

# FERTIGATION, CONTROL & MONITORING

## NETAFIM NMC CONTROLLERS

THE NETAFIM NMC FAMILY CONSISTS OF 3 CONTROLLERS TO SUIT ALL FARMS, CROPS AND SIZES.

**NMC PRO – LARGE FARM AND GREENHOUSE OPERATIONS**

**NMC PRO JUNIOR – SMALLER CONTAINER FARMS & GREENHOUSE**

**NMC DC – SMALLER, OFF GRID FARMING AND MOVABLE SEASONAL CROPS**



Product code	Description
74340-013884	NMC-PRO 16 OUTPUT <b>(EXPANABLE)</b>
74340-005135	NMC-JUNIOR PRO 15 OUTPUT <b>(FIXED)</b>
74340-013950	NMC-DC-DD-12V-8DC <b>(SOLAR/ BATTERY POWERED)</b>

## NETAFIM NMC EC/PH CONTROL & MONITORING

NETAFIM EC/PH MONITORING FOR CONECTION TO NMC PRO & NMC JUNIOR PRO. ENABLING FOR MONITORING AND CONTROL OF EC/PH IN ANY SYSTEM.

Product code	Description
74340-003580	EC PH - MONITOR 24 Volt WALL MOUNT
45000-006692	<b>PH SENSOR</b> JUMO 12MM GLASS W/BNC CONNECT.
45000-006701	<b>PH SENSOR</b> JUMO 12MM PLASTIC BARED WIRES
45000-006705	<b>EC SENSOR</b> JUMO TEMPERAT COMP.PT100 12MM
45000-006690	<b>EC SENSOR</b> JUMO TEMPERAT COMP.10K 12MM
45000-006460	MILWAUKEE <b>PH7.01</b> BUFFER SOLUT.20MLSACHET
45000-006440	MILWAUKEE <b>PH4.01</b> BUFFER SOLUT.20MLSACHET
45000-006480	MILWAUKEE <b>1.413</b> EC 20ML SACHET



# FERTIGATION, CONTROL & MONITORING

## NETAFIM NMC ONLINE CONNECTIONS

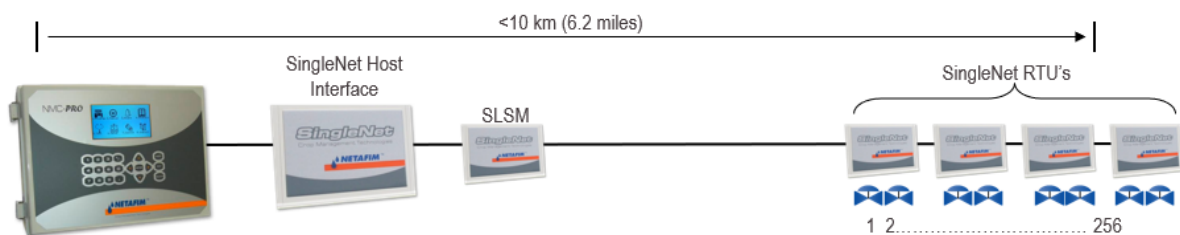
Product code	Description
33900-003010	NMC-AIR-KIT <b>NMC PRO-SINGLE</b>
33900-003050	NMC-AIR-KIT <b>2-5-NMC PRO-MULT</b>



## NETAFIM NMC SINGLENET (2 WIRE) SYSTEM

The NMC SINGLENET SYSTEM connects to the NMC Pro and DC Controllers - ideal for large decoder installations, available is a modular form from 2 to 256 outputs, using 2 wire latching technology. Enabling valve control and monitoring up to 10km away from the controller.

