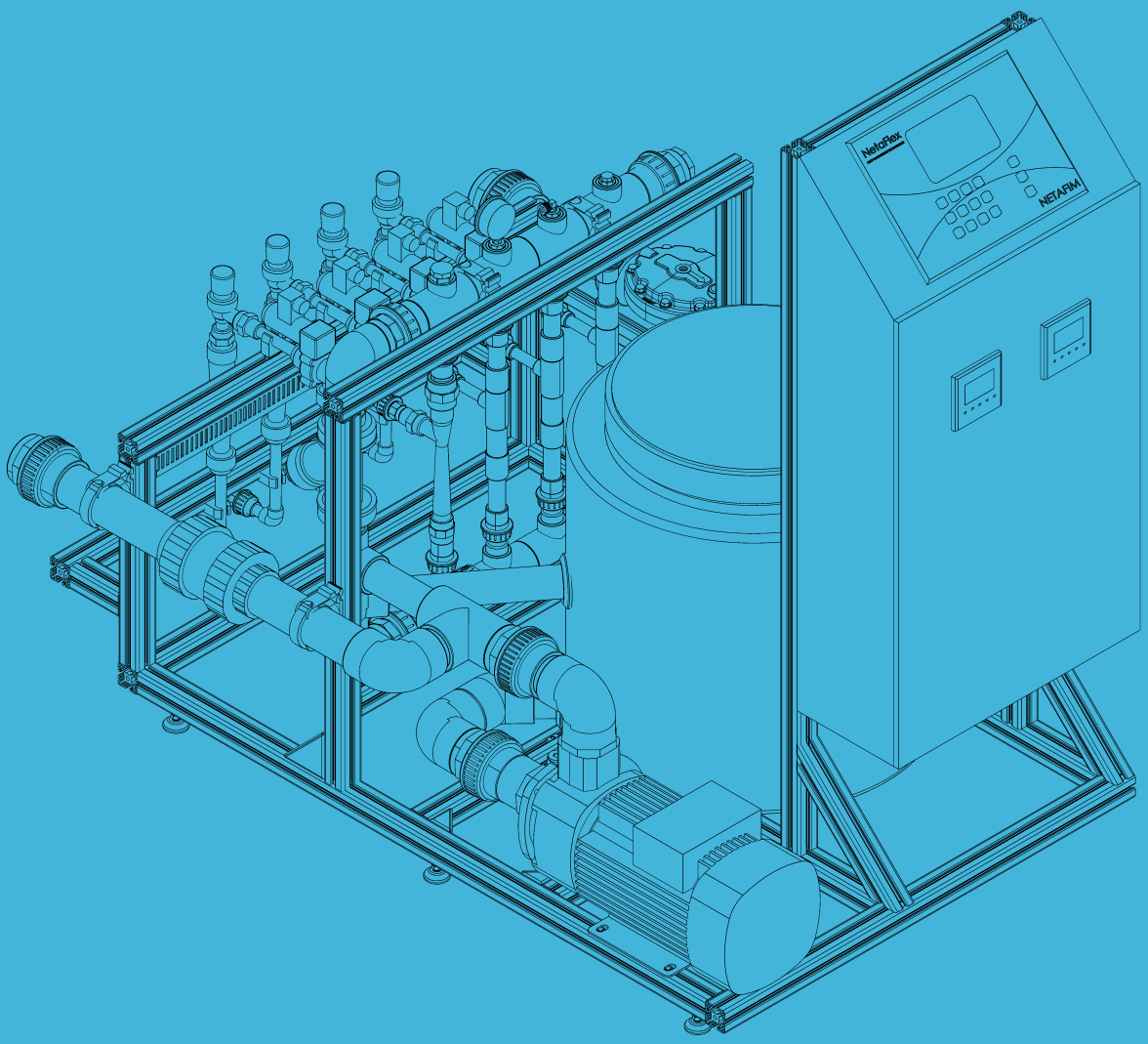
NETAFLEX™ 3G

SALES DOCUMENTATION



V 001.01 - JUNE 2013

NETAFIM™
GROW MORE WITH LESS

FOREIGN LANGUAGES

In the event that you are reading this manual in a language other than the English language, you acknowledge and agree that the English language version shall prevail in case of inconsistency or contradiction in interpretation or translation.

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TABLES AND GRAPHS

Tables

Graphs

Use of symbols

The symbols used in this manual refer to the following:

WARNING
The following text contains instructions aimed at preventing bodily injury or direct damage to the crops, the product and/or the infrastructure.

CAUTION
The following text contains instructions aimed at preventing unwanted system operation, installation or conditions that, if not followed, might void the warranty.

ATTENTION
The following text contains instructions aimed at enhancing the efficiency of usage of the instructions in the manual.

NOTE
The following text contains instructions aimed at emphasizing certain aspect of the operation of the system or installation.

ACID HAZARD
The following text contains instructions aimed at preventing bodily injury or direct damage to the crops, the product and/or the infrastructure in the presence of acid.

PROTECTIVE EQUIPMENT
The following text contains instructions aimed at preventing damage to health or bodily injury in the presence of fertilizers, acid or other chemicals.

THE NETAFLEX™ 3G

Description

The NetaFlex™ 3G is a reliable open-tank dosing system.
The NetaFlex™ 3G ensures very precise and homogeneous nutrient dosing for greenhouse crops.
The NetaFlex™ 3G is a modular CE-compliant dosing system that easily integrates with multiple Netafim™ and third-party control and monitoring systems.
The NetaFlex™ 3G always injects a uniform quantity of nutrients while performing perfect EC and pH control.
The NetaFlex™ 3G can accommodate a wide variety of dosing channels for fertilizer and concentrated/diluted acid. Up to 6 dosing channels of various types, from 50 l/hr (13 GPH) each, up to 600 l/hr (158 GPH) each, in many mixed configurations.
The NetaFlex™ 3G accommodates a wide variety of system pumps, peripherals and accessories to meet a vast range of applications and infrastructure constraints.

Highlights

- Wide range of soil/substrate applications
- Built around a standard platform
- Minimal investment requirement
- Efficient water, fertilizer and energy consumption
- Very large range of irrigation water capacities
- Quantitative or proportional Nutrigation capabilities
- Precise EC and pH control
- Almost completely maintenance-free Venturi operations - no moving parts
- Highly accurate dosing channels equipped with quick action dosing valves
- Fast and efficient Nutrigation recipe adjustments
- Easy integration into existing irrigation systems, Netafim's NMC, and third-party controllers
- Multilingual system
- Wide range of integrated accessories and peripherals
- High-quality components and PVC
- Aluminum, corrosion-resistant frame with adjustable legs
- Made by Netafim™

Advantages

- Easy to install and maintain system
- Highly profitable price/performance ratio
- Requires minimal investment with rapid ROI
- **Productive:** Employing precise EC and pH control assists in delivering a high quality product with outstanding yields (single or dual EC and pH control sets are available).
- **Uniform:** Delivers a consistent quantity or ratio of nutrients in a homogenous solution thanks to an open mixing tank design.
- **Flexible:** Works with a wide range of dosing channel flow rates up to 6 units of 50-600 l/hr (13-158 GPH). Each dosing channel is fitted with a multipurpose dosing valve for the dosing of fertilizer or acid, at any dosing rate up to 600 l/hr (158 GPH). Compatible with 50/60 Hz electricity frequency.
- **Scalable:** System flow rates from 3 m^3/h (13 GPM) to 64 m^3/h (282 GPM).
- **Focused:** Made for soil/soilless greenhouse applications.

