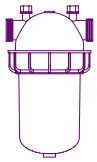
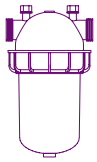
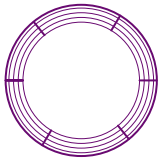
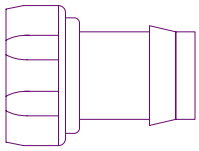
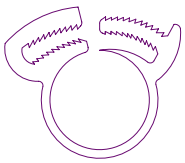
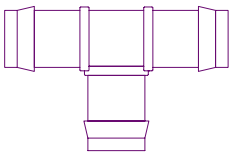
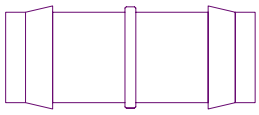
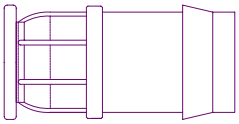
eFLOW
WASTE-WATER DISPERSAL SYSTEM

KIT CONTENTS

ITEM	DESCRIPTION	STARTER KIT	ADD-ON KIT
	1" Arkal Filter, 120 Mesh	1	–
	1" Techfilter	1	–
	25mm Purple LDPE	50m	50m
	25mm BSPF x 25mm Nut & Tails	4	–
	25mm Ratchet Clamps	16	13
	25mm LDPE Tee	0	1
	25mm LDPE Joiner	2	2
	25mm End Plug	2	2

eFLOW™
WASTE-WATER DISPERSAL SYSTEM

Installation Manual - Eflow Waste-water Dispersal System

Thankyou for buying an Eflow Waste-water Dispersal System. Your Eflow Waste-water Dispersal System has been designed and manufactured to Netafim's high standard of quality and durability. Netafim is an ISO 9002 certified company.

The Eflow Waste-water Dispersal System is a safe and efficient way to disperse effluent from an on-site treatment system. The Eflow Waste-water Dispersal System is available either as a Starter Kit or as an Add-On Kit. The Starter-Kit is supplied with all necessary head work and will service an area of 200m^2 (at 1m lateral spacing). The Add-On Kit will service an additional 200m^2 (at 1m lateral spacing). The Starter Kit can be used on its own while the Add-On Kit should only be used in conjunction with the starter kit. Please read the following Installation Manual carefully. Please also refer to section {I} for Regulations and Legislations.

NETAFIM
www.netafim.com

E-Flow Systems manufactured for:

TRADELINK

Freecall (for more info): **1800 801 750**
Email: environment@tradelink.com.au
Web: www.tradelink.com.au

NETAFIM

eFLOW™

WASTE-WATER DISPERSAL SYSTEM

INSTALLATION MANUAL

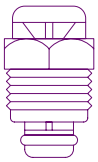
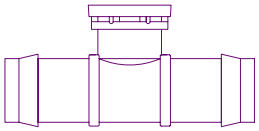
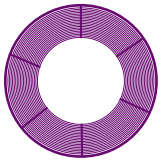
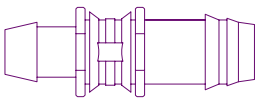
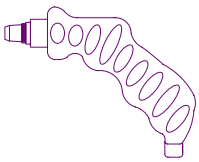
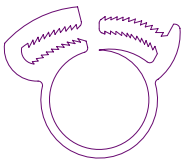
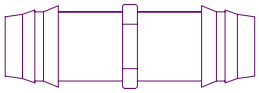
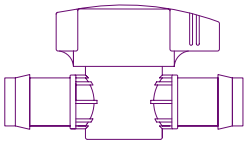
Manufactured for :