Product code	Description
00035-001750	SINGLENET SERIAL INTERFACE UN.RS232/485
74340-015800	CAST SINGLENET 1 X RTU IN BOX
74340-015830	CAST SINGLENET 1 X RTU + PLSM IN BOX
74340-015860	CAST SINGLENET 2 X RTU IN BOX
74340-015890	CAST SINGLENET 2 X RTU + PLSM IN BOX
77100-005880	GROUND KIT FOR SINGLENET PLSM
00035-008300	SINGLENET SLSM LINE SUPPRESSION MODULE
33000-012100	SINGLENET INTERF.KIT F/ PRO 115/230VAC

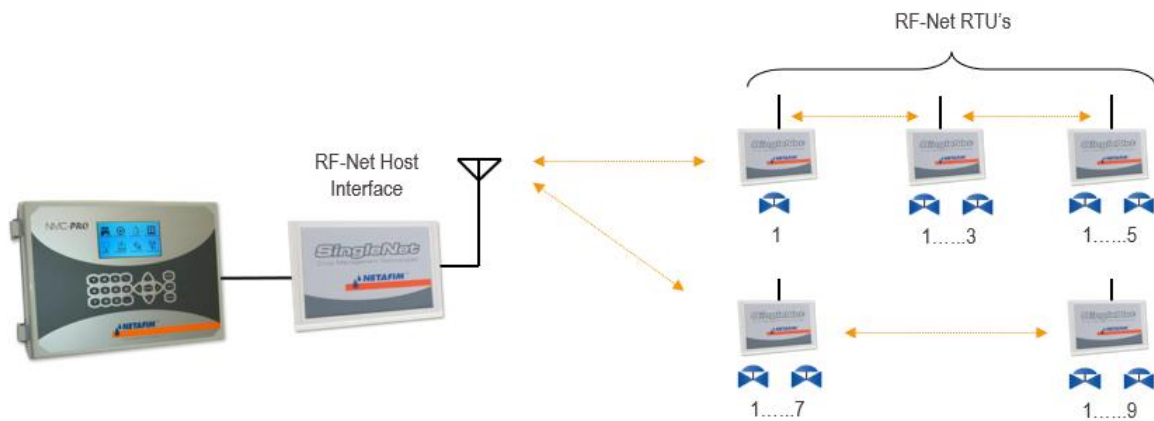


# FERTIGATION, CONTROL & MONITORING

## NETAFIM NMC RADIONET SYSTEM

The NMC RADIONET SYSTEM connects to the NMC Pro and DC Controllers - ideal for long range Radio (wireless) control, up to 256 outputs are available in modular form. Each Radio RTU is modular from 1 to 9 Outputs. Perfect for off grid and moveable seasonal crop control.

Product code	Description
74330-012100	R-NET BASE STATION
74330-012200	R-NET RTU 1XDO 2XDI SAF EXPANDABLE
74330-013140	R-NET EXPANSION CARD 2 X DO/2 X DI
74340-009530	NMC-PRO License key for 128 remote out
74330-002950	R-NET SOLAR PANEL KIT 6V 1.1W
74330-003025	R-NET BATTERY 6V 1.3AH SLA NP1.2-6
74330-005020	R-NET MONOPOL.ANT.430-470 3M GROUNDED484
74330-005050	R-NET MONOPOLE ANT. 430-470 6M
74330-005120	R-NET MONOPOL.ANT.430-470 10M GROUND.486
74330-005760	RADIONET SOLAR PANEL KIT 9V-3W
74330-010200	LITHIUM BATTERY 7.2V 8.5AH
74330-010210	LI BATTERY 7.2V 9AH,400MA FOR RADIONET
74330-012000	R-NET HOST COMPLETE UNIT RS485/232
00035-014780	POLENET USB TO RJ45 RS232 CONVERTER