THE NETAFLEX™ 3G

Specifications

Output flow rate and pressure

The NetaFlex™ 3G ensures a satisfactory mixture in a vast range of system performances.
Flow rate from 3 m^3/h (13 GPM) to 64 m^3/h (282 GPM) at a wide range of output pressure according to the selected system pump.
A single NetaFlex™ 3G will accommodate from a 0.1 Ha (0.25 Acres) to a 10 Ha (25 Acres) nursery.
For output pressure lower than 3.0 bar (44 PSI) consult Netafim™.

Fertilizer dosing capacity

The NetaFlex™ 3G accommodates up to 6 dosing channels of various types in many mixed configuration:

- 50 l/hr (13 GPH)
- 150 l/hr (40 GPH)
- 400 l/hr (105 GPH)
- 600 l/hr (158 GPH)

* For applications requiring more than 6 dosing channels - consult Netafim™.

Basic functions

The NetaFlex™ 3G supports the following Nutrigation™ functions:

- Fully controlled dosing and mixing of fertilizers/acid with source water into a homogenous nutrient solution.
- EC and pH correction of the nutrient solution (single or dual EC and pH control available).

Operating principle

Fertilizers and acid are injected into a tank, opened to the atmosphere; a homogeneous solution is prepared in the tank before it is delivered to the field.
The open mixing tank method permits accelerated assimilation of fertilizers into the water. The result is a perfectly mixed solution.

Service

The NetaFlex™ 3G utilises a modular construction making servicing a simple and prompt process.
The dealer keeps a small quantity of interchangeable components on hand, for replacement on site within a few minutes.

Maintenance

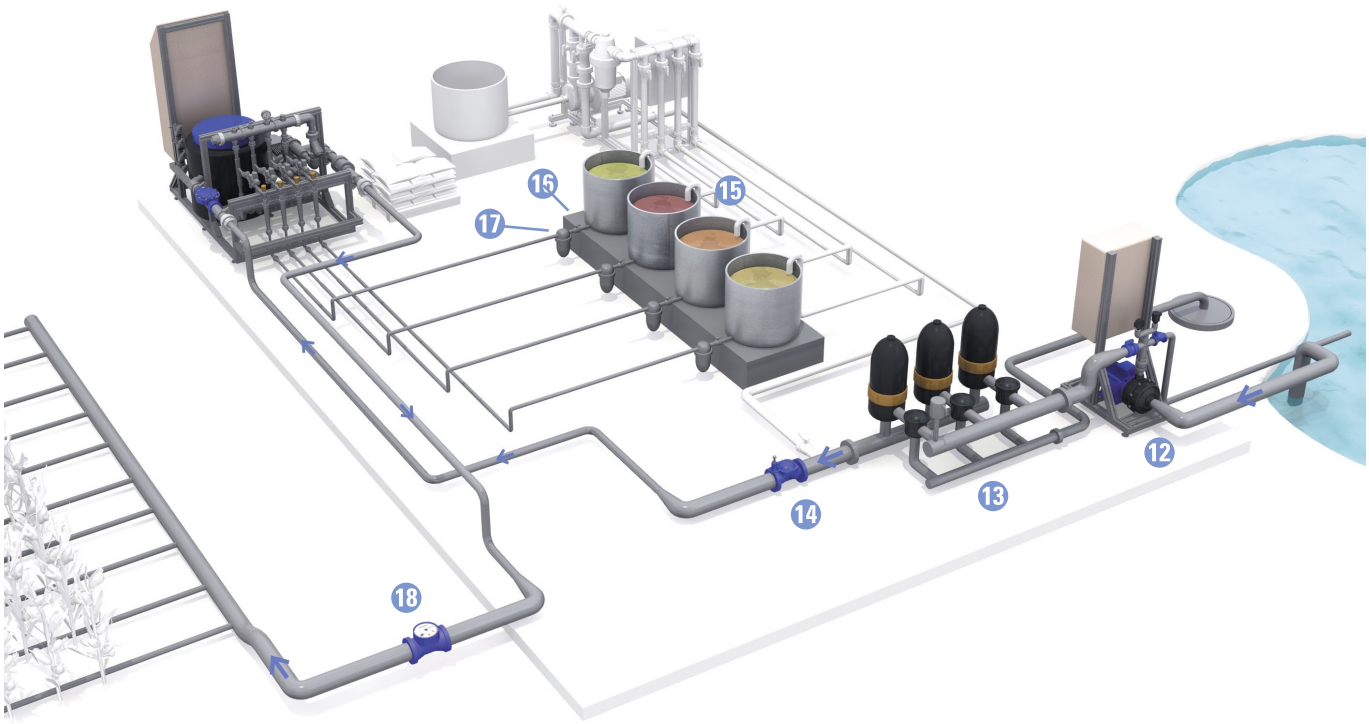
To prevent failures and extend the life cycle of the NetaFlex™ 3G, regular maintenance must be carried out by the user, such as periodic rinsing of filters and calibration of the EC and pH sensors.
Regular maintenance of the NetaFlex™ 3G is a prompt, low cost process tequiring no special tools or skils.

THE NETAFLEX™ 3G

Typical installation overview

The drawing below represents a typical NetaFlex™ 3G infrastructure.

NetaFlex™ 3G



12 Filling pump
13 Filling line filter
14 Pressure reducing valve
15 Fertilizer/acid stock tank
16 Manual valve (fertilizer)
17 Fertilizer/acid filter
18 Water meter

Add-ons

You can extend the functionality of your NetaFlex™ 3G by means of the many add-ons offering a wide variety of useful functions. All the add-ons are easy to connect to the NetaFlex™ 3G - here are a few examples:

Fertilizer meter with electric output

Enables continuous reading of fertilizer dosing. Useful in applications where the costumer wants a broader indication on fertilizer flow on top of the EC and pH readings.

Stock selection

Enables the dosing of multiple fertilizers through a single dosing channel (in cases where simultaneous dosing is not required).
Available in a wide variety of configurations, from a single channel with 2 fertilizers to as many channels and fertilizers as required.

For further information on the NetaFlex™ 3G add-ons, consult Netafim™.