TRADELINK

NETAFIM

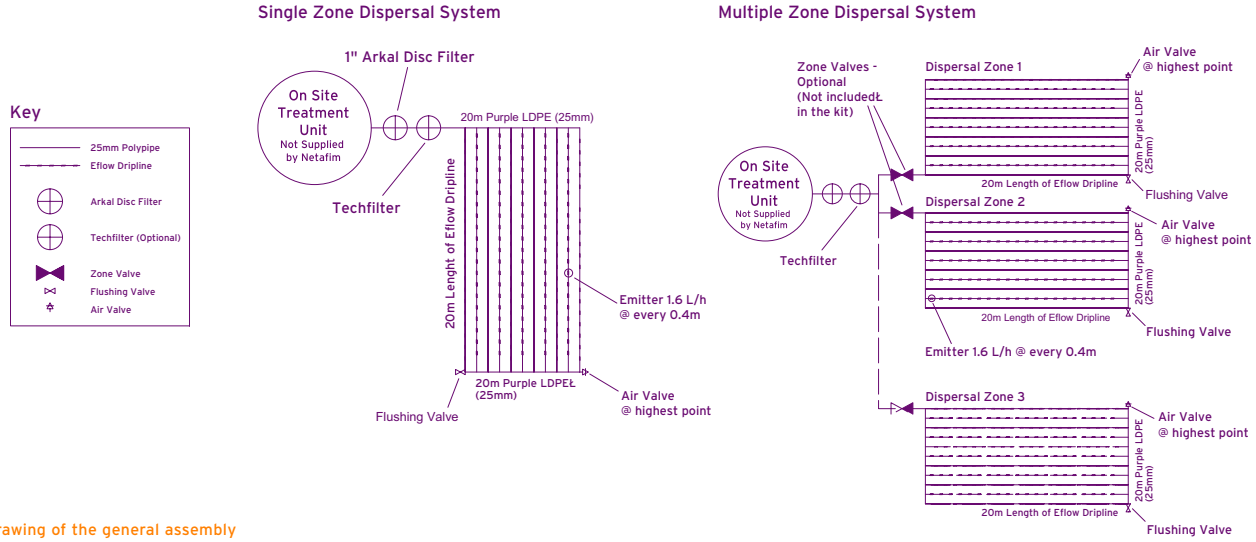
eFLOW
WASTE-WATER DISPERSAL SYSTEM

KIT CONTENTS

ITEM	DESCRIPTION	STARTER KIT	ADD-ON KIT
	1/2" Air Valve / Vacuum Breaker	1	1
	25mm x 1/2" BSPF Threaded Tee	1	1
	Bioline Dripline - 1.6 l/h Dripper @ 0.4m spacing	200m Coil	200m Coil
	Start Connectors	30	30
	Punch Tool	1	–
	17mm Ratchet Clamps	30	30
	17mm Joiners	5	5
	25mm Flush Valve	1	1

ORDER OF INSTALLATION

{A} General Layout of Eflow Waste-water Dispersal System



Drawing of the general assembly

{B} Surface & Subsurface Systems

Surface System

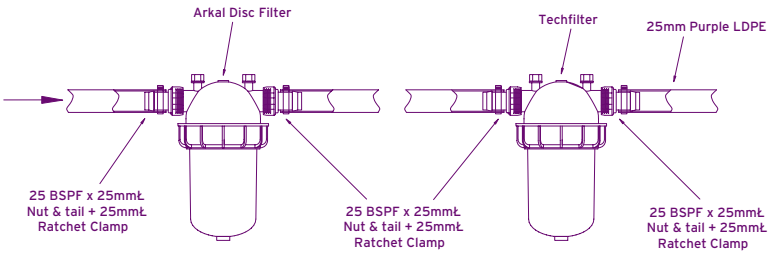
- If the Eflow Waste-water Dispersal System is to be laid on the surface it is recommended to cover the system with mulch.
- It is recommended to use a valve box for the air valves as well as the flushing valves.

Subsurface System

- If the Eflow Waste-water Dispersal System is to be laid sub-surface, a trench must be excavated for the dripline & header / flush line to be buried to the desired depth.
- It is recommended to use a valve box for the air valves as well as the flushing valves.

{C} Valve Assembly / Head Works

1. The 25mm Purple LDPE is used to connect the filter to the Eflow assembly.
2. The Arkal Disc Filter should be connected to the poly pipe using 25mm BSPF x 25mm Nut & Tails and 25mm Ratchet Clamps.
3. The Techfilter should be connected downstream of the Arkal disc filter using 25mm x BSPF x 25mm Nut & Tails and 25mm Ratchet Clamps.
4. The filter assembly should either be installed above ground or in a valve box (see section E).



