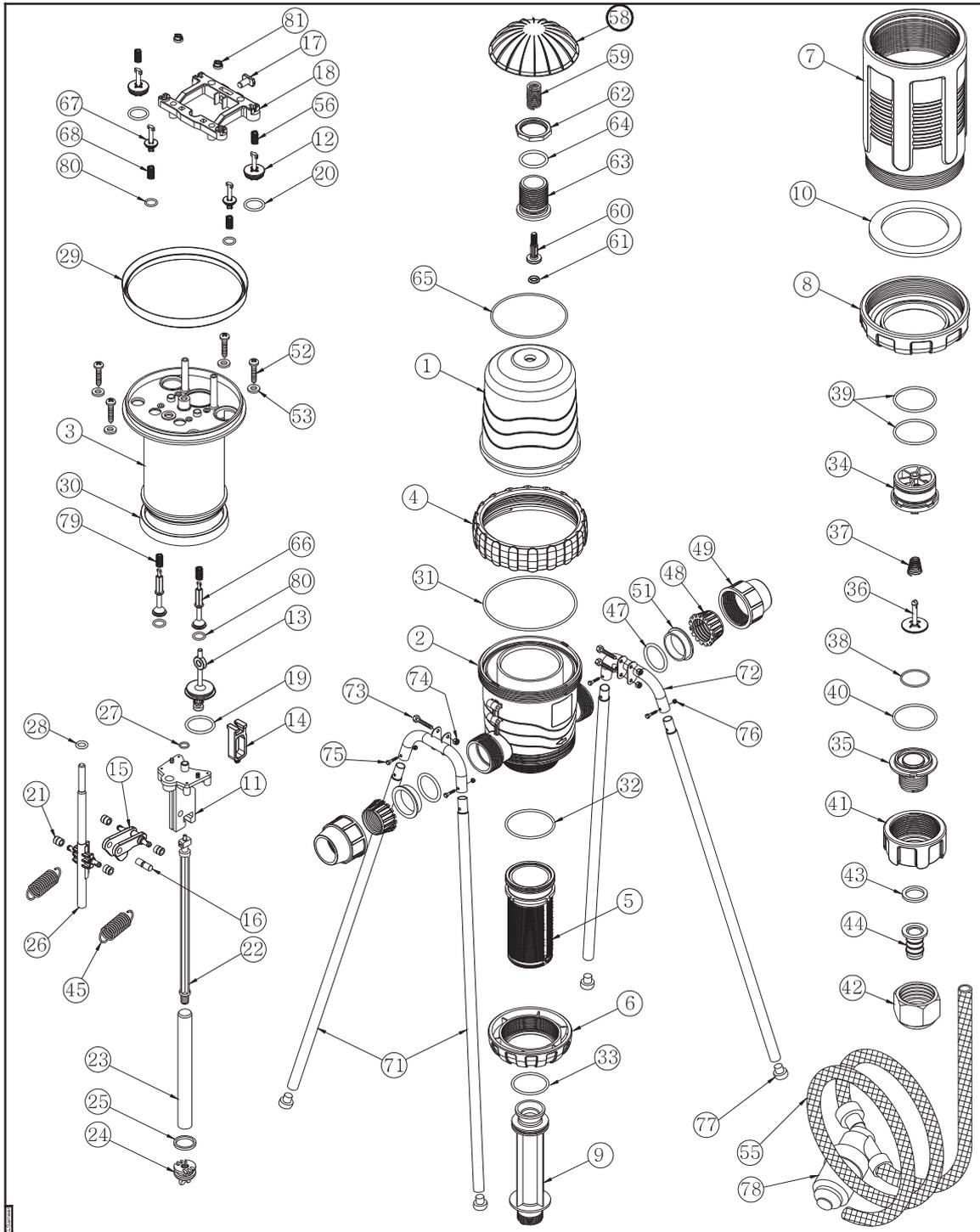
MIXRITE TF 25 - 001 28250100000

MIXRITE TF 25 - 002 28250200000

MIXRITE TF 25 - 005 28250500000

| No. | COMPONENT NAME | COMPONENT CODE | No. | COMPONENT NAME | COMPONENT CODE |
|-----|-------------------------------------|----------------|-----|--------------------------------|----------------|
| 1 | COVER TF | 35001001301 | 36 | CHECK VALVE PISTON | 35025001136 |
| 2 | BODY 63 TF | 35002251302 | 37 | CONICAL SPRING FOR CHECK VALVE | 38000001137 |
| 3 | PISTON TF | 35003003103 | 38 | O RING 2-211 | 38060221146 |
| 4 | COVER NUT | 35004001804 | 39 | O RING 2-132 | 38021329239 |
| 5 | CYLINDER SUPPORT | 35005003305 | 40 | O RING 2-134 | 38021349240 |
| 6 | CYLINDER SUPPORT NUT | 35006001806 | 41 | CHECK VALVE NUT | 35019003841 |
| 7 | ADJUSTMENT NUT | 35007001807 | 42 | RECORD NUT 1" | 35000003842 |
| 8 | LATCH NUT | 35008001808 | 43 | 1" SEAL | 37245581600 |
| 9 | CYLINDER 1% MIXRITE TF 25-001 | 35030016109 | 44 | RECORD BODY 25X1" | 35024003844 |
| 9 | CYLINDER 2% MIXRITE TF 25-002 | 35009026109 | 45 | SPRING 1 TF | 38000001145 |
| 9 | CYLINDER 5% MIXRITE TF 25-005 | 35010056109 | 47 | PLASSON SEAL 63 | 38000639247 |
| 10 | CYLINDER SUPPORT SPACER | 35016003810 | 48 | PLASSON 63 LOCK RING | 38000635148 |
| 11 | INSIDE BASE | 35011005211 | 49 | PLASSON 63 NUT | 38000634249 |
| 12 | LARGE EXIT VALVE 3 | 35012001112 | 50 | R-35 CLIP | 17090037002 |
| 13 | CENTRAL VALVE 3 | 35012001113 | 51 | 63 SEAL HOLDER | 35016003851 |
| 14 | TOGGEL FRAME | 35012001114 | 52 | EJOTE SCREW WN-1412 | 38000001152 |
| 15 | TOGGEL | 35015001115 | 53 | SS WASHER | 38000001153 |
| 16 | TOGGEL PIN | 35012001116 | 55 | SUCTION TUBE 25mm 4.5m | 36030002555 |
| 17 | BRIGE PIN | 35012001117 | 56 | LARGE EX. VALVE SPRING | 38000001146 |