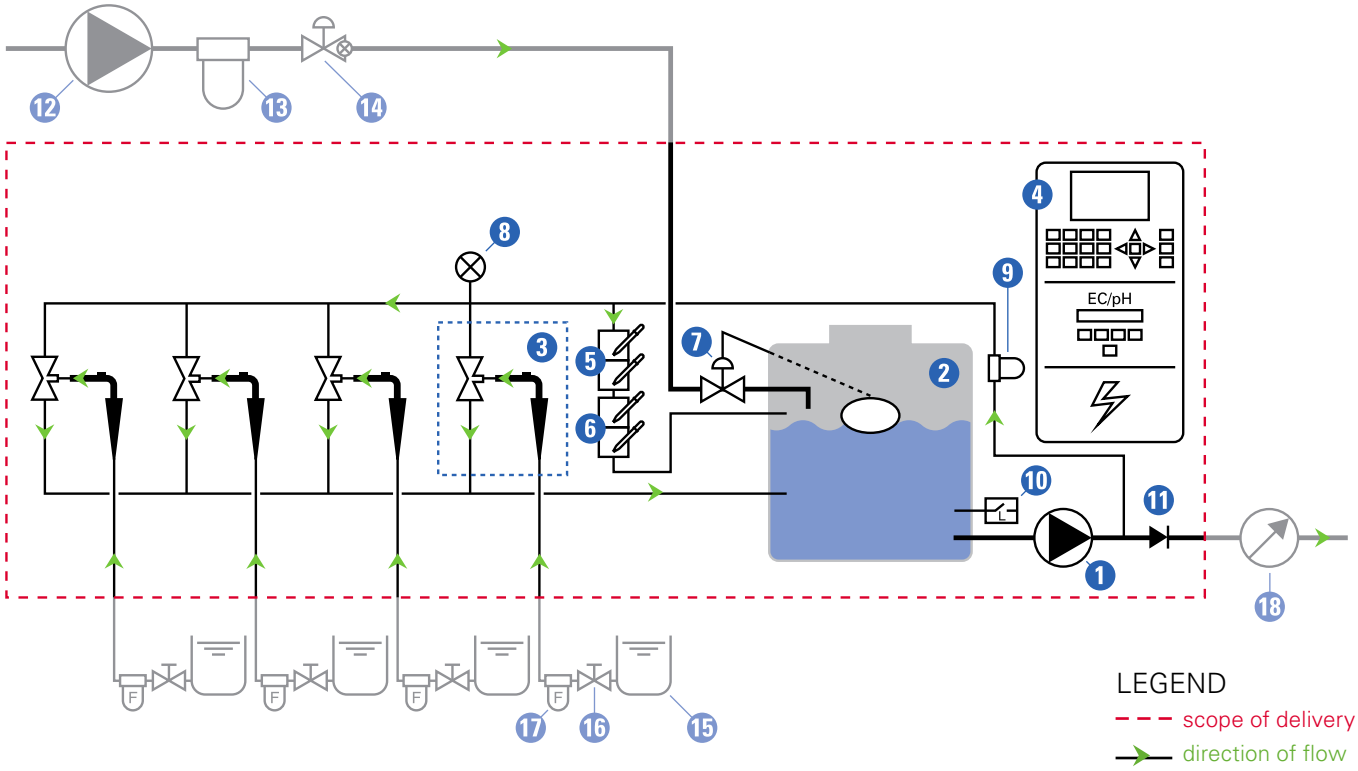
SELECTING A NETAFLEX™ 3G

Introduction

The NetaFlex™ 3G ensures a satisfactory mixture in a vast range of system performances.
Flow rate from 3 m³/h (13 GPM) to 64 m³/h (282 GPM) at a wide range of output pressure according to the selected system pump.
For output pressure lower than 3.0 bar (44 PSI), consult Netafim™.

A wide variety of dosing channels for fertilizer and concentrated/diluted acid is available:
The NetaFlex™ 3G accomodates up to 6 dosing channels of various types,
from 50 l/hr (13 GPH) each, up to 600 l/hr (158 GPH) each, in many mixed configuration.

Schematic diagram



1. System pump
2. Tank
3. Dosing channel + Venturi
4. Control panel, including: Controller, EC/pH tranceducer, electric switchboard.
5. EC sensors (2)
6. pH sensors (2)
7. Float valve
8. Pressure gauge
9. Upper manifold filter
10. Low level switch
11. Non-return valve
12. Filling pump
13. Filling line filter
14. Pressure reducing valve
15. Fertilizer/acid stock tank
16. Manual valve (fertilizer)
17. Fertilizer/acid filter
18. Water meter

Select your NetaFlex™ 3G according to the required flow rate of the largest irrigation shift.

ATTENTION
Make sure that the selected system pump fits the electricity voltage, phases and frequency on site.

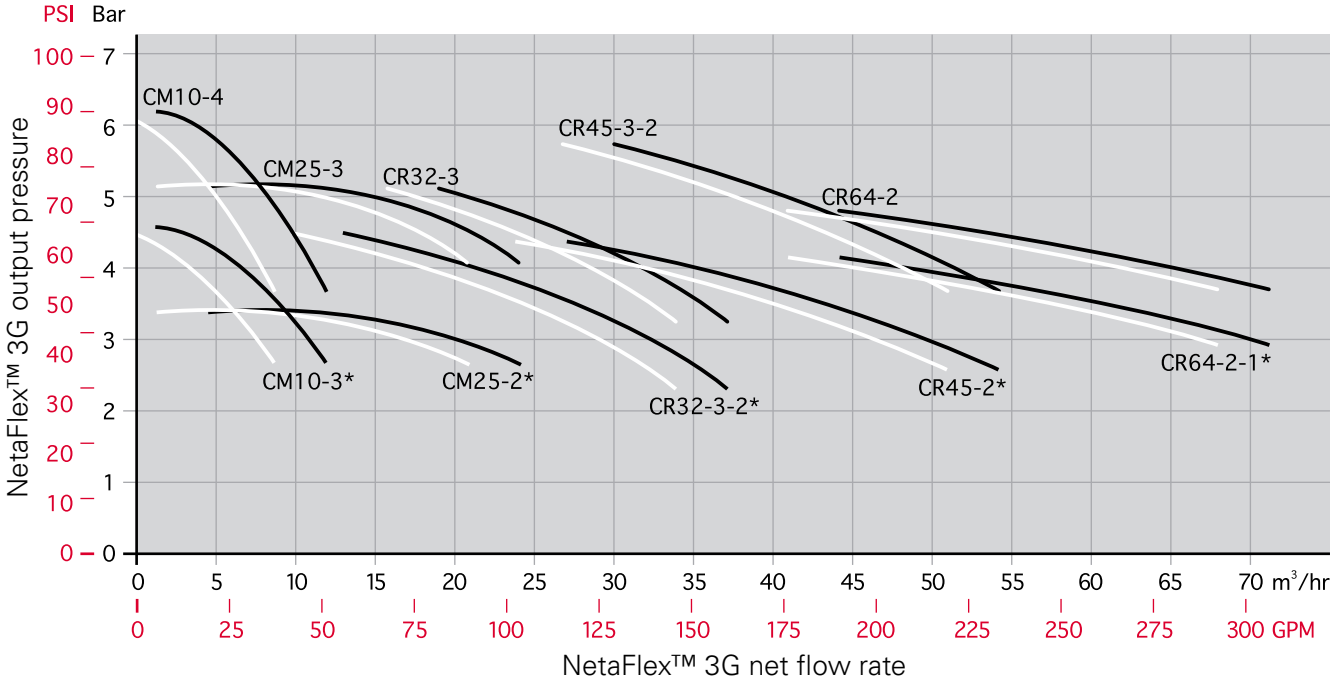
ATTENTION
Calculations are either in metric or in US units - consistency in the type of units used is essential.