Drawing of the filter assembly

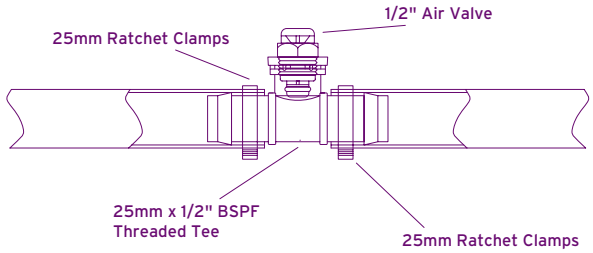
5. If installing multipipe zones, tee's should be installed to create other zones between the filter assembly and the Eflow headwork's assembly. Please see 'general layout', section {A}.

   The Eflow Kit does not include any indexing valves or controllers. Please contact your local Netafim dealer for more information on valves and controller options.

ORDER OF INSTALLATION

{D} Eflow Zone Assembly

1. The 25mm Purple LDPE should be used as the header and flushline for each zone. It is reccomended that both the header and flushline each be 10m long and 20m apart, however, other configurations can be used. (please check with your authorised Netafim dealer)
2. The Start Connectors should be joined by punching the 25mm Purple LDPE with the punch tool either at 1m apart. (please refer to table below) The smallest diameter end of the Start Connector is pushed into the 25mm Purple LDPE and the process is repeated for all punched holes.
3. Connect Bioline to Start Connector at the 25mm Purple LDPE header, securring with Ratchet Clamp. Run the Bioline to the 25mm Purple LDPE flushline and cut. Use the Start Connector to join the Bioline to the 25mm Purple LDPE flush line, securring with clamp.
4. Connect the 25mm Flush Valve to the lowest end of the 25mm Purple LDPE Flush line, securring with Ratchet Clamp. It is reccomended to place the flushing valve in a valve box(see section 'E')
5. At the other end of the 25mm Purple LDPE Flush line, insert the end plug, securring with Ratchet Clamp.
6. Locate the highest point on either the header or Flush line and cut the 25mm Purple LDPE and insert the 25mm x 1/2" BSPF Threaded Tee

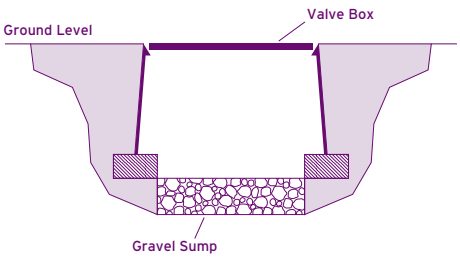


Drawing of Air Valve assembly

7. VERY IMPORTANT - Once the system has been fully installed, flush the system by opening the Flush Valve until all visible sediment has been flushed.
8. It is reccomended to use thread tape on all threadded fittings.

{E} Valve Box

Valve boxes are not included in the Eflow Kit, however, they are recommended to be used for the valve assembly, control valves, flushing valves, air valves and filter assembly. The valve box must be buried with a gravel sump adequate to drain any water entering the box or water from the flushing cycle.
Please contact your local Netafim Dealer for more information.



{F} Maintenance

Maintenance of the Eflow Waste-water Dispersal System should be carried out every time the on-site Wastewater Treatment Unit is being serviced.

The following maintenance should be carried out:

- Check and clean the filter
- Check for leakages in the Eflow dripline
- Flush the system by opening the flushing valve
- Replace Techfilter cartridge every 2 years
- Ensure the treated wastewater is being dispersed evenly over the dispersal area

{G} Designing the Treated Wastewater Dispersal System

When designing a Dispersal System for treated wastewater the main parameters affecting the design and size of the system are as follows:

- The amount of treated water to be dispersed.
- The dispersal rate (hydraulic loading rate) to the soil. Please see table 1 for recommended dispersal rates.
- The total area available for the Dispersal System.
- Council / Local Government requirements.

Other factors that must be considered are for example, slope & landscape contours, vegetation cover, watercourses etc.

{H} Dispersal Rates for Treated Wastewater

The acceptable dispersal rate for the Treated Wastewater Dispersal System depends on various factors as discussed above. The values in the following table represent a conservative approach for sizing a Dispersal System taking all parameters into account. The "Design Dispersal Rate" (hydraulic loading rate) is taken from the Australian / New Zealand standard 1547:2000.