| 18 | V7 BRIDGE | 35029001118 | 58 | AIR RELEASE | 35016003858 |
| 19 | O RING 35X4.5 | 38035459219 | 59 | SPRING 5 | 38060000059 |
| 20 | O RING 24X4 | 38024409220 | 60 | AIR RELEASER SCREW | 36030284360 |
| 21 | TOGGEL BEARING | 35021001121 | 61 | "O" RING 2-107 | 38060210761 |
| 22 | PISTON BAR 1% | 36016111103 | 62 | NUT 3/4" | 35000003162 |
| 22 | PISTON BAR 2%,5% | 35013005222 | 63 | ADAPTOR 3/4" | 35000003863 |
| 23 | PISTON SLEEVE | 35014001123 | 64 | O RING 2-118 | 38021189264 |
| 24 | SUCTION PISTON 1% MIXRITE TF 25-001 | 35031014224 | 65 | DALRIN RING | 35032005179 |
| 24 | SUCTION PISTON 2% MIXRITE TF 25-002 | 35017023124 | 66 | V7 INNER VALVE | 35027001160 |
| 24 | SUCTION PISTON 5% MIXRITE TF 25-005 | 35017053124 | 67 | SMALL EXIT VALVE | 35027001150 |
| 25 | SUCTION SEAL 1% MIXRITE TF 25-001 | 35000018225 | 68 | SMALL EXIT VALVE SPRING | 38000001147 |
| 25 | SUCTION SEAL 2% MIXRITE TF 25-002 | 35000028225 | 71 | EASEL LEG TF | 38000001171 |
| 25 | SUCTION SEAL 5% MIXRITE TF 25-005 | 35000058225 | 72 | EASEL BRIDGE TF | 38000001172 |
| 26 | OPERATION ROD | 35013005226 | 73 | HEX SCREW SS M8x45 | 38000001173 |
| 27 | "O" Ring 12X2 | 37005852002 | 74 | NUT SS M8 | 38000001174 |
| 28 | "O" RING 2-206 | 38022060084 | 75 | HEX SCREW SS M6x35 | 38000001175 |
| 29 | UPPER PISTON SEAL | 35023002229 | 76 | NUT SS M6 | 38000001176 |
| 30 | LOWER PISTON SEAL | 35024002230 | 77 | EASEL LEG PLUG | 38000003277 |
| 31 | O RING 2-370 | 38023709231 | 78 | FILTER 1" GREY | 38000000173 |
| 32 | O RING 6X105 | 38060610561 | 79 | V7 INNER VALVE SPRING | 38000001148 |
| 33 | O RING 2-337 | 38023379233 | 80 | O RING 2-112 | 38021129280 |
| 34 | CHECK VALVE GUIDE | 35018003334 | 81 | V7 INNER VALVE LOCKER | 35028001181 |
| 35 | CHECK VALVE SEAT | 35018003335 | | | |