SELECTING A NETAFLEX™ 3G

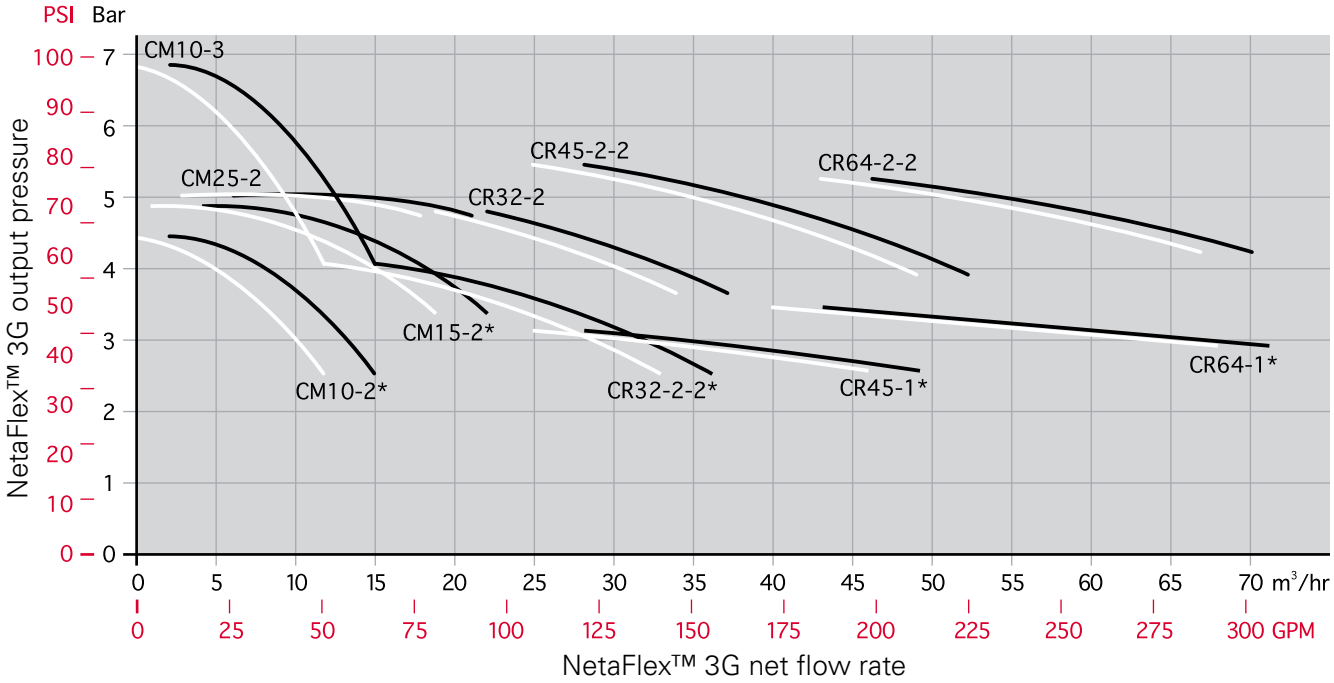
System pump

Select the system pump according to the electricity frequency (Hz), the required maximum flow rate and the output pressure.
For applications where the required output pressure is lower than 3.0 bar (44 PSI), consult Netafim™.

Graph 1 - NetaFlex™ 3G performance curves according to the selected pump - 50 Hz



Graph 2 - NetaFlex™ 3G performance curves according to the selected pump - 60 Hz



LEGEND

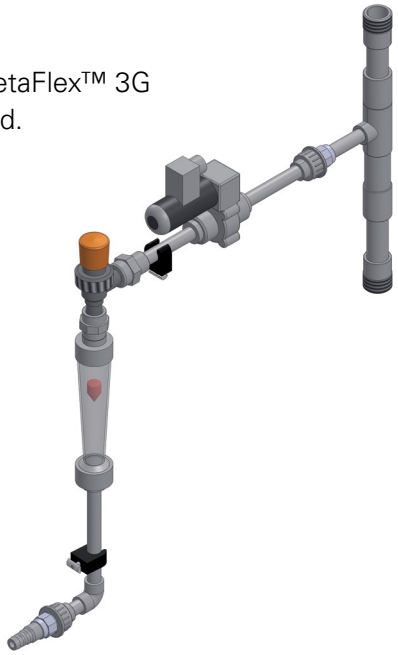
- Black curves = NetaFlex™ 3G with 3 dosing channels.
- White curves = NetaFlex™ 3G with 6 dosing channels.

* System pumps regularly in stock, enabling a shorter delivery time.

SELECTING A NETAFLEX™ 3G

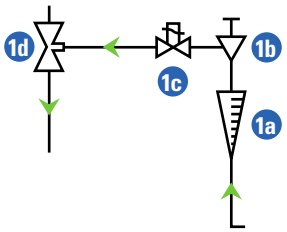
Venturis and dosing channels

To accommodate a variety of flow rates and Nutrigation™ needs, the NetaFlex™ 3G offers a wide range of Venturis and dosing channels for fertilizer and acid.



Typical Venturi and dosing channel

Schematic diagram



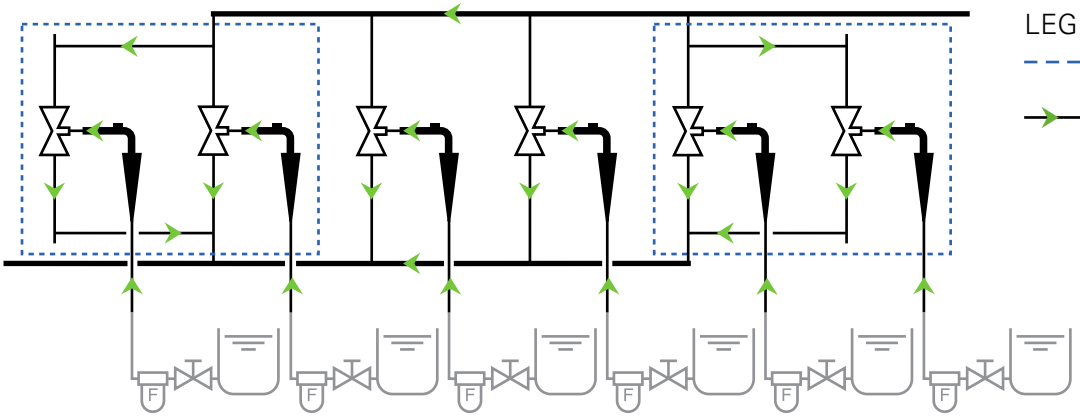
- 1a Rotameter
- 1b Needle valve
- 1c Dosing valve
- 1d Venturi