# FERTIGATION, CONTROL & MONITORING

## NETAFIM NMC CONTROLLER EXPECTATIONS AND SPARES

Product code	Description
74340-003300	NMC64/PRO/DC KEYBOARD CARD FOR LED LCD
74340-003600	NMC COMMUNICATION UNIT (MUX) RS485 230V
74340-004260	NMC MEASURING BOX SE TEMP&HUMIDITY
74340-004470	NMC HUMIDITY SENSOR PLUS REPLACEMENT TIP
74340-004550	NMC-PYRANOMETER GS-WW SOLAR RADIAT.SENS
74340-004900	NMC wind speed & direction sensor
74340-007800	NMC-PRO INPUT / OUTPUT BUS CARD
74340-007900	NMC PRO POWER SUPPLY CARD 115V
74340-008000	NMC PRO POWER SUPPLY CARD 230V
74340-008050	NMC-PRO/JUN 24V OUTPUT TRANSFORMER 115V
74340-008100	NMC-PRO/JUN 24V OUTPUT TRANSFORMER 230V
74340-008500	NMC PRO 24 V OUTPUT ADDITIONAL CARD
74340-008600	NMC PRO DRY CONT.OUTPUT ADDITIONAL CARD
74340-008800	NMC PRO DIGITAL INPUT ADDITIONAL CARD
74340-008900	NMC PRO ANALOG INPUT ADDITIONAL CARD
74340-009100	NMC PRO COMMUNICATION RS232 CARD
74340-009200	NMC PRO COMMUNICATION RS485 CARD
74340-012800	NMC-PRO COMMUNIC. CARD 2XRS485 ADDITION.
74340-014600	NMC Pro-CPU card
74340-022100	NMCDC DIGITAL ANALOG INPUTS CARD
74340-022200	NMCDC LATCH CARD
74340-022400	NMCDC POWER SUPPLY CARD

# FERTIGATION, CONTROL & MONITORING

## NETAFIM FEED RIG WITH CONTROLLER- EC/PH CONTROL 2 FEED 1 ACID

For systems operating under negative suction - from a reservoir or a tank.

Utilizes the main line pump pressure. Saves the need for a dosing booster.

Flow rate: 0.1 - 700 m<sup>3</sup>/h (85 - 3000 GPM)

Ideal for small farms/ greenhouses or farms with expandability plans. Comes with 2 x feed channels + 1 Acid expandable up to 6 channels plus stock selectors.

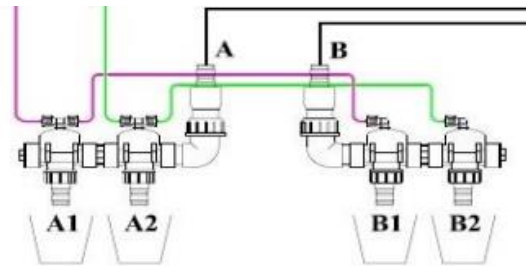
Also comes with EC/pH monitoring and control as standard.



Product code	Description
33200-002218	F3MS-2E60+1SA05-50H1X220EH16P4

## STOCK SELECTOR SPLITTER

For system that have expanded past the capabilities of there feed rigs, the Stock selector splitter enables a single feed channel to select from both 1 x A tank and 1 X B tank. Enabling for better dosing control.



Product code	Description
33000-010500	STOCK SELECTION AB*2 16MM (24VAC)

**System can be purpose built to fit any rig or requirements.**

## FEED RIG SPARES AND ACCESSOIRIS

Product code	Description
02264-880103	O-ring set FPM for VRIUIV 16-20
33000-005690	INLET F. DOSING CHANNEL+CHECK VLV+NOZZLE
33140-003685	NJSP-3G DOSING CHANNEL 300L/H S12
33140-004000	NJSP-3G ACID VENTURI MANIFOLD
33140-004260	NJSP-3G CONCENTR.ACID DOSING CHANNEL S12
33140-007400	NJSP- UPGRADE KIT F/ACID CHANNEL 3G S12
33140-008500	NJ/FKSP-UNION ADAPTOR SET F/JUMO SENSOR
33152-001520	N4SP -BP/IL-UPPER MANIFOLD

# FERTIGATION, CONTROL & MONITORING

## DOSING CHANNELS

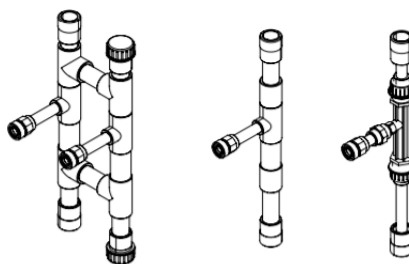
Product code	Description
33230-001100	FSA-CH-DUAL-400L/H-B50HZ-
33230-001020	FSA-CH-DUAL-600L/H-B50HZ
33230-001800	FSA-CH-DUAL-1000L/H-S22