{I} Regulations & Legislation

"Each State and Municipal Council has regulations and by-laws concerning the disposal of effluent which must be strictly complied with. This guideline is intended to be an aid to the end users of the Eflow waste-water dispersal system and accordingly any local, State, Municipal or Council law and regulation shall take precedence over these guidelines. You are accordingly advised and requested to check with your own local Municipal or State Council as to their specific requirements for the installation of the Eflow waste-water dispersal system. Furthermore, the user of the Eflow waste-water dispersal system is subject to local conditions that prevail at the site and further subject to any appropriate expert test including but not limited to soil tests and water tests, which may be required prior to installation to determine fitness for use.

In addition, other factors must be considered to determine fitness for use including but not limited to slope and landscape contours and acceptable hydraulic loading rates. In this respect we enclose by way of example the Australian Standards for the minimum area required to dispose 1 litre per day. However, you are required to obtain your own independent expert advice to determine the appropriateness of the Eflow waste-water dispersal system to your particular needs and requirements."

{J} Disclaimer

"Whilst Netafim Australia Pty Ltd has taken all reasonable opportunity to ensure the accuracy of the content of these guidelines Netafim does not take any responsibility for any changes to the Eflow waste-water dispersal system or requirements pursuant to the Municipal or Council laws and regulations. Accordingly, each end user is to ensure that prior to purchasing and installing the Eflow Recycling Systems they make full enquiries with all relevant authorities and where appropriate take independent advice. Accordingly, and except to the extent permitted by law, Netafim does not make any warranties in relation to the information herein provided nor to the fitness for the use of the Eflow waste-water dispersal system to your particular needs. The end user hereby acknowledges and confirms that Netafim Australia Pty. Ltd. CAN 056 229 755 and its associated entities, directors and staff are not liable or responsible for any loss or damage suffered by the end user of what so nature and kind including but not limited to loss or damage to or arising out of property damage or consequential loss and damage from or caused by the information contained in this guideline or by the use of the Eflow waste-water dispersal system."

TABLE 1 • MINIMUM AREA REQUIRED DISPERSING 1(ONE) LITRE OF WATER PER DAY

SOIL TEXTURE	SOIL STRUCTURE	DISPERSAL RATE mm / week	DISPERSAL RATE mm / day	AREA REQUIRED per 1L/day	DRIPLINE LENGTH per 1L Wastewater	
					LATERAL SPACING 0.5 m	LATERAL SPACING 1.0 m
GRAVEL / SAND	STRUCTURELESS MASSIVE	35	5	0.200 m2	0.400 m	0.200 m
SANDY LOAMS	WEAKLY STRUCTURED	35	5	0.200 m2	0.400 m	0.200 m
	MASSIVE	35	5	0.200 m2		
LOAMS	HIGHLY / MODERATELY STRUCTURED	28	4	0.250 m2	0.500 m	0.250 m
	WEAKLY STRUCTURED OR MASSIVE	28	4	0.250 m2		
CLAY LOAMS	HIGHLY / MODERATELY STRUCTURED	25	3.5	0.285 m2	0.570 m	0.285 m
	WEAKLY STRUCTURED	25	3.5	0.285 m2		
	MASSIVE STRUCTURED	25	3.5	0.285 m2		
LIGHT CLAYS	STRONGLY STRUCTURED	20	2.9	0.345 m2	0.690 m	0.345 m
	MODERATELY STRUCTURED	20	2.9	0.345 m2		
	WEAKLY STRUCTURED OR MASSIVE	20	2.9	0.345 m2		
MEDIUM / HEAVY CLAYS	STRONGLY STRUCTURED	15	2.14	0.467 m2	0.934 m	0.467 m
	MODERATELY STRUCTURED	15	2.14	0.467 m2		
	WEAKLY STRUCTURED OR MASSIVE	15	2.14	0.467 m2		

If the system is to be used to the maximum capacity of the site, the regulatory authorities may require more refined design procedures and water-balance estimations • Recommended Dispersal Rates according to the Design Irrigation Rates (DIR) Australian/New Zealand Standard 1547:2000

E-FLOW KITS:

Start Up Kit includes:

Bioline Dripline x 200m
25mm Purple LDPE x 50m
25mm Arkal Disc Filter
25mm Techfilter
Air Release Valve
Flush Valve
All Connections

Area of distribution:

200m² @ 1m lateral spacing

E-Flow is available as convenient kits to cover all your irrigation needs

Add-on Kits are also available to increase the area of distribution