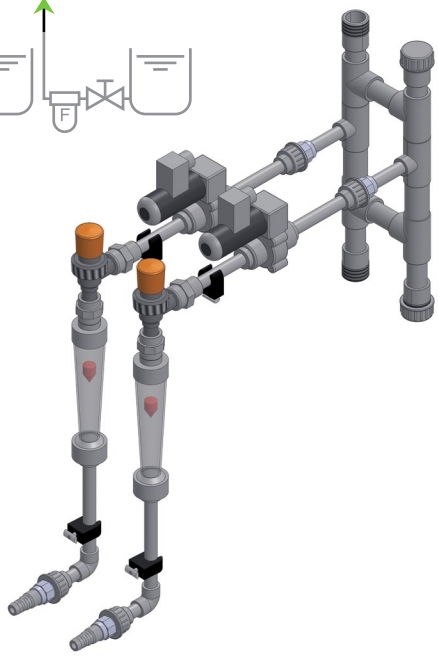
Dual dosing channel

If more than 4 dosing channels are required (up to 6), the dual dosing channel option can be used.

- Up to 2 dual dosing channels can be installed on the NetaFlex™ 3G, at the farthest manifold positions (1 and 4).
- The dual dosing channel option is applicable with 600 l/hr (158 GPH) or 50 l/hr (13 GPH) Venturis.

Schematic diagram





CAUTION

There are fertilizer combinations that should never be used in the dual dosing channel as they will induce crystalization and cause clogging of the pipes.

- Calcium Nitrate + Ammonium Sulfate => Calcium Sulfate
- Calcium Nitrate + Potassium Sulfate => Calcium Sulfate
- MKP + Calcium Nitrate => Calcium Phosphate
- MAP + Calcium Nitrate => Calcium Phosphate
- Phosphoric acid + Calcium Nitrate => Calcium Phosphate

In case of doubt regarding the use of any combination of fertilizers in the dual dosing channel, consult Netafim™.

SELECTING A NETAFLEX™ 3G

Venturis

Table 1 - A complete line of Venturis is available to accommodate various flow rates of fertilizer or acid.

Venturi	Nominal flow l/hr (GPH)	Typical motive flow* - l/hr (GPM)		Suitable for dual dosing channel
		At 3.5 bar (50.8 PSI)	At 5.5 bar (79.8 PSI)	
M050 - PVDF	50 (13)	850 (3.75)	1000 (4.4)	Yes
N150 - PP	150 (40)	800 (3.52)	1000 (4.4)	No
N600 - PVC	600 (158)	750 (3.3)	800 (3.52)	Yes

* Motive flow = the flow of water that needs to pass through the Venturi to enable nominal suction.

Dosing channels

ATTENTION

Table 2 - When dosing acid, respect the concentration of the acid used*:

Diaphragm and O-rings	For pH correction			For maintenance of drippers		
	Nitric (HNO_3)	Phosphoric (H_3PO_4)	Sulfuric (H_2SO_4)	Hydrochloric (HCl)	Hydrogen peroxide (H_2O_2)	Chlorine (as hypochloride)
Viton	<40%	<85%	<90%	<33%	<50%	<10%

% is by weight at 21°C (70°F)

* The table indicates the resistance of the dosing channel components to acid, and is not a recommendation to use the acids mentioned.

WARNING

Exceeding the recommended acid concentrations will damage the dosing channels.

Dosing channels for fertilizer or acid

Channel capacity - l/hr (GPH)

- 50 (13)
- 150 (40)
- 400 (105)
- 600 (158)

All the dosing channels are compatible with 50/60 Hz electricity frequency.

Compute the fertilizer flow rate

To select the appropriate fertilizer dosing channels and Venturis, perform the following calculation:

	Metric units		US units	
Enter the flow rate of the largest irrigation shift		m^3/hr		GPM
	X		X	
Enter the dosing ratio of a single fertilizer (for guidelines see appendix 1, page 21)		l/m^3		US gal/1000 US gal
	=		X 0.06 =	
Result: a single fertilizer flow rate		l/hr		GPH

ATTENTION

Calculation is either in metric or in US units - consistency in the type of units used is essential.

SELECTING A NETAFLEX™ 3G

Electrical mains

To select the proper dosing channels, system pump, controller and accessories, it is essential to know the properties of the electricity on site.
The electricity frequency (Hz) and voltage (V) depends on the country (in some countries frequencies and voltages differ by area).

NOTE

- The controller is single phase.
- The dosing booster is three-phase.

EC and pH control

In case of flow variations, the EC and pH control set enables the controller to perform precise fertilizer/acid optimization (single or dual EC and pH control sets are available).
The EC and pH control set is compatible with the NMC Pro controller (For compatibility with a third party controller, consult Netafim™).

Controller

The NetaFlex™ 3G is controlled by the NMC Pro controller, offering many useful functions (see the NMC Pro controller literature).
In cases where the NetaFlex™ 3G is to be controlled by a third party controller, consult Netafim™.

Additional controller accessories

Many controller accessories offering many additional useful functions are available:

- Weather station
- Temperature and humidity measuring box
- Radiation sensor
- Communication (MUX)
- Communication card
- Cellular modem (remote access and text messages)

For further details consult Netafim™.

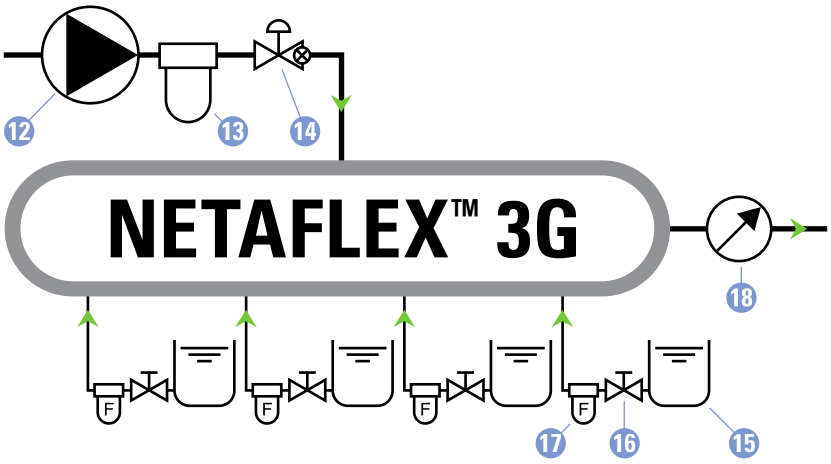
INSTALLATION REQUIREMENTS

Infrastructure

WARNING
Measures must be taken to prevent fertilizer infiltration of the water source, to avoid water pollution.