33230-001196	FSA-CH- <b>600L/H-S12</b>
33230-001950	FSA-CH- <b>050L/H-S12-ACID</b>



## VENTURIS

Product code	Description
33240-002375	FSP-VENTURI-PVC-N600 <b>DUAL</b>
33240-002380	FSP-VENTURI-PVC-N1000 <b>DUAL</b>
33240-002370	FSP-VENTURI-PVC-600l/h
33240-002390	FSP-VENTURI-PVC-1000l/h
33240-003200	FSP-VENTURI-PVDF-50l/h <b>ACID</b>



## DOSING VALVES

Product code	Description
70800-001785	BACCARA DOSING VALVE 1/2+EPDM 24VAC50Hz
70800-001795	BACCARA DOSING VALVE 1/2" 4-20MA EPDM
77800-004010	PLUG PE17A+CABLE 3M+LED FOR DOSING VALVE

77540-008480	DOSING VALVE FIP <b>S12</b> 24VAC 50/60HZ VITON
77540-008500	DOSING VALVE FIP <b>S22</b> 24VAC 50/60HZ VITON
77540-008520	CONNEX+CABLE FOR VALVE FIP S22/S12 24VAC



# FERTIGATION, CONTROL & MONITORING

## ROTOMETERS

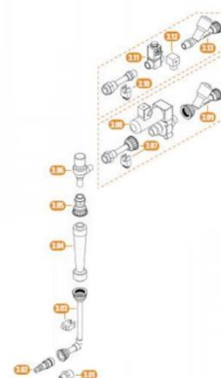
Product code	Description
77540-007560	ROTOMETER 5-50 L/HR
77540-007575	ROTOMETER 15-150 L/HR
77540-007570	ROTOMETER 40-400 L/HR
77540-007577	ROTOMETER 60-600 L/HR



## FEED CHANNEL SPARES

Product code	Description
33240-004200	HOSE NOZZLE
33240-004250	HOSE NOZZLE TO ROTOMETER 400L/H
33240-004300	HOSE NOZZLE TO ROTOMETER 600L/H
33240-004350	ROTOMETER 400L/H TO TAP
33240-004400	ROTAMTER 600L/H TO TAP
33240-004440	TAP TO DOSING.VL.S12
33240-004650	TAP TO DOSING.VL.BACCARA
76400-011375	TAP 1/2" LOW FLOW (UP TO 400L/H)
76400-011376	TAP 1/2" HIGH FLOW UP TO 1000L/H)
76420-007950	NON-RETURN VALVE 3/4"*1" EPDM
76420-007955	NON-RETURN VALVE 3/4"*3/4" EPDM
76420-007960	NON-RETURN VALVE 3/4"*3/4" VITON
76420-007970	NON-RETURN VALVE 3/4"*1/2 MALE VITON

Dosing channel





# FERTIGATION, CONTROL & MONITORING

## FERTIGATION MACHINE (PRE CONFIGURED OR BESPOKE)

IRRISMAART ARE THE ONLY COMPANY TO SUPPLY BESPOKE PRE-BUILT OR BUILD ONSITE REED RIG SOLUTIONS. THESE CAN COME CONNECTED TO A WIDE RANGE OF CONTROLLER, BE CONNECTED TO ANY CONTROLLER OF YOUR CHOICE, OR ALLOW A SINGLE CONTROLLER TO CONTROL SEVERAL FEEDING SYSTEMS (DEPENDING ON THE CONTROLLERS CAPABILITIES!)

- CHOOSE THE TYPE OF RIG YOU REQUIRE,
- CHOOSE HOW MANY CHANNLES YOU REQUIRE
- CHOOSE PRE-BUILT OR FLAT PACK
- CHOOSE IF YOU WANT IT FLOOR MOUNTER OR WALL MOUNTED.
- IRRISMAART WILL SUPPLY.