MixRite TF 25 2" BSPT



PARTS

MIXRITE TF 25 - 001 28240100000

MIXRITE TF 25 - 002 28240200000

MIXRITE TF 25 - 005 28240500000

| No. | COMPONENT NAME | COMPONENT CODE | No. | COMPONENT NAME | COMPONENT CODE |
|-----|-------------------------------------|----------------|-----|--------------------------------|----------------|
| 1 | COVER TF | 35001001301 | 34 | CHECK VALVE GUIDE | 3501800334 |
| 2 | BODY 2" BSPT | 35002151302 | 35 | CHECK VALVE SEAT | 35018003335 |
| 3 | PISTON TF | 35003003103 | 36 | PISTON CHECK VALVE | 35025001136 |
| 4 | COVER NUT | 35004001804 | 37 | CONICAL SPRING FOR CHECK VALVE | 38000001137 |
| 5 | CYLINDER SUPPORT | 35005003305 | 38 | O RING 2-211 | 38060221146 |
| 6 | CYLINDER SUPPORT NUT | 35006001806 | 39 | O RING 2-132 | 38021329239 |
| 7 | ADJUSTMENT NUT | 35007001807 | 40 | O RING 2-134 | 38021349240 |
| 8 | LATCH NUT | 35008001808 | 41 | CHECK VALVE NUT | 35019003841 |
| 9 | CYLINDER 1% MIXRITE TF 25-001 | 35030016109 | 42 | RECORD NUT 1" | 35000003842 |
| 9 | CYLINDER 2% MIXRITE TF 25-002 | 35009026109 | 43 | 1" SEAL | 37245581600 |
| 9 | CYLINDER 5% MIXRITE TF 25-005 | 35010056109 | 44 | RECORD BODY 25X1" | 35024003844 |
| 10 | CYLINDER SUPPORT SPACER | 35016003810 | 45 | SPRING 1 TF | 38000001145 |
| 11 | INSIDE BASE | 35011005211 | 50 | R-35 CLIP | 17090037002 |
| 12 | LARGE EXIT VALVE 3 | 35012001112 | 52 | EJOTE SCREW WN-1412 | 38000001152 |
| 13 | CENTRAL VALVE 3 | 35012001113 | 53 | SS WASHER | 38000001153 |
| 14 | TOGGEL FRAME | 35012001114 | 54 | 2" FEMALE PIPE COUPLING | 38005017722 |
| 15 | TOGGEL | 35015001115 | 55 | SUCTION TUBE 25mm 4.5m | 36030002555 |
| 16 | TOGGEL PIN | 35012001116 | 56 | LARGE EX. VALVE SPRING | 38000001146 |
| 17 | BRIGE PIN | 35012001117 | 58 | AIR RELEASE | 35016003858 |
| 18 | VALVE BRIDGE PIN | 35029001118 | 59 | SPRING 5 | 38060000059 |
| 19 | O RING 35X4.5 | 38035459219 | 60 | AIR RELEASER SCREW | 36030284360 |
| 20 | O RING 24X4 | 38024409220 | 61 | "O" RING 2-107 | 38060210761 |
| 21 | TOGGEL BEARING | 35021001121 | 62 | NUT 3/4" | 35000003162 |
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| 23 | PISTON SLEEVE | 35014001123 | 65 | DALRIN RING | 35032005179 |
| 24 | SUCTION PISTON 1% MIXRITE TF 25-001 | 35031014224 | 66 | V7 INNER VALVE | 35027001160 |
| 24 | SUCTION PISTON 2% MIXRITE TF 25-002 | 35017023124 | 67 | SMALL EXIT VALVE | 35027001150 |
| 24 | SUCTION PISTON 5% MIXRITE TF 25-005 | 35017053124 | 68 | SMALL EXIT VALVE SPRING | 38000001147 |
| 25 | SUCTION SEAL 1% MIXRITE TF 25-001 | 35000018225 | 71 | EASEL LEG TF | 38000001171 |
| 25 | SUCTION SEAL 2% MIXRITE TF 25-002 | 35000028225 | 72 | EASEL BRIDGE TF | 38000001172 |
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