- Sufficient space should be available between the fertilizer/acid tanks and the NetaFlex™ 3G to allow inspection and maintenance operations (see Typical installation, page 8).

Infrastructure schematic diagram



12 Filling pump
13 Filling line filter
14 Pressure reducing valve
15 Fertilizer/acid stock tank
16 Manual valve (fertilizer)
17 Fertilizer/acid filter
18 Water meter

LEGEND
direction of flow

Infrastructure installation components - Table 3

Component	Specifications
12 Filling pump	Suitable for flow rate satisfying the maximum field requirement (Ensure stable pressure).
13 Filling line filter	≤ 130 µm (≥ 120 mesh).
14 Pressure reducing valve (PRV)	Should be installed on the filling line, downstream from the filling line filter and be able to supply suitable pressure as specified for the NetaFlex™ 3G.
15 Fertilizer/acid stock tank	Between 1 and 6 fertilizer/acid solution stock tanks
16 Manual valve (fertilizer)	A manual ball valve on each fertilizer/acid line at the stock tank outlet
17 Fertilizer/acid filter	≤ 130 µm (≥ 120 mesh)
18 Water meter	With electrical pulses. The pulse should be as short as possible according to the filling line diameter and the controller's limitations. (See Recommended flow meter, table 4 below.)

Recommended flow meter pulse rate - Table 4

Flow rate m^3/hr	Flow meter output l/pulse
Up to 6	1
6 - 60	10

Flow rate GPM	Flow meter output US gal/pulse
Up to 88	1
88 - 1000	10

INSTALLATION REQUIREMENTS

Electrical installation

An electrical mains installation including a circuit breaker, complying with the local safety standards and regulations should be supplied in accordance with the power consumption requirements of the NetaFlex™ 3G.

Power consumption (kW)

The total power consumption of the NetaFlex™ 3G depends mainly on the consumption of the system pump

Table 5 - NetaFlex™ 3G power consumption with various system pumps

50Hz	
System pump	**Power consumption (kW)**
CM10-3	2.35
CM10-4	3.35
CM25-2	4.15
CM25-3	5.95
CR32-3-2	5.65
CR32-3	5.65
CR45-2	7.65
CR45-3-2	11.15
CR64-2-1	11.15
CR64-2	11.15

60Hz	
System pump	**Power consumption (kW)**
CM10-2	2.65
CM10-3	4.15
CM15-2	4.15
CM25-2	6.15
CR32-2-2	5.65
CR32-2	7.65
CR45-2-2	11.15
CR45-1	7.65
CR64-1	11.15
CR64-2-2	15.5

INSTALLATION REQUIREMENTS

Flow rate stability

Ensure that the consumption of the individual irrigation shifts is as equal as possible. Each changeover between shifts with different consumption will result in consumption fluctuation, affecting the EC and pH stability. **The smallest shift should not be less than 75% of the largest shift.**

Source water

- Source water should enter the NetaFlex™ 3G at a flow rate equal to the maximum flow rate required for the field.
  If the flow rate at the inlet of the NetaFlex™ 3G is insufficient, the low level switch will be activated and the fertilizer solution supply will be interrupted.
- The water entering the NetaFlex™ 3G should be within a temperature range of 10°C and 35°C (50°F and 95°F).
- The source water to the NetaFlex™ 3G should be of a satisfactory chemical quality. If water pre-treatment is required, apply chemical conditioning before the water reaches the NetaFlex™ 3G:

Source water quality

NetaFlex™ 3G is specially designed for Fertigation™ in greenhouses using growing media or substrate. In such growing systems, especially in the high-tech sector, that uses a low water retention substrate, low substrate volume per plant, and a 2-3 l/h dripper, the irrigation pulse is very short (1.5-2.0 min) and the system has to reach the desired EC and pH in a very short time. The higher the Bicarbonate (HCO_3) content in the water entering the NetaFlex™ 3G, the more time it will need to reach the desired pH and to stabilize it.

In the high tech sector, when the bicarbonate (HCO_3) content in the source water is low, less than 2.0 meq/l (7.6 meq/US gal), it can be used in the NetaFlex™ 3G without acid pre-treatment. The NetaFlex™ 3G will control the pH using a pH sensor and an acid dosing channel. For an optimal performance, when bicarbonate content in the source water is higher than 2.0 meq/l (7.6 meq/US gal), it is recommended to lower the bicarbonate content in the source water before it enters the NetaFlex™ 3G. That will insure a fast achievement of the desired pH and a high stability of the pH during the irrigation pulse.

In the medium tech sector, when using a substrate of higher water retention or/and volume, the pulse duration is longer (3-5 min), so source water with a higher bicarbonate (HCO_3) content, up to 4 meq/l can be used in the NetaFlex™ 3G without acid pre-treatment.

Adding high concentration of fertilizers to water with a high bicarbonate (HCO_3) content may create low-solubility salts in the solution, that reduces Fertigation™ efficiency and may cause clogging of filters and drippers. This is why it is recommended not to use water with bicarbonate (HCO_3) content higher than 4 meq/l.

When the bicarbonate (HCO_3) content is higher than the required level, a pre-acidification of the source water is recommended. In this process the incoming water is brought to a mild acid pH level of approx. 6.0 prior to its storage in a day-storage tank. This process can be performed by an additional Fertikit™ fitted with the appropriate features (Consult Netafim™). The acid applied will neutralize the bicarbonate (HCO_3) in the storage tank by means of a chemical reaction and the carbon dioxide (CO_2) will be released from the source water. Aerating or spraying the acidified water to the storage tank will improve the discharge of CO_2, accelerating the neutralization process.

NOTE
A full analysis of the water is recommended. In case of doubt, consult a Netafim™ expert.