- **WRAP AROUND** (WRAPS AROUND AN EXISTING (OR NEW) IRRIGATION)
- **PRESSURE BOOSTING OR PRESSUREISED LINE SYSTEM** (BUILT IN PUMP TO DRAW OR BOOST THE WATER THOUGH THE FEED RIG INTO THE MAIN LINE)
- **PRESSURE DIFFENTIAL SYSTEM** (USING A PRESSURISED SYSTEM AND FORCING PART OF THE FLOW THROUGH THE FEED RIG USING A MANUAL OR AUTO VALVE. IDEAL FOR AREA WITH LITTLE OR NOW POWER)
- **MIXING TANK** (FOR 100% ACURACEY USING 2 PUMPS TO MIX A GIVEN RECIPIY AT THE POINT OF INJECTION. UP-TO 65M3/HR)
- **MINI** (2-3 FERTILISER CHANNLES FOR SMALL SCALE AGRICULTURE OR HORICULTURAL SYSTEMS)
- **1 FERT** (A SINGLE CHANNLE INJECTION SYSTEM IDEAL FOR FIELD GROWN SEASON CROPS TO INJECT BULK FEED WITH NO POWER)



# FERTIGATION, CONTROL & MONITORING

## NETAFIM NETBEAT DIGITAL CONTROL SYSTEM



### All-in-one irrigation solution

**NetBeat™** is the first digital farming solution to enable automated irrigation, fertigation, and crop protection. Combining everything into one closed-loop platform, NetBeat™ lets you easily monitor, analyse, and control your irrigation from wherever you are.

### Monitor - Control – Analyse - Fertigation

#### Product code Description

74700-000018 NETBEAT CONTROLLER

74740-000201 ALUMINUM WALL MOUNT FOR MCU

74720-000001 NB-MCU Tile 16 DO AC/DC + 4DI

74720-000002 NB-MCU Tile 6 AI + 2EC+2pH + 4DI Tile

74740-000117 NB-MCU POWER TILE

74740-000130 NB- Antenna Kit 868MHz 10m



# FERTIGATION, CONTROL & MONITORING

## ONLINE MONITORING PLATFORM & SENSORS

IRRISMAART OFFERS A FULL RANGE OF MONITORING AND SENSING EQUIPMENT WITH LIVE DATA AND ALLARMS FOR CLIMATE CONDITIONS, MOISTOR CONDITIONS, EC/PH, PLANT CONDITIONS. ALL THIS DATA CAN BE USED TO INFORM AND MANAGE IRRIGATION, FERTIGATION, VENTING, DESIESE AND SPRAYING MUCH MORE.

WITH MOST ONLINE IRRIGATION CONTROL SYSTEMS, WE ARE NOW ABLE TO WORK TOGETHER ENABLING CONTOL AND MONITORING TO COME TOGETHER MAKING SYSTEM COMPLETELY AUTONIMUS.

### SENTEK DRILL & DROP TRISCAN PROBE



- VWC
- Soil temperature
- Soil salinity (VIC)
- Length: 30, 60, 90, 120, 150 cm
- One sensor every 10 cm
- Rapid connector
- Cable protection