DIMENSIONS AND WEIGHTS

Dimensions

Extrenal dimensions

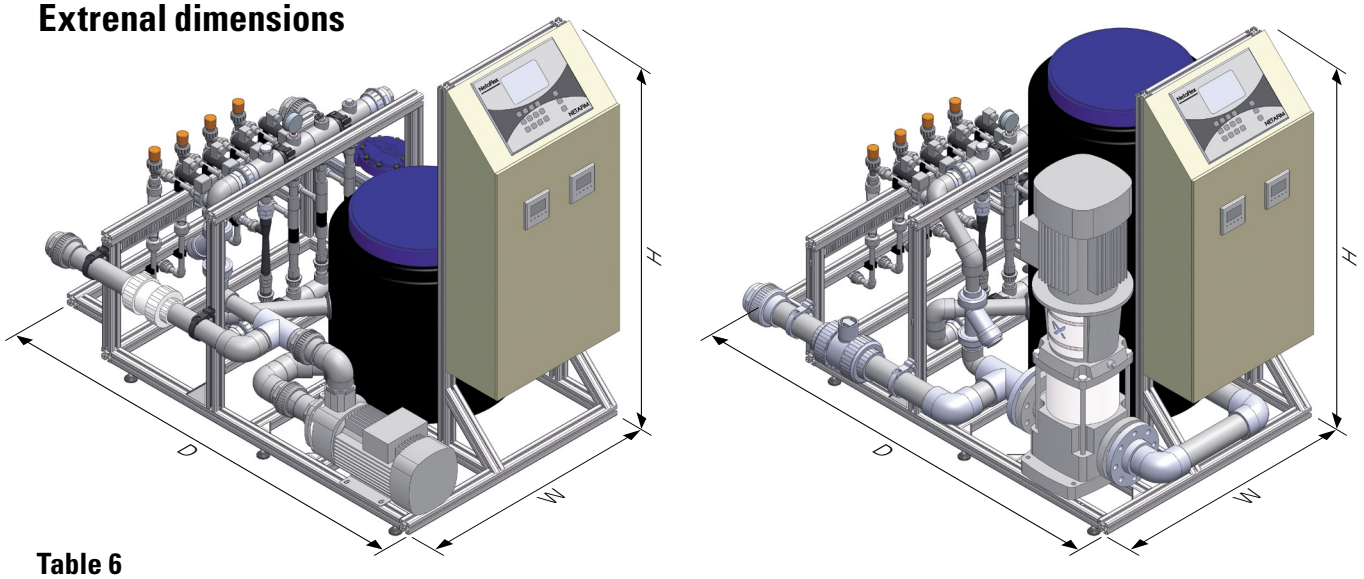


Table 6

NetaFlex™ 3G external dimensions (W/D/H*)	Package dimensions (W/D/H**)
109/148/133.5 cm (43/58.3/52.5")	131/166/159 cm (51.5/65.5/62.5")

*The height varies by ±1 cm (±0.5") according to the adjustment of the legs.

**The package height includes the pallet height of 15 cm (6").

NOTE

Allow 20 cm (8") arround the NetaFlex™ 3G for inlet, outlet and fertilizer pipes connections.

Weights°

The weight of the NetaFlex™ 3G varies according to the selected system pump.

Table 7

50Hz		
System pump	**Net weight°**	**Packed weight°**
CM10-3	156 kg. (344 lbs.)	286 kg. (631 lbs.)
CM10-4	159 kg. (351 lbs.)	289 kg. (637 lbs.)
CM25-2	153 kg. (337 lbs.)	283 kg. (624 lbs.)
CM25-3	176 kg. (388 lbs.)	306 kg. (675 lbs.)
CR32-3-2	217 kg. (478 lbs.)	347 kg. (765 lbs.)
CR32-3	217 kg. (478 lbs.)	347 kg. (765 lbs.)
CR45-2	237 kg. (522 lbs.)	367 kg. (809 lbs.)
CR45-3-2	284 kg. (626 lbs.)	414 kg. (913 lbs.)
CR64-2-1	283 kg. (624 lbs.)	413 kg. (911 lbs.)
CR64-2	240 kg. (529 lbs.)	370 kg. (816 lbs.)

60Hz		
System pump	**Net weight°**	**Packed weight°**
CM10-2	158 kg. (348 lbs.)	288 kg. (635 lbs.)
CM10-3	161 kg. (355 lbs.)	291 kg. (642 lbs.)
CM15-2	160 kg. (353 lbs.)	290 kg. (639 lbs.)
CM25-2	172 kg. (379 lbs.)	302 kg. (665 lbs.)
CR32-2-2	214 kg. (472 lbs.)	344 kg. (758 lbs.)
CR32-2	226 kg. (498 lbs.)	356 kg. (785 lbs.)
CR45-2-2	280 kg. (617 lbs.)	410 kg. (904 lbs.)
CR45-1	233 kg. (514 lbs.)	363 kg. (800 lbs.)
CR64-1	279 kg. (615 lbs.)	409 kg. (902 lbs.)
CR64-2-2	296 kg. (653 lbs.)	426 kg. (939 lbs.)

°Order of magnitude only - final weights will be issued with the product order.

DIMENSIONS AND WEIGHTS

Location of inlet, outlet and fertilizer/acid line connectors

The location of the inlet and the outlet connectors vary according to the selected system pump.

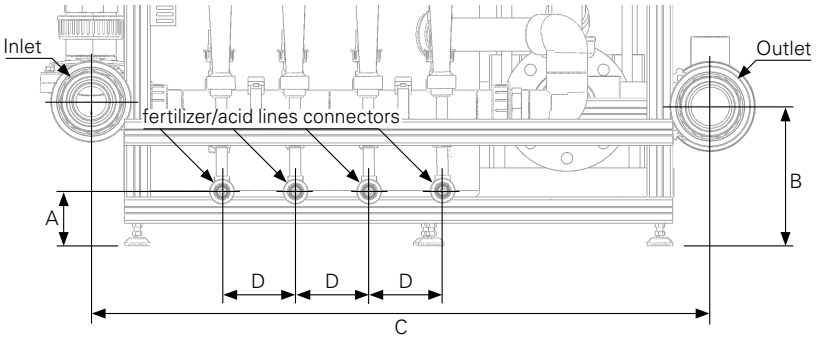


Table 8

	Distance - cm (inch)			
System pump	**A***	**B***	**C**	**D**
CM10	12.5 cm (4.9")	36.6 cm (14.4")	95.7 cm (37.7")	11.4 cm (4.5")
CM15				
CM25				
CR 32		15.8 cm (6.2")	97.5 cm (38.4")	
CR 45		18.3 cm (7.2")		
CR 64				

*The height varies by ±1 cm (±0.5") according to the adjustment of the legs.

Fertilizer and acid line connection types

Table 9

Fittings (interchangeable)	Diameter
PVC, hose nozzle insert connector (installed)	16 mm
PVC, nipple - male thread connector (supplied)	1/2"
PVC, half union - female thread connector (supplied)	3/4"

Inlet and outlet connection types

The diameter of the inlet and outlet connectors varies according to the selected system pump.

Table 10

	Diameter - mm (inch)	
System pump	**PVC, adaptor union - glue connector (installed)**	**BSP or NPT nipple - male thread connector (supplied)**
CM10	63 mm	2"
CM15		
CM25		
CR 32	75 mm	2.5"
CR 45-1		
CR 64-1	90 mm	3"

SAFETY AND WARRANTY

Safety

- All safety regulations must be applied.
- Ensure that the installation is carried out in a manner that prevents leaks from the NetaFlex™ 3G, the fertilizer/acid tanks and lines, the peripherals and the accessories (contaminating the environment, soil or ambient area).
- When using acid always observe the acid manufacturer's safety instructions.
- Use protective equipment, shoes, gloves and goggles when handling fertilizers, acid and other chemicals!
- Electrical installation should be performed by an authorized electrician only.
- The electrical installation must comply with the local safety standards and regulations.
- Ensure that suitable electrical power supply is available for the NetaFlex™ 3G electrical connection.
- Installation should be performed by authorized technicians only.
- Protection provided by the equipment can be impaired if the equipment is used in a manner other than that specified by the manufacturer.

ACID HAZARD
When using acid - always observe the acid manufacturer's safety instructions.

WARNING
Always use protective equipment, gloves and goggles when handling fertilizers, acid and other chemicals!

WARNING
Measures must be taken to prevent fertilizer infiltration of the water source, to avoid water pollution.

NOTE
The maximum sound level produced by the equipment does not exceed 70dB.

SAFETY AND WARRANTY

Warranty

Netafim™ warrants all the components of the NetaFlex™ 3G to be free of defects in material and workmanship for 1 (one) year from the date of installation, provided the installation has been reported to Netafim™ within 30 days of installation.

If the installation was not reported or was reported later than 30 days from the date of installation, Netafim™ will warrant the NetaFlex™ 3G for a period of 18 months from the date of production, according to its serial number.

If a defect is discovered during the applicable warranty period, Netafim™ will repair or replace, at its discretion, the product or the defective part.

The above does not apply to EC and pH sensors, since they are wearable. Netafim™ will warrant these items to be free of defects in material and workmanship for 3 months from the date of installation, provided the installation has been reported to Netafim™ within 30 days, or 6 months from date of production if installation was not reported or was reported later than 30 days from the date of installation.

CAUTION

When not installed, the pH sensor must be immersed in KCL solution (supplied with the sensor) or in calibration buffer 4 at temperature 18-25˚C (64-77˚F), protected from freezing and not be exposed to pressure greater than 6 bars (87 PSI).
Damage due to these causes is not covered by warranty.

This warranty does not extend to repairs, adjustments or replacements of a NetaFlex™ 3G or part that results from misuse, negligence, alteration, force majeure, lightning, power surge, improper installation or improper maintenance.

If a defect arises in your Netafim™ product during the warranty period, contact your local Netafim™ representative.

Limited warranty

This warranty is subject to the conditions in Netafim's official warranty statement.
(For the full text of Netafim's official warranty statement, please contact your local Netafim™ representative).

APPENDIX 1

Dosing ratio estimates

WARNING

These are only estimates - for the exact fertilizer dosing ratio in a given project, consult an agronomist.

Table 11

Crop	Dosing ratio per channel (l/m³) (US gal/1000 US gal)
Protected Crops	
Vegetable in soil (A+B+acid)	5
Flowers in soil (A+B+acid)	5
Vegetable in soil (A+B+C+D+acid)	3.5
Flowers in soil (A+B+C+D+acid)	3.5
Vegetable in substrate	5
Flowers in substrate	5
Vegetable in substrate (High-Tech greenhouse - Multi-pulse*)	10
Flowers in substrate (High-Tech greenhouse - Multi-pulse*)	10

*Multi-pulse (dozens of short irrigation pulses per day)

APPENDIX 2

List of configurator items Table 12

N F X - 3 F 4 0 + 1 A 1 5 - 5 0 H 4 0 0 C M 2 5 2 D E H - 2 4 P 2 - 4 8 5 - F M

A B C D E F G H I J K L M

A

NETAFLEX™ 3G

B No. of Fertilizer channels

Code	Description
-1F	1 Channel for fertilizers
-2F	2 Channels for fertilizers
-3F	3 Channels for fertilizers
-4F	4 Channels for fertilizers
-5F	5 Channels for fertilizers
-6F	6 Channels for fertilizers

C Fertilizer channel flowrate

Code	Description
60	600 l/h (160 GPH)
40	400 l/h (105 GPH)
15	150 l/h (40 GPH)
05	50 l/h (13 GPH)

D No of Acid channels

Code	Description
Blank	No Channel for Acid
+1	1 Channel for Acid
+2	2 Channels for Acid
+3	3 Channels for Acid
+4	4 Channels for Acid
+5	5 Channels for Acid
+6	6 Channels for Acid

E Acid Channel

Code	Description
A40	Acid Channel 400 l/h (105 GPH)
A15	Acid Channel 150 l/h (40 GPH)
A05	Acid Channel 50 l/h (13 GPH)

F Frequency

Code	Description
-50H	50Hz
-60H	60Hz

G Voltage

Code	Description
400	3 x 380 - 415V
440	3 x 440 - 480V
220	3 x 220V
200	3 x 200V

H Pump type

Code	Description
CM102	Grundfos - CM10-2
CM103	Grundfos - CM10-3
CM104	Grundfos - CM10-4
CM152	Grundfos - CM15-2
CM252	Grundfos - CM25-2
CM253	Grundfos - CM25-3
CR322	Grundfos - CR 32-2
CR3222	Grundfos - CR 32-2-2
CR323	Grundfos - CR 32-3
CR3232	Grundfos - CR 32-3-2
CR451	Grundfos - CR 45-1
CR452	Grundfos - CR 45-2
CR4522	Grundfos - CR 45-2-2
CR4532	Grundfos - CR 45-3-2
CR641	Grundfos - CR 64-1
CR642	Grundfos - CR 64-2
CR6421	Grundfos - CR 64-2-1
CR6422	Grundfos - CR 64-2-2

I EC/pH measurement

Code	Description
EH	Single EC/pH
DEH	Dual EC/pH
GROW	Dual EC/pH for Priva Controller
Blank	None

J Number of outputs

Code	Description
-16	16 OUTPUTS
-24	24 OUTPUTS
-32	32 OUTPUTS
-40	40 OUTPUTS
-48	48 OUTPUTS
-56	56 OUTPUTS
-64	64 OUTPUTS
Blank	Without controller

K Controller

Code	Description
P1	NMC-PRO 115V
P2	NMC-PRO 230V
K2	NMC-PRO 230V - Korean & Chinese
-SSR	Solid state relays for the dosing channel (No controller)
Blank	Without controller

L Communication port

Code	Description
-485	RS-485 (parallel) Communication card
-EXP	Dual RS485 for Expansion box
-232	RS-232 (serial) Communication card
-SN1	Singlenet with License key 128 (Including host & SLSM)
-SN2	Singlenet with License key 256 (Including host & SLSM)
-128	Radionet with License key 128 (Excluding host)
-256	Radionet with License key 256 (Excluding host)
-GSM	GSM modem onboard
Blank	None

M Fertilizer Meter

Code	Description
Blank	None
-FM	Fertilizer Meters - Litres
-FG	Fertilizer Meters - Gallons

APPENDIX 3

On-line configurator

To receive a quote or find the catalogue Number for a selected NetaFlex™ 3G configuration - after selecting the NetaFlex™ 3G, go to www.netafim.com

In the on-line configurator:

- Follow the instructions
- Send the resulting string to Netafim™.

ATTENTION

Not every configuration of the NetaFlex™ 3G is practicable.
Do not use the List of configurator items on the previous page to build a NetaFlex™ 3G configuration.
To avoid unpracticable configurations, always use the on-line configurator.

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