### METER TEROS 21



- Soil water tension
- Soil temperature

### IMETOS® AC PROBE



- VWC
- Soil temperature
- Length: 60 cm, 80 cm, 120 cm
- One sensor every 10 cm

### METER ECH<sub>2</sub>O 10HS



- VWC

### WATERMARK (IRROMETER)



- Soil water tension

### METER ECH<sub>2</sub>O EC5/5TM



- VWC
- Soil temperature

### METER TEROS 10/12



- VWC
- Soil temperature
- EC

### TENSIOMETER (IRROMETER)



- Soil water tension
- Shaft length 15 cm, 30 cm, 45 cm, 60 cm, 90 cm

## Other Sensors

### RAIN GAUGE



### PRESSURE SWITCH



### SOIL TEMPERATURE



### PIPE PRESSURE



### EC & pH INTERFACE WITH DISPLAY



### WATER LEVEL



### EC & pH



### DENDROMETER



### VOLUMETRIC COUNTER



### YARA WATER SENSOR



## A Holistic Solution for Irrigation Management



## Data Interpretation with FieldClimate

All measured data from iMETOS® devices and sensors is stored and available in near real-time on FieldClimate.com and accessible through free iOS and Android apps. You can select any time period you want to view, including all historical data in both graph and table form.



# FERTIGATION, CONTROL & MONITORING

## BESPOKE PUMP HOUSE / IRRIGATION ROOMS



**IRRISMART OFFER A FULL RANGE OF SOLUTIONS FOR IRRIGATION ROOMS AND PUMP HOUSES, THESE SYSTEMS CAN BE DELIVERED BUILT IN A CONTAINER, IN SKID FORM FOR EASY ASSEMBLY OF AS PARTS TO INSTALL ON SITE IN ANY COVERED ENVIROMENT.**

**THESE SYSTEM CAN INCLUDE EVERYTHING REQUIRED TO FULLY CONTROL ALL ASPECTS OF IRRIGATION, CONTROL MONITORING AND WATER QUALITY MANAMENT. ALL SYSTEM ARE BEPSOKE BASED ON :**

- *INDIVIDUAL REQUIREMENTS*
- *CROP*
- *AREA*
- *FLOW RATES*
- *WATER QUALITY*
- *AND CONTROL LEVEL*

**ALL SYSTEMS CAN BE SCALED UP OR DOWN TO SUIT BUDGET, EXPANABILITY GROWERS' NEEDS.**

**THESE SYSTEM CAN INCLUDE:**

- *IRRIGATION TANK*
- *ALL REQUIRED PIPE WORK*
- *FULL CONTROL SYSTEMS*
- *MONITORING SYSTEM (IRRIGATION, FERTIGATION, MOISTURE, CLIMATE AND FIELD CONDITIONS.)*
- *ONLINE CONNECTABILITY*
- *FERTIGATION SYSTEM (+ EC/ PH CONTROL AND FEED TANKS)*
- *WATER SOURCE AND FEED TANK AGITATION SYSTEMS*
- *REQUIRED FILTRATION (BASED ON WATER SOURCE, QUALITY AND FLOWRATES)*
- *CHEMICAL OR NON-CHEMICAL WATER QUALITY TREATMENT SYSTEM (INCLUDING MONITORING).*
- *VALVES IN THE PUMP HOUSE OR IN THE FIELD (WITH CONNECTIVITY VIA MULTI CABLE, 2 WIRE SYSTEM RADIO OR ONLINE CONTROL)*

**CONTACT IRRISMART FOR MORE INFORMATION OR TO VISIT A COMPLETED PROJECT.**

# FERTIGATION, CONTROL & MONITORING

## ONLINE CONTROL PACKAGES (CONTROLLERS)

The DREAM 2 is the next generation of central control irrigation systems. It allows combining various technologies to suit each project specific needs. #It is an Internet enabled controller so the user can control everything from A PC or Smartphone.

The DREAM 2 can handle multiple irrigation heads thus allowing the user to manage medium to exceptionally large projects with many irrigation lines using a single controller.

Modular & Flexible Hardware:

- Local outputs DC or AC – Directly activating Solenoids and Electric Valves
- Single cable 2W RTU – Up to 10 km
- Radio RTU – Up to 5 km (Soon 10 km)
- Ph/EC control – Handles multiple fertilization injection units



Product code	Description
49000-49000	DREAM 2 CONTROLLER 32 OUTPUTS
49000-49001	OUT-PUT EXPANTION
49000-49002	ETHERNET CONNECTION
49000-49003	WIFI CONNECTION
49000-49004	RADIO INTERFACE
49000-49005	2-WIRE INTERFACE

*The SAPIR2 is full featured professional controller, allowing volumetric irrigation and fertilization and filter backflush and more... It designed for more advanced users with demanding applications in medium to large sized projects.*

**The SAPIR2 has AC & DC versions:**

**AC version** – Can be powered directly from mains, using the 220V / 110V to 24V AC transformer and 9aH rechargeable battery.

**DC version** can be powered:

5W Solar panel and 9aH rechargeable battery.

12V DC power supply from main and 9aH rechargeable battery.

**It is modular:**

- 4/8/12/16 local outputs: AC version – 24V AC solenoids OR DC version – 12V DC latch solenoids
- Maximum number of outputs is 32 with radio RTU

**Connection to the internet is done through:**

Cellular modem OR Wi-Fi router.

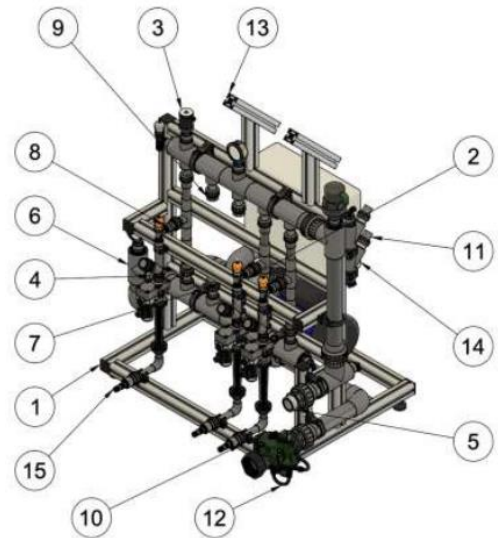




# FERTIGATION, CONTROL & MONITORING

## FLAT PACK FEED RIG (EXPANDABLE UPTO 5 DOSING CHANNELS) – NO CONTROLLER

Product code	Description
30050-0095	(1) Aluminium Frame
30030-026	(2) 3 phase SHM06 Pump
30000-0278	(3) Upper Manifold (5 Channel)
30000-0025	(4) Lower Manifold (5 Channel)
30000-0755	(5) Inlet Manifold
30000-0306	(6) Pump Inlet Manifold
30000-0813	(7) Pump Outlet Manifold
30000-0760	(8) Venturi 600l/h
30000-0041	(9) Plug 1" male
30000-0758	(10) Vertical Dosing Channel
30000-0498	(11) EC/pH Manifold
20000-0041	(12) 1-1/2" Sustaining Valve
30050-0002	(13) Controller Brackets for frame
30030-0035	(14) 3 Phase Service Board
30000-0586	(15) 16mm x 1" Hose Nozzle



**Much more available on request along with bespoke solutions to suit any farm, green house or vertical farming.**

# FERTIGATION, CONTROL & MONITORING

## TEFEN FERTILISER PUMPS (HYDRAULIC)

### Product code Description

76420-000010 TEFEN TF 1 0.2% FIXED

76420-001000 TEFEN 2.5 - 0.3-2%

76420-001042 TEFEN 2.5 – 0.3-3% (**POLTRY**)

76420-001200 TEFEN 2.5 – 5% (FIXED)

76420-000290 TEFEN TF5 – 0.2-2%

76420-000292 TEFEN TF5 – 0.2-2% (**CHLORINE**)

76420-000357 TEFEN TF10 – 0.1-1%

76420-000365 TEFEN TF10 – 0.2-2%

76420-000294 TEFEN TF10 – 0.2-2% (**CHLORINE**)

76420-000375 TEFEN TF10 – 1-5%

76420-000480 TEFEN TF25 – 0.3-2.5%

76420-000435 TEFEN TF25 – 0.3-2.5% (**CHLORINE**)

76420-000470 TEFEN TF25 – 1-5.5%

76420-001370 TEFEN 125 – 0.2-2% (**HYDROGEN POROXIDE H020**)

76420-001109 TEFEN 125 – 0.2-2% (**HYDROGEN POROXIDE H020**)

